



FATAL SUICIDE CASES FROM 1991 TO 2000 IN SZEGED, HUNGARY

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ABSTRACT:

The authors analysed the fatal suicide cases occurring between 1991 and 2000 in the Department of Forensic Medicine, University of Szeged, Hungary.

There was a fall in the number of suicides both nationwide and more significantly in Csongrád county during the investigated period. The ratio of male to female remained unchanged. The mean age of the victims: in men reached its peak in 1996, while in women following an increase remained constant from 1996. Amongst the methods of commitment the violent ones became dominant (e.g. hanging). The proportion of alcoholic influenced victims is still high.

Keywords:

Suicide, Hungary, Szeged

1. INTRODUCTION

Both the number and ratio of suicidal attempts and completed suicidal cases are traditionally high in Hungary. The occurrence frequency in the early 1990s was continuously increasing and was the highest in the world for decades. Recently the Baltic States and Sri Lanka have reported higher occurrence frequency. Previous epidemiological tests indicated significant geographic differences within the country and there were differences in the distribution of suicidal cases in the capital city and the country. Since the change in the political regimes from 1990 the overall occurrence frequency figures have decreased by 20%, although, no overall epidemiological test has been performed to investigate the current situation.

In this paper we wish to analyze the changes occurring in 1991-2000 on the basis of the fatal suicidal cases on which post mortem were carried out in the University of Szeged, Department of Forensic Medicine

2. MATERIAL AND METHOD

County Csongrad is situated in the south-eastern part of Hungary. Its population is about 460 thousand people. The seat of the County is in Szeged. The total population figure of Szeged on 1st January 2000 was 158.158 people. In accordance with the law all the victims who suffered violent deaths including those committing suicides undergo a post mortem and the material available in the University of Szeged, Department of Forensic Medicine includes all the fatal suicidal cases occurring in the county seat.

During the post mortem apart from macroscopic and microscopic tests blood alcohol and toxicological tests were carried out in each case where death occurred in the site of the suicide or within six hours after admission to hospital. The determination of blood and urine alcohol content was carried out with a head-space gas-chromatographic method. For the screening toxicological test the immunological test of the urine and the thin-layer chromatography test of the urine and the liver were carried out. The confirmation tests are usually performed in the National Forensic Toxicological Institute with GC/MS tests.

3. RESULTS

The number of suicides in County Csongrad corresponds to the national trend and shows an approximate decrease of 20% in the examined time period. Considering the annual trends it can be stated that the decrease stopped in about 1995/1996 and the number and ratio of fatal suicidal cases have been stagnating since then. The analyzed material is characteristic of the City of Szeged and represents approximately one-third of the deaths in the county. The decreasing tendency could also be detected in our material as well (Fig. 1).

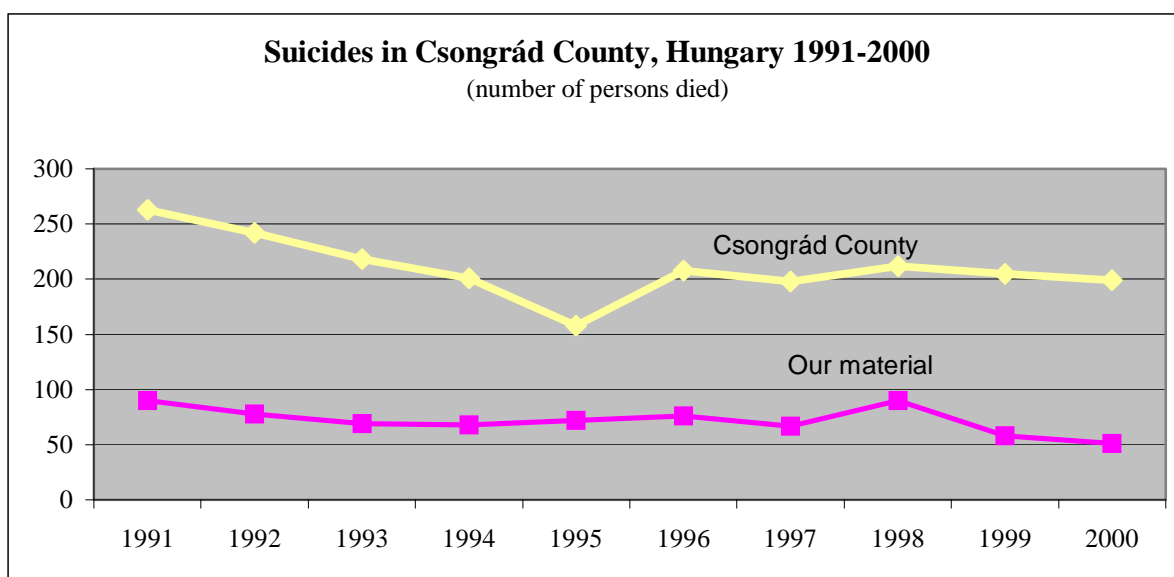


Fig. 1. Suicide in Csongrad County

From among 719 deaths there were 501 men and 218 women, and the female-male ratio was 2.5:1. In the examined period it showed the same distribution apart from a minimum variation. The age distribution differs significantly in the male and the female group. The greatest number of male suicide cases happened in the male age group of 41-50, whereas in the female age group it was only between 71 and 80. By standardizing the values, it can be stated that the occurrence frequency begins to rise at the age of 30-40 for males and the same trend can only be noticed after the age of 70 for females (Figure 2). The average male age is 51.12 years and the average female age is 58.29 years. Within the analyzed time period the female average age was gradually increasing, whereas the average male age showed an increase until 1996 only and started to decrease gradually afterwards (Figure 3).

Standardised age and sex distribution of suicide cases 1991-2000

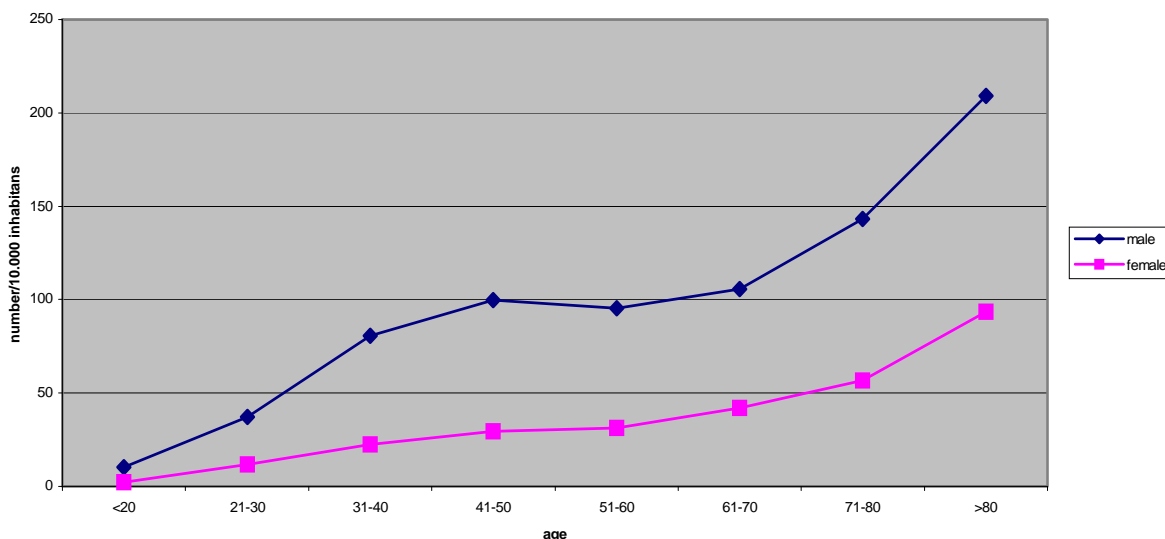


Fig. 2. Age specific mortality

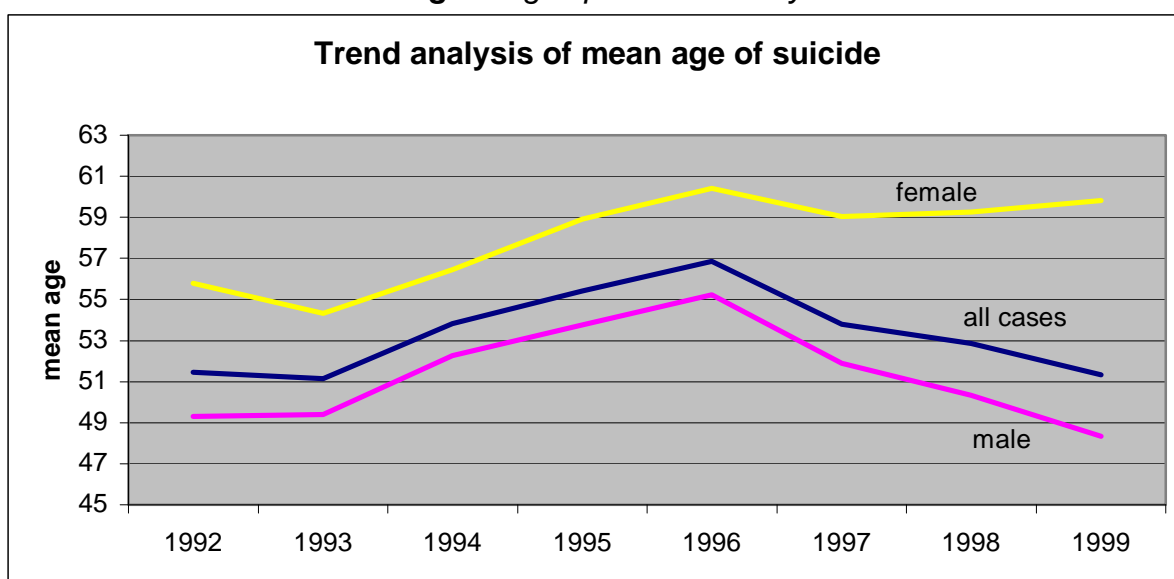


Fig. 3. Trend analysis of mean age

As to the methods of committing a suicide, the most frequent method is hanging in both the male and the female cases and the occurrence frequency gradually increased in the examined time period (44% in 1991 and 57% in 2000). The number and ratio of suicide cases committed with drugs show a slight but gradual decrease (22% in 1991 and 14% in 2000). The other methods are rare and their number and ratio did not change considerably in the examined time period. For men hanging and suicide with pesticides are the most frequent, whereas suicide with drugs is characteristic of females mainly.

In 38% (125 cases) of all the examined 474 cases alcohol could be detected in either the blood or the urine in the concentration of slight or average alcoholic impairment. Analysing the occurrence frequency of alcoholic impairment in the two sexes, it can be stated that 47% of all males and 16% of all females drank alcoholic drinks prior to the suicide (Figure 4). The occurrence and degree of alcoholic impairment is independent of the method of committing a suicide.

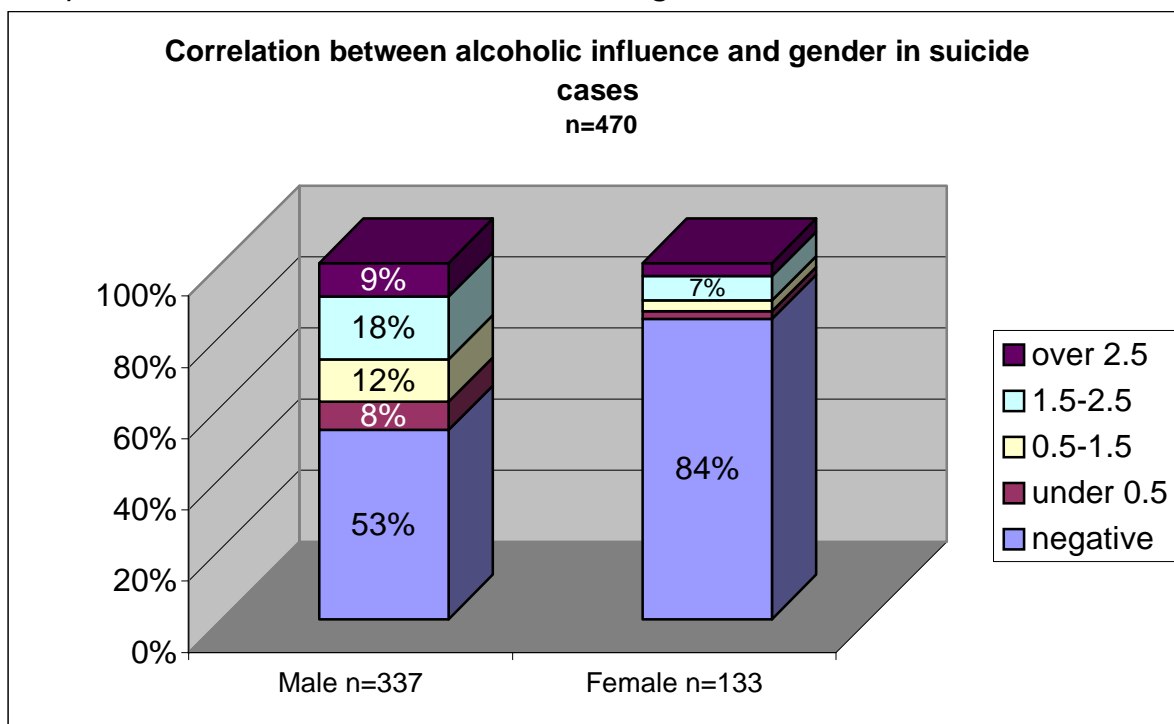


Fig. 4. Alcoholic influence

Table 1. Licit drugs in not drug related deaths
The presence of licit drugs in not drug related deaths

Drugs	No. of cases
Barbiturate	10
Benzodiazepine	51
Fenotiazine	1
Tricyclic antidepressants	6
benzodiazepine+fenotiazine	2
Glutimid	1
Meprobamat	3
drugs of cardiovascular system	2
Total	76

In 635 of the non-drug-related suicidal cases toxicological tests were carried out, and in 76 cases (11%) the test results were positive with barbiturates (10 cases) and (51 cases) with benzodiazepines. The number of drugs that do not attack the central nervous system is negligible (Table 1).

4. DISCUSSION

The detailed analysis of the fatal suicidal cases in the population of the capital city in Hungary was carried out in 1972 and in the south-western part of Hungary in 1983-87. The epidemiological data indicate that the occurrence frequency is considerably higher in the south-eastern part of Hungary. This trend can be seen continuously in the past 50 years and basically corresponds to the occurrence frequency of chronic alcoholism. The male-female ratio is 3:1 within which however great territorial differences can be observed. During the earlier examinations 60% of all males and 18% of all females showed signs of pathological changes due to chronic alcoholism, whereas in 41% of non-drug-related suicide cases researchers detected the presence of tranquillizers or sleeping pills earlier.

The decrease in the occurrence frequency can be seen in the entire country since 1990 and can be found in both Csongrád County and our examined material. The occurrence frequency has stabilized nationwide since 1997 and in Csongrád County since 1996. In comparison to the previous years a shift can be seen in the age distribution. The difference between the average age of males and females was somewhat more than 7 years and it could be seen in the examined period continuously but with the decrease in the occurrence frequency the average age of male and female perpetrators gradually increased. An increasing tendency could be observed among the female perpetrators afterwards as well, whereas a decrease could be registered regarding the average age of male perpetrators. The standardized frequency values indicate that the number of cases increase considerably between 30 and 40 among men and after 70 among women.

The frequency of alcohol consumption before the suicide corresponds to the occurrence frequency of chronic alcoholism and is significantly higher among males. The occurrence of tranquillizers and sedatives in 11% of the non-drug-related suicide cases supports the likelihood of a previously existing depression but the occurrence frequency observed by our team is significantly lower than what was found elsewhere in the country.

In the analysed period it is possible to say that on the basis of the age distribution, the alcoholic impairment and the occurrence of tranquillizers chronic alcoholism and existential problems were the motives for males, whereas for women mainly depression, loneliness and diseases played a role.

Certain redistribution can be seen with respect to the ways suicides are committed. In comparison to the previous decades carbon-monoxide poisoning has disappeared and drug-related suicide cases have significantly increased, as well as the brutal methods, including hanging, have also been on the increase. The reason for this cannot be explained on the basis of our analysis.