

Characteristics of Patients Who Committed Suicide during Hospitalization in Psychiatric Hospital »Vrapče« in the Period 1996–2006

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ABSTRACT

The aim of this study was to determine the characteristics of psychiatric inpatients who committed suicide in the Vrapče Psychiatric Hospital with respect to clinical, ethical, and legal context. The study included all patients hospitalized in the Vrapče Psychiatric Hospital between 1 January 1996 and 31 December 2006 who committed suicide (n=25). The suicide rate in the observed period was 32.9 per 100.000 (suicide coefficient, 50), which is similar that in general population. Based on the characteristics of hospitalized patients who committed suicide, we obtained a typical profile as follows: a middle-aged person, single, unemployed, repeatedly hospitalized, with schizophrenia and a history of suicide attempts, committing suicide using a violent method after more than three weeks of hospital treatment. If further prevention of hospital suicide will be treated as a legal rather than medical issue, the hospital atmosphere would be totalitarian rather than therapeutic. The success of psychiatric treatment is the perception of both of these aspects of suicide as well as their efficient balancing.

Key words: hospitals, psychiatric, inpatients, suicide, schizophrenia

Introduction

Suicide is a complex phenomenon, a voluntary and deliberate act of taking one's own life, associated with numerous and various biological, social, and psychological factors. It is an important psychopathological entity and one of the most demanding clinical problems, which psychiatrists face in their everyday practice. Suicides in Croatia represent an important public health problem. On average, there are 979.5 ± 110.3 suicide cases per year, with an average annual suicide rate of 21.4 ± 2.1 . Most suicides are committed by men (71.5% vs. 28.5% by women). According to literature data, the number of suicides of hospitalized patients has been increasing in recent decades^{1,2}. Suicide statistics show that the problem of suicide requires increased attention; however, its nature makes it difficult to elaborate, define, and confront in both psychological-psychiatric and ethical context.

The 10th version of the International Classification of Diseases (ICD-10) does not specify diagnostic criteria for suicide as a separate diagnostic category, but lists suicidal thoughts, behavior, and actions as modifications or complications of certain mental disorders.

Recent studies and models of suicidal behavior tend to perceive it as a gradual process affected by two groups of risk factors, predisposition factors (diathesis) and trigger factors (stressors). Since risk factors have poor specificity, sensitivity, and positive predictive value, it is not possible to determine the risk of suicide with sufficient reliability⁴.

Research has shown that approximately 90% of people who commit suicide have a mental disorder, which undoubtedly supports the assumption of an association between psychiatric diagnosis and suicide¹.

Suicide in psychiatric hospitals and wards is always an undesirable event followed by serious consequences and numerous dilemmas on whether it was possible to avoid and prevent such an unnatural death. It is the perception of a hospital ward as a protected environment with a certain level of safety that raises a number of questions related to the problems of personal, professional, and legal responsibility in case of inpatient suicide.

Psychiatric institutions usually admit patients who need stationary psychiatric treatment due to intensive

psychopathological manifestations², including those who have attempted suicide or have suicidal ideas or intentions. The suicide rate in Croatia is relatively high, and suicidal rates in some groups of mental patients (patients with affective disorders, schizophrenia or addiction) are even higher. Research has shown that the suicide rate among patients with mental disorders is seven to ten times higher than among general population². Considering the number of suicidal patients in psychiatric institutions, it may be expected that patients will attempt or even commit suicide even during hospital treatment. Since suicides are an imminent threat in psychiatric institutions and raise a number of issues, such as physician responsibility in everyday practice and the concept of work and organization of hospital wards, we decided to determine and analyze the characteristics of hospitalized patients who committed suicides in the Vrapče Psychiatric Hospital in the clinical psychiatric, ethical, and legal context.

Subjects and Methods

The study included all patients hospitalized in the Vrapče Psychiatric Hospital who committed suicide between 1 January 1996 and 31 December 2006. The hospitalized patient who committed suicide was defined as a patient who committed suicide on the ward and/or within or outside the hospital and/or during the granted leave of absence from hospital.

Sociodemographic data were collected (sex, age at the time of suicide, marital and employment status), as well as the data on clinical characteristics (psychiatric diagnosis and duration of illness), place and method of committing suicide, earlier suicidal behavior, legal aspect of hospitalization (voluntary or involuntary hospitalization, admitted without consent), and family history.

Patient data were collected retrospectively from medical records. Psychiatric diagnoses based on ICD-10 criteria were made by psychiatrists who treated the patients included in the study.

Sociodemographic and clinical data are presented descriptively as percentages. The hospital ethics committee approved the study in accordance with the Declaration of Helsinki from 1964.

Results

During the 10-year observation period, a total of 75,794 patients were hospitalized in Vrapče Psychiatric Hospital. Of them, 25 (0.03%) committed suicide. The calculated suicide rate in our hospital was 32.9 per 100,000 admissions, and the suicide coefficient in the observed period was 50. Among the patients who committed suicide, there were 13 women and 12 men. Five patients were married and 20 were unmarried. Four patients were in the 20–29 age group, 18 in the 30–59 age group, and 3 patients were aged over 60. As many as 19 patients were unemployed and only 6 were employed.

Most patients who committed suicide had already been hospitalized at least twice (Table 1). With respect to the duration of illness, most of them had been chronic patients who suffered from a psychiatric disorder for more than five years. As for the hospitalization duration, most patients who committed suicide were hospitalized for up to 90 days, followed by those hospitalized for more than 90 days. Majority was hospitalized voluntarily. As many as 20 patients were diagnosed with schizophrenia, whereas others were diagnosed with mood disorder, dementia or alcohol addiction.

With respect to suicide method, i.e. cause of death, most patients jumped from a height or in front of a moving vehicle, whereas smaller number committed suicide by hanging, poisoning, or other methods (Table 2). Two-thirds committed suicide outside the hospital or during the leave, whereas one-third committed suicide in the ward and/or within the hospital area. Twelve of 25 patients who committed suicide had earlier suicide attempts, and only one patient had a family history of suicide.

Discussion

We found that the suicide rate among psychiatric patients in our hospital in the observed 10-year period was similar to that reported for general population in Croatia⁵. Given that many patients with the most severe mental illnesses, including those with suicidal tenden-

TABLE 1
CHARACTERISTICS OF 25 INPATIENTS WHO COMMITTED SUICIDE IN VRAPČE PSYCHIATRIC HOSPITAL IN THE 1996–2006 PERIOD

Patient history	n (%)
No. of previous hospitalizations	
none	5 (20)
one	3 (12)
two or more	17 (68)
Duration of illness (years)	
>1	5 (20)
1–5	4 (16)
<5	16 (64)
Duration of hospitalization (days)	
<7	2 (8)
8–21	3 (12)
22–90	13 (52)
>90	7 (28)
Hospitalization method	
voluntary	18 (72)
involuntary	7 (28)
Diagnosis	
schizophrenia	20 (80)
mood disorder	3 (12)
dementia	1 (4)
alcohol addiction	1 (4)

TABLE 2
CHARACTERISTICS OF SUICIDES COMMITTED BY 25 INPATIENTS IN THE VRAPČE PSYCHIATRIC HOSPITAL IN THE 1996–2006 PERIOD

Suicide characteristic	n (%)
Cause of death	
hanging	5 (20)
jumping in front of a moving vehicle	6 (24)
jumping from a height	8 (32)
poisoning	3 (12)
other	3 (12)
Site of suicide	
ward and/or within hospital site	8 (32)
outside hospital site	8 (32)
during a granted leave	9 (36)
History of suicidal behavior	
positive patient history	12 (48)
positive family history	1 (4)

cies, are referred to and treated in the Vrapče Psychiatric Hospital, the suicide rate was expected to be considerably higher than that among general population. This lack of difference between the hospital and general population suicide rates could be explained as a result of controlled conditions and intensive observation and treatment of such in-patients.

The suicide coefficient in our study was 50, i.e., lower than that found in previous research. In the Popovača Psychiatric Hospital, the reported suicide coefficient was 120, in some Slovenian psychiatric hospitals it was 293.5, and in some psychiatric hospitals in China 269^{6,7}. We can speculate that the patients in those studies underwent longer hospital treatment, which contributed to higher suicide coefficient.

In our study, suicide was committed equally by men and women, whereas in general population, men commit suicide three times more often than women. Morgan and Priest⁸ also found no gender difference in suicides. On the other hand, other authors reported that men commit suicide more frequently^{9–11}. Jukić et al⁶ reported nine times higher representation of men among people who commit suicide in Croatia.

Although patients with schizophrenia were a relative majority among Vrapče hospital inpatients during the observation period, they were an absolute majority among those who committed suicide. This result is in accordance with the findings reported by other authors^{6,7,12}. In our study, over 90% of male patients who committed suicide suffered from schizophrenia, which is similar to results published by King¹⁰. On the other hand, research in England and Ireland has shown that patients with mood disorder commit suicide more often^{1,6,11,13,14}. Due to the small sample size, it is very difficult to generalize the conclusions, but the obtained data could indicate a more severe long-term prognosis of schizophrenia in male pa-

tients. We may also speculate that the reason why there was not a single male patient with mood disorder who committed suicide is that depression in men is more often than not unrecognized and underdiagnosed¹⁵.

Violent suicide methods (jumping from a height or in front of a moving vehicle or hanging) were used in 75% of all suicide cases in our study. These data are somewhat different from those for general population, where 51% suicides are committed by hanging, 18% with firearms, and 7% by jumping from a height. Hanging was the most frequent method in the patient sample from the Popovača Psychiatric Hospital, which also differs from our results⁶. According to literature data, the method of committing suicide is greatly determined by the availability of methods¹³. Our results confirm these data. There is a railroad in the vicinity of the Vrapče Psychiatric Hospital and 24% of our patients committed suicide by jumping in front of a train.

We found that most patients who committed suicide had already attempted suicide, which is in accordance with previous reports on suicide attempts as the most important predictive factor^{1,16–20}. These patients should be under close supervision.

In our study, only a few patients committed suicide during the first week of treatment, i.e., their percentage was smaller than that reported in other studies^{10,21,22}. On the other hand, almost one-third of suicides were committed after 90 days of treatment, which is in accordance with the results of some earlier studies^{12,19}. The fact that the patients with high suicidal risk are most often treated in the intensive care units during the first couple of days can account for a small number of suicides committed during the first week of hospital treatment.

Most patients in our sample were unmarried and unemployed, with long duration of illness and large number of previous hospitalizations (6.3 on average), which are all well-known risk factors for committing suicide¹. On the other hand, Powell⁴ reported that male gender, bachelor's life, and unemployment are not associated with patient suicide during treatment.

Five of our patients committed suicide in the forensic ward. They were mostly long-term inpatients with severe mental disorders and criminal record, which made them an especially vulnerable group. In fact, the multicausality of suicidal risk in this group of patients is conditioned by both personal factors (awareness of illness and perpetrated crime, feeling of rejection, guilt, depression, hopelessness, and pronounced social anxiety) and social factors, i.e., hospital and family setting with certain sociocultural and moralistic attitudes.

In addition to the five forensic patients, only two more patients were involuntarily hospitalized, whereas other patients who committed suicide were hospitalized voluntarily. Also, most patients committed suicide after more than three weeks of hospitalization. It is possible that during this period the acute clinical picture was resolved, but the suicidal risk remained. Additionally, with time, patients gain greater insight into their illness,

which may cause feelings of hopelessness. We should keep in mind that respecting human rights, in the broadest sense of the term, also includes giving priority to voluntary over involuntary hospital treatment of psychiatric patients.

Although the main strength of our study was a large number of hospitalized patients in the 10-year observation period, there are several limitations that need to be taken into account, such as the retrospective design of our study. Also, the variability in methodology used in similar studies limits comparison of results. This is the basic problem in the field of suicide research and the reason why no relevant and reliable predictive factors of suicide risk assessment have been identified. It is also an aggravating circumstance regarding the problem of suicide prevention.

The number of suicides committed during hospitalization has been increasing in the last twenty years,

which represents a paradox given the progress in the field of pharmacotherapy and psychotherapeutic techniques. The possible reasons could be shorter hospitalizations, larger and faster patient turnover, changes of custodial approach into much more liberal treatment regimes, numerous hospitalizations, and inadequate care in the community, the services of which have not kept up with radical changes in health system.

Suicide in psychiatric hospitals is a reality, which should be accepted as such, but reconciled with. The first and foremost reason of reducing the suicide rate is not to avoid legal responsibility, but to protect life as such. If further prevention of hospital suicide will be treated as a legal rather than medical issue, the hospital atmosphere would be totalitarian rather than therapeutic. The success of psychiatric treatment is the perception of both of these aspects of suicide as well as their efficient balancing.

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OBILJEŽJA SUICIDA PSIHIJATRIJSKIH BOLESNIKA TIJEKOM HOSPITALIZACIJE U PSIHIJATRIJSKOJ BOLNICI VRAPČE U RAZDOBLJU OD 1996. DO 2006. GODINE

SAŽETAK

Cilj ovog istraživanja bio je utvrditi osobine psihijatrijskih bolesnika koji su počinili samoubojstvo tijekom hospitalizacije u Psihijatrijskoj bolnici Vrapče iz kliničko psihijatrijske, etičke i sudske perspektive. Istraživanjem su bili obuhvaćeni svi bolesnici hospitalizirani u Psihijatrijskoj bolnici Vrapče od 1. siječnja 1996. do 31. prosinca 2006. godine (N=75,794), od kojih je 25 počinilo samoubojstvo. Stopa samoubojstava u promatranom razdoblju bila je 32,9 (koeficijent suicida, 50), što bitno ne odstupa od podataka iz opće populacije. Ispitivanjem osobina hospitaliziranih bolesnika koji su počinili samoubojstvo dobili smo tipični profil: osoba srednjih godina, samac, nezaposlen, višekratno hospitaliziran, s dijagnozom shizofrenije i pozitivnom anamnezom prethodnog pokušaja samoubojstva, a samoubojstvo je izvršio nasilnom metodom nakon više od tri tjedna bolničkog liječenja. Ako se daljnja prevencija samoubojstava u bolnici svede samo na prevenciju samoubojstva kao pravnog, a ne medicinskog problema, u bolnici bi mogla prevladati totalitarna, a ne terapijska atmosfera. Uspjeh psihijatrijskog liječenja je percepcija obaju aspekata samoubojstva te uspješno balansiranje između njih.