

Original Research**The Frequency of Psychiatric Disorders in the Second Axis in Suicide Attempters In Comparison With the Control Group in Zahedan, South East of Iran**

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Abstract

Background: Suicide has many causes, the most important of which is mental disorders which increase the prevalence of suicide which is essential to identify these factors. The aim of this study was to evaluate the prevalence of Axis II psychiatric disorders in drug and self-immolation suicide attempters compared to the control group.

Method: This study was performed on 185 patients (11 with self-immolation, 74 with drug suicide and 100 as control group). After obtaining patient consent and demographic data, psychiatric disorders were recorded. Chi-square and Mann-Whitney tests were used to compare the data. Statistical analysis was done using SPSS v. 22.0

Results: The results of our study showed that there is no statistically significant difference in the incidence of suicide with demographic characteristics such as age, sex, marriage, occupation, economic status and place of residence. But it was found that the personality disorder, especially antisocial, schizoid, schizotypal and other abusive and paranoid, is significantly more in people with suicide attempts than the control group(p -value<0.05), but it was not related to the type of suicide attempt, except for the abusive-aggressive one, which in People with poisoning were significantly more than the control group, but no significant statistical difference was found between people with self-immolation and the control group(p -value<0.05).

Conclusion: Considering the importance of Axis II disorder with higher incidence of suicide, it is recommended to conduct comprehensive research on Axis II disorder and suicidal ideation among young population and to predict the predictive role of Axis II disorder and suicidal ideation. Consider the risk factors for suicide attempt and to prevent this social problem.

Keywords: Axis II Psychiatric Disorders, Self-immolation, Drug Poisoning.

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Introduction

According to the definition of the World Health Organization, suicide attempt is a non-fatal act in which a person intentionally and without the intervention of others performs an abnormal behavior such as self-harm or consuming a substance in an amount greater than the amount prescribed for treatment, and his goal Realization of expected changes. Looking at the history of suicide studies, we find that although in ancient times, suicide was considered as self-sacrifice and self-immolation, and later as a sin. Later, with the development of societies and the expansion of private and social rights, suicide was raised as a disease. In this regard, one of the areas that have attracted the attention of suicide researchers is the investigation of psychological factors and disorders associated with suicide, which in the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM IV-TR) includes axis I disorders (clinical disorders) and axis II (personality disorders)(1-3). The multi-axis diagnosis system, which officially entered the field of psychiatry since 1980 with the publication of the "Diagnostic and Statistical Manual of Mental Disorders" edition of DSM, is used to diagnose psychiatric diseases and problems in five axes(1). axis two including personality disorders and mental retardation are in this group. Patients who use defense mechanisms are also included in this group(2). According to DSM-IV-TR, personality disorders are divided into three categories: the first category is paranoid, schizoid and schizotypal personality disorder, the second category is four antisocial, borderline, dramatic and narcissistic personality disorders that people with this Dramatic disorder is the name of balance and excitement. The third category also includes avoidant, dependent and obsessive-compulsive disorders that people with these disorders often seem anxious and fearful(4). One of the important issues in suicide is the role of simultaneous presence of various mental disorders and factors related to suicide, among which mental disorders

such as depression, personality disorders, drug and alcohol abuse, and schizophrenia can be mentioned(5). Therefore, the aim of the present study is to determine the frequency of axis II psychiatric disorders in drug and self-immolation suicide attempters and compare it with the control group.

Methods

This study was conducted in a cross-sectional descriptive manner with the census sampling method. The population studied in this research includes all those who referred to the emergency room of Khatam Al-Anbia Hospital and Ali Ibn Abi Talib Hospital in Zahedan, who were diagnosed with intentional drug poisoning and self-immolation with the approval of the emergency medicine specialist. The control group also includes those referred to the orthopedic, internal and surgical departments who do not have the same problem and were matched in terms of age, gender and marital status. In such a way, if the age of the patients in the case group was, for example, in the 30s and had a female gender, it was tried that the person in the control group was also in the 30s and had a female gender. As much as possible, we tried to match the two groups. In this study, all the principles of Helsinki were observed and after approval by the Ethics Committee of the Faculty of Medical Sciences of Azad University of Zahedan, all patients who tried to commit suicide were selected for the purpose of follow-up. The tools used in this research include the following: 1) Demographic Characteristics Questionnaire: This questionnaire was created by the researcher and includes variables such as age, educational level, marital status. 2) The Millon Clinical Multiaxial Inventory II) MCMI-II (: This questionnaire was made by Milon in 1987 based on his psycho-social biological theory. This questionnaire contains 175 short self-description sentences with yes and no answers and a scale, which are placed in three groups. 1) Clinical scales of personality 2) Pathological patterns of personality 3) Clinical symptoms

In this study, personality disorder scales were used, which are: paranoid, schizoid, schizotypal, antisocial, borderline, dramatic and narcissistic, avoidant, dependent, harasser, obsessive-compulsive, harasser and depressed(6).

Inclusion criteria:

1. Informed consent to enter the plan
2. All patients attempting suicide who referred to the emergency room of Khatam Al-Anbia Hospital and Ali Ibn Abi Talib Zahedan Hospital in 2018
3. Complete the questionnaire in full

Exclusion criteria:

1. Lack of consent to enter the study
2. Patients with defects in information

All the information of the people was recorded in the checklist made by the moderator and entered into the SPSS v 22 software. Statistical analyzes were presented in two descriptive and analytical sections. In the descriptive section, the frequency of Axis II disorders was reported. In the analytical part, non-parametric and parametric proportional tests were used based on the establishment of statistical assumptions. If the initial assumptions such as normality were not met, the Mann-Whitney non-parametric method was used. Chi-square test was used to analyze qualitative findings and independent T-test was used to compare quantitative data. All tests were evaluated at the 5% error level.

Results

In this study, 185 people (11 people with self-immolation, 74 people with poisoning and 100 people as a control group) were included in the study, and the average age of the people studied was 31.09 ± 8.53 years. Of the 185 people who entered the study, 87 (47%) were men and 98 (53%) were women. The results of the present study are given below.

As can be seen in the table above, the mean and standard deviation of age in the three studied groups did not have a statistically significant difference compared to each other ($P>0.05$). As can be seen in the table above, there was no

statistically significant difference in the frequency of gender in the three studied groups ($P>0.05$).

As can be seen in the table above, the frequency of marital status in the three studied groups did not have a statistically significant difference ($P>0.05$).

As can be seen in the table above, there was no statistically significant difference in the frequency of jobs in the three studied groups ($P>0.05$).

As can be seen in the table above, the frequency of economic status in the three studied groups did not have a statistically significant difference ($P>0.05$).

As can be seen in the table above, the frequency of economic status in the three studied groups did not have a statistically significant difference ($P>0.05$).

As can be seen in the table above, the frequency of antisocial personality disorder in patients who had self-immolated (54.5%) or poisoned (32.4%) was significantly higher than the control group (17%). ($P=0.005$), but there was no difference between the two suicide attempt groups ($P>0.05$).

It was also found that the frequency of schizoid personality disorder in patients who had self-immolated (45.5%) or poisoned (40.5%) was significantly higher than the control group (6%) ($P<0.001$). But there was no difference between the two suicide attempt groups ($P>0.05$). It was also found that the frequency of paranoid personality disorder in patients who had self-immolated (27.3%) or poisoned (24.3%) was significantly higher than the control group (5%) ($P<0.001$).

But there was no difference between the two suicide attempt groups ($P>0.05$). It was also found that the frequency of other Sadism-Aggressive Personality disorder in patients who had self-immolated (36.4%) or poisoned (48.6%) was significantly higher than the control group (19%) ($P<0.001$) but there was no difference between the two suicide attempt groups ($P>0.05$).

It was also found that the frequency of schizotypal personality disorder in patients who had self-immolated (36.4%) or poisoned (33.8%) was significantly higher than the control group (5%)

($P<0.001$). But there was no difference between the two suicide attempt groups ($P>0.05$).

Discussion

The present study was conducted with the aim of evaluate the prevalence of Axis II psychiatric disorders in drug and self-immolation suicide attempters compared to the control group in 2018. In the study of Hawton et al. in 2003, with the aim of investigating Axis I and Axis II disorders in suicidal patients, it was conducted on 111 patients who committed suicide. It was evaluated according to ICD-10 criteria to investigate mental and personality disorders. For the interview, a semi-formal interview schedule and standardized questionnaires were used. The background characteristics of the patients, conditions of suicide attempts, psychological characteristics and the results after 12-20 months with both types of disorders were compared with the patients. The results showed that suicidal acts with psychiatric disorders along with personality disorders show a significant difference compared to people without both of these disorders(7).The results of the mentioned study are in line with the findings of our study. In our study, it was also found that the prevalence of personality disorder, especially antisocial, schizoid, schizotypal, and other abuse and paranoid in people with suicide attempts is significantly higher than the control group, but it was not related to the type of suicide attempt, except the Sadism- Aggressive Personality, which was significantly higher in people with poisoning than in the control group, but no statistically significant difference was found between people with self-immolation and the control group. In the study of Zare et al. in 2006, with the aim of investigating mental disorders and factors with suicide attempts in patients referred to the emergency room, it was conducted on 113 suicide attempters. Then the questionnaire of personal characteristics and suicide risk factors was completed for the samples. The findings showed that depression with 58%, narcissism with 56%, schizophrenia with 54%, and antisocial personality with 54% had the highest frequency.

Physical diseases with 17% had the lowest percentage among the ten factors related to suicide and they concluded that mental disorders. The predictors of suicide attempt are marital status, depression, drug abuse and young age, increasing the seriousness of suicide in cases of suicide attempt(8).In our study, it was also found that the frequency of antisocial personality disorder in patients who had self-immolated (54.5%) or poisoned (32.4%) was significantly higher than the control group(17%) but there was no difference between the two suicide attempt groups. Donyavi et al.'s research demonstrated a significant association among avoidant, narcissistic, antisocial, depressive, schizotypal, borderline, and paranoid personality disorders. This association carries significance(9).The outcomes of our investigation align with those of the aforementioned research, albeit our study did not find a connection between the borderline personality disorder and suicide. This variance could potentially be attributed to the differing sample sizes employed in the respective studies. Furthermore, the classification of personality types holds importance. In the study of Hosseinaei et al. in 2005, with the aim of investigating the role of personality disorders in suicide attempts, it was conducted on 30 students who attempted suicide and normal students, which was conducted as a simple sampling. Avoidant, antisocial, borderline, schizotypal, paranoid, narcissistic, passive-aggressive, and Sadism- Aggressive disorders were significantly different from normal students, and the average score of those attempting suicide was higher. And schizoid, dependent, histrionic, obsessive-compulsive, and Sadism- Aggressive disorder did not have a significant difference. The results showed that students attempting to commit suicide have a high score in some personality disorders, and it is possible to recognize that they are at risk by examining their personality disorders(10).In our study, only antisocial personality disorder, schizoid, schizotypal, and Sadism- Aggressive and paranoid personality disorders were significantly higher in people with

suicide attempts than in the control group, and no difference was seen in avoidant, borderline, narcissistic, passive-aggressive personality. The reason for this difference in the results obtained from our study and the aforementioned study may be due to the difference in the sample size studied, the difference in the demographic indicators of the patients, the difference in the way of data collection, the difference in controlling the effect of confounders and the difference in How to sample. In a study conducted by Valikhani et al. with the aim of predicting suicidal thoughts based on borderline and schizotypal personality components in medical students. For this purpose, during a descriptive correlational research, 250 students of Shiraz University of Medical Sciences were selected and evaluated in terms of borderline personality, schizotypal personality and suicidal thoughts. The results of the discriminant correlation test showed that all components of borderline and schizotypal personality were positively and significantly related to suicidal thoughts, but only frustration and paranoid and dissociative symptoms related to tension and paranoid suspicion/social anxiety could significantly predict suicidal thoughts. According to the results of this research, it can be said that in normal people who have traces of borderline and schizotypal personalities, their suicidal thoughts should be investigated and to prevent suicide attempts of people with borderline personality traits, more attention should be paid to the characteristics of Their despair and paranoid symptoms should be worked on, and in people who have traits of schizotypal personality, the characteristic of paranoid suspicion and social anxiety should be taken into consideration(11).The results of the mentioned study are in line with the findings of our study in a conducted by Kazemi et al. with the aim of comparing schizoid personality disorder and depression in people attempting suicide with a normal sample. The research method is of a comparative causal type and the statistical population included people who committed

suicide in Meshginshahr city, among which there were 30 people who committed suicide and 30 people who were normal, as a sample of the research and as a sampling method in Available were selected. To collect information, the questionnaires of depression and schizoid components of Minnesota Multiphasic Personality Inventory (MMPI) were used and the obtained data were analyzed by SPSS software and through multivariate analysis of variance (MANOVA) method. The findings showed that depression and schizoid were significantly more among the suicide attempters than the normal sample(12).The results of the mentioned study are consistent with the findings of our study.In a study conducted by Akbari et al., with the aim of the relationship between suicide and personality traits and life events. This descriptive-correlation study was conducted on a total of 148 people, including 74 men and women who committed suicide and 74 men and women who did not commit suicide. Millon Clinical Multiaxial Inventory (MCMI-II) and Negative Life Events Inventory were used to collect data. Among the incompatible personality patterns, borderline, antisocial, narcissistic, passive and harassing, anxious and depressed personality disorders were observed among people who took action more than those who did not take action. Meanwhile, those who took action had experienced more negative experiences in life. Among mental disorders, anxiety, narcissistic, and antisocial personality disorders, and among negative life events, severe conflict with family and blame and humiliation, have the highest ability to predict suicide(13).In our study, only antisocial personality disorder, schizoid, schizotypal, and Sadism- Aggressive Personality and paranoid personality disorders were significantly higher in people with suicide attempts than in the control group, and no difference was seen in avoidant, borderline, narcissistic, passive-aggressive personality. The reason for this difference in the results obtained from our study and the aforementioned study may be due to the difference in the sample size studied,

the difference in the demographic indicators of the patients, the difference in the way of data collection, the difference in controlling the effect of confounders and the difference in How to sample.

Conclusion

The results of our study showed that there is no statistically significant difference in the incidence of suicide with demographic characteristics such as age, gender, marriage, occupation, economic status and place of residence. But it was found that the personality disorder, especially antisocial, schizoid, schizotypal and other abuse and paranoid in people with suicide attempts is significantly more than the control group, but it was not related to the type of suicide attempt, except for the Sadism- Aggressive Personality other, which in People with poisoning were significantly more than the control group, but no significant statistical difference was found between people with self-immolation and the control group. Therefore, considering the significance of axis II disorder with higher incidence of suicide, it is suggested to carry out comprehensive research on axis II disorder and suicidal thoughts among the young population and the predictive role of axis II disorder and suicidal thoughts as risk factors. To commit suicide and to prevent this social problem, attention should be paid.

Research limitations

The lack of sample size, especially the investigation in patients with special conditions, including the underlying disease, which requires a more detailed investigation with further expansion in subsequent studies, as well as the impossibility of following up patients for a long period of time due to the time limit, with more complications and the result of treatment and incidence Recognizing suicide in treated patients.

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Authors Contributions:

All authors contributed toward data analysis, drafting and revising the paper and agreed to be responsible for all the aspects of this work.

Ethical considerations:

The present thesis was carried out after receiving permission from the Ethics Committee of Zahedan University of Medical Sciences under the number IR.ZAUMS.REC.1398.050

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Tables:**Table 1: Average and standard deviation of age in three studied groups**

Group	Number	Mean	SD	P-value
Self-immolation	11	34.36	9.437	P1= 0.083 P2= 0.075 P3=0.308 P4= 0.08
Poisoning	74	29.58	7.907	
Control	100	31.85	8.760	
Total	185	31.09	8.532	

P1 = Comparison of three groups (ANOVA)

P2 = Comparison self-immolation with poisoning (Independent t test)

P3 = Comparing self-immolation with control (Independent t test)

P4 = Comparison of poisoning with control (Independent t test)

Table 2: Frequency of gender in three studied groups

Group Gender		Self- immolation	Poisoning	Control	Total	P-value
Male	Number	4	34	49	87	P1= 0.707 P2= 0.747 P3=0.532 P4= 0.69
	Percentage	36.4	45.9	49.0	47.0	
Female	Number	7	40	51	98	P3=0.532 P4= 0.69
	Percentage	63.6	54.1	51.0	53.0	
Total	Number	11	74	100	185	
	Percentage	100.0	100.0	100.0	100.0	

P1 = Comparison of three groups (Chi square test)

P2 = Comparing self-immolation with poisoning (Fisher exact test)

P3 = Comparing self-immolation with control (Fisher exact test)

P4 = Comparison of poisoning with control (Chi square test)

Table 3: Frequency of marital status in three studied groups

Group Marital status		self- immolation	Poisoning	Control	Total	P-value
Single	Number	5	42	46	93	P1= 0.354 P2= 0.482 P3=0.973 P4= 0.161
	Percentage	45.5	56.8	46.0	50.3	
Married	Number	6	32	54	92	P3=0.973 P4= 0.161
	Percentage	54.5	43.2	54.0	49.7	
Total	Number	11	74	100	185	
	Percentage	100.0	100.0	100.0	100.0	

P1 = Comparison of three groups (Chi square test)

P2 = Comparing self-immolation with poisoning (Chi square test)

P3 = Comparing self-immolation with control (Chi square test)

P4 = Comparison of poisoning with control (Chi square test)

Table 4: The frequency of jobs in the three studied groups

Group Job		Self-immolation		Poisoning	Control	Total	P-value
Unemployed		Number		0	5	7	12
		Percentage		0	6.8	7.0	6.5
Student		Number		1	13	6	20
		Percentage		9.1	17.6	6.0	10.8
Housewife		Number		6	21	35	62
		Percentage		54.5	28.4	35.0	33.5
Free job		Number		3	25	36	64
		Percentage		27.3	33.8	36.0	34.6
Employee		Number		0	6	8	14
		Percentage		0	8.1	8.0	7.6
Manual worker		Number		1	4	8	13
		Percentage		9.1	5.4	8.0	7.0
Total		Number		11	74	100	185
		Percentage		100.0%	100.0%	100.0%	100.0%

P1 = Comparison of three groups (Fisher exact test)

P2 = Comparing self-immolation with poisoning (Fisher exact test)

P3 = Comparing self-immolation with control (Fisher exact test)

P4 = Comparison of poisoning with control (Chi square test)

Table 5: Frequency of economic status in three studied groups

Group Economic status		Self-immolation	poisoning	control	Total	P-value
Low	Number	5	28	26	59	P1= 0.408 P2= 0.866 P3=0.366 P4= 0.233
	Percentage	45.5	37.8	26.0	31.9	
Middle	Number	5	40	66	111	
	Percentage	45.5	54.1	66.0%	60.0	
High	Number	1	6	8	15	
	Percentage	9.1	8.1	8.0	8.1	
Total		Number	11	74	100	185
		Percentage	100.0%	100.0%	100.0%	100.0%

P1 = Comparison of three groups (Chi square test)

P2 = Comparing self-immolation with poisoning (Chi square test)

P3 = Comparing self-immolation with control (Chi square test)

P4 = Comparison of poisoning with control (Chi square test)

Table 6: The frequency of residence in the three studied groups

Group residence		self- immolation	poisoning	control	Total	P-value
City	Number	8	50	59	117	P1= 0.407 P2= 1 P3=0.522 P4= 0.248
	Percentage	72.7	67.6	59.0	63.2	
Village	Number	3	24	41	68	P1= 0.407 P2= 1 P3=0.522 P4= 0.248
	Percentage	27.3	32.4	41.0	36.8	
Total	Number	11	74	100	185	
	Percentage	100.0%	100.0%	100.0%	100.0%	

P1 = Comparison of three groups (Chi square test)

P2 = Comparing self-immolation with poisoning (Fisher exact test)

P3 = Comparing self-immolation with control (Chi square test)

P4 = Comparison of poisoning with control (Chi square test)

Table 7: Frequency of axis II disorder in three studied groups

Group Disorder		Self- immolati on	Poisonin g	Control	Total	P-value
Antisocial	Number	6	24	17	47	P1= 0.005 P2= 0.152 P3=0.004 P4= 0.018
	Percentage	54.5	32.4	17.0	25.4	
Schizoid	Number	5	30	6	41	P1<0.001 P2= 0.757 P3<0.001 P4<0.001
	Percentage	45.5	40.5	6.0	22.2	
Dependent	Number	2	16	13	31	P1=0.319 P2= 0.692 P3=0.877 P4=0.587
	Percentage	18.2	21.6	13.0	16.8	
Paranoid	Number	3	18	5	26	P1<0.001 P2= 1 P3=0.031 P4<0.001
	Percentage	27.3	24.3	5.0	14.1	
Obsessive- compulsive	Number	2	7	9	18	P1= 0.511 P2= 0.329 P3=0.298 P4= 0.917
	Percentage	18.2	9.5	9.0	9.7	
Histrionic	Number	1	7	4	12	P1=0.291 P2= 1 P3=0.413 P4=0.208
	Percentage	9.1	9.5	4.0	6.5	

Narcissistic	Number	3	21	25	49	P1= 0.893 P2= 1 P3=1 P4= 0.617
	Percentage	27.3	28.4	25.0	26.5	
Avoidant	Number	5	30	35	70	P1= 0.656 P2= 0.757 P3=0.493 P4= 0.455
	Percentage	45.5	40.5	35.0	37.8	
Sadism-Aggressive Personality	Number	4	36	19	59	P1<0.001 P2= 0.529 P3=0.235 P4<0.001
	Percentage	36.4	48.6	19.0	31.9	
Passive-Aggressive Personality	Number	4	27	24	55	P1= 0.163 P2= 1 P3=0.464 P4= 0.074
	Percentage	36.4	36.5	24.0	29.7	
Schizotypal	Number	4	25	5	34	P1<0.001 P2= 1 P3=0.005 P4<0.001
	Percentage	36.4	33.8	5.0	18.4	
Borderline	Number	2	12	12	26	P1= 0.645 P2= 1 P3=0.628 P4= 0.425
	Percentage	18.2	16.2	12.0	14.1	

P1= Comparison of three groups (Chi square test) (but Fisher's exact test was used for demonstration purposes)

P2 = Comparison of self-immolation with intoxication (Fisher exact test) (antisocial, schizoid and avoidant is chi square)

P3 = Comparison of self-immolation with control (Fisher exact test) (antisocial, schizoid and avoidant is chi square)

P4 = Comparison of poisoning with control (Chi square test)