

General health status among high school students in Ilam: a cross-sectional study

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ABSTRACT

Background and aims: Many factors could affect on the health status. This study aimed to assess the general health status of high-school students in Ilam province in 2014.

Methods: This cross-sectional study determined the general health status of high-school students in Ilam, located in west of Iran in 2014. The samples were selected by multi-stage random sampling method. Data were collected by a two-part questionnaire. The first part of the questionnaire included the personal characteristics and the second part of the questionnaire contained General Health Questionnaire- 28 (GHQ-28).

Results: A total of 381 students were enrolled in this study. Overall 236 (61.9%) of students had healthy status. In addition, 145 (38.1%) of all participants had disorder in one or more dimensions of their general health status. The mean±SD of overall score of general health was 5.78±4.53 in healthy status students and 7.83±5.72 in disorder status students. The difference in overall score of general health was statistically significant between healthy and disorder status students ($P<0.001$). Moreover, the differences in the age, school grade, parental education and number of children living with families were significant between healthy and disorder status students ($P<0.05$).

Conclusion: General health is an important issue among adolescents and high-school students who are at high risk of general health disorder. Therefore, the regular evaluation of their general health status is necessary for planning an appropriate counseling program.

Keywords: Cross-sectional study, High school students, Ilam, GHQ-28.

INTRODUCTION

World Health Organization (WHO) has defined the "health" as a state of complete physical, mental, and social well-being and not merely the absence of disease.¹ There are several effective factors on health state

including: income and social status, health care services, physical environments, social environments, education and literacy, gender, personal health practices, coping skills and healthy child development.^{2,3}

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Among them, gender, ethnicity and age have been reported as the most effective factors on health status.⁴ Moreover, adolescence is a substantial part of Iran population. Therefore, several studies have been evaluated the health status of this age group in Iran.⁵⁻¹⁰ Indeed, health status of each student has an important role in learning ability. Many researches have evaluated the relationship between general health and students' performance.^{7,10}

Students may receive various types of stress and may be at risk of mental ill-health. In fact, stress can cause physical and mental health problems and reduce the students' self-esteem.^{11, 12} In another study, health behaviors of 171 Venezuelan students was reported on the gender differences as a perceived health status in students.¹³ Furthermore, there is a relationship between the mental health and school progresses and increase of educational progress in students who are mentally healthy.¹⁴ In fact, identifying the students' health status is important for planning and providing services such as counseling and probable interventions to improve the health problem of the population in the future. Regarding the efficiency and dynamic role in ensuring the health of students and prevention of school failure, this study was conducted to assess the general health status of high school students of Ilam, located in west of Iran.

METHODS

This cross-sectional study assessed 381 high school students in Ilam, located in west of Iran in 2014. The samples were selected by multi-stage random sampling method. Based on socioeconomic status of families, Ilam province was divided into three strata. Then, each selected high school in a stratum was considered as a cluster. Six clusters of three strata were selected by simple random sampling and finally the selected high school participants were

selected by simple random sampling. Data were collected using a two-part questionnaire. The first part of the questionnaire was included the personal characteristics such as age, gender, parents' occupation, parents' education and number of children. The second part of the questionnaire was included GHQ-28. The GHQ-28 is a screening tool using in epidemiological studies, GHQ-28 has indeed been developed by Goldberg in 1972.¹⁵ The purpose of this questionnaire was to explore psychiatric disorders in different situations. The GHQ-28 has been translated into several (international) languages. Validity and reliability of GHQ-28 test have been confirmed in previous studies.¹⁶⁻²¹ on Iranian population.²²

GHQ-28 consists of four scales of: physical symptoms (items 1–7), anxiety and insomnia (8–14), social dysfunction (15–21) and severe depression (22–28). Several different scoring methods for GHQ-28, affecting on the total score, have been proposed. The traditional scoring method provided a score of 0 for responses 1 and 2 (“not at all” and “no more than usual”) and a score of 1 for responses 3 and 4 (“rather more than usual” and “much more than usual”) (16–18). Another scoring option is Likert method which indicates symptom's severity, which scores the item response between 0–3 (0–1–2–3, subscale range). The traditional scoring method as used in this study, and a score of 0 for responses 1 and 2 and a score of 1 for responses 3 and 4 were assigned, respectively. Previous research has determined a cut-off point 6 in the Iranian population. Participants who receive a score of 6 or less were considered as healthy and those who receive a score of 7 or higher were considered as disorders.²²

This study has received the approval of the Ethical Committee of Ilam University of Medical Sciences. The purpose of the study was explained for participants and an informed consent form was completed by all participants before the enrollment in the study. To enhance confidentiality, all questionnaires were completed anonymously.

Using SPSS software (version 16), ANOVA or Kruskal Wallis test was used to analyze. Pearson correlation coefficient was also used to estimate the association between variables.

RESULTS

A total number of 381 students were enrolled in this study. Subjects consisted of 192 (50.4%) males and 189 (49.6%) females. The mean \pm Standard Deviation (SD) of age was 16.68 ± 1.1 and 16.31 ± 1.1 years in healthy status students and disorder status students, respectively ($P=0.002$). Overall 236 (61.9%) students had healthy

status and 145 (38.1) had disorder in one or more dimensions of their general health status. The overall mean \pm SD scores of general health were 5.78 ± 4.53 in healthy status students and 7.83 ± 5.72 in disorder status students. The difference in overall score of general health was statistically significant between two groups ($P < 0.001$). The differences in age, school grade, parental education and number of children living with families were also significant ($P < 0.05$). However, the differences in gender and parental occupation were not significant. Demographic characteristics of study participants are presented in table 1.

Table 1: Demographic characteristics of health status among high school students of Ilam province in 2014

Characteristics	Groups		Total	P- value	
	Healthy**	Disorder**			
	236 (61.9%)	145 (38.1)			
Age*	16.68 ± 1.1	16.31 ± 1.1		0.002	
Gender**	Male	157(81.82)	35(18.2)	192(100)	0.277
	Female	149(78.8)	40(21.2)		
School grade	1st high school	66(73.3)	24(26.7)	90(100)	0.001
	2st high school	90(94.7)	5(5.3)	95(100)	
	3st high school	74(77.1)	22(22.9)	96(100)	
	4st high school	76(76)	24(24)	100(100)	
Father occupation	Governmental	150(81.5)	34(18.5)	184(100)	0.304
	Non-governmental	122(78.8)	33(21.3)	155(100)	
Mother occupation	Governmental	22(75.9)	7(24.1)	29(100)	0.456
	Non-governmental	246(78.3)	68(21.7)	341(100)	
Father education	Illiterate	5(31.2)	11(68.8)	16(100)	<0.001
	Primary	67(70.5)	28(29.5)	95(100)	
	Secondary	24(72.7)	9(27.3)	33(100)	
	Diploma	48(48.5)	51(51.5)	99(100)	
	Academic	79(73.8)	28(26.2)	107(100)	
Mother education	Illiterate	51(58)	37(42)	88(100)	0.001
	Primary	43(53.8)	37(46.2)	80(100)	
	Secondary	18(45)	22(55)	40(100)	
	Diploma	49(69)	29(31)	71(100)	
	Academic	53(80.3)	13(19.7)	66(100)	

*Values are given as Mean \pm SD; **Number (%).

The differences in the mean \pm SD of scores for physical and anxiety and sleep disorders were statistically significant between healthy and disorder status students ($P < 0.001$). But the differences in social dysfunction and

depression scores were not statistically significant between two groups ($P > 0.05$). Comparisons of general health demission are presented in table 2.

Table 2: Comparison of health demission scores between groups

Demission Score*	Groups		P- value
	Healthy	Disorder	
Physical	0.94±1.34	1.95±1.97	0.000
Anxiety and sleep disorders	1.17±1.74	2.32±2.14	0.000
Social dysfunction	2.31±2.60	1.96±1.95	0.214
Depression	1.36±2.02	1.60±2.16	0.357

*Values are given as mean ± SD

DISCUSSION

The general health status of 381 high-school students of Ilam were assessed in 2014 and more than half of the students were found to be healthy. The difference in overall scores of general health was statistically significant between two groups as well as age, school grade, parental education and number of children living with families but not for gender and parental occupation.

Quality of life could be concerned as physical, mental and social health and well known as overall sense of well-being. Increasing the level of health can also be associated with increasing the quality of life and life satisfaction.²² In fact, the health status of students is considered as one of the main public health issues worldwide. Several studies evaluated the health status of students.⁴⁻⁹ Evidence showed that general health is effective on educational status. Mental health can also provide the creativity and increase the learners' abilities.²³ Several studies reported the impact of mental health on students' achievement.²⁴⁻²⁷ In fact, the physical and mental health are not only associated with student achievement but also it has been found a relationship between health and religion.²⁸

Furthermore, different studies have used different cut-off points for estimation of the overall health status of populations, maybe due to different interviewers and various

levels of scientific classification of the diagnostic criteria. A cut-off point 6 was used in this study. Students with a score of 6 or less and 7 or more were considered as healthy and disorder students, respectively. Other studies have also confirmed the use of cut-off point 6 to evaluate the health status of Iranian students.^{29, 30} Some other studies have also reported a lower cut-off point in their study.^{31, 32}

This study considered four dimensions of general health including physical symptoms, anxiety and insomnia, social dysfunction and depression. Based on current results, the overall score of general health was statistically significant between two groups. In addition, physical, anxiety and sleep disorders demission of general health status were significantly different between two groups. However, social dysfunction and depression were not significantly different between groups. The result of one previous study also showed that questions related to depression and anxiety represented the individual states more than two-scale physical and social functioning.¹⁰

Current communication technologies such as satellite and internet are improving. Therefore, the use of these technologies could influence on the general health of students and the regular health status investigation is essential in this age group.

CONCLUSION

General health is an important issue among adolescents and high-school students due to their higher risk of general health disorder. Therefore, to plan an appropriate counseling program, the evaluation of students' general health status is necessary.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

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