

# **DRUG ADDICTION AS RISK FOR SUICIDE ATTEMPTS DURING THE COVID-19 PANDEMIC. CASE STUDY AT CAROLINA CENTER FOR BEHAVIORAL HEALTH, PSYCHIATRIC RESIDENTIAL HOSPITAL IN SOUTH CAROLINA, UNITED STATES**

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## **Abstract**

*Background:* Suicide is closely linked to the substances use. Therefore, it is very important to confirm the factors that affect the possibility of suicidal behavior. The research was conducted in the year 2020, during the internship certification period for Counselor on Addicts, conducted in the Carolina Center for Behavioral Health, Greer, SC, overlapping period and with the effects of the crisis caused by the covid-19 pandemic.

*Methods:* The survey included 200 respondents, all subjects in the facility; 100 heroin addicts on the substitution program that attempted suicide and 100 opiate addicts who have not attempted suicide. The evaluation included a questionnaire with socio-demographic, hereditary and addiction data, legal problems and then the Minnesota Multiphasic Personality Inventory–MMPI-2. Of the 100 addicts who tried to commit suicide, an attempt was made to apply the Scale for Assessment of Lethality of Suicide Attempt (SALSA), but with low response rates.

*Results:* The results showed a statistically significant difference compared to the personality structure, especially pronounced in hypersensitive structures, in relation to the duration of addictive experience and duration of heroin by intravenous route, as well as in relation to the presence of psychotic disorders, drug abuse and suicidal behavior in the family.

*Conclusion:* As risk factors among opiate addicts are identified interfered biological and psychological factors and the effects of the substances themselves.

**Keywords:** *Drug, addiction, suicidal risk, prevention, therapeutic program.*

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## **1. Introduction**

Suicide is a leading cause of premature death in young adults. Data from the World Health Organization indicate that the rate of completed suicide for the world's population is 16 per 100,000 inhabitants, which means that each year more than a million people in the world commit suicide. Suicide attempts are five to twenty times more common than the completed suicide (Harris & Barraclough, 1997). Based on the data from the research community, approximately 5% of adults attempt suicide at least once in their lifetime (Kessler et al., 1999).

Mental health problems are the most common and best explored risk factor associated with suicidal ideas, suicide attempts and completed suicide. During the coronavirus disease 2019 (COVID-19) pandemic, people can experience anxiety, fear, frustration, sadness and loneliness — to the point that those feelings become constant and overwhelming. Existing mental health conditions, including severe anxiety and major depression, may worsen. The emotional and psychological impacts of the pandemic can lead to feelings of hopelessness and thoughts about suicide. About 90% of all people who commit suicide met the diagnostic criteria for one or more psychiatric disorders (Wilcox et al., 2004). People who abuse alcohol and/or drugs attempting suicide nearly six times more often than people who do not abuse these substances. (Maloney et al., 2007; Darke et al., 2004).

In most cases, drug addicts attempt suicide by overuse of drugs that is an overdose, or a combination of drugs and tablets, while in a few cases the manner in which the suicide is attempted is not directly related to drugs (Min et al., 2013). Although there is a correlation between the disorder caused by the use of substances and suicidal behavior, a large number of addicts will never attempt suicide. It is therefore important to identify those individuals with the disorder caused by the use of substances that may be at higher risk for suicide (Schneider, 2009; Borges & Loera, 2010). Many risk factors for suicide in the

general population also apply to drug addicts (Darke & Ross J, 2002). Previous suicide attempts there represent a strong risk factor for repeated suicidal attempts (Ilgen et al., 2007). Affective disorders in general, and particularly depressed mood is a risk factor for suicidal behavior in the general population and among addicts (Conner et al., 2003). Suicidal addicts tend to have certain emotional problems and behavioral problems that strongly affect their activities, primarily as impulsive reactions and the inability to control behavior (Wojnar et al., 2009).

The general objective of this study was to determine the characteristics and risk factors of opiate addicts who have attempted suicide compared to addicts who have not attempted suicide. The study participants were patients of a residential center, under substitution treatment, for a period between 3 and 5 weeks. The instrument was the structured questionnaire, but also the psychological test the Minnesota Multiphasic Personality Inventory MMPI-2 (Butcher et al., 1989), which objectively assessed the personality profile.

## **2. Material and methods**

### **2.1. Participants**

This study included 200 opiate addicts who have been in the recovery phase on a substitution treatment. Respondents agreed to participate in this study, with the permission of centers for treatment of drug addicts in Greer, where the research was conducted. The survey was conducted from March to September 2020.

The experimental group consisted of 100 opiate drug users who have had a history of suicide attempts, and a control group of 100 opiate addicts who had no history of suicide attempts. Inclusion factor for both groups was the opiate addiction by ICD-10 criteria, while excluding factors were: organic and symptomatic mental disorders, schizophrenia, schizoid personality disorder and insane mental disorders, mood disorders and mental retardation.

### **2.2. Methods**

This study tested the factors that affect suicidal behavior of opiate addicts. Data were collected from anonymous participants on voluntary basis and no compensation was not offered in connection with the study.

For this study was used questionnaire structured specifically for this research. The questionnaire contained the following areas: socio-demographic data, data on psychiatric heredity, data on addiction characteristics and on judicial issues. In addition, respondents filled out the Minnesota Multiphasic Personality Inventory MMPI-2, which objectively assessed personality structure; also, the Scale for Assessment of Lethality of Suicide Attempt (SALSA) provides useful information regarding the behavior. The scale for assessment of lethality of suicide attempt (SALSA) has two components: The first component has four items indicating seriousness of the attempt and its likely consequences and the second component is the global impression of lethality.

For statistical analysis were used SPSS Program, Student's t test and Pearson's chi-square test.

## **3. Results of study**

In relation to social factors—with whom they live: alone, with a partner or with a partner and children in relation to the life with the primary family or with other/friend, suicidal and non suicidal addicts do not show a statistically significant difference. The level of significance in relation to the employment status is only marginally significant. Education among the groups showed no statistically significant difference. Addicts who attempted suicide were statistically significant more often unmarried and divorced. A statistically significant difference between the examined groups in respect of whether they have children does not exist, as well in relation to the marital status of the parents.

Analysis of psychiatric heredity is performed with respect to the family members and psychiatric disorders. In respect of family members, there was no statistically significant difference, while in relation to psychiatric disorders there was. Among addicts who attempted suicide were more common psychotic disorders, drug addiction and suicide attempts in the family.

Analysis of heroin use onset, between groups showed no statistically significant difference. Unlike the previous variables, Duration of addiction and duration of intravenous heroin use are at border levels of statistical significance in relation to the mean, and highly statistically different in relation to the analysis of variance. Addiction duration and the duration of intravenous use among persons who attempted suicide is longer.

Sociodemographic characteristics of the sample were not significantly different between those who succumbed to their attempt compared to those who survived. Most of the sample survived (63.4%) the attempt; 11 (13.4%) were brought dead and later 19 (23.2%) more died. Those who died were significantly older ( $41.9 \pm 17.6$  years) in age compared to the survivors ( $30.2 \pm 9.5$ ,  $t: 3.9$ ,  $df: 80$ ,  $P < 0.001$ ). It was observed that around 9 (10.9%) people had taken alcohol before attempt, 17 (20.7%) took precautions to avoid discovery, and 41 (50.0%) attempted impulsively. History of past suicide attempt was there in 9 (10.8%). Only a small proportion (3.7%) used more than one method of suicide.

Table 1. *Psychiatric heredity.*

Variable		Suicidal	Non suicidal	Chi square	DF	p
Psychiatric treatment	Father	27	26	4.027	4	0.40232
	Mother	5	5			
	Siblings	12	6			
	Close relatives	2	6			
	No heredity	54	57			
Psychiatric disorder	Alcoholism	21	30	19.601	8	0.011
	Drug addiction	10	2			
	Psychosis	9	6			
	Psychoneuroses	0	2			
	Depression	0	3			
	Suicide	5	0			
	No disorder	54	57			

Using MMPI is performed detection of disorders in eight categories: psychopathy-1, hypersensitivity structure-2, symptoms of alleviating problems-3, passive-aggressive-structure -4, narcissistic structure -5, borderline personality disorders-6, passive-aggressive structure-7 and schizoid personality structure-8. Passive-aggressive and schizoid structure was not diagnosed in any case. Statistical analysis showed that the difference between groups is statistically significant: Chi-square- 13.892, df-5,  $p = 0.0163$ .

Table 2. *Addiction features.*

	Mean suicide	Mean Non suic.	t-value	DF	p	Std. Dev. suicide	Std. Dev. nonsuicide	F ratio	p
Age of first use	19.940	19.640	0.340	19	0.733	5.901	6.532	1.225	0.313
Addiction duration	10.11	8.870	1.437	19	0.052	7.070	5.000	1.999	0.000
Duration of intravenous use	7.070	5.000	1.999	19	0.054	4.217	8.630	4.187	0.000

## 4. Conclusion

In this study, as the main risk factors for suicide attempts among addicts were proven the following variables: heredity, primarily psychotic disorders, drug addiction and suicide attempts in the family, then the duration of substance use and intravenous heroin use and hypersensitive personality structure. When this is integrated, we conclude that these are interfered biological and psychological factors and the effects of the substances themselves and psychological stress caused by COVID-19 Pandemic could be one of them.

During and after the COVID-19 pandemic, mental health issues need more attention to reduce the risk of suicide. Broadly, this means that public and private mental health services and individual providers need to be creative in finding, assessing and treating individuals at risk of suicide. This might include, for example, improving working conditions and providing more mental health services for workers on the front lines, encouraging scheduled breaks and taking time off, offering telehealth counseling, or providing food support and financial aid to those who have lost their jobs.

Individual action is important, too, especially during times when self-isolation and physical distancing are recommended.

It appears that SALSA is a valid and reliable instrument and will be useful for assessment of lethality of suicidal behavior during usual clinical evaluations considering the ease of administration.

Higher lethality was associated with attempters who succumbed to their attempt, who tried to avoid discovery and had intent to die. It was interesting to observe that the impulsive attempts were associated with higher lethality compared to planned attempts, which is in contrast to the reported observations that lethal suicidal acts often involve planning. Although impulsivity or planning of the attempt could not be ascertained in a considerable proportion, the study results suggested that impulsive attempts could be serious. Therefore, through this research, we have achieved the goal from which we started to carry out the study.

## 5. Limitations

There are a few limitations of the study that may be considered. The sample size was relatively small and the information had no scope for diagnostic assessment, thus the proportion may not reflect the exact prevalence of the phenomenon.

## 6. Discussions

Suicide is closely linked to the substance use (Sher, 2004; Sundin et al., 2011; Darke et al., 2007). It was confirmed that the psychiatric heredity is significant predictor of suicidal attempts in the case when the family members present psychotic disorders, drug abuse and suicide attempts. (Bohnert et al., 2010; Ilgen et al., 2010).

There's little data yet on the COVID-19 pandemic and its impact on the suicide rate. But clearly, the pandemic has added intense emotional and mental stress to the lives of people around the world. Fear, anxiety and depression can stem from a wide range of concerns and experiences, from personal and family issues to work-related stress (Bansal et al., 2011).

The unique circumstances of the COVID-19 pandemic, including little social interaction, may make it more challenging to identify those at risk of suicide. Warning signs aren't always obvious, and they may vary from person to person. Some people make their intentions clear, while others keep suicidal thoughts and feelings secret (Murphy et al., 2015).

Staying connected to each other and being aware of signs of suicide risk and how to respond is especially important to prevent suicide. Even in these times when there is greater physical detachment, people can maintain social connections and take care of their mental health (Chermack et al., 2000).

Economic decline during and after the COVID-19 pandemic will probably have a powerful and harmful effect on mental health and result in an increase in the prevalence of psychiatric disorders and suicidal behavior (Chermack et al., 2008; Franken & Ingmar, 2002).

To reduce potential harms of increased substance use related to COVID-19, resources, including social support, comprehensive treatment options, and harm reduction services, are essential and should remain accessible. Periodic assessment of mental health, substance use, and suicidal thoughts should evaluate the prevalence of psychological distress over time. Addressing mental health disparities and preparing support systems to mitigate mental health consequences as the pandemic evolves will continue to be needed urgently.

## Conflict of interest

The author declares that there is no conflict of interest.

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