



Clinical Profile of a Person with Experience of Deliberate Self-Poisoning

Vanja Tatalović¹, Ana-Marija Vejnović^{1,2}, Sveto Bjelan¹, Sanja Bjelan^{1,2}, Isidora Đozić¹

¹Medical Faculty, University of Novi Sad, Novi Sad, Serbia

²Clinic for Psychiatry, University Clinical Center of Vojvodina, Novi Sad, Serbia

Email: tatalovicvanja1@gmail.com

How to cite this paper: Tatalović, V., Vejnović, A.-M., Bjelan, S., Bjelan, S. and Đozić, I. (2024) Clinical Profile of a Person with Experience of Deliberate Self-Poisoning. *Open Access Library Journal*, 11: e11476. <https://doi.org/10.4236/oalib.1111476>

Received: March 24, 2024

Accepted: April 27, 2024

Published: April 30, 2024

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Abstract

Introduction: Suicide is one of the leading causes of premature death in young adults. Among the major risk factors for suicide is a pre-existing suicide attempt. Self-poisoning is the most common form of suicide attempt, so we decided to examine the clinical profile of people with this experience to contribute to the design of prevention programs in order to reduce suicide rate. **The Aim:** The aim was to analyze sociodemographic and psychopathological characteristics, and health of patients who were under psychiatric treatment due to deliberate self-poisoning. **Material and Methods:** We analyzed 190 patients (99 women and 91 men) who were admitted to the Clinic for Psychiatry of the Clinical Center of Vojvodina in 2020, after deliberate self-poisoning. Medical records were used to collect psychopathological and sociodemographic characteristics, physical health data, characteristics related to the act, and the substance used for self-poisoning. **Results:** The average age was 39.01 ± 15.44 years. It was determined that, during the analyzed period, the most common motive for self-poisoning was suicide. Women were more often treated for suicidal and non-suicidal intentions, while men were more often hospitalized for abusing substances. The prevalence of previous psychiatric treatment existed in 65.8% of respondents, while 29.47% of them had this experience before. Suicidal intent was most common in patients with depressive disorders, while those with substance addiction were motivated by avoiding withdrawal symptoms or pleasure. Personal psychiatric therapy was used for self-poisoning in 42.86% of patients. The most commonly used substance was benzodiazepines. **Conclusion:** In order to prevent intentional self-poisoning, it is necessary to recognize psychiatric disorders and to attend early treatment. Increased control of prescription of psychotropic drugs, primarily benzodiazepines, could reduce the incidence of self-poisoning phenomena.

Subject Areas

Health Prevention, Psychiatry, Mental Health

Keywords

Self-Poisoning, Suicide Attempt, Appeal, Abuse, Benzodiazepines

1. Introduction

Suicidality involves inclination for suicidal thoughts, attempt, and execution of suicide. Suicide represents one of the leading causes of premature deaths in young adults. According to the data of the World Health Organization for period from 2010 to 2016, every year about 700 thousand people performs suicide, while on every suicide there are more than 20 attempts of suicide [1]. Newer studies have shown that there is an upward trend of suicides and attempts of suicide. In Serbia, in year 2018 suicide rate was 13/100,000, but it differs by localization, so in Vojvodina rate was the highest, 16.4/100,000 [2]. Predisposing factors for suicide were males, older age, unemployment, economic crisis, also specific professions like doctors, veterinarians, and farmers. The act itself was planned in detail and performed in highly lethal ways, like hanging, drowning, and jumping from high, unlike attempts of suicide, where usually less lethal ways were used [3].

Attempt of suicide represents an act of self-harming in which no fatality occurs. The investigations so far showed that the individuals who attempted suicide were usually females, young people, and persons with personality disorders, depression, and alcoholism. The suicide attempts are characterized by taking high doses of medications, with no previous planning, and attempts were taken in places where help is highly available, so it is considered that the act itself is a type of appeal and wish for a change. Some genetic and epidemic factors could have an important impact on suicidal behavior, like the presence of family history of suicide, the existence of previous suicide attempts, marriage status, employment, education degree, and material status [3] [4].

Self-poisoning can be defined as a self-exposure to the amount of substance that could potentially harm an individual. It could be accidental or deliberate. Deliberate self-poisoning has a low mortality rate and is the most common method of suicide attempt. In our country, most acute poisonings of adults are caused by the ingestion of drugs (primarily psychotropic, and then cardiotropic drugs) for suicidal purposes, although they can also occur by accident [5]. According to some authors, overdoses of alcohol and “recreational drugs” are also considered to be intentional self-poisoning [6].

The fact is that every healthy living being has survival as an instinctive need. What is it then that makes a human being harm himself and try to take his own

life? It is a question to which there is no unique answer, and it is the field of interest of numerous scientific and professional disciplines, and in practice it most often belongs to psychiatrists. Suicidology is a relatively young scientific discipline that studies the phenomenon of suicidality with a possibly fatal outcome [3].

The term “parasuicide” is used as a synonym for attempted suicide, precisely to point out that, although there is a similarity with the phenomenon of suicide, there are also differences [7]. These patients do not have a clear suicidal intention, but instead, they state a need for a “break” or “rest” as the motive for the attempt or as an act that would attract the attention of people in the immediate area “to check if someone cares about them”. Although it is often unfairly considered that people who attempt suicide by deliberate self-poisoning are “just looking for attention”, studies have shown that the largest proportion of these patients do have a suicidal intention [8].

Suicide is an important public health problem. It is believed that about 10% - 15% of patients who attempt suicide will succeed [8]. Knowing that suicide attempt is the main risk factor for committing suicide [9] [10], it is important for us to examine how frequent this motivation is among people with intentional self-poisoning. This study describes the sociodemographic and psychopathological characteristics, as well as the physical health of patients who were admitted to the Clinic for Psychiatry of the University Clinical Center of Vojvodina in Novi Sad after intentional self-poisoning with drugs. Using these information we could potentially make an artificial intelligence model that could predict suicide behavior and implement it in primary care units.

2. The Aims

- Review and analysis of the psychopathological characteristics of patients with a history of intentional self-poisoning.
- Review and analysis of the sociodemographic characteristics of patients with a history of intentional self-poisoning.
- Analysis of the act of self-poisoning itself: motive, immediate reason, date of admission, duration of hospitalization, number of attempts, and period between two suicide attempts.
- Analysis of the data on the etiological factor that caused the self-poisoning.

3. Material and Methods

A retrospective observational study was conducted at the Psychiatry Clinic of the University Clinical Center of Vojvodina. The criterion for the participation of subjects in the study was an act of intentional self-poisoning. The criteria for excluding subjects from the study were: second method of intentional self-injury, alcohol intoxication as the only agent, and self-poisoning by accident in Novi Sad, Vojvodina for the period from January 1st to December 31st, 2020. The Clinical Information System of the Clinical Center was used to collect data. The option to search for reports of patients with a specific diagnosis was used to

search the database, considering the following codes of discharge diagnoses according to the current 10th revision of the International Classification of Diseases (ICD-10): F10-19, X60-X69, and T40-T50. The parameters that were observed are gender, age, employment, level of education, marital status, number of household members, number of children, previous experience of self-poisoning, type of substance, intention, previous psychiatric treatment, morbidities, date of execution of the act, period of hospitalization, if any, as well as stated reasons for the act itself.

Subsequently, the respondents were divided into 3 groups, according to the intention of self-poisoning:

1) Group S (suicidal intent)—patients who clearly expressed suicidal ideation, declared their desire to end their lives, and stated the reasons for the act itself, were classified in this group.

2) Group Z (addiction/abuse)—patients who stated their intent as “substance enjoyment” and have previously been diagnosed with addiction or harmful use of some psychoactive substance, and the reason for the examination was a drug overdose.

3) PS Group (parasuicidal intent)—patients who denied suicidal ideas, plans, and impulses, citing “rest”, “break” or “checking the environment, will someone help me?” as the reason.

All data were recorded in a table in *Microsoft Excel* and processed in the statistical program *JASP* 0.14.1. Numerical characteristics are presented in the form of middle values (arithmetic middle) and measures of variability (standard deviation), and attributive characteristics using frequencies and percentages. Testing the difference in frequencies of attributive features was performed using the χ^2 test. Values with a significance level of $p < 0.05$ were considered statistically significant.

The research was approved by the Ethics Commission of the University Clinical Center of Vojvodina (approval number 00-45 dated March 12th, 2021).

4. Results

We found 931 patients who were labeled as intentional self-poisoning using diagnosis codes at the time of discharge. Even 741 cases of intentional self-poisoning with ethanol as an only substance were excluded from the study, as it exceeds the narrower goals of this study. The examined group consisted of 190 people aged between 11 and 85 years, average age 39.01 ± 15.44 years. 99 female and 91 male patients participated in the research (**Table 1**).

By reviewing data on marital status, level of education, employment, number of household members, and number of children, we saw that most of the data was missing, so we did not proceed with further analysis and statistical processing.

4.1. Information about the Act of Self-Poisoning Itself

Table 2 shows motives for self-poisoning and the immediate reasons given by

Table 1. Presentation of sociodemographic data of the examined group: age and gender.

Age	Female		Male		In total	
	frequency	%	frequency	%	frequency	%
11 - 24	13	6.84	17	8.95	30	15.79
25 - 34	29	15.26	23	12.1	52	27.31
35 - 44	29	15.26	20	10.5	49	25.79
45 - 54	11	5.78	15	7.89	26	13.68
55 - 64	8	4.21	11	5.79	19	10
≥65	1	0.53	13	6.84	14	7.36
In total	91	47.89	99	52.1	190	100

Table 2. An overview of the motives for the act of self-poisoning.

The intention	Gender				In total	
	Male		Female		Frequency	%
	Frequency	%	Frequency	%		
Suicidal intent	20	10.53	53	27.89	73	38.42
Abuse/addiction	48	25.26	13	6.84	61	32.1
Parasuicidal intent	4	2.1	14	7.37	18	9.47
Unknown	19	10	19	10	38	20

the patient, where it can be seen that the most common intention, in 73 patients (38.42%), was a suicide attempt, less often was an overdose as part of abuse/addiction in 61 respondents (32.1%), while the rarest motives patients cited were “rest” and “break”—in 18 patients (9.47%). By processing the data on gender and intention to self-poison, it was determined that statistically significantly more often female persons self-poisoned for both suicidal and non-suicidal purposes, while male persons were more often examined for psychoactive substance overdose as part of the disease of addiction/harmful use ($\chi^2 = 33.634$, *Kramer V coefficient* 0.472, $p < 0.01$).

The most commonly listed immediate reason for self-poisoning were family problems in 31 patients (15.58%), followed by partner relationship problems in 18 (9.04%), financial problems in 8 (4.02%), and the death of a loved one were listed in 6 respondents (3.01%), while the other reasons were less common or unknown.

A review of the collected data found that in 2020, at the Psychiatry Clinic of the University Clinical Center of Vojvodina, after intentional self-poisoning, 73 (38.42%) patients were treated on an outpatient basis, while 117 (61.58%) patients were hospitalized.

The average length of hospitalization was 5.58 ± 7.6 days (min 1, max 51). Analyzing the period of the year based on the recorded dates of self-poisoning at the Psychiatry Clinic in Novi Sad, it was observed that in 2020, the largest num-

ber of admissions occurred in September and amounted 25 attempts (13.16%), while the lowest was in May and it was 7 (3.68%).

4.2. Physical and Psychiatric Condition of the Patients

Figure 1 and **Figure 2** show the history of psychiatric and physical treatment of the patients. It was found that 125 (65.8%) patients had previous psychiatric treatment, 19 (10%) had none, while 46 (24.2%) had no available data. Physical diseases were present in 61 (32.1%) patients, absent in 39 (20.53%), and data were missing for 90 (47.37%) patients.

Analyzing data on the physical condition of patients admitted to the Psychiatry Clinic after a suicide attempt by deliberate self-poisoning, it was observed that the most prevalent physical disease was arterial hypertension (in 21 patients (11.05%)), followed by infectious diseases such as infection with the human immunodeficiency virus (HIV). and hepatitis B and C virus (in 10 patients (5.26%)), diabetes mellitus (in 9 (4.74%)), thyroid function disorders (in 8 patients (4.21%)), asthma (in 7 patients (3.68)), while slightly less represented were malignant diseases, anemia and epilepsy with two patients each (1.58%) and

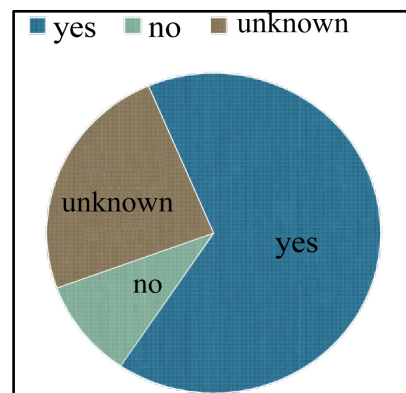


Figure 1. Presentation of the presence of previous psychiatric treatment.

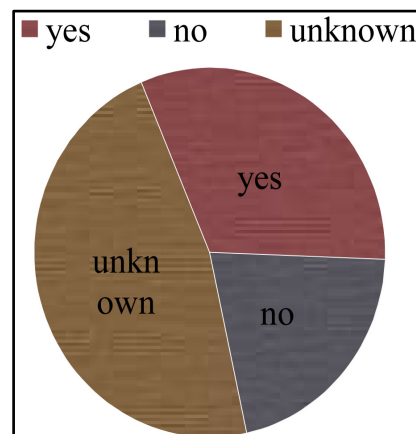


Figure 2. Presentation of the presence of physical diseases.

osteoporosis, ulcerative colitis, alcoholic liver disease and glomerulonephritis with one patient each (1.05%).

In **Table 3**, it can be seen that 56 (29.47%) respondents with the experience of self-poisoning already had such experience before, of which 49 (25.79%) tried this act 3 or more times, 4 patients (2.1%) twice, and 3 (1.58%) once. The group of people who have not attempted suicide before consists of 8 patients (4.21%), while data are unknown for 126 (66.31%) patients.

Analyzing the date of admission after repeated self-poisoning, we observed that the average interval between two acts of self-poisoning was 49.33 ± 55.42 days (min 1, max 210).

As part of the data analysis of the previous psychiatric treatment of patients with the experience of intentional self-poisoning, we observed the presence of a hereditary factor within the family history, where in 22 (11.58%) patients there was a positive family burden of psychiatric heredity, in 17 (8.95%) there was none, while data on family history were missing in 141 (74.21%) cases.

By reviewing the psychiatric diagnoses present in patients who committed intentional self-poisoning, compared with the suicidal intent stated by the patients, we conducted that as an individual diagnosis among suicide attempts, the most prevalent were 23 (20%) patients with depressive disorders, 13 (11.3%) personality and behavior disorders, and 10 (8.69%) neurotic, stressogenic and somatoform disorders, while as a combination of diagnoses the most common were behavior disorders and adjustment disorders 5 (4.35%). Among the patients who stated their intention to appeal, the most prevalent psychiatric disorders with a frequency of 4 patients each were schizophrenia and other psychotic disorders and personality and behavioral disorders (22.22%), in contrast to the group of patients whose intention was abuse, where with a frequency of 38 patients, the most frequent psychiatric disorder was the presence of addiction (58.46%).

4.3. Data on the Substance Used for Self-Poisoning

Table 4 shows patients divided based on how many types of substances they used for self-poisoning. Only intentions of suicide attempts and appeals were considered. The largest proportion of patients who attempted suicide used two substances (28 patients/38.36%), while 10 of them (55.55%), who indicated an appeal as their intention (parasuicidal intention), used one substance. As a single substance, for the purpose of suicide, benzodiazepines were most often used in

Table 3. Presentation of previous suicide attempts in patients admitted after intentional self-poisoning.

	Previous suicide attempts (frequency, %)				
	0	1	2	3 or more	Unknown
Males	4/2.1%	1/0.51%	1/0.51%	24/12.63%	61/32.1%
Females	4/2.1%	2/1.05%	3/1.58%	25/13.16%	65/34.21%
In total	8/4.2%	3/1.58%	4/2.1%	49/25.79%	126/66.31%

Table 4. Presentation of the type and quantity of the substance with which the act of self-poisoning was committed in cases of suicide attempts and appeals.

Numbers of substance	Types of substance	Frequency (frequency/%)	
		Suicide attempt	Appeal
1	Benzodiazepines	21/28.76%	8/44.44%
	Antiepileptics	1/1.3%	1/5.55%
	Antipsychotics	3/4.11%	0
	Other	2/2.74%	1/5.55%
	In total	27/36.99%	10/55.55%
2	BZD + Alcohol	10/13.7%	1/5.55%
	BZD + AD	3/4.11%	0
	BZD + KT	3/4.11%	0
	BZD + AP	2/2.74%	0
	BZD + AE	2/2.74%	0
	Other	8/10.96%	5/27.77%
	In total	28/38.36%	6/33.33%
3 or more	All combinations	18/24.66%	2/11.11%

*Legend: Benzodiazepines (BZD), Antidepressants (AD), Cardiotropic drugs (KT), Antipsychotics (AP), Antiepileptics (AE).

both suicide attempts (21 patients/28.76%) and appeals (8 patients/44.44%), while alcohol and benzodiazepines were the most common combinations in suicide attempts (10 patients/13.7%). In one patient who attempted suicide (1.37%), the type and quantity of the substance is unknown.

An analysis of the type of substance represented individually showed that the most common drug used for the purpose of suicide attempts or appeals were benzodiazepines (76 cases/82.6%), followed by antiepileptics (12 cases/13.04%), antidepressants (10 cases/11.96%), antipsychotics (10 cases/11.96%) and cardiotropic drugs (9 cases/9.78%). Other types of substances were less common.

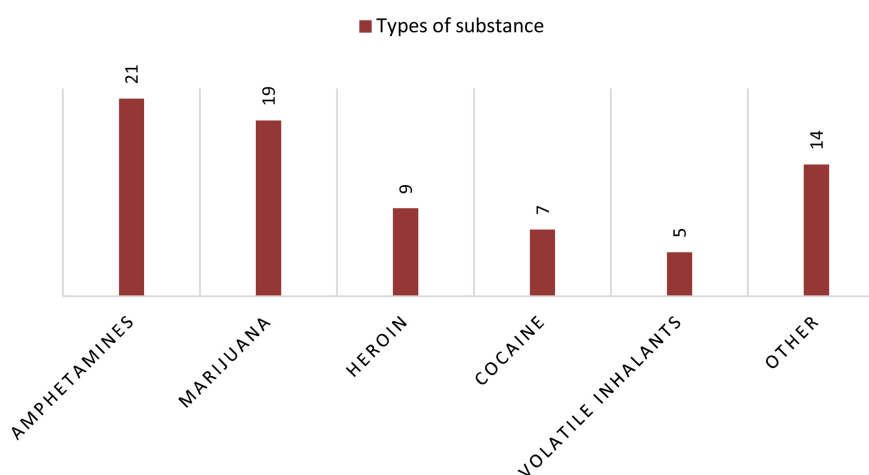
Table 5 shows that in 39 (42.86%) patients who had a history of psychiatric treatment, the substance with which they attempted suicide was the one they use in their regular therapy, while in 9 (9.89%) patients this was not the case.

By observing the representation of individual psychoactive substances within the group of patients who stated their intention to enjoy psychoactive substances, it can be seen that the most frequently represented substances are the following: in 18 cases (20.93%) amphetamines, 16 (18.6%) marijuana, 8 (9.3%) heroin, 6 (6.98%) cocaine and 4 (4.65%) volatile inhalants, while in 22 patients (25.58%) the type of substance was their substitution therapy (methadone, buprenorphine). In 12 cases (13.92%) there was self-poisoning with other psychoactive substances (**Figure 3**).

Within the framework of our research, death occurred after intentional

Table 5. Presentation of the use of own therapeutic psychiatric therapy for suicide attempt.

Using their own psychiatric therapy for self-poisoning		
	Frequency	%
Yes	39	42.86%
No	9	9.89%
Unknown	43	47.25%

**Figure 3.** Types of substances used for recreational purposes.

self-poisoning in 2 patients (1.05%). In both cases, death occurred after self-poisoning with benzodiazepines, while in one case inhalant drugs were used along with benzodiazepines.

5. Discussion

Available data related to self-poisoning in Vojvodina are scarce. The importance of this study is based on the analysis of sociodemographic and psychopathological data for patients who had a first and repeated experience of self-poisoning with different motives. In this way, we have significant data for the future development of a strategy in the early recognition of people with a tendency to self-poisoning in our area and in the prevention of possible consequences, the most serious of which is lost life.

The difference in distribution between the sexes indicates that women more often perform the act of self-poisoning for both suicidal and non-suicidal purposes, which is in agreement with data from other studies [8] [11] [12]. At the same time, men more often use substances for enjoyment [8], and that may be because of the cultural idea of masculinity, where a man may think that he will be perceived as weak if he sees a therapist or takes steps to relieve stress. Hence, he uses substances to cope with his feelings. Most women with this experience were in the 25 - 34 age group, which agrees with the results of other research [4] [11] [13], while men were most numerous in two groups, 25 - 34 and 35 - 44

years.

Some of the socio-demographic information such as marital status, level of education, employment, number of household members, and number of children was not processed statistically because of insufficient data. This speaks in favor of an inadequately conducted anamnesis in our center, as well as the need for better databases in the form of different questionnaires that could later be used for scientific research purposes.

In the group of patients with the experience of intentional self-poisoning, the most numerous group of patients had a suicidal intention, there were slightly fewer of those who had the intention of enjoying substances, while there were significantly fewer of those who wanted to appeal to the environment by this act. The data on the representation of certain motives are in agreement with other studies [8], while what differs is the frequency of abuse, which is higher (38%) compared to our results (32.1%). This may indicate that it is not justified to stigmatize people with the experience of self-poisoning as “persons who are just looking for attention” because the majority resorted to this act with the intention of committing suicide [8].

The choice of substance used for self-poisoning is specific to the area. For rural areas, characteristic of developing countries, it was determined that pesticides are the most common means of suicide attempts [14], while in the urban environment, as in our study, excluding alcohol, the dominant drugs are primarily psychotropic [15]. This data could be explained by the fact that medicines are easily available in developed areas, while in rural areas people are mainly engaged in agriculture, where pesticides are part of everyday life.

The most frequently used drugs were benzodiazepines, followed by antiepileptics and antidepressants, which is in agreement with previous studies conducted in developed countries [13] [16]. The use of paracetamol for the purpose of self-poisoning in our study was extremely low, which is in contradiction with most studies conducted in developed countries, where paracetamol was one of the most common medications used for intentional self-poisoning [17]. Such data could indicate a difference in the pattern of overdose in different regions of the world, and economic status may have an impact on the type of substance used.

Comparing the number of different types of substances that were taken, it was observed that in patients with suicidal intent, several different types of substances were used in almost 2/3 of cases, while in slightly more than half of patients who did not have suicidal intent, the use of one substance dominated. This could be explained by the fact that the patients who stated their intention as an appeal, “rest” or “to sleep over” really had that intention, considering that in this group of patients one type of substance was most often used in a smaller dose, which is less lethal, while those who had suicidal intent had a higher frequency of using several different substances and therefore had a higher risk of a fatal outcome. Observing the number of substances, the largest number of patients used one type of substance, slightly less two types, while the smallest number of

patients used 3 or more substances, which agrees with the results recorded in studies conducted in Belgium and Iran [13] [16]. The results in previous studies support the high frequency of benzodiazepine use, where this percentage ranged between 35% and 51% [13] [16].

The most frequently cited immediate reason for self-poisoning was family conflicts, followed by partner altercations and material problems [13], which is in agreement with the results of our study.

Observing the previous psychiatric treatment, it was determined that 2/3 of the patients with the experience of intentional self-poisoning were previously treated psychiatrically. At the same time, almost 1/3 already had this experience before, which was also shown in other works [11] [16] [18]. The average interval between the two attempts was 49.33 days. In foreign prospective studies, it was shown that the repeated act of self-poisoning was on average 3 to 6 months after the last hospitalization [19] [20]. Repetitive (recurrent or repeated) self-poisoning is a frequent phenomenon worldwide. It is considered that the low lethal outcome of self-poisoning is the cause of this phenomenon [21]. This information could indicate the need for longer hospital treatment of these patients in order to overcome the critical period in which the risk of repeated self-poisoning is the greatest. In our study, the average length of hospitalization was 5.58 days. The most common psychiatric diagnosis, as in other studies [4] [22], was depressive disorders, followed by schizophrenia and other psychotic disorders. This fact is important because it is believed that most patients develop a mental disorder before the appearance of suicidal ideation and behavior. According to data from the *World Health Organization*, 40% - 60% of patients in a period of 7 days visit a general practitioner or an emergency medicine service before attempting or committing suicide. This is very encouraging because it speaks in favor of the fact that, if such patients are recognized in time, suicide attempts or executions can be prevented. On the other hand, it can be troublesome, considering that it indicates that there is inexperience, insufficient time, or insufficient commitment of the doctors who initially care for such patients [23].

Some of the studies [24] [25] [26] point out that another factor that could contribute to a suicide attempt is the presence of physical diseases. In our study, the presence of physical diseases was found in 31% of cases.

It was observed that in approximately half of the patients, the substance used for self-poisoning was exactly the one present in their regular psychiatric therapy, which is also confirmed by the results of other studies [27]. This leads to the question of whether the amount of drugs that can be prescribed per examination should be limited in some way, which would be sufficient for the period until the next control, which would not be in a long-term interval. Also, the use of drugs with a high lethal potential should be limited in patients whose personality profile matches the profile characteristic of an act of self-poisoning. Currently, in our country, there are no strict regulations, although benzodiazepines are the most commonly abused medication [28], every doctor can prescribe unlimited amount of benzodiazepines. Also, there are no strict regulations for withdrawing

medications in pharmacy, where one can withdraw prescription more than once.

Concerning the period of the year when the admission occurred after self-poisoning, it was determined that a greater number of patients were admitted in the fall, compared to the spring months, which is in agreement with the study conducted in Iran [13], while in the other hand, in some works [16] the value of this parameter is approximately the same throughout the year, or even the complete opposite, in some works the highest value is in the spring and summer months, and the lowest in the autumn months [11]. The data obtained in this way could be taken with a reserve, considering that during the spring months of 2020, the coronavirus pandemic limited the work of the psychiatric service of the University Clinical Center of Vojvodina.

Our study had several limitations, primarily in the interpretation of the frequency of self-poisoning. We assume that the frequency of self-poisoning is even higher than presented, but a certain number of people were not included in our study. One group is patients with a fatal outcome after self-poisoning, whose medical documentation is in the Center for Forensic Medicine, Toxicology and Clinical Genetics of the University Clinical Center of Vojvodina, bypassing the database of the clinical information system. The second group is patients who, after detoxification in the Emergency Center of the UCCV, were not referred to the Clinic for Psychiatry, due to a complication of their physical condition or because of the refusal of a medical measure in the form of a psychiatrist's examination. Finally, often the family itself conceals the act of attempted suicide, wanting to avoid the social stigma associated with treatment in a psychiatric institution [29]. In addition to the above, there is a possibility that the patients or their entourage incorrectly stated some of the data related to the act of self-poisoning, since in all cases the substances were not isolated from biological material or toxicological analyses were not performed, and we were guided by anamnestic data.

With future research, we would strive to overcome these limitations and to look at the occurrence of self-poisoning over a longer period, in order to better understand the essence of this phenomenon.

6. Conclusion

The results of this study show the importance of early diagnosis of psychiatric disorders and early treatment, which are among the leading causes of self-poisoning. Increased control over the prescription of psychotropic drugs, primarily benzodiazepines, could also contribute to a reduction in the frequency of self-poisoning. The prescription of psychotropic drugs, primarily benzodiazepines, should be left to psychiatrists, or at least be limited to only a few times for general practitioner doctors. Also, it should be strict laws for pharmacies when withdrawing prescriptions. Early recognition of other risk factors for self-poisoning, such as social and psychological factors, is important. We suggest organizing preventive programs with a team of experts from several disciplines,

in order to reduce the frequency of self-poisoning in our population.

Conflicts of Interest

The authors declare no conflicts of interest.

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