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A Study of the Mental Health among High School Students in Khouzestan Province

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Abstract The aim of the present study is to investigate the mental health status among high school students. The researchers conducted the study on a sample including 1000 students-514 males and 486 females- based on the multiple, random cluster sampling. They used a personal questionnaire to get the students' personal information through the mental health questionnaire SCL-90-R. The results showed that the mental disorders prevalence was 10.8%- with the first graders, second graders, and third graders according to 8.8%, 15.02% and 9.6% of the prevalence respectively. In the study fields, the rate of prevalence was: general course 8.8%, Humanities 14.34%, experimental science 6.6%, mathematics 10.41 and technical course 23%. In the current study, there was a significant difference between the mean of mental health among high school students in Khouzestan province in the level of $P < 0.001$. Moreover, there were a significant difference between different aspects of mental health (depression, aggressiveness, sensitivity in interpersonal relationships, psychical complaints, paranoid thoughts, phobia, obsession, anxiety and psychosis). In addition, there were a significant difference between the mean of mental health in different grades in the level of $P < 0.05$. But there was no significant difference between the mean of mental health in different study fields.

Keywords Health, Mental health, Students, Khouzestan province

1. Introduction

Mental health, like physical health, may be viewed as existing on a continuum be viewed as existing on a continuum from healthy living to chronic illness. In 2001, the U.S. Surgeon General defined mental health as "the successful performance of mental function, resulting in productive activities, fulfilling relationships productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity" [Anastasia K. Ska lski and Marta J. Smith, 2006].

Ted's story reminds us of the millions of students who struggle with emotional and behavioral problems that affect their learning and the learning of others. In 1999, the U.S. Surgeon General reported that one in five children and adolescents will experience a significant mental health problem during their education years (U.S. Department of ealth and Human Services, 1999). When students experience mental health roblems,they often struggle to attend school,have difficulty completing assignments,and have more frequent conflicts with peers and adults. Increasingly, schools are recognized as places where students receive mental health services. The President's New Freedom Commission on Mental Health (2003) acknowledged this relationship, saying, "Schools are where children spend most of each day. [Anastasia K. Ska lski and Marta J. Smith, 2006].

The mental health plays an important role in guarantying the dynamism and efficiency of society (Sadeghian et al, 2010). Adolescence is accompanied by puberty and significant changes in physical, cognitive, affective and social aspects. It ranges from 12 to 20 years, and high school students belong to this range. Adolescence is usually considered as a critical period, so if students pass adolescence without considerable difficulty, they will be successful adults (Abbas Zadeh et al. 2003). The healthy, motivated and cheerful students are considered as a main goal in the education systems of different societies because having such human resources can facilitate the development and progress toward the achievement of the predetermined goals. So, providing the mental health for different social classes, especially for students in school environments is one of the most significant factors which educational authorities must pay close attention to because the future performance and great comprehensive cultural and value development of millions of students rely on their today's personalities.

Shamloo (1997) believes that the aim of education and mental health theoretically is the same because their goal is to healthy, useful and successful individuals. Lacking the

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mental health not only affects the way personality is developed, but also engenders many inappropriate behaviors and places significant effects on the intelligence, thoughts, creativity and academic achievement. So some scholars state that the students' healthy and balanced personality, development, as well as the activation of their talent and dependent on the mental health, mental security and affective stability. Students and adolescence who have conflicts and lack mental security, give much thought solving the problems in their minds. So, one of the main factors of mental health in the society is the evaluation of mental health. Different reasons show that the organizing of the psychological services in schools is a main strategy to improve the students' mental health. Numerous studies have been conducted on the mental health status in society, especially among students showed different results. Some of them are presented as follows:

D, Eisenberg, MF Downs, E Golberstein.(2009): Mental health concerns are the most serious and prevalent health problems among students in higher education. Increasingly effective psychopharmacological and psychotherapeutic treatments have facilitated matriculation for students with histories of anxiety, mood, personality, eating and substance abuse disorders. This phenomenon has been accompanied by a striking increase in the number of previously undiagnosed students requesting treatment. College and university mental health programs struggle to care for larger numbers of students, necessitating greater interdisciplinary collaboration in treatment, research, outreach, and educational services.

J Hunt, D Eisenberg (2011)In a study data from random samples at 26 colleges and american universities in and 2009 .they founded that of students %17 to the Patieant Health Questionnair-9,including %9 for major depression and %10 of students had apositive Patient Health Questionnnaire screen for an anxity disorder (panic or generalized anxiety disorder).

Bolhuri et al. (1994) reported 16.5% mental disorders prevalence in the rural population in Meibod, Yazd. Also Yousefi et al. (2000) reported 37.2%. Moreover, Mousavi et al. (1998) conducted a study on the depression prevalence among the students aged ranged 15-17 years in Bandar Abbas high schools and calculated it to be 44.5%. In addition, Hosseini et al. (2000) expressed that the mental disorders prevalence among medical science students in Mazandaran was 51.8%. A study conducted on the female high school students in Yazd indicated 19% anxiety prevalence. Hosseini Fard et al. (2002) reported 16.6% mental disorders prevalence including 21.6% females and 10.6% males.

Sadeghian et al. (2009) administered a research on 600 high school students in Hamadan city. They found that there was a significant relationship between study fields, grades, ages and mental health. In addition, in another study, Masoud Zadeh et al. (2004) selected 1068 high school students and showed that the psychological symptoms prevalence was 58.8%, so there was a significant difference between the mental health of males and females and their grades.

Rahman, and Rollock (2004). Among 199 South Asian international students in the United States, higher levels of depressive symptoms were predicted by higher perceived prejudice and lower self-reported competence in work, personal/social efficacy, and intracultural behaviors. Relationships among the predictors and depressive symptoms differed by gender. Implications for theory, research, and mental health interventions are discussed.

Today, the high school students' mental security is emphasized because such students are experiencing adolescence which is the most sensitive period psychologically. So the educational authorities and principals must be aware of their students' mental health to make precise plans and provide their security. The objective of the current research is to consider the mental health of high school students in Khouzestan province. The research seeks to answer the following questions and consider the related hypotheses.

2. Research Questions

1) How much is the prevalence of mental disorders among students in different study fields?

2) How much is the prevalence of mental disorders among students in different grades?

3) Is there any difference between the mental health of male and female?

4) Is there any difference between male and female students in each especial aspects of mental health (depression, aggressiveness, sensitivity in interpersonal relationships, physical complaints, paranoid thoughts, phobia, obsession, anxiety and psychosis)?

5) Is there any significant difference between different grades and mental health?

6) Is there any significant difference between the study field and mental health?

3. Research Hypotheses

1) There is a significant difference between total mean of mental health among male and female students.

2) There is a significant difference between mean of special aspects of mental health among males and females.

3) There is a significant difference between different grades and mental health.

4) There is a significant difference between different study fields and mental health.

4. Methodology

The current study is of a descriptive-cross sectional design seeking to consider the mental health based on gender, study field, and grades of high school students in Khouzestan province.

5. Participants

The population included all the students who studied in high schools of Khouzestan province in the academic year 2006-2007. The researchers selected 1000 students-514 males (51.4%) and 486 females (48.6%), aged ranging from 14 to 19. They studied mathematics, Humanities, experimental science, technical as first, second and third graders. The sampling method was of the multistep random cluster type which also benefited the information from the statistics Bureau of the Educational Administration in Khouzestan province.

6. Instruments

The researchers used two questionnaires to gather the data: 1) the personal information questionnaire to get the participants' personal information, 2) the SCL-90-R questionnaire to assess the students' mental health. This questionnaire contained 90 questions to evaluate the psychological symptoms reported by the participants. Its first form was presented by Derogatise et al. (1973, cited in Hosseini Fard et al. 2002) and revised after clinical and psychometric analysis, then its final form was presented in 1976. This questionnaire consists of nine psychological aspects such as physical complaints, depression, hostility, phobia, obsession, sensitivity in interpersonal relationships, anxiety, paranoid thoughts and psychosis. The responses in each domain must be given in a five-option index within a 12-15 minutes-long time (Derogatise, 1983, cited in Hosseini Fard et al. 2002). The scoring and interpreting of the data were done based on the global severity index (GSI), positive symptom distress index (PSDI), and positive symptom total (PST). Derogatise (1983, cited in Hosseini, 2002) calculated the reliability of the nine aspects through internal consistency and test-retest. The internal reliability was considered as satisfactory and the maximum and minimum were calculated respectively for depression and psychosis. Moreover, the test-retest reliability was estimated between 0.78-0.90.

Mirzaee (1981) conducted a study on 2241 clinical patients and healthy individuals, he calculated the test reliability in all the nine aspects except aggressiveness, phobia and paranoid thoughts, and it was higher than 0.80. The results of construct validity showed that this test can be used as an instrument to diagnose the mental disorders symptoms. In Hosseini Fard et al.'s research (2002), the global reliability index of psychological symptom was 0.86. In the present study, the test reliability was calculated by split-half way and Cronbach's alpha to be 0.96 and 0.95 respectively. Moreover, the validity was reported satisfactory. In the Derogatise et al. (1975, cited in Hosseini Fard et al. 2002), concurrent validity of nine aspects with Minnesota Multiphasic Personality Inventory was 0.36-0.73. In addition, Yar Ahmadi (1997) calculated the reliability coefficient between 0.27-0.56, also Reza Pur (1997) estimated it between 0.38-0.66.

7. Procedures

In this research, two scores were allocated to participants' responses to the questionnaire: first, the global index of psychological symptoms (mental health) obtained on 90 questions, the second was the score on each aspect such as depression, anxiety, as the special index of psychological symptom. So in the study, the raw scores in all tests were considered as mental health index and their raw scores in special aspects of mental health as the mental health special index. Individuals who got lower scores, had better mental health, vice versa. Also the students' scores in different grades and fields changed to T scores and students who's their T scores were higher than cutting-off score were regarded as individuals who had mental disorders symptoms commonly. The researchers used SPSS software to analyze descriptive statistics-frequency, mean, variance, standard deviation- and inferential statistics-independent t-test, one-way ANOVA variance analysis.

8. Results

Table 1 showed the whole sample size including 1000 students, 514 males (51.4%) and 486 females (48.6%).

Table 1. The frequencies of the sample data due to gender

Gender/index	Frequency	Percentage
Females	486	48.6
Males	514	51.4
total	1000	100

Regarding the results of table 2, the sample included 297 students (29.7%) in general course, 261 (26.1%) in Humanities, 177 (17.7%) in experimental science, 226 (22.6%) in mathematics, 39 (3.9%) in technical course.

Table 2. The frequencies of the sample due to course

Course/index	frequency	percentage
General	297	29.7
Humanities	261	26.1
Experimental Science	177	17.7
Mathematics	226	22.6
Technical	39	3.9
total	1000	100

Table 3. The frequencies of the sample due to the grade

Grades/index	Frequency	Percentage
First	297	29.7
Second	272	27.2
Third	431	43.1
total	1000	100

Table 3 showed that the frequency of sample with regard to the grade: 297 students in first grade (29.7%), 272 in second grade (27.2%) and 431 in third grade (43.1%).

The mental health questionnaire was distributed among

1000 students. After taking them, the researchers found that 47 questionnaire were incomplete, so they put them aside. Thus, the final analysis was performed for 953 students. According to the results in table 4, the mean of mental health among females (141.47) was higher than males (113.2). Also the results of independent t-test showed that there was a significant difference between the mean of males and females' mental health in the level of $P \leq 0.001$. Therefore, the first hypothesis is confirmed, and female participants had lower mental health than males.

The results of table 5 indicated the prevalence of mental disorders in the general course students (first grade), Humanities, experimental science, mathematics and technical course were 8.8, 14.34, 6.6, 10.41 and 23% respectively. Moreover, findings revealed that the prevalence of mental disorders in different grades were: first grade students 8.8%, second grade 15.02% and third grade 9.6%.

According to the findings in table 6, there was a significant difference between mean of males and females health in the nine aspects of mental health (depression, aggressiveness, sensitivity in interpersonal relationships, paranoid thoughts, phobia, obsession, anxiety and psychosis) except hostility in the level of significance- $P \leq 0.001$. And female subjects' mental health in eight aspects than males. So the second hypothesis is confirmed.

The results of table 7 revealed that the mental health of second graders was lower than first and third graders. The researchers used one-way ANOVA to compare the mental health in different grades.

Table 8 showed that there was a significant difference between the total mean of mental health in different grades in the level of $P < 0.05$ and Tokay test used to see the differences. So comparison of means revealed that there was a significant difference between the mean of mental health in first grade with second grade, and second grade with third grade in the level of $P < 0.05$, although there was no significant difference between mean of the first and third grade' mental health. Therefore, the third hypothesis is confirmed.

Table 4. The mental health indexes due to gender

Gender/index	N	Mean	Std. Deviation	Std. Error	T-observed	Sig.
Females	452	141.47	64.22	3.02		
Males	501	113.2	56.07	2.5	7.25	*P< 0.001

Table 5. The frequencies of total index of mental symptoms due to course and grade

Course/grade /statistical index		N	Frequency	percentage
course	General	282	25	8.8
	Humanities	244	35	14.34
	Experimental Science	167	11	6.6
	Mathematics	221	23	10.41
	Technical	39	9	23
Grade	First	282	25	8.8
	Second	253	38	15.02
	third	418	40	9.6

Table 6. The certain indexes of mental health due to gender

	Males				**Females**					
Mental aspects/Gender	N	μ	S	se	N	μ	S	se	t	Sig.
Physical complaint	501	13.31	8.92	0.39	452	17.91	10.38	0.48	7.48	P≤0.001
Obsession	501	14.55	7.42	0.33	452	17.35	7.97	0.37	5.7	P≤0.001
Depression	501	15.16	9.57	0.42	452	20.43	11.67	0.54	7.74	P≤0.001
Sensitivity	501	12.66	6.98	0.31	452	15.45	8.1	0.38	5.78	P≤0.001
Anxiety	501	12.09	7.65	0.34	452	16.98	9.51	0.44	8.91	P≤0.001
Hostility	501	8.73	5.37	0.24	452	8.76	5.36	0.25	0.1	P>0.05
Phobia	501	4.94	4.49	0.20	452	7.64	5.49	0.25	8.47	P≤0.001
Paranoid thoughts	501	10.19	5.18	0.23	452	12.34	5	0.23	6.62	P≤0.001
psychosis	501	11.12	7.22	0.32	452	12.49	7.7	0.36	2.87	P≤0.001

Table 7. Comparison of the mental health mean in different grades

Grades/Index	N	Mean	VarianceStd. Deviation		Std. Error
first	282	121.96	4005.62	63.29	3.77
Second	253	136.11	4199.04	64.80	4.07
Third	418	126.61	3373.29	58.08	2.84

Table 8. The One-Way ANOVA for the mean of mental health in different grades

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	31769.18	2	15884.59	4.203	P<0.05
Within Groups	3590691.61	950	3779.67		
Total	3622460.79	952			

According to the results of tables 9 and 10, there was no significant difference between different field studies regarding mental health (P>0.05). So, it can claim that the fourth hypothesis is rejected.

Table 9. The status of the mental health aspects in different courses

Course/Index	N	Mean	Variance	Std. Deviation	Std. Error
General	282	123.49	4041.14	63.57	3.79
Humanities	244	132.66	4079.38	63.87	4.09
Experimental science	167	122.73	3481.83	59.007	4.57
Mathematics	221	126.74	3520.05	59.33	3.99
Technical	39	129.78	3275.27	57.23	9.17

Table 10. The One-Way ANOVA for the mental health in different courses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18533.79	4	4633.45	1.22	P>0.05
Within Groups	3603927	948	3801.61		
Total	3622460.79	952			

9. Discussion and Conclusions

In this study, the prevalence of mental disorders was 10.8% including general course 8.8%, Humanities 14.34%, experimental science 6.6%, mathematics 10.41% and technical course 23%. The prevalence of mental disorders was among the first graders 8.8%, second graders 15.02 and third graders 9.6%. Also the results showed that there was a significant difference between the mean of males and females' mental health in the lower level of P< 0.001. Moreover, there was a significant difference between the mean of mental health in the nine aspects (depression, aggressiveness, sensitivity in interpersonal relationships, physical complaints, paranoid thoughts, phobia, obsession, anxiety and psychosis) except hostility. So, the study claimed that males had lower level of mental health than males. In addition, a significant difference was found between the mean of second grade students who had lower mental health than first and third grades students. But in this research, there was no significant difference between the mean of mental health among students in different study fields.

The research findings were consistent with the studies conducted by Bolhuri (1994)-showing 12.5% prevalence-, Palahang et al. (1995)-11.8% prevalence-, Bagheri Yazdi (1994)-reporting 11.7% prevalence-, Hosseini Fard et al. (2002), Sadeghian et al. (2009), Soltanian et al. (2005) and some parts of Abbas Zadeh' research (2004). So, it can be claimed that the prevalence of mental disorders among people especially among students is unavoidable. Also the results of these studies showed that females had lower levels of mental health in each aspect compared to the male subjects.

On the contrary, the results of the study had some differences in comparison to some previous studies such as Soltanian et al. (2005)-showed 40.7% prevalence (first grade 37%, second grade 40.4%, third grade 44.5%, in general course 37.8%, Humanities 46.4%, experimental science 43% and mathematics 38.7%), Yousefi et al. (2000)-showed 44.5% prevalence-, Hosseini Fard et al. (2000)-indicated 51.8% prevalence-, Abbas Zadeh (2004)-reported 58.8% prevalence-, Mousavi et al. (1998) reported 44.5% prevalence. Such differences may have resulted from differences in samples, sampling method, different instruments and procedures or the cultural and social differences in the studied samples.

10. Limitations of the Study

This study like any other study include some shortcomings as follows:

1) Lack of enough related literature especially in high school fields and grades.

2) The current research administered at high schools in Khouzestan province, so it is to cautiously be generalized to other geographical areas and other educational levels.

3) The study was conducted in state schools, and some principal had no or little cooperation in carrying out the study.

4) The long questionnaire impinged on students' tolerance and made them tired.

11. Suggestions

Student life is a time of change and adjustment, and students' families as well as staff need resources to help them provide support for students experiencing mental health difficulties. [Nicky, S, Manthorpe, j, 2002].

a) Similar to other works, this research showed that females had mental health than males, so it can be advised that authorities and managers provide opportunities to do political, legal and advertising activities and remove the customer result to the gender discrimination and threat the females' mental health.

b) The Education Administration can hold the mental health meetings in each area for teachers and school personnel to increase their awareness in the case of students' mental health.

c) Having the family training classes in mental health

especially in schools to increase parents' awareness.

d) Cooperation of educational counsellors in mental health affairs of high schools to diagnose the mental disorders and prevent to them.

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