

# A Study on Psycho-Social Factors Related to Children's Suicide

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## Abstract

**Background:** Over the last 45 years, mortality due to suicide has increased in some developed and developing countries, among both children and adults. This study was undertaken to determine the cases suicide in 6-15 years old children.

**Methods:** Between Jan. 2005 and Jan. 2008, data from 292 children (239 girls and 53 boys) aged 6-15 years who attempted suicide and were referred to the Loghman Hakim Medical Poison Centre affiliated to Shahid Beheshti University of Medical Sciences in Tehran, Iran were enrolled. The Children Suicide Questionnaire (CSQ) was applied.

**Results:** The percentage of girls who attempted suicide was 81.8% against 18.2% for boys. Most of them were from 12 to 14 years old. 43.8% of the children were in a poor socio-economic class. 55.5% of the study period was between 6.00 pm and 12.00 pm. 41% of the respondents reported cases of mental illness in their family. 41.6% of the children had previously attempted suicide while 95% of suicide attempts took place at home and in 36.6% of suicides, there was a family argument. Depression (28%) and epilepsy (27.1%) were the most cited cases of personal problems using antiepileptic drugs (23%), benzodiazepine (23%), and antidepressants (20%).

**Conclusion:** This study suggests a collaboration between pediatricians, psychiatrists and psychologists.

**Keywords:** Children; Suicide; Iran; Children's Suicide Questionnaire

## Introduction

Over the last 45 years, mortality due to suicide has increased in some developed and developing countries among both children and adults in all ages and both genders. Suicide attempts occur 10-40 times more frequent than the completed ones.<sup>1</sup> Suicidal tendencies and attempts mainly happen among children who suffer from mental diseases, even in mild form, although these attempts are rarely fatal. Few studies were performed on suicide in children in Iran. Even in Western Europe and the United States, systematic studies on suicide in children were few until the late 70's. Jackson and Nuttall (2001) studied on suicidal behaviours among children, throughout the 1980's.<sup>2</sup>

Suicide is still a taboo in most societies and particularly in Islamic countries. Therefore, lots of deaths were described as accidentals rather than suicides. Psychological assessment is usually rare and early behavioural evaluation leading to a suicide is problematic.<sup>3</sup> In the United States, a study in a group of randomly selected healthy children showed that 13% of children occasionally thought about suicide or had the intention of suicide. While many of them do not actually take place, several sociological factors may also contribute suicidal behaviours. Barker reported that in United States, suicide was the main cause of death in children younger than 14 years<sup>4</sup> and is the 11<sup>th</sup> cause of death in the country (30,000/year).

The main factors related to children suicide are age, gender, personal and family problems and family conflicts. A previous suicide attempt can be one of the strongest predictive factors for an intended suicide in future.<sup>5</sup> Seghatoleslam *et al.* (2006) showed that factors related to children's suicide in Iran were gender

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(more in girls), the area of residence (mostly in south of Tehran as a poor area of the country), and the time period (mostly between 6.00 pm and 12.00 midnight). Prescription drugs were used in most cases. The majority of the children reported an attempt after a family argument.<sup>6</sup> The present study was designed to determine the factor related to attempted suicides in children in Tehran, Capital of Iran.

### Materials and Methods

292 files of children aged between 6 and 15 years old (239 girls, 53 boys) were enrolled. The children who had attempted suicide were referred to Loghman Hakim Poison Centre affiliated to Shahid Beheshti University of Medical Sciences in Tehran, Iran between 2005-2008.

All relevant information from data files of the hospital were collected. The Children's Suicide Questionnaire (CSQ) had personal information such as: age, sex, economical class and family history.<sup>6</sup> The questionnaires were completed by 2 psychiatrists and 2 psychologists covering a list of psycho-social factors associated with the children's suicide attempts. The questionnaire comprised the reasons for the suicide attempts, area of residence, the time of suicide, the means and location of the attempts, previous history of suicide attempts, mental and physical history and general psychological information such as family problems, type of drug and dosage, history of psychiatric and physical status as well as mental disorders in children and their family. Table 1 shows the psychological characteristic of the sample population.

All analyses were conducted using SPSS software (version 15, Chicago, IL, USA).

### Results

Among 292 enrolled cases, the majority were significantly females (81.8%). 36% of subjects who attempted suicide were between 12 and 14 years old (mean=12 years). 43.8% of participants were from south of Tehran as a poor area of the country. Table 2 shows a higher percentage of history of mental illness in the family (41%). 28% of the cases suffered from depression, at the same time other cases had epileptic seizures. 36.6% of children attempted suicide after a family argument. 55.5% of suicide attempts occurred between 6.00 pm and 12.00 pm by taking drugs

**Table 1:** The psychosocial characteristics of the sample according to attempt suicide status, sex, age, and living areas

Variables	Attempted suicide No. (%)
Sex	
Male	53 (18.2)
Female	239 (81.8)
Age	
Mean	12
Group age	
6-8	50 (17)
9-11	71 (24.3)
12-14	105 (36)
15-	66 (22.6)
Tehran Living Area(TLA)*	
West	35 (12.0)
North	128 (43.8)
South	34 (11.6)
East	81 (27.7)
Centre	1 (0.3)
Unknown	

TLA\*, It was classified according to Iran Map of Tehran living areas (condensed into 5 categories).

(85.4%) such as benzodiazepines (23%), anti-epileptics (23%) and antidepressant medication (20%). 41.6% of the children had a previous attempt of suicide and 95% of suicide attempts took place at home.

### Discussion

This study indicated that attempted suicides were more common in girls. Although the sample was comparatively small, this seems to agree with the figures for attempted suicides among adults in Iran.<sup>7</sup> Janghorbani and Sharifirad (2005)<sup>7</sup> carried out a study in Ilam among adults who attempted suicide and found that 36.9% were in males and 63.1% in females. Stiffman noticed more suicide attempts in girls too. In spite of religious rules that mention suicide to be a great sin, suicide in Islamic countries is also more common in females due to more embarrassments in females seeking help for solving their problems.<sup>8</sup> Seghatoleslam *et al.* showed that not only suicide attempts among adult females were three times more than males,<sup>9</sup> but also girls attempted suicide more than boys.<sup>6</sup> These findings agree with those in southern Delhi, India by Sharma *et al.* that showed girls were far more likely to attempt suicide than boys.<sup>10</sup>

**Table 2:** Measurement of the psycho-social factors in the CSQ

Variables	Frequency	%
Family problems:		
Family argument	107	36.6
During divorce	54	18.5
Separated parents	52	17.8
Mother lives with children(alone)	46	15.8
Type of family illness:		
Mental	120	41
Physical	92	31.5
Type of mental and physical illness in the cases:		
Depression	82	28
Epilepsy	79	27
Other physical and mental illnesses	66	22.6
The time of suicide		
00.00-6.00 AM	68	23.2
6.00 AM-12.00 PM	23	7.9
12.00 PM-6.00 PM	39	13.4
6.00 PM-12.00 AM	162	55.5
The mean of suicide:		
Drugs	249	85.4
Insecticide	16	5.5
Alcohol	3	1
The kind of drugs that were used:		
Benzodiazepine	57	23
Anti-depressant	51	20
Anti-epileptic	57	23

Most attempts were in the 6-15 years age group (36%). This may indicate that apart from psycho-social factors, puberty may be an important determinant in suicide attempts among children. These findings are in agreement with McClore's study showing that behaviour is correlated to suicide and is more prevalent in boys and girls younger than 15 years.<sup>11</sup>

43.8% of subjects lived southern parts of Tehran, Capital of Iran, which is an economically deprived area with high unemployment rate and poor housing conditions. Sharma *et al.* showed that most cases of suicide attempts were among those living in low socio-economical status.<sup>10</sup>

In our study, 95.5% of suicides took place at home. Western studies showed that most suicide attempts happened at school which is not in agreement with our findings. Suicide was attempted between

6.00 pm and 12.00 pm; the same time-period reported by Groholt *et al.*<sup>12</sup> It seems the stresses are more within the hours at home rather than school. More than one third of children in our study reported a suicide attempt following family arguments at home. Zhang *et al.* showed that 34% of causes of suicide attempts among teenagers were due to family arguments.<sup>13</sup> Another study demonstrated that stressful family tension was related to internal anger and hostility because of lacking of a good communication.<sup>1</sup>

Van der Kolk *et al.*'s study on mental illnesses in children showed that stress in families and a previous history of mental illness are important causes of a suicide attempt among children.<sup>14</sup> Seghatoleslam *et al.* found out that 26.4% of participants had mental problems such as depression and epilepsy.<sup>6</sup> Shaffer *et al.* (1996) showed that depressed children attempt suicide three times more than healthy children.<sup>15</sup> Some of the cases were children suffering from epilepsy, another determinant of suicide attempt.<sup>15</sup> Most of the children in the study used prescription drugs as their method to attempt suicide. From the files, it was apparent that those drugs were dispensed in cases of mental disorders. This is also true of adults<sup>9</sup> and therefore, children already undergoing treatment or living with a mentally or physically ill family member had relatively an easy access to prescription drugs that is identical to our findings that prescription drugs were used in 85.4% of cases. However, the vast majority of people who have access to these drugs do not commit suicide.

Another strong determinant in suicide attempts is gender. In Iran, girls and women are far more likely to attempt suicide. Poverty and lack of social and economical opportunities can play a part in depression and suicide attempts. A WHO study of poverty and mental disorders in developing countries identified income, insecurity, feelings of hopelessness, social change, low educational level and gender as a comorbidity, such as inadequate housing and poor physical health as determinants of mental disorders.<sup>16</sup> Dastgiri *et al.* showed that 98% of women who committed suicide by self-immolation did not have any income<sup>17</sup> and most of them had a history of previous suicide. In this study, we found that 41.6% of children admitted to the hospital had tried to attempt suicide on a previous occasion too.

Therefore, a combination of factors can result into suicidal behaviours; stresses such as mental or physical illnesses, living with a mentally ill family member, residing in an economically deprived neighbour-

hood, with its attendant violence, and lack of access to proper psychiatric care. We suggest a multidisciplinary approach to the problem from psychological, biological and social perspectives. Cooperation between psychiatrists, psychologists, paediatricians and social workers to prevent suicide attempts is recommended.

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