



THE PROFILE OF PATIENTS WITH SCHIZOPHRENIA WHO ATTEMPTED SUICIDE

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ABSTRACT

Introduction: Suicide is a complex phenomenon, 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, especial in schizophrenic patients. According to literature data, the number of suicides of schizophrenic patients has been increasing in recent decades

Objectives: The aim of this study was to determinate the profile of patients with schizophrenia who attempted suicide in the Psychiatric hospital "Skopje"-Skopje, R.Macedonia.

Methods: The study included 114 patients with schizophrenia, 47.4% (n=54) of them attempted suicide, 52.6% (60) was group consists of patients with schizophrenia who is not registered for suicide attempt, nor the existence of suicide idea. Psychiatric diagnosis of schizophrenia was based on ICD-10 criteria.

Results: Based on the investigation of patients with schizophrenia who attempted suicide, we obtained a typical profile as follows: middle-aged person(31.4 average years), single (61,1% were not married, 44.4% live alone), (79.5%) unemployed, repeatedly hospitalized and history of suicide attempts, attempting suicide using a violent method (poisoning -55.5%, drowning-7.4%, hanging-9.2%, slashing their wrists-16.6%, jumped from height-5.5% etc.) after more than tree weeks of hospital treatment and out of hospital.

Keywords: suicide; schizophrenia; characteristics

Academic Discipline And Sub-Disciplines:medicine-psychiatry

Council for Innovative Research

Peer Review Research Publishing System

Journal: International Journal of Research in Education methodology

Vol . 6, No.3

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www.ijrem.com



Introduction:

Suicide is a complex phenomenon, 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, especially in schizophrenic patients^[1]. According to literature data, the number of suicides of schizophrenic patients has been increasing in recent decades^[2].

Research has shown that approximately 80% of people who attempted suicide have schizophrenia, 90% have a mental disorder, which undoubtedly supports the assumption of an association between psychiatric diagnosis and suicide^[1-2]. Research has shown that the suicide rate among patients with schizophrenia is seven to ten times higher than among general population^[1-2]. According to Smalc VF.^[3] suicidality is a very important and frequent event in schizophrenic patients, occurring in up to 50% of patients during lifetime, and 20% of schizophrenic patients end with suicide. Suicides in schizophrenic patients, although sharing some characteristics with suicides in general population, have also specific features for this particular diagnostic group. As many as 1 out of 4 persons with schizophrenia attempt suicide, some even while they are under psychiatric care. Specialists in the study of suicide outline risk factors for suicide in schizophrenic patients and the implications for preventive strategies. Suicide is a major cause of death among patients with schizophrenia, with young adulthood to midlife being the age range of greatest risk. A past history of suicide attempts is common among schizophrenic suicide victims, as are affective symptomatology and feelings of hopelessness and demoralization^[4]. Active paranoia may increase risk, whereas negative symptoms may decrease the risk of self-destructive acts in schizophrenic patients. Many suicides occur during hospitalization or shortly after discharge. Methodical assessment of suicidal ideation and aggressive treatment with psychological, social, and pharmacologic approaches are vital aspects of patient management.

Subjects and methods:

The study included 114 patients hospitalized in the Psychiatric hospital "Skopje" with diagnosis – schizophrenia. The 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 methods of committing suicide, legal aspects of hospitalization (voluntary or involuntary) and family history. Patient data were collected retrospectively from medical records and present. Psychiatric diagnosis of schizophrenia was based on ICD-10 criteria. From the statistical methods were used percent, average, standard deviation, OR and χ^2 -test.

Results:

During the observation period, 114 patients have diagnosis schizophrenia, suicide attempts are registration in 47.4% (n=54) of the patients (tab-fig.1). Among the patients who attempted suicide, there were 36 (66,7%) men and 18(33,3%) women, there is statistical difference between men and women(p=0.0009). We register statistically significant relationship between the attempted suicide and sex($\chi^2=3.9$, p=0.04). 61.1 % (33) were not married, they were singled, 44.4% live alone and 16.6% with their parents (tab2). There is statistical difference between men and women(p=0.0009). We register statistically significant relationship between the attempted suicide and modalities of marital status ($\chi^2=3.9$, p=0.04). According to OR (odds ratio) marital status of patients reduces the risk of suicide (OR=0.33(0.12<OR<0.93, CI95%). We register statistically significant relationship between the attempted suicide and living alone ($\chi^2=4.77$,p=0.028). Living alone, according to the OR is statistically significant risk that increases the chance of suicide in patients with schizophrenia twice. (OR=2.40(1.01<OR<5.74, CI95%). Living in or with a family, according to OR is statistically significant reduces the risk for registration of suicide in schizophrenia (OR = 0.42 (0.17<OR<0.99, CI95%).The average age were 31.4 (\pm 9.3) y., 30 patients were in the age group less than 25 y., 11 in the 26-35 age group, 13 were aged over 36 y., when they have their attempted of suicide (tab2). As many as 25(46.3%) patients were unemployed, was employed, now is not 18(33.3%) and only 8 were employed (tab.2) We register statistically significant relationship between unemployment and registration of suicide in people with schizophrenia ($\chi^2 = 5.76$ for p= 0,029) Unemployment according to OR relationship is statistically significant risk increases the chance of registration suicide in patients suffering from schizophrenia for three times (OR = 2.92 (1.10<OR<7.88, CI95%).

Most of the patients with schizophrenia who attempted suicide had already been hospitalized at least twice, average of previous hospitalizations are 4.4 \pm 3,7, with one and maximum 13 times(tab.3). There is a positive correlation between the number of hospitalizations and the increase of attempted suicide - r = 0.3118, p = 0.022. With respect to the duration of illness, most of the patients had been chronic patients who suffered from schizophrenia for more than five years-70,4%, the average duration of disease was 18 years. As for the hospitalization duration, most of the patients who attempted suicide were hospitalized for up to three weeks. Majority was hospitalized voluntarily. Clinical types of schizophrenia were: 42, 6% paranoid, non-difference and non-specific was 22.2% and so on (tab3)



The suicide methods, most patients used poisoning with medicaments and acid-59.2% as a suicide methods, drowning-7.4%, hanging-9.2%, and slashing their wrists-16.6% whereas smaller number attempted suicide by jumping in front of vehicle(car, bus, train), used electric current, jumped from height, stabbing him/herself with knife, -20.4%(tab.3). All of the patients who attempted suicide had earlier suicide attempts, and only 5(9.3%) patients had family history of suicide (tab3). We register statistically significant relationship between suicide attempts in families and registration suicide in patients suffering from schizophrenia Fisher exact 2 tailed p value- $p = 0,042$. All attempted suicide were outside of hospital.

Discussion:

The obtained data could indicate a more severe long-term prognosis of schizophrenia patients.

In our study, suicide was attempted 64,35% in men, there is statistical difference between men and women($p < 0.05$), whereas in general population, man attempted suicide three times more often than women.. Brecic^[1] also found no gender difference in suicides. On the other hand, other authors reported that man attempted suicide more frequently^[1,5-8].

Although patients with paranoid-42.6%, non-difference and non-specific (22,2%) clinical types of schizophrenia were relative majority among hospital patients. This result is in accordance with the findings reported by other authors. Fenton and colleges⁽⁹⁻¹¹⁾ in theirs studies had find among the patients with schizophrenia, 50% had the paranoid subtype, 42,8% had undifferentiated schizophrenia, and 7,2% had the disorganized type. Active paranoia may increase risk, whereas negative symptoms may decrease the risk of self-destructive acts in schizophrenic patients^[4].

As was observed in our sample, a past history of suicide attempts is common in attempts suicides with schizophrenia, and may be the most prominent predictor of subsequent death. We found that most patients who attempted suicide had already attempted suicide, which is in accordance with previous reports on suicide attempts as the most important predictive factor⁽¹²⁻¹⁶⁾. These patients should be under close supervision. A past history of suicide attempts is common among schizophrenic suicide victims, as are affective symptomatology and feelings of hopelessness and demoralization^[4]. According some authors^[14, 17, 18] and their informants and records documented a past history of suicide attempts were in 75% of victims. Seventy-one percent of Finnish schizophrenics who committed suicide had a past history of suicide attempts^[13]. Allebeck and colleagues^[16-17] noted this association to be especially strong among women.

Individuals with schizophrenia have a shortened life expectancy^[19]. Compared with both the general population and persons with other mental disorders, these patients have increased mortality risk due to physical illness, accidents, and other causes of violent death, especially suicide^[20-21]. Studies estimate that from 9% to 24% of individuals with schizophrenia will die by their own hand^[20-23].

According Caldwell^[22-23] in their study, mean age was 36.5 (± 12.0) years. Fourteen (70%) were single, 3 were married, 2 were divorced, and 1 was widowed. Five (25%) lived alone, while the remainder lived with other family or friends. The percent were similar to our findings. Some evidence supports that being unmarried, socially isolated, and unemployed are risk factors for suicide among schizophrenics as well^[24-26].

Violent suicide methods - poisoning with medicaments and acid - 59.2%, drowning-7,4 %, slashing their wrists and hanging-16,7%, stabbing him/ herself with knife, electric current, jumping in front of moving vehicle, jumping from a height were used in all suicide cases in our study. These data are some what different from those for general population, where 51% suicides are attempted by hanging, 18% with firearms and 7% by jumping from height. Jumping from a height was most frequent method in the patient sample from Vrapce Psychiatric Hospital^[1]. Our results are very similar to these data. According other study^[12], the schizophrenic patients tended to use violent methods to take their lives: 6 (30%) used a firearm, 5 hanged themselves, 4 jumped from a height, and the remainder used a variety of other means (drowning, drug ingestion, carbon monoxide poisoning, exposure, and self-immolation). According to literature data, the method of attempting suicide is greatly determined by the availability of methods.

The mean duration of illness was over 5 years, had an average of 3.9 lifetime psychiatric admissions. Studies indicate that schizophrenic patients who commit suicide tend to have a relatively more chronic course of illness, with acute exacerbations^[14,18,19]. Among 92 schizophrenic suicides identified in the Finnish National Suicide Prevention Project, the mean duration of illness was 15.5 years, and victims had an average of 7.9 lifetime psychiatric admissions^[14]. Havaki-Kontaxaki and colleagues^[15] found a mean duration of illness of 19.3 (± 8.8) years for suicide completers, compared with 13.5 (± 9.9) years for schizophrenic controls, a significant difference. Cheng and others^[12] found that, compared with no suicidal schizophrenics, suicide completers had more frequent psychiatric hospitalizations. Westermeyer and Harrow^[24] suggested that a gradual onset of illness over time may also place schizophrenic patients at risk for suicide. Most of the patients in Vrapce^[1] samples were unmarried and unemployed, with long duration of illness and large number of previous hospitalizations(6,3 on average), which are well-known risk factors for attempting suicide.

Many suicides occur during hospitalization or shortly after discharge. In our study, almost two-third of suicides were attempted after tree weeks of treatment and hospitalization, which is in accordance with results of Vrapce study^[1]. A large



proportion of suicides among schizophrenics occur during or shortly after hospitalization^[26]. Allebeck and Wistedt^[27] found that 34 of 63 suicides took place during or shortly after psychiatric care. Hu and co workers^[28] found that 81.1% of Taiwanese schizophrenic individuals who committed suicide were engaged in either inpatient or outpatient treatment during their final month of life, and 31% of suicides occurred while the patient was receiving inpatient psychiatric care. In a Finnish sample, 45 (51%) of 89 schizophrenics who committed suicide had their last contact with a health care provider within 4 days of death, 70% within 2 weeks, and 82% within a month^[14]. Caldwell and Gottesman^[22] concluded that 88.1% of schizophrenics who committed suicide were in psychiatric care at the time of attempt.

We agree with conclusion of Brecic et al^[1], that 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 suicide attempted during the hospitalization and after has been increasing in the last years, which represents a paradox given the progress in the field of pharmacotherapy and psychotherapeutic techniques. The possible reason 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^[1,3]. As Brecic et al^[1] said that 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 is not to avoid legal responsibility, but to protect life as such. Methodical assessment of suicidal ideation and aggressive treatment with psychological, social, and pharmacological approaches are vital aspects of patient management.

Conclusion: Based on the investigation of patients with schizophrenia who attempted suicide, we obtained a typical profile as follows: middle-aged person, single, unemployed, repeatedly hospitalized and history of suicide attempts, attempting suicide using a violent method after more than tree weeks of hospital treatment and out of hospital.

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Tables and chart

Table 1- Patients with suicide attempts in the group of patients with schizophrenia

Suicide attempts	No	%
yes	54	47.4
no	60	52.6

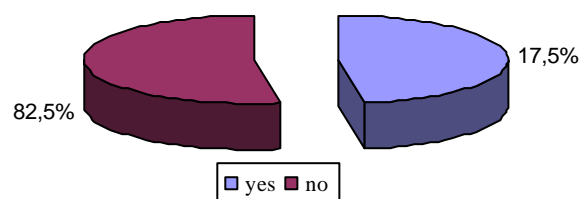


Figure 1 Patients with suicide attempts in the group of patients with schizophrenia



Table 2- Characteristics of patients(N=114) who attempted suicide and patients with out

characteristic	With attempted Suicide	with out suicide	n (%)	n (%)
sex				
Men			36(66.7)	29(48.3)
Women			18(33.3)	31(51.7)
average of age during the investigation				
31.4-mean	minimum 15y	maximum 48y	± St.Dev. 9.3	with attempted
26.1y -mean	minimum 14y	maximum 38y	± St.Dev. 5.4	with out
average of age when they made attempted of suicide				
27.5y -mean	minimum 14y	maximum 45y	± St.Dev. 8.3	
age(years) when they made attempted of suicide				
≤25y				30(55.6)
26-35				11(20.4)
≥ 36				13(24.0)
Married status				
Not married			33(61,1)	36(60,6)
Married			15(27.8)	14(23,3)
widow /er			4 (7.4)	9(15.0)
divorce			2 (3.7)	1 (1.7)
Employed status				
employed				8(14,8)
	18(30.0)			
Students/pupils			2 (3.7)	4
	(6.7)			
was employed, now is not			18(33.3)	4 (6.7)
Pensioner			1 (1.8)	4
	(6.7)			
unemployed				25(46.3)
	30(50.0)			
Living with				
Alone				24(44.4)
	15(25.0)			
Parents				9(16.7)
	15(25.0)			
Cousins				2 (3.7)
	7(11.7)			
with one parents				4 (7.4)
	9(15.0)			
With wife/husband				15(27.8)
	14(23.3)			

Table 3- Characteristics of 54 patients who attempted suicide and 60 patients with out

Patient history				
average of durations of illness(years)				
18.1-mean	minimum 21.0	maximum 36.0	± St.Dev. 9.4	
average of previous hospitalizations				
4.4-mean	minimum 1.0	maximum 13.0	± St.Dev. 3.7	
average of number of suicide attempts				
1.8-mean	minimum 1.0	maximum 10.0	± St.Dev. 1.5	



number of suicide attempts	N %
1	32(59.3)
2-3	18(33.3)
4-5	3 (5.6)
>5	1 (1.9)

Duration of hospitalization(weeks)

1-3	35(64.8)
>3	19(35.2)

Hospitalization

Voluntary	39(72.6)
Involuntary	15(27.8)

Clinical type of schizophrenia

	with out suicide	with suicide	n (%)
Paranoid	23(42.6)	18(30.0)	
Hebephrenic	4 (7.4)	9(15.0)	4
Non-difference	12(22.2)	12(20,0)	
Residual	12(22.2)	9(15.0)	
others	3 (3.7)	9(15.0)	2
Non-specific	1 (1.9)	3 (5.0)	1

Suicide methods

Slashing their wrists	9(16.7)	N %
Hanging	5 (9.3)	
Jumping in front of vehicle(car, bus, train)	2 (3.7)	
Jumping from height	3 (5.6)	
Drowning	4 (7.4)	
Electric current	3 (5.6)	
Stabbing him/herself with knife	2 (3.7)	
Poisoning (medicaments, acid)	32(59.3)	

History of suicidal behaviour

Positive family	5(9.3)	N %
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