

THE EPIDEMIOLOGY OF SUICIDES ON THE TERRITORY OF THE CITY OF NIŠ WITHIN 2001-2002

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Summary. *The region that directly gravitates to health institutions in the City of Niš comprises the population of about 400.000 inhabitants. The number of suicides, compared to the period preceding 2001, appears to have doubled within 2001-2002 when expressed in absolute figures. Epidemiologically, however, the phenomenon has not yet reached a critical point. The increase of suicides occurred in a climate following a long lasting social disintegration and a period anticipating some sort of consolidation of social relations. A detailed insight into the structural features of the 2001-2002 epidemiological picture of suicides can help in the prediction of new attempts, which is presented in this report. The data suggest that suicides are proportionately more common in males who are married, elderly and officially employed, and who generally commit suicide by hanging in the daytime. In addition, seasonal variations can be also noticed, the summer and spring months being associated with more suicides.*

Key words: *Epidemiology, suicides, city of Niš*

Introduction

The term "suicide" is used for all causes of death which are directly or indirectly provoked by the positive or negative acts of the victim, who knew the ensuing consequences (1). Suicide is among the ten leading causes of death in most countries around the world for which information is available (2). It appears quite improbable to understand what a small number of people today, even in developed countries, succeeds in finding the meaning of life (3). The large majority of those who die from suicide have some form of mental disorder at the time of death (4).

In response to alarming statistics about suicide in 1999, US Surgeon General David Satcher issued a call to action, stating that "the nation must address suicide as a significant public health problem and put into place national strategies to prevent the loss of life and the suffering suicide causes" (5). The anticipations for 2002 in the United States were dramatic: "more than 30.000 people will commit suicide, the equivalent of more than 80 suicides a day or one every 20 minutes. Self-directed violence will result in more than 600.000 emergency department visits" (5).

On the territory of the City of Niš, and 6 municipalities with 396.043 inhabitants (1991 Census), the number of suicides, expressed in absolute figures and compared to the period preceding 2001 (in 1998-21, in 1999-23, in 2000-23), appear to have doubled within 2001-2002 (in 2001-58, in 2002-64). This increase stirred the interest of the public but we have so far failed to understand the phenomenon due to fact that the greatest number of suicides did not reveal the tendency

and did not leave any kind of explanation such as messages etc. The increase of suicides occurred in a climate following a long lasting social disintegration and a period anticipating some sort of consolidation of social relations. The gathered data presented in this paper are an attempt to shed some light on the phenomenon. We hope it will be useful for future preventive programs, with the idea to do something, not with a suicidal person, but for him/her (6).

Method

The data were obtained from the authorities in charge, the epidemiological department of the Medical Centre as well as from the Clinic of Mental Health in Niš. Wherever possible, the data were completed with heteroanamnesic listings from the members of the bereaved families.

Results

The total number of suicides committed on the territory controlled by the Niš Secretariat of the Ministry of Internal Affairs of the Republic of Serbia was 58 in 2001, and 64 in 2002. The total number of suicides on that territory in 1998/2000 was lower (in 1998-21, in 1999-23, in 2000-23).

The proportion of males was significantly higher compared to females (Fig.1). Males committed suicide 2.6 times more than females in 2001, but in 2002 male suicides were even 3.9 times more frequent.

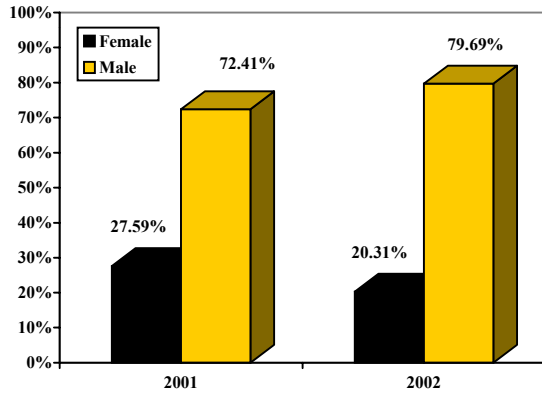


Fig. 1. Suicides by sex

In both 2001 and 2002 suicides were commonly committed by the population over 75 years of age, and together with the 65 year age group, they make over 40% of all suicide deaths (Fig. 2). What about adolescents (aged 15-24) and children (aged under 15)? The percentage representation (8.5%) was the same in 2001 and 2002 for the first group. The group of children (aged under 15) was without any committed suicide in 2001 and 2002.

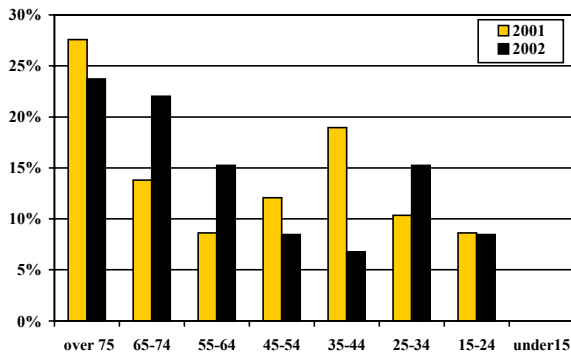


Fig. 2. Suicides by age

The employment status is consistent with the structural values of the preceding parameter (Fig.3). Half of the total number of suicides was committed by retired population, farmers and dependents. Suicide was 2 times more frequent in the population officially evidenced as employed.

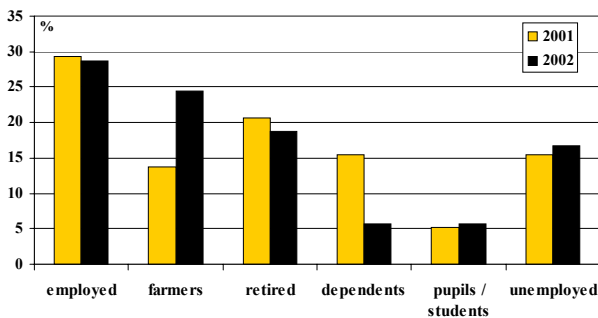


Fig. 3. Suicides by employment status

The majority of suicides in 2001-2002 was committed by married population or persons living in the primary family, while a discrete movement to singles was registered in 2002 (Fig. 4).

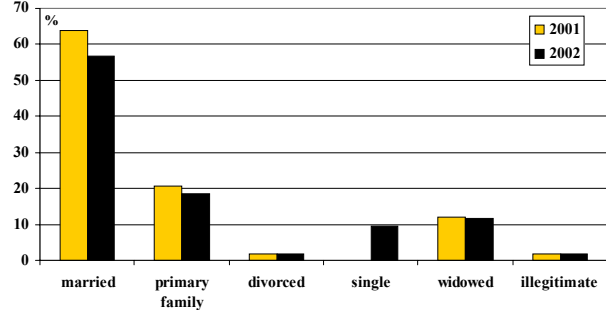


Fig. 4. Suicides by marital/family status

The most frequent method of suicide was by hanging, while the use of firearms and poisoning was rather rare (Fig. 5).

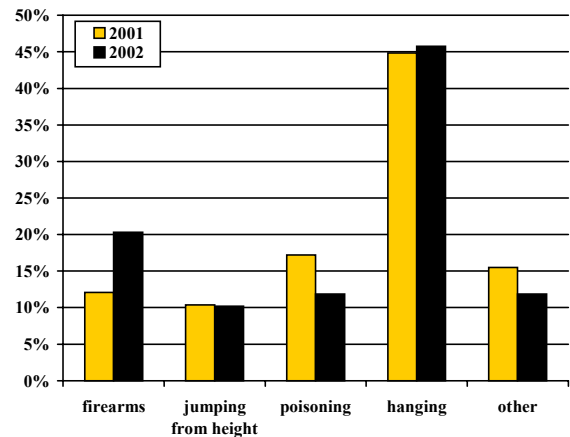


Fig. 5. Suicides by methods of commitment

Seasonal variations with point at the summer and spring months. For 2001 in spring was 25.86%, in summer 36.21%, in autumn 22.41% and winter 15.52%. For 2002 in spring the percentage was 26.56%, in summer 42.18%, in autumn 7.81% and winter 23.45%.

Daily variations suggest that over 60% suicides were committed in the daytime (Fig. 6).

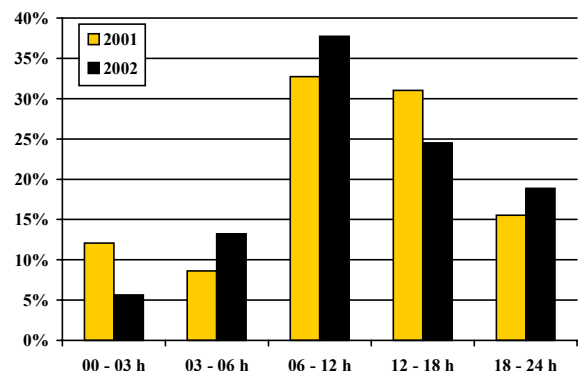


Fig. 6. Suicides by daytime of commitment

Discussion

In the beginning of the 1990s, some investigations showed typical epidemiological characteristics of suicide in the region of Niš: rates were higher among males than females, the most frequent ways of suicide were hanging, poisoning and drowning, and the highest rates were among the elderly people, and the greatest number of suicides occurred in the spring and at the beginning of the new week – Monday (7).

The number of suicides, expressed in absolute figures, on the territory of the City of Niš within 2001-2002, was doubled compared with the previous records (in 1998/2000). Epidemiologically, however, the phenomenon has not yet reached a critical point. Expressed as suicide rate (calculated per 100.000 inhabitants) with 15.25 it still remained within limits of the middle rate. The average annual suicide rate in this Region for period 1987/1989 was 15.2, and in 1999, 13.1 (7). We recall that the former Yugoslavia had middle suicide rate as well (8). Those findings can suggest that the economic crisis (that marked the ongoing period) could be a more important suicidal factor, than the political crisis and wars (that marked the period around 1999).

The increased number of suicide among males against females in 2002 was in accordance with the already known pattern of suicide distribution by sex, thus approaching the general trend in developed countries, where males died 4 times more often than females (5).

In most countries the highest rate of suicide was in people aged over 75 years (2), which is in accord with our investigation. Important risk factors are depression, social isolation and impaired physical health. However, older people are less likely than the young to have talked about suicide or made previous suicide attempts. So, those percentages are worrying us, and would require stronger health and social care in our town.

Although there was not any increase of the number of committed suicides aged 15-24, in 2002, we must be careful because suicide is the third leading cause of death in that aged group in the US (5). Some recent investigations confirmed an increasing trend of suicide attempts and suicides among adolescents and the young (7). Nevertheless, the suicide is known to be rare in children (2), as we found out, we should know more about factors leading to suicide in childhood, except that it is associated with severe personal and social morbidity.

Suicide was 2 times more frequent in the population officially evidenced as employed than unemployed. In the ongoing period of social transition, however, the employment status has become incisive given that economic changes leave part of the population with an employment status that is fictional and has yet to be defined, including the type of work that has to be remastered. The aforementioned objections require a dose of reserve when interpreting this structure. Such characteristics are in discord with the known structural rates in

the developed regions of Europe, where a higher rate is registered among the unemployed population (2).

A high percent of those who committed suicide in 2001 (84.48%) and 2002 (74.97%) lived in marriage in the primary family. It deviates from world researches where suicide rates are lowest among the married, and increase progressively with the never married, widowers and widows, and the divorced (2).

The data suggest a question: Are marriage and family a protective barrier against ideation, or may be a provocative factor? The family seems to have lost its protective capacity and integrating function with respect to the primary family members, and does no longer leave space for protection of elderly members, incapable of accepting a new social role at such a progressed age.

The most frequent method of suicide was hanging (44.83% in 2001 and 45.76% in 2002). Compared to the usual methods in European countries there is a difference: 58% of all suicides (either male and female) was committed by firearms (5). Some recent researches indicate there is a considerable evidence of relationship between the availability of suicidal means and the method of suicide (7).

Regarding seasons, the greatest number of suicides occurred from April to August. Majority of authors found the same (2, 7, 8), although the reason for these fluctuations is not known. Similar patterns in daily variations have been found in other countries (3, 7). Every third suicide occurs in the beginning of the day-between 06-12h (8). One of the possible explanations is that every person who intends to commit suicide has a number of problems, as well as some hope that the new period will solve their problems. The lack of solution results in suicide (7). We can conclude that depression is the most important factor that moves the arm of suicide person at the time of death.

Conclusion

The epidemiology of suicides on the territory of the City of Niš within 2001-2002, shows typical epidemiological characteristics for this Region. The increase of suicides in that period is difficult for interpretation. Although many suicidal risk factors, such as genetics, psychopathological conditions, social (cultural, religious, economic and political) factors have been defined, the real reasons for such dramatic acts still remain unknown for all, except for suicides themselves. The public mental health care, specially of older and younger people, as well as care of marital and family mental health, and solving the socio-economic problems are some of recommendations. However, additional research is necessary in order to elucidate all suicidal factors and all structural features of epidemiologic picture of suicides that can help in the prediction of new attempts.

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EPIDEMIOLOGIJA SAMOUBISTAVA NA PODRUČJU REGIONA NIŠ U PERIODU 2001 – 2002 GODINE

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Kratak sadržaj: *Region koji neposredno grvitira zdravstvenim ustanovama u Nišu obuhvata populaciju od oko 400.000 stanovnika. Problem porasta broja suicida u odnosu na period do 2001 godine, udvostručen je u apsolutnim brojevima, ali još uvek sa epidemiološkog stanovišta ne dostiže kao pojava dramatične razmere. Porast samoubistava dešava se u klimi dugotrajne socijalne dezintegracije i u periodu anticipacije neke vrste konsolidacije u socijalnim relacijama. Sagledavanje strukturalnih obeležja epidemiološkog prikaza za period 2001-2002 god. mogu biti prediktori novih pokušaja i izloženi su u ovom prikazu. Podaci upućuju na veću procentualnu zastupljenost osoba muškog pola, u bračnom odnosu, starije životne dobi, formalno zaposlenih, koji se pretežno odlučuju za samoubistvo vešanjem, i izvršavaju ga pretežno u toku dana. Takođe se zapažaju sezonske varijacije vezane za letnje i prolećne mesece.*

Ključne reči: *Epidemiologija, samoubistvo, grad Niš*