

Epidemiology of mental disorders among adolescents in the city of Bandar Abbas, Iran, in 2012

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Abstract: Mental disorders are a very common health problem among adolescents. The purpose of this study was to determine the prevalence of mental disorders in high school adolescents in the city of Bandar Abbas in the 2012 academic year. In this study, the cluster sampling method was used to select 800 subjects from the student population of the high school, and a survey of their mental health was conducted by using the SCL-90-R questionnaire. The survey results were used to identify students who were suspected of having a mental disorder, and those students were evaluated using an interview method based on DSM-IV. The results showed that 16.7% of the 800 students included in the study had some mental disorder. Anxiety and mood disorders were the most prevalent mental disorders observed, with prevalence percentages of 85% and 39%, respectively. Among the demographic variables, 22% of the girls and 11% of the boys had some disorder. There were significant relationships between the mental disorders of the adolescents and a number of variables, including a family history of mental disorders, the occurrence of divorce in their families, drug addiction, and alcohol consumption. Mental disorders in the city of Bandar Abbas were more prevalent among adolescent girls than boys, and specific anxiety disorders, such as anxiety, obsessive-compulsive disorder, and depression, occurred more frequently than other mental disorders. Mental disorders were more prevalent among students from families in which there was a family history of mental disorders, divorce, drug addiction, and alcohol consumption.

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1. Introduction

The health of the population is one of the most important and fundamental issues in all countries, and three perspectives of health must be considered, i.e., physical, psychological, and mental health (Omidi et al., 2004). Mentally healthy people are those who are comfortable with themselves and their surroundings. The attributes of people who are mentally healthy include their abilities to enjoy life, control their behavior, make correct assessments of factual information, work effectively, and have a sense of well-being (Carson, 2002). However, in many countries, mental health has received very little attention because health priorities have been focused on such issues as infectious and contagious diseases (Sadeghi-Movahed et al., 2009). However, mental disorders are serious and common health problems, and, worldwide, they comprise almost 20% of total referrals to healthcare centers. The published statistics related to the prevalence of mental disorders in many countries around the world, including Iran, clearly indicate that mental illnesses should be considered as an important health priority. In 2002, the World Health Organization (WHO) announced that about 500 million people worldwide are suffering from various mental disorders, with about

half of them suffering from comparatively mild mental disorders, such as depression and anxiety (Hashemi-Nazari et al., 2008). It should be noted that many of the mental disorders in adulthood are, in fact, just continuations of disorders that originated during childhood and adolescence (Kaplan Sadock, 1998). Epidemiological studies of mental disorders that have been conducted in Iran have produced varying results, with estimates of the affected population ranging from about 12% to about 30% (Mohammadi, Davidian, and Noorbala, 2004; Noorbala, Mohammadi, and Bagheri Yazdi, 2000). According to research conducted by Ehsan Mannesh (2002), the prevalence of these disorders in Iran was in the range of 18% to 23%. Our review of the previous studies performed in Iran showed that the prevalence of mental disorders was increasing over time. For example, the prevalence of mental disorders in the rural population of Meybod, Yazd was estimated to be 16.5% (Bagheri-Yazdi, 1995), while, in a study conducted by Fayegh-Yousefi et al. (2001), the prevalence of mental disorders in male and female students in Kurdistan was reported to be 37.2%. Mousavi et al. (2000) reported that the prevalence of depression 15-17 year-old students in the high schools in Abbas was 44.5%, while Hosseini

et al. (2001) reported that the prevalence of mental disorders in students at the Mazandaran University of Medical Sciences was 51.8%. Considering that the adolescent years are when personal and social structure behaviors are formed, mental disorders that occur at this time can have serious and adverse effects on a person's ultimate capabilities, which determine her or his future and destiny. Hence, paying attention to the emotional and spiritual needs of adolescents is significantly important. In addition to our efforts to provide good healthcare and educational opportunities for our children, we also must understand the factors that can harm their mental and spiritual development and develop good solutions for preventing and compensating for these factors. To accomplish this, perhaps the first step is to study the prevalence of disorders and psychopathology so that we can make adolescents aware of these challenges and how to deal with them when they occur (Robert, 1998). Using this approach, we can assist the education system

in planning for the future of the adolescents and minimize the social and psychological damages that can occur when childhood and adolescent disorders are not treated properly, allowing them to continue into adulthood. In this way, the effects of mental health issues could be reduced throughout our society. The city of Bandar Abbas was chosen as the site for the assessment of the mental health of high school adolescents due to the special features associated with the city, such as being a coastal, border city; the influx of immigrants; and the hot and humid climate.

The purpose of this research was to study the prevalence of mental disorders in high school students of the city of Bandar Abbas, and the specific objectives of this study were:

1. To determine the prevalence of mental disorders in the adolescents of Bandar Abbas in the 2012 academic year
2. To determine the highest and lowest prevalence of mental disorders among the adolescents in the high school at Bandar Abbas during the 2012 academic year
3. To compare the prevalence of mental disorders among the adolescent girls and the adolescent boys in the high school at Bandar Abbas in the 2012 academic year.

2. Material and Methods

The study presented in this paper was a descriptive research study. The statistical population was all of the high school students in the city of Bandar Abbas. The subjects were selected from all of the high school students in BandaAbbas during the 2012 academic year. The multi-stage cluster random

sampling method was used to select 800 subjects, 41% of whom were males and 59% of whom were females. Initially, 814 subjects were selected, but 14 were excluded, leaving a total of 800 subjects who participated in the mental health assessment.

2.1. Research tool

The following tools were used in the study:

2.1.1. The SCL-90-R questionnaire

The Symptom Check List-90-Revised (SCL-90-R) questionnaire contains 90 questions that were used to assess the psychological symptoms reported by the subjects. The questionnaire contains nine complaints aspects, including somatization disorder, obsessive-compulsive disorder, interpersonal sensitivity disorder, depression disorder, anxiety disorder, aggression disorder, phobic anxiety disorder, paranoid personality disorder, and psychotic disorder. Each of the test materials was answered using a five-option scale, and the time allowed to complete the test was 12-15 minutes. Scoring and interpretation of the test were performed based on the Global Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST). The validity of the design of this questionnaire showed that it can be used effectively as a tool to diagnose mental disorders (Hosseinfard et al., 2005).

2.1.2. Clinical interview

During the screening phase performed by the SCL-90-R questionnaire, 176 subjects who were suspected of having mental disorders were identified. In the second phase, a clinical interview was conducted with the subjects using the symptoms recording form based on DSM-IV diagnostic criteria, and a psychiatrist made a diagnosis based on the symptoms recorded on the form. Of the 176 subjects who were suspected of having mental disorders, 155 were interviewed, 17 of which were diagnosed as not having any mental disorder. Twenty-one subjects were not interviewed for various reasons. The data were analyzed using descriptive statistical methods and the chi-squared test.

3. Results

As can be seen in Table 1, 31.2% of the subjects with mental disorders lived with family members who abused the use of drugs, and 29.9% of the subjects lived with family members who abused the use of alcohol. According to our findings, nearly half of the subjects lived with both parents, and a smaller percentage lived with other relatives, e.g., in a room in their grandfather's house. In Table 2, the standard deviation and the mean GSI score on the SCL-90-R questionnaire are shown by gender.

Collectively, 16.7% of the 800 subjects had mental disorders. The disorder with the highest prevalence was anxiety, with 85% of the subjects being so diagnosed, and this disorder was observed to a greater extent among girls than among boys. The

anxiety disorder and obsessive-compulsive disorder were diagnosed more than the others, with phobic anxiety disorder occurring less frequently than the other disorders.

Table 1. Demographic of students

| Variables | Percent | | | |
|---|-------------------------|----------------------|--------------|---------|
| | Male | | Female | |
| Sexuality | 340 (42.5 %) | | 460(57.5 %) | |
| Live with parent | Death one of the parent | Live with two parent | Death parent | Divorce |
| | 14 | 54 | 8 | 24 |
| Situation house | Personal house | | Rental house | |
| | 61.9 | | 38.1 | |
| History of mental disorder in families | Yes | | No | |
| | 29.9 | | 70.1 | |
| History of drug and alcohol abuse in families | Yes | | No | |
| | 31.2 | | 68.8 | |

Table 2. The standard deviation and the mean GSI score

| Scales | Female (460) | | Male (340) | |
|---------------------------|--------------|---------------|------------|---------------|
| | Mean | Std.Deviation | Mean | Std.Deviation |
| Somatization | 39% | 43% | 29% | 33% |
| Obsessive-compulsive | 52% | 50% | 38% | 41% |
| Interpersonal sensitivity | 72% | 67% | 42% | 46% |
| Depression | 59% | 57% | 31% | 39% |
| Anxiety | 50% | 59% | 29% | 40% |
| Aggression | 47% | 55% | 42% | 52% |
| Paranoididea | 73% | 69% | 63% | 57% |
| Phobic anxiety | 28% | 40% | 15% | 28% |
| Psychoticism | 42% | 52% | 32% | 43% |
| GSI | 51% | 45% | 34% | 33% |

4. Discussions

In our study of subjects who were 15 and older, the prevalence mental disorders was higher than that reported in earlier research (Afshari et al., 1998; Fones et al., 1998; Bagheri-Yazdi et al., 1995; Hosseini et al., 1995; Kokabeh, 1994; Javidi, 1994; Weissman, 1978). However, some other studies reported the prevalence of mental disorders among such adolescents to be lower than our findings (Kessler, 1994; Stansfeld, 1991; Medianos, 1987; Hoper et al., 1979). In the researcher's opinion, these differences could be due to one or more of the following:

- Using research tools other than the SCL-90-R questionnaire for assessing mental health
- Differences in sampling methods
- Differences in the ages of the subjects studied
- Differences in cultural, social and welfare characteristics

For example, in the city of Bandar Abbas, the reasons for the difference could be due to the specific characteristics of this city, such as high temperature and high humidity throughout most of the year, limiting interactions with the natural environment; lack of proper recreational and welfare facilities; the influx of immigrants; being away from family members; its status as a coastal and border city; adverse economic conditions of most families and adolescents; small, crowded houses; and limited interactions with other people. Based on our findings, the prevalence of mental disorders in the girls was twice that among the boys. This finding was consistent with the findings of earlier research conducted in Iran (Bagheri-Yazdi, 1995; Khosravi, 1995; Afshari-Monfared, 1998; Noorbala, 2002; Mohammadi, 2002; Hosseinifard, 2005). Hollifield et al. (1990) and Bahar et al. (1992) obtained similar results in studies outside of Iran, and it seems that biological factors, hot weather, social limitations, and environmental stresses are the underlying factors that

cause the higher prevalence of mental disorders in girls. Regarding the relationship between mental illness in adolescents and various factors, such as a history of psychiatric disorders in the family, substance abuse, alcohol abuse, and divorce, other researchers also have reported similar findings (Hosseinfard et al., 2005; Mohammadi, 2002; Doherty et al., 1991). One main limitation of this study was the lack of knowledge among some subjects that made it difficult for them to read the questions, understand what was being requested, and interact productively with the research staff. Another main limitation was the lack of cooperation exhibited by some of the subjects. Also, the research was expensive and consumed a lot of time because of its magnitude, i.e., the inclusion of 800 subjects. The results of his study showed that mental disorders are more prevalent in girls than in boys. The results also showed that anxiety disorders, such as disseminated anxiety disorder and obsessive-compulsive disorder, followed closely by depression disorder, are more prevalent than other mental disorders. Based on the results obtained and our analysis of those results, it is recommended that the research be repeated in mountainous areas, regions with good climates, and among other cultures using the same research tools and sampling methods so that comparisons of the factors that may affect the prevalence of mental disorders can be made.

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