

A Survey on General Health among students of guidance schools

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ABSTRACT

In recent years, the prevalence of mental disorders has increased and the prevalence of 18-23% is reported for Iran. This study aims to evaluate psychological aspect of general health status of children in Ilam city, located in Iran using a questionnaire. This study is a descriptive-comparative research that measures general health of boys and girls in schools. The required information is obtained by means of the GHQ-28 standard questionnaire which distributed among 118 children. The general health is divided into four categories, in which the dangerous group receives the higher scores in the range of 64-84. The SPSS software is used for data analysis. The sample consisted of 64 (54%) boys and 54 (46%) girls and overall score of children are classified into four categories. Among the samples, 38 participants (32.2%), 61 children (51.7%), 17 children (14.7%) and two persons (1.7%) are received the scores of 0-21, 22-42, 43-63 and 64-84, respectively. Also, the statistical association is observed between age, grade and general health of participants ($P < 0.05$). Relatively large numbers of children possessed good general health status. It is found that as age of participant is increased its general health degrades.

Key words: General Health; Mental Disorders; Children; GHQ-28

INTRODUCTION

Health science is an important factor in advancement of the health and welfare in societies. The health is a complex term and consists of many types. Mental health science is the branch of health science deals with social behaviors and mental disorders. The concept of mental health is based on well-being, self-reliance, capacity of competition and self-actualization. A mental healthy man faces with the problems logically and adapts itself quickly to the environment. In recent years, the mental health has received much attention due to this fact that mental health is not limited to the absence of mental disorders and has an important as physical health. According to the World Health Organization reports [1], mental illness quickly replaced its role with infectious diseases and it retards the abilities of human ultimately leads to premature deaths. Population growth, rapid change in social behaviors and economic problems has increased mental disorders in developing countries [1]. In addition,

some factors like employments of women and responsibility for caring the aged parents has caused an increase in mental illness. These reasons are strongly affected on emotional health leading to emotional breakdown, financial difficulties and weakness. The depression, anxiety, paranoid and somatic symptoms are observed for mental disorders, respectively [2]. Schools, societies, the environments can adapt with each other using education to prevent and treat of mental disorders. Children make a large part of our population and schools play a critical role for emotional and mental health of children. In addition, responsibility of teachers is not limited to develop of muscle strength and familiarize of children with cognitive, social behaves; they are also responsible for providing emotional maturity and mental health of children. Mental health of children is very important and higher level of mental health will results in enhancement in children's health fulfilling the goals of education system and reduction in academic

failures. The general health questionnaire (GHQ), with many versions, is extensively used to investigate mental health [3-5]. Generally, the GHQ is found to be good reliability and validity in general populations [6]. The GHQ is translated from English into different languages and is used in different cultures [7-11]. The original GHQ consists of 60 items but 30, 28 and 12 items version are derived from it [12]. In despite of that Iran has a large school-based population and is a youth country; it appears there is no published study in the subject of children's general health in Iran. In present study, the general health is evaluated for children that educate in secondary schools of Ilam city, province of Iran at 2012 using GHQ-28.

METHODS

The present paper is a descriptive- cross sectional study that evaluates general health of children in the secondary schools of Ashrafi Nemati and Adab for boys and Tazkie and Marzie for girls in the period of September 2011 to September 2012 in Ilam, Iran. The participants were 118, both boys and girls in the age range of 11-15 years, based on the Mourgan's table [4]. The main instrument used to determine general health of children is the standard general health questionnaire, GHQ-28, in this study. The Persian version of the 28-item GHQ-28 is used to evaluate general health of children in secondary schools of Ilam. The participants are randomly invited to complete the GHQ-28 and they returned the questionnaire to the researcher. Before commencing data collection, the researcher explained the significance of investigation and discussed the research strategy. Also, children are asked to fully complete the questionnaire and a questionnaire is considered invalid if answers were missing for one or more questions. The major areas of the questionnaire were (1) somatic/ bodily symptoms (7 items), including headache, feel of weakness, hot or cold in their body and drugs usage, (2) anxiety/ stress status (7 items), including sleep status, feeling under strain and anxiety, (3) social functioning (7 items), including learning status, life enjoying and ability to do routine duties and (4) severe depress status (7 items) including feel of being worthless, suicide and no hope. The subscales of somatic, anxiety, social dysfunction, and severe depression were measured in the GHQ-28. Each

item in the GHQ is rated on a four-point scale (0-1-2-3) which 0 represents the answers of "not at all"; 1 for "somewhat/same as usual," 2, "rather more than usual," and 3, "much more than usual". The scores on each scale fall into a range of 0 to 21, and the overall score ranges from 0-84 based on the defined four subscales. The higher scores indicate higher level of distress or poorer status of general health. Data analysis is conducted by SPSS (IBM Co, SPSS) version 19.0 and reliability analysis of the GHQ-28 is performed using the Cronbach's coefficient, α . Cronbach α for the whole sample is considered 0.8, which is acceptable for internal reliability [4].

RESULTS

Results from the analysis of demographic data show that the sample consists of 64 boys and 54 girls. 31 persons were 11-12years, 49 of participants had 12.1-13 years (the highest proportion), 31 persons had 13.1-14 and 7 persons had more than 14 years. 24, 38 and 38 of children had the Grade per average (GPA) of 19.1-20, 18.1-19 and 17.1-18, respectively. Rest of participants (17 persons) had the GPA of less than 17. These illustrations are tabulated in Table 1. From the four subscales, the distributions of stress, depress, social functions and somatic pains are calculated 33.02, 29.28, 28.41 and 26.92, respectively. The mean average scores for the age groups of 11-12, 12.1-13, 13.1-14 and higher than 14 years equal to 16.62, 32.10, 32.62 and 36, respectively. Also, the results showed that the overall score is 28.04 for boys and 29.09 for girls.

Table 1. Demographic data of the samples

Demographic Variables		Frequency (%)
Age	11-12	31(26.3)
	12.1-13	49(41.5)
	13.1-14	31(26.3)
	>14	7(5.9)
Gender	Boy	64(54.2)
	Girl	54(45.8)
Grade	First Grade	26(22)
	Second Grade	66(55.9)
	Third Grade	26(22)
Average of scores	19.1-20	24(20.3)
	18.1-19	38(32.2)
	17.1-18	38(32.2)
	<17	18(15.3)

Table 2. The mean scores of participants based on defined four scales

Demographic Variables		Somatic symptoms		Anxiety symptoms		Social dysfunction		Depression		Overall score	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	11-12	3.92	0.778	5.15	1.329	4.23	0.914	3.62	1.180	16.62	3.959
	12.1-13	7	1.007	8.95	0.970	8	0.876	8.14	1.438	32.10	3.474
	13.1-14	9	0.994	9.92	1.263	6.85	0.898	6.85	0.823	32.62	2.984
	>14	7	1.528	9	1.000	9.33	1.202	10.67	2.667	36	2.887
Gender	Boys	6.78	0.863	7.26	0.739	6.67	0.784	7.33	1.241	28.04	3.068
	Girls	6.65	0.819	9.35	1.143	6.96	0.756	6.13	0.830	29.09	3.059
Grade	First Grade	3.73	0.752	4.73	1.471	3.73	0.925	2.91	1.194	15.09	4.060
	Second Grade	7.53	0.672	10.18	0.745	8.39	0.592	8.18	0.916	34.68	2.050
	Third Grade	6.64	1.702	6.73	1.258	5.82	1.271	7.09	1.993	26.27	5.449
Average scores	19/1-20	4.20	0.757	5.40	1.579	4.0	1.080	4.20	1.659	18.70	4.328
	18/1-19	8.25	0.968	10.19	0.754	7.38	0.921	7.44	1.294	33.25	3.313
	17/1-18	6.13	1.129	6.56	1.107	6.56	1.118	6.81	1.43	26.06	4.245
	17>	8	1.69	11.13	1.846	8.50	0.926	8.43	1.927	36.25	3.811
	Overall	26.58	4.544	33.28	52.86	27.34	4.045	26.88	6.310	114.26	15.697

Table 3. Correlation of demographic variables with general health scales

Demographic Variables		Depression	Social dysfunction	Anxiety symptoms	Somatic symptoms	Overall score
Age	Pearson Correlation	0.374	0.331	0.334	0.445	0.428
	P value	0.008	0.019	0.018	0.001	0.002
Grade	Pearson Correlation	0.254	0.113	0.100	0.213	0.178
	P value	0.075	0.433	0.491	0.137	0.217
Grade per average (GPA)	Pearson Correlation	0.241	0.240	0.165	0.159	0.271
	P value	0.092	0.093	0.251	0.270	0.056

Table4. Two-way analysis of age and academic education versus GHQ subscales

Age	Education	Mean Somatic symptoms	Mean Anxiety symptoms	Mean Social dysfunction	Mean Depression	Mean Total
11-12	First Grade	1.55	3.73	4.73	2.91	15.09
	Secondary Grade	3.55	5.00	7.50	7.50	27.00
	Total	1.85	3.92	5.15	3.62	16.92
12-13	Secondary Grade	2.43	7.14	9.64	9.07	34.64
	Third Grade	2.71	6.71	7.57	6.29	27.00
	Total	2.52	7.00	8.95	8.14	32.10
13-14	Secondary Grade	2.83	9.33	11.25	7.25	36.00
	Third Grade	2.75	6.50	5.25	8.50	25.00
	Total	2.81	8.63	9.75	7.56	33.25
Total	First Grade	1.55	3.73	4.73	2.91	15.09
	Secondary Grade	2.68	7.93	10.18	8.18	34.68
	Third Grade	2.73	6.64	6.73	7.09	26.27
	Total	2.44	6.72	8.22	6.68	28.52

Table 5. Responds to GHQ

GHQ scales	Question	Percent %			
		Much more than usual	Rather more than usual	No more than usual	Not at all
Somatic	1-What were you feeling about your health during past month?	6	14	42	38
	2-Did you ever felt that you need drug reinforcement, during past month?	14	10	42	34
	3-Did you ever felt weakness during past month?	8	18	42	32
	4-Did you ever felt that you are ill during past month?	8	26	28	38
	5-Did you ever have headache during past month?	6	22	46	26
	6-Did you ever felt that your head is tightly tied with something like scarf or pressure is applied to your head during past month?	4	10	38	48
	7-Have you ever felt that your body is cold or hot, in past month?	8	18	36	38
Anxiety	8-Did you ever felt insomnia due to concerns since past month?	12	32	22	34
	9-Did you ever wake up in middle of night since past month?	16	30	30	24
	10-Did you ever felt that you are constantly under pressure since last month?	8	26	28	38
	11-Did you ever get angry and grumpy since last month?	12	36	34	18
	12-Did you ever afraid without any convincing reason since last month?	0	24	46	30
	13-Have you noticed that doing whatever is beyond of your abilities, since last month?	8	18	38	36
	14-Have you noticed that you are nervous and worry all of the time since last month?	6	26	34	32
Social functioning	15-Did you find yourself busy over that past month?	8	14	42	36
	16-Did happen for you that you are spending more time longer than usual to do your works, since last month?	4	24	42	30
	17-Generally, did you feel that you are doing your jobs better than last month?	4	24	42	30
	18-Are you satisfying from doing your jobs since last month?	6	20	38	36
	19-Did you ever feel that you have a critical role in your duties in the last month?	4	16	44	36
	20-Did you were able to decide on your affairs since last month?	10	18	46	26
	21-Have you ever feel enjoy from your routine activities in last month?	2	16	48	34
Depression	22-Have you ever felt that you are worthless person during last month?	12	10	30	48
	23-Have you ever felt that your life is completely hopeless in last month?	12	26	28	34
	24-Have you ever felt that life does not worth living in last month?	14	22	28	36
	25-Did you ever think of suicide since last month?	18	4	16	62
	26-Have you ever felt that you are unable to do your affairs when you are angry in last month?	18	18	32	32
	27-Have you ever concluded that it is best for you to die and get rid of life, in past month?	14	10	20	56
	28-Did you think a thought that to end your life since last month?	16	8	16	60

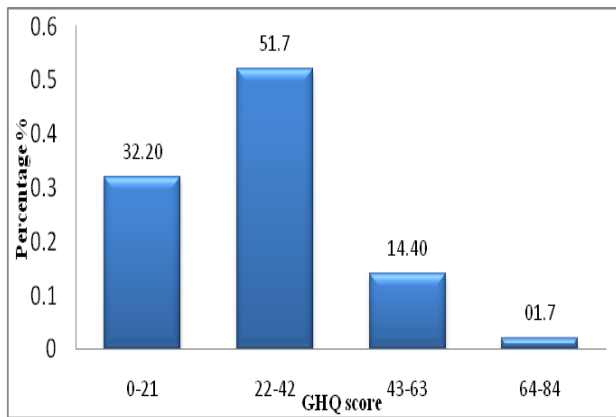


Figure 1. Classification of general health status of children

The T-independent and one-way ANOVA tests are utilized to find the statistical association between demographic variables with the general health subscales as shown in Table 2. From this table, the statistical association is observed between the age of children with somatic, anxiety and social symptoms which means that increase in age of children yields to enhance in their general health ($P < 0.05$). In the other words, young children are healthier than older ones. However, no significant association is found between depression/age, and somatic/social and anxiety functions ($P > 0.05$). The results also showed that there is a significant association between education of children with their somatic, anxiety and social dysfunctions ($P < 0.05$). From the results, it is observed that the children in the second grade have received higher scores in comparison with rest of the participants. Though, no association between GPA/ somatic complaints and anxiety/depression symptoms is observed ($P > 0.05$); a significant correlation is found between GPA and anxiety, in the sample ($P < 0.05$). Moreover, the children with GPA of less than 17 possessed higher social health score thus, the rest of participants were healthier than the mentioned age group.

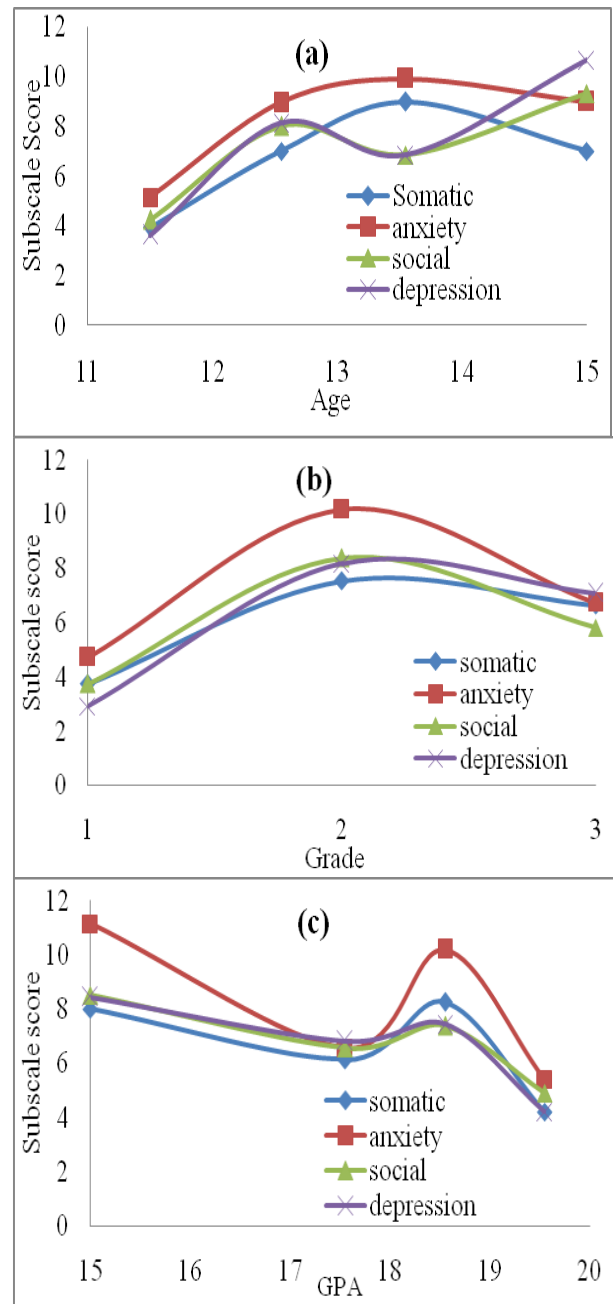


Figure 2. Communications between GHQ scales respect to (a) age, (b) grade and (c) GPA.

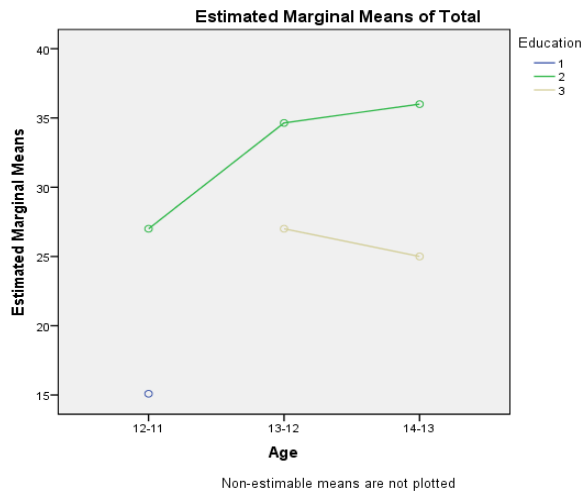


Figure3. Two-way ANOVA analysis of age and academic education of children with their total score of GHQ

The hypothesis II describes an association between children's general health versus their genders. According to the data presented in Table 2, though the overall scores of girls under study are higher than that of boys which means that boys are healthier than girls; no statistical association is found for this hypothesis ($P > 0.05$). The hypothesis III relates age of children with their general health status. The data of Table 3 clearly show that a statistical association is observed for age of children with overall score ($P < 0.05$). From the information given in Table 2, it is seen that as age of children increases, overall score rises. It means that young children are healthier than older ones which confirm the hypothesis III. The hypothesis IV shows the relationship between education grades of children with their general health. According to Table 2; the results indicate that since the grade of children enhances their general health score increases. In confirmation of hypothesis IV, general health decreases with an increase in children age.

Figure 1 shows the overall scores of children which are divided into four subscales. It is seen that 38 participants (32.20%) have the scores between 0-21 which shows this matter that they are healthier than others. From this figure, it can be concluded that only 1.7 % of sample are susceptible to mental illness and large number of children have relatively good general health status.

Figure 2a shows that average scores of somatic and anxiety signs for children with the age range of 13.1-14 are more than others which implies some perils for these children. Figure 2a also shows that since students get older, their social functioning and depression will increase leading to disorder in their social behaviors. Figure 2b depicts that score of children in the second grade is more than other groups in all general health subscales therefore; this group possesses low general health status. In addition, Figure 2c reveals that higher GPA leads to higher level of general health. Figure 3 that shows the Two-way ANOVA analysis indicates that scores of children increases with their age as given in Table 4 and Table 5.

DISCUSSION:

Basically, general health is complex and even it becomes a primary concern to all organizations and academic centers. Knowledge of general health and its influence on people life is of important, especially in developing countries. Continuous research and understanding of this phenomenon can be used to rebuild destructive general health actions and improve them. The results of present research show that only 1.7 % of participants possessed severe general health status. Mohammadi et al. [13] have found that 4.34 % of participants do not have desirable status of general health. They also observed that the prevalence of general health is 5.45 and 2.9 % for girls and boys, respectively. These observations are totally consistent with our results. Bridges and Goldberg [4] are also shown that 23.8 % of children have earned high scores in UK. It is noted that higher score of general health implies suspicion to mental disorders. These results are not consistent with the current research findings due to different education system of students in UK and Iran. The results of the current study indicated that high scores are found for anxiety, depression, social and somatic complaints, respectively. It means that children are healthier in the view of somatic area compared to other subscales. Moradi et al. [14] has reported that 2.56 % of children are physically impaired and their results are reasonably consistent with our findings. However, Yaghoobi et al. [15] and Nourbala et al. [16] have shown that highest

frequency of positive responses is related to somatic signs. The results of Yaghobi et al. [15] and Nourbala et al. [16] are also inconsistent with our findings due to different ages of research participants in survey. Moreover, there is a statistical association between children's general health with their social functions. Yaghobi et al. [15] have shown that girls' general health is higher than boys that these data are inconsistent with our results due to different time of researches. However, Nourbala et al. [16] are observed a relationship between social scales with other main areas which is consistent with our findings. According to the current research results, there is an association between depression and education grade of children which is compatible with Masoudzad et al. [17] work. According to our research, children with the age range/of 13-14 years are at greater risk than other age groups and score of anxiety was higher than

the other subscales which are in agreement with Salehian et al. [18]. It should be noted that this age is maturity age of children hence, higher status of anxiety is in relation to their fear of future.

CONCLUSION

A relatively good general health status is found for large part of participants. In order to reduce the stress and environmental problems of children during their educations, the preventive actions regarding to stress with the help of behavioral scientists, especially psychologists and counselors to prevent the stress is a suitable choice for thus children. Though the present research covered general health of children in secondary schools, it is recommended that future research focus more on general health of older students in high schools.

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