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Female Suicides in Diyarbakir, Turkey

ABSTRACT: The aim of this study was to investigate the methods used and demographic data of women suicides by examining postmortem investigation and autopsy reports from the Branch of the Council of Forensic Medicine in Diyarbakir Province, Turkey, between 1996 and 2001. Fifty-eight percent (174/302) of suicides were females and 42% (128/302) were males. The suicide rates were similarly higher for females than for males (2.6 and 1.8 per 10,000 population, respectively).

Over half of female suicides (56.3%) occurred in those under 20 years of age. The most common suicide method for women was hanging (32.2%), and for men was firearms (51.7%), but for women younger than 20 years the most frequent method was firearms. Among the female suicides, five (2.8%) were known to have attempted suicide at least once in the past. Twenty-nine women (16.7%) were documented to have any psychiatric illness. None of the women had a history of drug or alcohol abuse. A suicide note was found in only six cases (3.4%). The predominant suicide motive was family problems (in 32% or 56/174).

The higher rate of suicide in females than in males, and the absolute female predominance in suicides in Diyarbakir, Turkey, are in contrast to most of the medical literature and statistical information about suicide rates by country, in which suicide rates are usually higher among males.

KEYWORDS: forensic science, suicide, female, death, Turkey

Suicide is defined as any death resulting either directly or indirectly from a positive or negative action carried out intentionally by the person killed with full knowledge that it will result in his or her death (1).

The aim of the present study was to describe the demographic data of suicidal deaths in the Diyarbakir region of Turkey between 1996 and 2001, with particular attention to differences between men and women. In a number of previous studies, while the rate of attempted suicide has been found to be four to six times higher among women than men (2,3), men have been found to have a completed suicide rate two to four times that of women (4). In our study, there were higher rates of completed suicide in women; we have found no similar finding in the literature.

Material and Methods

There were 174 females in a total of 302 suicide deaths collected retrospectively from the files of the Branch of the Council of Forensic Medicine in Diyarbakir, Turkey, between 1996 and 2001, including all medicolegal deaths. Knowledge about all medicolegal deaths in our region is available retrospectively in a record system that includes information about cause and manner of death, and autopsy data. All autopsies are performed by specialists in forensic medicine in this region. We have retrospectively investigated thoroughly the suicide cases from the record system, and no uncertainty remained as to the manner of death.

According to the State Institute of Statistics of Turkey (SIS), in the year 2000, the population of Diyarbakir Province was 1,362,708,

of whom 692,167 (49.2%) were females and 670,541 (50.8%) were males (5).

Results

Between 1996 and 2001 a total of 3000 medicolegal autopsies were performed, accounting for 2226 (74.2%) accidents, 472 (15.7%) homicides, and 302 (10.1%) suicides. Of the accident cases 712 (32%) were females, and among the homicide cases 85 (18%) were females. Of the suicides, 174 were female (58%) (rate of 2.6/10,000 population), and 128 were male (42%) (rate of 1.8/10,000 population). The overall suicide rate was 4.4/10,000 population. The mean age at death for all female cases was 22.8 years, ranging from 11 to 70 years. Over half (56.3%) the female suicides occurred in those under 20 years of age (Table 1). Their marital status was unmarried in 108 cases, married in 64, and divorced in 2. Fourteen (12.9%) of the unmarried women had deflorated hymens. Overall, hanging was the most frequent suicide method (32.2%), but firearms were the most common suicide method for the females under 20 years of age (74%) (Table 1). Among the males, firearms were also the most frequent suicide method (54.7%), followed by hanging (19.5%), jumping from height (18.7%), and poisoning (6.3%). Six (12%) of the female firearm suicides were committed with a shotgun, and 44 (88%) with a handgun. The site of bullet entry was usually the right temple ($n = 32$). In other cases the site entry was the mouth ($n = 6$), parietal scalp ($n = 1$), the left side of the chest ($n = 5$), and the epigastric region of abdomen ($n = 6$). Burning cases occurred during terrorist events ($n = 5$). Among women, five (2.8%) were known to have attempted suicide at least once in the past. Twenty-nine persons were documented as having a psychiatric illness. None of the suicides had a history of drug or alcohol abuse. A suicide note was found in 6/174 (3.4%) cases. Predominant suicide motives were family problems (56/174 or 32%), bigamous husbands (10/174 or 6%), bigamous fathers (2/174 or 1.2%), separated parents (2/174 or 1.2%), and divorce from husband (2/174 or 1.2%).

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TABLE 1—Age distribution by method for female suicides.

Age	Jumping	Poisoning	Firearm	Hanging	Burning	Total (n)	%
0–15	2	5	3	7	...	17	9.8
16–20	15	12	34	20	...	81	46.5
21–25	7	12	8	19	2	48	27.6
26–30	...	...	...	5	3	8	4.6
31–40	3	5	2	2	...	12	6.9
41–50	...	...	...	3	...	3	1.7
51–60	...	...	...	...	...	...	...
>60	2	...	3	...	...	5	2.9
Total	29	34	50	56	5	174	100.0

Most of the women committed suicide in their own homes. Suicides occurred in rural areas in 41 cases and in the urban center in 133 cases.

Discussion

Diyarbakir is a large province in the southeast of Turkey, a republican country governed democratically. People living in this region have lower socioeconomic, cultural, and educational status than the western parts of Turkey. From 1993 until 1998, people were evacuated from some villages and hamlets in Diyarbakir and its surroundings because of security reasons and were resettled in urban centers, which were thought to be safer from terrorism in the region. The annual population growth rate of Diyarbakir was 21.9% from 1999 to 2000 and the share of the population living in cities reached 60% in 2000—an increasing trend (5). Having previous experience only in farming and raising livestock, many persons were unable to find work in the city and were faced with serious economic problems. According to SIS records, rates of unemployment were 43.3% and 30.3% in small towns and the provincial centers, respectively. The reasons for high suicide rates in the region may include terrorism, migration, and unemployment (6). Ferrada et al. found that migration, whether voluntary or involuntary, leads to social isolation and economic problems, and is a risk factor for suicide (7).

In the 2000 population, 49.2% were females and 50.8% males. However, females predominated in suicidal deaths from 1996 to 2001 ($n = 174$, 57.6%). Suicide rates were higher in women than in men, 2.6 and 1.8 per 10,000 population among females and males, respectively. Our results were different from reports out of the western regions of Turkey which showed a male predominance of suicides (8), and from the entire country, in which the ratio of male/female suicides was 1.8 (9) compared to a ratio of 0.73 in Diyarbakir. This ratio was 3 in the U.S. (2), 4.9 in Greece, 3 in Italy, 3.2 in Spain and Austria, 2.6 in Germany, 2.7 in Switzerland, 2.8 in Israel, 1.4 in Kuwait, and 2.1 in Japan (10). Kaplan et al. and Wiebe et al. have also shown higher suicide rates of females than males in their recent reports from the U.S. (11–13). The high rate of female suicides in our study may be explained by the social status of women in Diyarbakir. Turkey has a conservative family structure, which is even more strict in this region. The woman may have problems with her husband's relatives within the traditional family structure, with no social support. Other socioeconomic factors may influence the rates, including lower level of literacy and higher unemployment among women than men. Literacy rates were 55.4% and 83.5%, and unemployment rates 44.6% and 27.7%, among females and males, respectively, according to SIS records (5).

With regard to age distribution in the present study, 56.3% of the women were under 20 years and 2.9% were over 60 years. In

the study of Runyan et al. (14) the suicide rate under the age of 24 was 11.8% and over 64 years old 14.4%. Doddakashi et al. (15) reported that the highest rate for suicide was seen in women aged between 35 and 45 years. In the literature, suicides are reported to be relatively frequent among youths, and after the age of 55 there is a second increase in suicide rates between ages 60 and 70 (3,16,17). Female suicide rates per 100,000 population have been reported to be lower in Muslim populations such as Turkey (2.4/100,000) and Kuwait (1.5/100,000) than in Western populations, e.g., Slovenia, Germany, Austria, Switzerland, and Russia, with reported rates of 12.6, 8.3, 10.7, 11.1, and 13.3 per 100,000 population, respectively (10). This was true in our study, in which the female suicide rate was 2.6/100,000 population.

With regard to marital status of the females, 108 (62.1%) were unmarried, 64 (36.8%) were married, and 2 (1.1%) were divorced, while among the males, 62 (48.4%) were unmarried, 66 (51.6%) were married. Of the unmarried women, 14 (12.9%) were found to have deflorated hymens. Since hymen perforation is significant within the traditional social structure in our society, these females may have chosen suicide as a respectable manner of death. The suicide rate for single persons has been reported to be twice that of married persons and four to five times higher than that of the divorced, separated, or widowed in two different studies (11,18). However, in the study by Runyan et al. from North Carolina (14), among the women over age 19, the suicide rate of married persons was three times higher than for those who had never married.

With regard to method of suicide in females, the most common method used was hanging (32.2%), followed by firearms (28.7%). The rate of suicide by firearms varies in the literature from 0 to 65.8% (11,14,15,19–22). In our region, firearms are easily accessible in homes, for ceremonial purposes and protection against terrorism. Our findings seem to be consistent with those of other studies that have examined the relationship between firearm suicide and the availability of firearms in the community (11,13,21,23,24).

In the present study, more of the female suicides occurred in urban centers (76.4%) than in rural areas. This might reflect differences in population or it may be related to the change to a lower socioeconomic group, and loss of social support, with migration from rural to urban centers. Our study does not clearly answer this question.

In conclusion, in the six-year period from 1996 to 2001, female suicide rates were higher than male suicide rates in Diyarbakir Province, Turkey. The rate of suicide by firearms was notably high in our region, probably because firearms are easily accessible in almost every home. Although the prevalence of firearms as a method of female suicide was similar to the findings of many previous studies, no similar finding of higher rates of completed suicide in women as compared to those of men was found in the literature or in statistical reports of suicide by country.

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