آموزش های تخصصی ویژه از های ویژه کارکنان و فیلم‌های آموزشی

اصول تنظیم قراردادها

پروپوزال نویسی

آموزش مهارت‌های کاربردی در تدوین و چاپ مقاله
Frequency of Psychological Disorders amongst Children in Urban Areas of Tehran

Ali Alavi, MD1
Mohammad Reza Mohammadi, MD2
Narges Joshaghani, MD2
Javad Mahmoudi-Gharaei, MD2

1. Department of psychiatry, Hafez hospital, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Psychiatry and Psychology Research Center, Department of psychiatry, Roozbeh hospital, Tehran University of Medical Sciences, Tehran, Iran.
3. Department of psychiatry, Roozbeh hospital, Tehran University of Medical Sciences, Tehran, Iran.

Corresponding author:
Ali Alavi, MD
Assistant Professor of Child and Adolescent Psychiatry, Department of psychiatry, Shiraz University of Medical Sciences, Hafez Hospital, Shiraz, Iran.
Email: alialavi@sums.ac.ir

Objective: To evaluate the frequency of different psychiatric disorders among 7 to 12 years old children in urban areas of Tehran.

Method: A sample of 799 children (6 to 11 years old) were selected from 250 clusters of the entire 22 municipality areas of Tehran using a multistage sampling method from 250 clusters from the entire 22 municipality areas of Tehran. After responding to a Persian version of the Strengths and Difficulties Questionnaire (SDQ) parent-report form, the Persian version of Kiddie Schedule for Affective Disorders and Schizophrenia – Present and Lifetime (K-SADS-PL) was administered to 241 children and their families. The frequency of child psychological disorders was determined using the results of K-SADS-PL.

Results: The overall frequency of any psychological disorders in the sample of children was 17.9 percent. Among the interviewed children, the most prevalent diagnoses were Attention-Deficit/Hyperactivity Disorder (ADHD) (8.6 percent), Oppositional Defiant Disorder (ODD) (7.3 percent), and separation anxiety disorder (SAD) (5.9 percent). There were no statistically significant differences between sexes in the frequency of psychological disorders except enuresis that was more frequent in the boys and anorexia nervosa that was observed more frequently in the girls.

Conclusion: Higher frequency of ADHD and ODD and SAD among the studied children warrants more specific evaluation of frequency and possible causes of these high frequency rates. The frequency of psychological disorders in the studied children was comparable to the that of other studies.

Keywords: Children, Epidemiology, Mental disorders, Urban population

Iran J Psychiatry 2010; 5:2:55-59

Psychological community studies are helpful in evaluating the socio-demographic correlates of mental disorders in a given community (1). Social, Cultural, political, and economical changes may influence physical and mental health of children and adolescents (2). On the other hand, the psychological disorders are relatively costly (3). Although psychological disorders were known for centuries, it was only at the recent decades that statistical methods were used to determine their exact frequencies (4).

Studies about frequency of child and adolescent psychological disorders in different parts of the world are very different and diverse. For example, a review about frequency of behavioral and emotional problems in developing countries showed that frequency of child psychological disorders in large cities is 10 to 20 percent that is equal to those of developed countries (5). In four studies in India, Columbia, Philippines, and Sudan, the frequency of psychological disorders reported to be 12 to 29 percent (6). In the other words, as Flettlich-Bilyk and Goodman noted in their study in Brazil, at least one in 8 school aged children have major psychological disorders that cause distress or social impairment (7). Abou-Saleh, Gubash, and Daradkeh, in a study at 2001 reported that the frequency of ICD-10 psychological disorders at Al-Ain, United Arab Emirates, is equal to 8.2 percent (8). These frequencies in Nigeria were about 15 percent, and the most frequent disorders included those with emotional and conduct problems (9). In a study conducted in the United States, it has been reported that 5 percent of 7 to 14 year-old children had significant behavioral or emotional disorders that had impact on their functioning, learning, friendship, family life and leisure activities (10). In a study from Norway, it was reported that one third of the children had minor perceived problems and about 5 percent had definite or severe disorders (11).

Iran as a developing country is undergoing significant social, cultural, and economic changes that can influence its populations' mental health status. According to recent surveys, Iran has a population of
Methods and Materials

Participants

The cases were selected by multistage, cluster sampling method. The studied population included all of the children between 6 to 11 years of age in all of the municipality areas of Tehran. The cases were selected from 250 clusters of the 22 municipality areas of Tehran, proposed by Iran National Statistics Organization according to their population. The locations and directions of moving in the course of samplings were defined exactly using a detailed 1:14000 map of Tehran (14). A Persian version of the Strength and Difficulties Questionnaire (SDQ) parent-report form was used as the screening tool. The children who had scores in the total problem score or each of the subscales higher than the cutoff points determined by Goodman et al (15) were referred for further evaluation. The evaluation was done using the Persian version of Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Life-time (K-SADS-PL).

Study design

Cases were selected from each cluster from both sexes, among each age group (6-8 and 9-11 year olds). Using the sampling protocol of the study, the cases were found by one of the 6 teams consisting of two clinical psychologists of both sexes. The clinical psychologists were instructed to complete the SDQ and achieved high inter-rater reliability after completing 5 questionnaires by the presence of the fellow of child and adolescent psychiatry in 3 consecutive sessions. They were also instructed on the sampling protocol and detailed locations of the clusters. After describing the objectives of the study to the parents of children and obtaining their oral consent, the examiners filled out the Persian version of the parent-report form of SDQ for each case. If the participants had any complaints about probable psychopathologies, they were instructed to refer to one of the child and adolescent psychiatrists collaborating in the study and their first session of the treatment was free of charge. The cases that had scores over the previously determined and validated cutoff points for the total score by Goodman et al. (15) and each of the subscales of SDQ were determined. In the case of any deficiency in the SDQ answer sheet, the case was excluded from the study. After evaluating the results of SDQ, the children with total or subscale scores higher and a random sample of the children with scores lower than cutoff points proposed by Goodman et al were selected (15). These children and their families were evaluated by the fellow of child and adolescent psychiatry or one of the child and adolescent psychiatrists using the Persian version of K-SADS-PL in the psychiatry and psychology research center of Tehran University of Medical Sciences.

In the case that the children or their families did not show up to the research center, a team consisting of two clinical psychologists referred to the children's home and interviewed the children and their parents for evaluation.

Statistical analysis

To evaluate the probable relationships between the demographic factors and occurrence of psychological disorders, t-student and Chi square tests were used when appropriate. The statistical analyses were done using SPSS-Win 15. Significance levels determined to be equal to 0.05.
Results

The present study is a descriptive-analytical one that was performed on children between 6 to 11 years of age in all of the 22 municipality areas of Tehran during 2007. The parent-report form of SDQ was filled completely for 799 cases. Among the studied children, 408 (51.1 percent) were female and 391 (48.9) were male. The mean age of the participants in this study was 8.9±1.43 years. The mean age of the male and female participants did not differ significantly (P > 0.05). Among them, 207 children collaborated in the second phase of the study and could be interviewed by K-SADS-PL. Thirty four children with scores lower than Goodman's cutoff points were interviewed as well. Among the studied children, 206 (25.8 percent; 107 male and 99 female) had total problem scores higher than 17 in their SDQ (Table 1). As demonstrated in

Table 1, there were not any statistically significant differences in various problem scores of SDQ between sexes. The overall frequency of any psychological disorders in the studied children was 17.9 percent (Table 2).

Among the children who were interviewed, the most prevalent diagnoses were Attention-Deficit/Hyperactivity Disorder (8.6%), Oppositional Defiant Disorder (7.3 %), and separation anxiety disorder (5.9%). The possible relationship between high SDQ scores and different disorders were evaluated and are shown in table 3. The total problem score scale and different SDQ subscales scores between responders and non-responders were compared and no significant differences were found.

Table 1. Frequency of Tehran children with scores higher than Goodman’s cutoff points in the subscales of the Strength and Difficulties Questionnaire, parent-report form.

| Cutoff point | Total N (%) | Male N (%) | Female N (%) | Significance (between sexes) |
|--------------|-------------|------------|--------------|------------------------------|
| Emotional problem | 5 168 (21.0) | 75 (19.2) | 93 (22.8) | NS |
| Conduct problem | 4 282 (35.3) | 134 (34.3) | 148 (36.3) | NS |
| Hyperactivity | 7 173 (21.7) | 94 (24.0) | 79 (19.4) | NS |
| Peer problem | 3 179 (22.4) | 97 (24.8) | 82 (20.1) | NS |
| Total difficulty | 17 206 (25.8) | 107 (27.4) | 99 (24.3) | NS |
| Prosocial behavior | 4 12 (1.5) | 9 (2.3) | 3 (0.7) | NS |

Table 2. Frequency of different psychological disorders in Tehran Children

| Disorders | Total N (%) | Boys N (%) | Girls N (%) | Significance (between sexes) |
|-----------|-------------|------------|-------------|------------------------------|
| Depression Disorder | 36 (4.5) | 17 (4.3) | 19 (4.7) | NS |
| Bipolar Disorder | 14 (1.8) | 6 (1.5) | 8 (2.0) | NS |
| Psychosis Disorder | 5 (0.6) | 1 (0.3) | 4 (1.0) | NS |
| Panic Disorder | 5 (0.6) | 1 (0.3) | 4 (1.0) | NS |
| Separation Anxiety Disorder | 47 (5.9) | 21 (5.4) | 26 (6.4) | NS |
| Social phobia | 24 (3.0) | 12 (3.1) | 12 (2.9) | NS |
| Phobias | 31 (3.9) | 12 (3.1) | 19 (4.7) | NS |
| Generalized Anxiety Disorder | 35 (4.4) | 16 (4.1) | 19 (4.7) | NS |
| Obsessive Compulsive Disorder | 17 (2.1) | 9 (2.3) | 8 (2.0) | NS |
| Enuresis | 24 (3.0) | 17 (4.3) | 7 (1.7) | 0.031 |
| Anorexia | 14 (1.8) | 1 (0.3) | 13 (3.2) | 0.001 |
| Bulimia | 11 (1.4) | 7 (1.6) | 4 (1.0) | NS |
| Attention Deficit Hyperactivity Disorder | 89 (8.6) | 134 (34.3) | 31 (7.6) | NS |
| Oppositional Defiant Disorder | 58 (7.3) | 32 (8.2) | 26 (6.4) | NS |
| Conduct Disorder | 21 (2.6) | 13 (3.3) | 8 (2.0) | NS |
| Tic Disorders | 5 (0.6) | 4 (1.0) | 1 (0.2) | NS |
| Substance Disorder | 2 (0.3) | 1 (0.3) | 1 (0.2) | NS |
| Post Traumatic Stress Disorder | 9 (1.1) | 3 (0.8) | 6 (1.5) | NS |

Table 3. The relationship between high scores in the SDQ subscales and different disorders in Tehran Children

| Subscale | Disorders |
|----------|-----------|
| Total difficulty | Depressive disorders, Panic disorder, Enuresis, Bulimia, Oppositional defiant disorder, Conduct disorder, Tic Disorder |
| Emotional problems | Depressive disorders, Panic disorder, Generalized anxiety disorder, Obsessive-compulsive disorder, Bulimia, Conduct disorder, Tic Disorder |
| Hyperactivity | Generalized anxiety disorder, Attention-deficit/Hyperactivity disorder, Oppositional defiant disorder |
| Prosocial Behavior | Depressive disorders, Separation anxiety disorder |
Discussion
In this study, the frequency of different psychological disorders in a community sample of children in Tehran was evaluated. There were not any statistically significant differences in the age distribution of the studied children in either sex; this makes the comparisons between the sex groups possible. The overall frequency of psychological disorders in the studied population was equal to that of other studies (7, 9, 16-21). However, the frequencies of some disorders (such as ADHD, ODD or CD) were higher than some previous reports. The rapid pace of cultural changes in Iran as a developing country and the ongoing shifts in the socio-cultural behaviors are factors that may produce some problematic behaviors. However, similar reports regarding the frequency of the above-mentioned disorders exist in some studies (18).

In another study, approximately one in eight school children in the study area in the southeast of Brazil have psychological disorders involving a level of distress or social impairment likely to warrant treatment (7). In a study from Puerto Rico, although 19.8% of the sample met the DSM-IV criteria without considering impairment, 16.4% of the population had 1 or more of the DSM-IV disorders when a measure of impairment specific to each diagnosis was considered. The most prevalent disorders were attention-deficit/hyperactivity disorder (8.0%) and oppositional defiant disorder (5.5%).

In Al-Ain, 23.9% of children were reported to have a mental health problem by either the parent or the school health physician (18), and this is higher than our report. Boys were more often reported to be having problems than girls (1.8:1). This finding is also different with ours. They used the Rutter A2 scale for parents; and the frequency estimate for behavioral disorders was 16.5%. The weighted frequency for DSM-IV disorders was 10.4% for the entire population. The presence of certain culture-specific risk factors such as male gender, number of children in the household, polygamy, and low socioeconomic status were identified for psychological disorders. They concluded that the frequency rates of children psychological disorders and the symptomatology observed in this Middle East community are similar to those reported in Western studies (18). The observed differences in their study with our results may be due to differences in the studied populations or the scales used.

In Denmark, the overall estimated frequency rate of child psychopathology was 11.8%. ADHD was found to be the most common specific child psychological disorder. There were no differences in frequency rates between respondents and non-respondents.

The estimated frequency rates were broadly comparable to frequency rates found in other epidemiological studies. The teacher-based interview proved to be a valid instrument for the assessment of non-respondents. (19)

In Australia, 14 percent of children and adolescents were identified as having mental health problems. Many of those with mental health problems had problems in other areas of their lives and were at increased risk for suicidal behaviors. Only 25% of those with mental health problems had attended a professional service during the six months prior to the survey (20).

In another study by Costello et al., although 3-month frequency of any disorder averaged 13.3% during the study period, 36.7% of the participants (31% of girls and 42% of boys) had at least 1 psychological disorder. Some disorders (social anxiety, panic, depression, and substance abuse) increased in frequency with increasing age, whereas others, including separation anxiety disorder and attention-deficit/hyperactivity disorder (ADHD) decreased (21). The results of this study support this idea.

In another multistage study in Finland, the overall frequency of psychological disorders in a sample of 8 and 9 year-old children was 21.8 percent. Like our study, ADHD was the most prevalent diagnosis (22).

Limitations
Among the 443 children with high SDQ scores, only 207 participated in the second phase of the study. This response rate is lower than ideal and may cause lower estimations of the frequency of psychological disorders than it could really be. Most of the similar reports faced similar problems. The response rate increased by referring to children's home but problems such as displacement, going on trips or lack of cooperation remained.

Conclusion
The overall frequency of psychological disorders in the studied children was comparable to that of other studies. ADHD was the most prevalent diagnosis. However, higher frequency of ODD and SAD among the studied children warrants more specific evaluation of frequency and possible causes of these high frequency rates.

Acknowledgement
The authors thank all children and their families for participating in the study. They also extend their thanks to the interviewers for completing the questionnaires and to the K-SADS interviewers for their helps and hard working. This study was supported by a research grant from Tehran University of Medical Sciences and national Mental Health Network.
References

1. Davies S, Heyman I, Goodman R. A population survey of mental health problems in children with epilepsy. Dev Med Child Neurol 2003; 45: 292-295.

2. Nikapota AD. Child psychiatry in developing countries. Br J Psychiatry 1991; 158: 743-751.

3. Smit F, Cuijpers P, Oostenbrink J, Batelaan N, de Graaf R, Beekman A. Costs of nine common mental disorders: implications for curative and preventive psychiatry. J Ment Health Policy Econ 2006;9: 193-200.

4. Goldberg D. The detection of psychiatric illness by questionnaire. London: Oxford University Press; 1973.

5. Taylor E, Fombonne F, Danckaerts M. Epidemiology of Mental Disorders in Childhood (W.H.O. Monograph). Geneva: World Health Organisation. (In press).

6. Giel R, de Arango MV, Climent CE, Harding TW, Ibrahim HH, Ladrigo-Ignacio L, et al. Childhood mental disorders in primary health care: Results of observations in four developing countries. Paediatrics 1981;68: 677-683.

7. Fleitlich-Bilyk B, Goodman R. Prevalence of child and adolescent psychiatric disorders in southeast Brazil. J Am Acad Child Adolesc Psychiatry 2004; 43:727-734.

8. Abou-Saleh MT, Ghubash R, Daradkeh TK. A1 Ain Community Psychiatric Survey. I. Prevalence and socio-demographic correlates. Soc Psychiatry Psychiatr Epidemiol 2001;36 :20-28.

9. Abiodun OA. Emotional illness in a paediatric population in Nigeria. East Afr Med J 1992;69 :557-559.

10. Simpson GA, Bloom B, Cohen RA, Blumberg S, Bourdon KH. U.S. Children with Emotional and Behavioral Difficulties: Data from the 2001, 2002, and 2003 National Health Interview Surveys. Adv Data 2005; 360: 1-13.

11. Ranning JA, Handegaard BH, Sourander A, March WT. The Strengths and Difficulties Self-Report Questionnaire as a screening instrument in Norwegian community samples. Eur Child Adolesc Psychiatry 2004; 13: 73-82.

12. Mohammadi MR, Davidian H, Noorbala AA, Malekazizi H, Naghavi HR, Pourtemad HR, et al. An epidemiological survey of psychiatric disorders in Iran. Clin Pract Epidemiol Ment Health 2005; 1:16.

13. Mohammadi MR, Alavi A, Mahmoudi-Gharaei J, Tehranidoost M, Shahrivar Z, Saadat S. [Prevalence of Psychiatric Disorders amongst Adolescents in Tehran]. Iranian Journal of Psychiatry 2008; 3: 100-104.

14. Ketab-e Avval. Ketabe Avval co. Tehran; 2005.

15. Goodman R, Meltzer H, Bailey V. The Strengths and Difficulties Questionnaire: a pilot study on the validity of the self-report version. Int Rev Psychiatry 2003;15:173-177.

16. Ghanizadeh A, Mohammadi MR, Yazdanshenas A. Psychometric properties of the Farsi translation of the Kiddle Schedule for Affective Disorders and Schizophrenia-Present and Lifetime version. BMC Psychiatry 2006; 6:10.

17. Canino G, Shrou PE, Rubio-Stipec M, Bird HR, Bravo M, Ramirez R, et al. The DSM-IV rates of child and adolescent disorders in Puerto Rico: prevalence, correlates, service use, and the effects of impairment. Arch Gen Psychiatry 2004;61:85-93.

18. Eapen V, al-Gazali L, Bin-Othman S, Abou-Saleh M. Mental health problems among schoolchildren in United Arab Emirates: prevalence and risk factors. J Am Acad Child Adolesc Psychiatry 1998;37:880-886.

19. Petersen DJ, Bilenberg N, Hoerder K, Gillberg C. The population prevalence of child psychiatric disorders in Danish 8- to 9-year-old children. Eur Child Adolesc Psychiatry 2006;15 :71-78.

20. Sawyer MG, Arney FM, Baghurst PA, Clark JJ, Graetz BW, Kosky RJ, et al. The mental health of young people in Australia: key findings from the child and adolescent component of the national survey of mental health and well-being. Aust N Z J Psychiatry 2001;35 :806-814.

21. Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003;60 :837-844.

22. Almqvist F, Puura K, Kumpulainen K, Tuompo-Johansson E, Henttonen I, Huikko E, et al. Psychiatric disorders in 8-9-year-old children based on a diagnostic interview with the parents. Eur Child Adolesc Psychiatry 1999; 8 :17-28.
۳۰ درصد تخفیف نوروزی در کارگاه‌ها و فیلم‌های آموزشی

اصول تنظیم قراردادها

پروپوزال نویسی

آموزش مهارت‌های کاربردی در ندوین و چاپ مقاله