

Research Paper

Determining the Prevalence of Narcotics, Stimulants, and Alcohol Abuse in Hospitalized Patients With Suicide Attempts

Mehdi Lalehzari¹, Alireza Khodami Ghadehari², Melika Alavitabar², Sholeh Namazi^{3*}

1. Department of Forensic Medicine, Faculty of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

2. Student Research Committee, Faculty of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

3. Department of General Courses, Faculty of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.



Citation Lalehzari M, Khodami Ghadehari A, Alavitabar M, Namazi Sh. Determining the Prevalence of Narcotics, Stimulants, and Alcohol Abuse in Hospitalized Patients With Suicide Attempts. *Tobacco and Health* 2023; 2(4):207-216. <http://dx.doi.org/10.32598/thj.2.4.1103>

doi <http://dx.doi.org/10.32598/thj.2.4.1103>

**Article info:**

Received: 23 Feb 2023

Accepted: 18 Apr 2023

Available Online: 01 Dec 2023

ABSTRACT

Background: Mental diseases are one of the problems in communities. People with mental health disorders face premature death. More than 700000 deaths occur due to suicide annually. Accordingly, considering the high prevalence of suicide and the importance of drug and alcohol abuse in this incidence, this research investigates the amount of drug, stimulants, and alcohol abuse in hospitalized patients who attempted suicide in Shahid Mohammadi Hospital in Bandar Abbas City, Iran, in the second half of 2022.

Materials and Methods: This descriptive-cross-sectional retrospective study was conducted on 193 patients who were admitted to Shahid Mohammadi Hospital in Bandar Abbas City, Iran, with a diagnosis of suicide. Of this population, 38 patients were considered the statistical population.

Results: According to the results of the survey, the prevalence of drug, stimulant, and alcohol abuse among the participants was 63.2%. Meanwhile, the prevalence of abuse in men was higher than in women. The highest prevalence of abuse was related to married people, and individuals who had an income of 5-10 million Tomans per month had a higher prevalence of abuse. Most of them lived in the city.

Conclusion: The findings demonstrated that the prevalence of alcohol and drug abuse and concurrent drug and stimulant utilization was significantly higher in men compared to women. The mean age of stimulant-using patients was considerably higher; however, there was no difference between the drug alcohol and tobacco groups.

Keywords:

Suicide, Substance abuse, Mental health, Alcohol use disorder

*** Corresponding Author:**

Sholeh Namazi, Assistant Professor.

Address: Department of General Courses, Faculty of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

Tel: +98 (917) 3610433

E-mail: sholehnamazi@gmail.com

Introduction

Suicide is one of the most severe medical and social problems worldwide. It is also one of the most serious emergencies in psychiatry [1, 2]. According to the [World Health Organization \(WHO\)](#), suicide is a deliberate human act without the intervention of others that results in abnormal behaviors, such as self-harm or the excessive use of a substance over a prescribed therapeutic amount to achieve a desired effect [3]. Suicide and suicide attempts affect the individual and their family, friends, colleagues, and society. According to [WHO](#), mental illness is widespread and increasing worldwide. More than 700000 people commit suicide annually, and one person dies every 40 s in the world. Each suicide has 20 or more suicide attempts. Suicide occurs in all regions of the world, with 77% occurring in low- and middle-income countries. Given the clear link between mental illness (particularly depression and alcoholism) and suicide, many suicides occur suddenly during life crises. Other risk factors include death, loneliness, violence, rape, and other social difficulties, of which the most critical risk factor is a previous suicide attempt. Psychologically, suicide has become the fourth leading cause of death among 15- to 29-year-olds. To illustrate the gravity of the situation, suicide is the tenth leading cause of death worldwide and the eighth leading cause of death in the United States. Suicide is the second leading cause of death worldwide among people aged 15-29 years and the third leading cause of death among people aged 26-34 years [4-7].

Risky behavior is any behavior that can cause problems, physical or mental illness, or social harm to people at the moment or in the future. Various activities, such as smoking, drinking, drug and illegal drug abuse, and unsafe sex, are examples of risky behaviors. The most important of these is drug addiction, a global phenomenon and one of the most significant social dangers in society. Drug abuse among young people is widespread in many countries. This can lead to negative consequences, including addiction, overdose, accidents, physical and mental damage, premature death, and so on.

There is a significant correlation between substance use disorders and suicide attempts. Previously, opium suicides were common in Iran; however, currently, men turn to pills, hangers, and guns, while women regularly set themselves on fire [4]. Research shows that drug addiction is one of the main reasons for the increase in the number of suicides. About half of the suicides are people with drug addiction. Both men and women who attempt

suicide have a history of alcohol or drug abuse. Suicidal behavior is a significant problem for people seeking drug addiction treatment [8]. Suicide and the use of drugs, stimulants, and alcoholism negatively affect society, harm the mental health of families and communities, destroy social vitality and productivity, and increase the likelihood and frequency of suicide among social members while spreading social hopelessness and despair [9].

Given the importance of drug, alcohol, and stimulant abuse in suicide, the causes and factors associated with this social harm need to be investigated and recognized to prevent and control this action. Accordingly, this study investigates drug, stimulant, and alcohol abuse among inpatients who attempted suicide.

Materials and Methods

The statistical population of this study included patients referred to the Emergency Department of Shahid Mohammadi Hospital in Bandar Abbas City, Iran, from March 21, 2022, to September 22, 2022. The study was conducted on 38 hospitalized patients who were diagnosed with suicide by various methods. The sample volume was calculated using the [Equation 1](#).

$$1. \quad n = \left(z \left(\frac{\alpha}{2} \right)^2 \times p \times q \right) \div \alpha^2$$

$$n = 3.84 \times 0.025 \times 0.975 \div 0.0025 = 38$$

$$z \left(\frac{\alpha}{2} \right) = 3.84$$

$$p = 0.025, \quad q = 0.975, \quad \alpha = 0.05$$

Those with a confirmed diagnosis were surveyed to see if they met the criteria to participate in the study. The selection criteria for the sample group were 16 years of age or higher, a confirmed diagnosis of suicide, and informed consent to participate in the study. Meanwhile, the exclusion criteria were the presence of other diagnoses for admission. The study was sampled via convenience sampling of all patients referred to Shahid Mohammadi Hospital in Bandar Abbas City, Iran, with a diagnosis of suicide in 2022. A total of 193 people were included. After the statistical population census, 38 people were randomly selected as samples. After explaining the interview method and study procedure, the patient's consent was obtained, and a telephone interview was conducted with the patients or their acquaintances. After the study, participants completed all questionnaires, and descriptive statistics (frequency, percentage, Mean \pm SD,

and standard error of the mean) and inferential statistics were used. The chi-square and Fisher exact tests were used to compare the relationships between categorical variables in different study groups. A t-test and analysis of variance were used to compare the ratio of mean values of quantitative variables between other groups. If the distribution of the variable was not normal, the Whitney Mann was used. The P of 0.05 was considered the statistically significant level. Information was collected using a two-part checklist created by the researcher. The first part collected demographic information, such as name, age, and gender. The second part included other variables relevant to the study subject, such as opioids, stimulants, or alcohol use or non-use. Finally, after the data were collected and entered into the SPSS software, version 22 they were analyzed using descriptive and inferential statistical methods with $P < 0.05$ considered statistically significant. This was a cross-sectional descriptive study.

Results

According to [Table 1](#), of the 38 patients included in this study, 23(60.5%) were women and 15(39.5%) were men. The mean age of the participants was 29.87 ± 8.37 years. Meanwhile, 13(34.2%) were single, and 25(65.8%) were married. In terms of economic status, 3(7.9%) people had an income of more than 15 million Tomans, 9(23.2%) had an income of 10-15 million Tomans, 15(39.5%) indi-

viduals had an income of 5-10 million Tomans or more, 6(15.8%) people had an income of less than 1 million Tomans, and 5(13.2%) people had no income. A total of 30(78.9%) individuals lived in cities, and only 8(21.1%) lived in rural areas. All patients survived.

[Table 2](#) demonstrates that the prevalence of alcohol consumption was 4.3% for women and 66.7% for men, with a statistically significant difference between alcohol consumption for women and men. The prevalence of smoking was 34.8% for women and 53.3% for men. There was no statistically significant difference between smoking and gender. The prevalence of drug abuse was 4.3% for women and 40.0% for men, with a statistically significant difference in drug abuse between women and men. The prevalence of stimulant use was 4.3% in women and 13.3% in men; however, there was no statistically significant association between stimulant use by gender. The prevalence of narcotics and stimulant use was 8% in women and 40.0% in men. Accordingly, there was a statistically significant difference between the concurrent use of narcotics and stimulants in these two groups. Only 2 cases (8.0%) of cannabis use involved men, and there was no statistically significant difference between cannabis use and gender.

Table 1. Demographic information of the participants

Variables		No. (%)
Gender	Female	23(34.2)
	Man	15(65.8)
Marital status	Single	13(34.2)
	Married	25(65.8)
Economic status	>15 million Tomans	3(7.9)
	10-15 million Tomans	9(23.7)
	5-10 million Tomans	15(39.5)
	<5 million Tomans	6(15.8)
	No independent income	5(13.2)
Residence	City	30(78.9)
	Village	8(21.1)
Variable	Mean±SD (Min-Max)	
Age (y)	29.87±8.37 (17-47)	

Table 2. Comparison of alcohol, narcotic, and stimulant consumption of participants based on gender

Materials		No. (%)			P
		Female	Man	Total	
Alcohol consumption	Yes	1(4.3)	10(66.7)	11(28.9)	<0.001
	No	22(95.7)	5(33.3)	27(71.1)	
Smoking	Yes	8(34.8)	8(53.3)	16(42.1)	0.26
	No	15(65.2)	7(46.7)	22(57.9)	
Drug use	Yes	1(4.3)	6(40.0)	7(18.4)	0.006
	No	22(95.7)	9(60.0)	31(81.6)	
Consumption of stimulants	Yes	1(4.3)	2(13.3)	3(7.9)	0.31
	No	22(95.7)	13(86.7)	35(92.1)	
Simultaneous use of drugs and stimulants	Yes	2(8.7)	6(40.0)	8(21.2)	0.02
	No	21(91.3)	9(60.0)	30(78.9)	
Cannabis use	Yes	0(0.0)	2(13.3)	2(5.3)	0.07
	No	23(100.0)	13(86.7)	36(94.7)	

Table 3 demonstrates the alcohol, drug, and stimulant abuse based on marital status. Singles (46.2%) had a higher prevalence of alcohol use compared to married (20.0%) individuals, although this difference was not statistically significant. Smoking prevalence among

singles (23.1%) was lower than among married people (52.0%); however, there was no statistically significant difference between smoking and marriage. The prevalence of drug abuse in singles (30.8%) was higher than in married people (8.0%), and statistically, there was a sig-

Table 3. Comparison of alcohol, drugs, and stimulants consumption by participants based on marital status

Materials		No. (%)			P
		Single	Married	Total	
Alcohol consumption	Yes	6(46.2)	5(20.0)	13(28.9)	0.09
	No	7(53.8)	20(80.0)	25(71.1)	
Smoking	Yes	3(23.1)	13(52.0)	16(42.1)	0.08
	No	10(76.9)	12(48.0)	22(57.9)	
Drug use	Yes	4(30.8)	2(8.0)	6(15.8)	0.009
	No	9(69.2)	23(92.0)	32(84.2)	
Consumption of stimulants	Yes	0(0.0)	3(12.0)	3(7.9)	0.27
	No	13(100.0)	22(88.0)	35(92.1)	
Simultaneous use of drugs and stimulants	Yes	0(0.0)	2(8.0)	2(5.3)	0.43
	No	13(100.0)	23(92.0)	36(94.7)	
Cannabis use	Yes	0(0.0)	2(8.0)	2(5.3)	0.43
	No	13(100.0)	23(92.0)	36(94.7)	

Table 4. Comparison of alcohol, drugs, and stimulants consumption by participants based on economic status

Materials		No. (%)					Total	P
		No Output	5<	5-10	10-15	15>		
Alcohol consumption	Yes	3(60.0)	3(50.0)	4(26.7)	1(11.1)	0(0.0)	11(29.8)	0.19
	No	2(40.0)	3(50.0)	11(73.3)	8(88.9)	3(100.0)	27(71.1)	
Smoking	Yes	1(20.0)	2(33.3)	6(40.0)	4(44.4)	3(23.1)	16(42.1)	0.31
	No	4(80.0)	4(66.7)	9(60.0)	5(55.6)	0(0.0)	22(57.9)	
Drug use	Yes	1(20.0)	2(33.3)	2(13.3)	1(11.1)	0(0.0)	6(15.8)	0.76
	No	4(80.0)	4(66.7)	13(86.7)	8(88.9)	3(100.0)	32(84.2)	
Consumption of stimulants	Yes	0(0.0)	3(50.0)	0(0.0)	0(0.0)	0(0.0)	3(7.9)	0.08
	No	5(100.0)	3(50.0)	15(100.0)	9(100.0)	3(100.0)	35(92.1)	
Simultaneous use of drugs and stimulants	Yes	0(0.0)	2(33.3)	0(0.0)	0(0.0)	0(0.0)	2(5.3)	0.06
	No	5(100.0)	4(66.7)	15(100.0)	9(100.0)	3(100.0)	36(94.7)	
Cannabis use	Yes	0(0.0)	2(33.3)	0(0.0)	0(0.0)	0(0.0)	2(5.3)	0.06
	No	5(100.0)	4(66.7)	15(100.0)	9(100.0)	3(100.0)	36(94.7)	

nificant difference between drug use and marital status. The prevalence of stimulant drug use was 0 in singles and 12.0% in married people; however, this difference was not statistically significant. Also, the results showed that the prevalence of concurrent use of narcotics and

stimulants and the prevalence of cannabis use was only 2 cases (8.0%), which included married people. There was not a statistically significant difference between concurrent use of drugs and stimulants and cannabis use with marital status.

Table 5. Comparison of alcohol, drugs, and stimulants consumption by participants based on the place of residence

Materials		No. (%)			P
		City	Village	Total	
Alcohol consumption	Yes	8(26.7)	3(37.5)	11(29.8)	0.55
	No	22(73.3)	5(62.5)	27(71.1)	
Smoking	Yes	13(43.3)	3(37.5)	16(42.1)	0.55
	No	17(56.7)	5(62.5)	22(57.9)	
Drug use	Yes	5(16.7)	1(12.5)	6(15.8)	0.63
	No	25(83.3)	7(87.5)	32(84.2)	
Consumption of stimulants	Yes	2(6.7)	1(12.5)	3(7.9)	0.52
	No	28(93.3)	7(87.5)	35(92.1)	
Simultaneous use of drugs and stimulants	Yes	2(6.7)	0(0.0)	2(5.3)	0.62
	No	28(93.3)	8(100.0)	36(94.7)	
Cannabis use	Yes	2(6.7)	0(0.0)	2(5.3)	0.62
	No	28(93.3)	8(100.0)	36(94.7)	

Table 6. Frequency distribution of demographic variables of the studied subjects with drug abuse, stimulants, and alcohol

Variables	No. (%)		P	
	Abuse of Drugs (Opiates), Stimulants, and Alcohol			
	Yes	No		
Gender	Female	10(41.7)	13(92.9)	0.002
	Man	14(58.3)	1(7.1)	
Marital status	Single	8(33.3)	5(35.7)	0.88
	Married	16(66.7)	9(64.3)	
Economic status	>15 million Tomans	3(12.5)	0(0.0)	0.45
	10-15 million Tomans	5(20.8)	4(28.6)	
	5-10 million Tomans	8(33.3)	7(50.0)	
	<5 million Tomans	5(20.8)	1(7.1)	
	No independent income	3(12.5)	2(14.3)	
Residency	City	19(79.2)	11(78.6)	0.96
	Village	5(20.8)	3(21.4)	

Table 4 shows a significant relationship between alcohol consumption, tobacco use, narcotics use, concurrent use of narcotics, stimulants, and cannabis use with economic status.

Table 5 shows no statistically significant difference between consumption of alcohol, narcotics, and stimulants and concurrent use of narcotics and stimulants and cannabis use with place of residence.

According to Table 6, the prevalence of narcotics, stimulants, and alcohol abuse among the participants was 63.2% (n=24). The prevalence of drug abuse, stimulants, and alcohol in men (58.3%) was higher compared to women (41.7%), which is statistically significant. The highest prevalence of drug abuse, stimulants, and alcohol was related to married people (66.7%); in addition, the results showed that people who had an income of 5-10 million Tomans per month had a higher prevalence of drug abuse stimulants and alcohol. Most of the people who committed suicide were residents of the city. Also, the results showed that compared to people who did not abuse opiates, stimulants, and alcohol, a statistically significant difference was seen among the people who used these substances.

Discussion

This study was conducted to investigate the abuse of drugs, stimulants, alcohol, and tobacco among patients hospitalized following a suicide attempt. Substance abuse was the second most common disorder among people who had attempted suicide or had a history of suicide attempts, at a rate of 54%. Theoretically, drug use increases the risk of suicidal ideation through biological and psychological effects and the development of consequences, such as stress, family problems, and social rejection. According to research, to commit suicide, people must feel like they are a burden to others, they are not emotionally integrated, and they may harm themselves physically. Drug use increases the likelihood of these factors occurring. Drug use also alters neurological mechanisms and can lead to increased impulsivity and suicidal behavior.

In this study, the mean age of the study participants was 29.87±8.37 years, and the average age of people who used stimulants was significantly higher compared to people who did not use drugs (the mean age of people who used drugs, alcohol, etc.). Meanwhile, tobacco had no statistically significant difference. However, in the study by Zygo et al. in 2019, the highest suicide rate was recorded at age 17 [10]. The results of their study were consistent with the results of the study by Zakharov et al., who reported suicidal behavior is more common

between the ages of 14 and 18 years [11]. Furthermore, Lewisohn et al. concluded that suicide attempts increase among girls over 13 years old and reach their peak between 15 and 18 years old [12]. Various studies also show that suicidal thoughts and suicide attempts occur more frequently in girls compared to boys [11, 12].

In this study, the incidence was also higher in women. Still, the main risk factors for suicide, alcohol consumption, and the use of opiates and stimulants were significantly higher in men compared to women. Differences between studies can be explained by variations in sample size, demographic characteristics of the population, the intended purpose of the study, and the study population, which our study examined only patients with suicide attempts. On the other hand, several studies have shown that women may be more reluctant to seek medical attention when using medications than men. Therefore, women have more serious medical conditions at the time of diagnosis. In the study conducted by Green [13], women are less likely to seek psychiatric treatment for substance abuse, and they appear to prefer seeking treatment in primary care settings, so their treatment outcomes are poor.

Studies show that healthcare systems pay particular attention to the suicide risk of women with substance use disorders. Additionally, further research examining possible differences in the impact of substance use disorders on suicide risk in men and women could inform future suicide screening and treatment efforts [14]. There were no deaths by suicide in our study; however, statistics show that men are more likely to commit suicide than women [15, 16]. As noted above, suicide attempts and suicidal ideation are now more common among women than men.

Our study showed no statistically significant difference in suicide rates by place of residence (city/village). Borges et al. also concluded that there is no statistically significant difference in the residence between young people who tried suicide attempts and those who did not do so [17]. Unlike the results of this study, Makara et al. found that suicide attempts among rural residents in the Lublin District (Poland) were more common [18]. Differences between studies may be explained by differences in the epidemiological characteristics of the study areas, differences between urban and rural populations in the study areas, statistical people, and sample sizes. As mentioned, the prevalence of alcohol consumption and the use of narcotics and stimulants in this study was statistically higher among men than women. Still, the prevalence of smoking between women and men had no significant association.

Swahn et al. [19] concluded that early alcohol consumption is associated with suicide attempts among young people. Kim et al. confirmed that early alcohol use increases the risk of suicidal thoughts and attempts in both men and women [20]. Wichstrom [21] and Kelly et al. [22] consider alcoholism and harmful alcohol use to be factors leading to suicide in young people. Wu et al. [23] and Nock et al. [24] note that youth who report suicidal behavior are significantly more likely to become intoxicated by alcohol and drugs than their peers who do not report suicidal behavior.

Since this is an observational study, confounding factors cannot be ruled out. Specifically, we were unable to examine several demographic variables that may be important determinants of the association between drug use and suicide risk, including race and ethnicity, suicide methods, and different patterns of drug use and psychiatric comorbidities. We were unable to investigate the risks associated with specific types of drugs (such as cocaine), and risks may vary by drug type. We also did not measure the severity of drug use, so individuals with more severe disorders could explain differences in suicide risk. We did not use reliable methods to identify suicide-related deaths, and it is possible that some of the deaths identified as suicide were the result of an accidental overdose, which is difficult to detect in people with certain types of substance use disorders. Information regarding the diagnosis of drug use depends on the health professionals who code the diagnosis and given that in this study, the information on drug use was obtained through a telephone interview with the patients themselves or with their caregivers, some people with substance use disorders may have been overlooked. This limitation may be due to several reasons, such as unreliable, uncooperative, uninformative, or undiagnosed respondents.

Conclusion

Our research showed that while female suicide rates are higher, men are more likely to use alcohol and drugs and use both drugs and stimulants. Economic status was an important variable in this study, but place of residence did not show a significant association between substance use and suicide. People who earn less than the average wage are more likely to use drugs. Married people also have higher rates of drug use. It is recommended to take advantage of important confounding factors, including demographic variables, which are essential factors in modifying the relationship between drug use and suicide risk, such as race or ethnicity, suicide methods, different patterns of drug use, and mental illness, and individual

characteristics and personal life events should be considered for future research. Furthermore, it is recommended to study suicide methods based on the type of substance used and the type of addiction to identify common ways to prevent suicide in risk groups.

Ethical Considerations

Compliance with ethical guidelines

Hormozgan University of Medical Sciences Ethics Committee approved the study (Code: Hums.rec.1401 .175).

Funding

This research received no specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

Acknowledgments

The authors wish to thank the staff of Shahid Mohammadi Hospital due to their great and humble collaboration.

References

- [1] Azizi M, Rahmati R. [A review of suicide and its causes (Persian)]. *Paramed Sci Mil Health*. 2014; 9(2):37-40. [\[Link\]](#)
- [2] Maric D, Brkic S, Tomic S, Novakov Mikic A, Cebovic T, Turkulov V. Multivitamin mineral supplementation in patients with chronic fatigue syndrome. *Med Sci Monit*. 2014; 20:47-53. [\[DOI:10.12659/MSM.889333\]](#) [\[PMID\]](#)
- [3] Moradi A, Moradi R, Mostafavi E. [The study of factors related suicide Bahar town (Persian)]. *Res Behav Sci*. 2012; 10(1):50-8. [\[Link\]](#)
- [4] WHO. Suicide. Geneva: WHO; 2023. [\[Link\]](#)
- [5] WHO. Mental health. Geneva: WHO; 2022. [\[Link\]](#)
- [6] Simbar M, Golezar S, Alizadeh S, Hajifoghaha M. [Suicide risk factors in adolescents worldwide: A narrative review (Persian)]. *J Rafsanjan Univ Med Sci*. 2018; 16(12):1153-68. [\[Link\]](#)
- [7] Thompson Mp, Swartout K. Epidemiology of suicide attempts among youth transitioning to adulthood. *J Youth Adolesc*. 2018; 47(4):807-17. [\[DOI:10.1007/s10964-017-0674-8\]](#) [\[PMID\]](#)
- [8] Gorgi Z, Sheikh Fathollahi M, Askarizadeh Mk, Rezaeian M. Epidemiology of suicide and attempted suicide in the Larstan and gerash during 2008 To 2012. *J Rafsanjan Univ Med Sci*. 2014; 13(7):597-608. [\[Link\]](#)
- [9] Asadiyun M, Daliri S. Suicide attempt and suicide death in Iran: A systematic review and meta-analysis study. *Iran J Psychiatry*. 2023; 18(2):191-212. [\[DOI:10.18502/ijps.v18i2.12370\]](#)
- [10] Zygo M, Pawłowska B, Potembska E, Dreher P, Kapka-Skrzypczak L. Prevalence and selected risk factors of suicidal ideation, suicidal tendencies and suicide attempts in young people aged 13-19 years. *Ann Agric Environ Med*. 2019; 26(2):329-36. [\[DOI:10.26444/aaem/93817\]](#) [\[PMID\]](#)
- [11] Zakharov S, Navratil T, Pelclova D. Suicide attempts by deliberate self-poisoning in children and adolescents. *Psychiatry Res*. 2013; 210(1):302-7. [\[DOI:10.1016/j.psychres.2013.03.037\]](#) [\[PMID\]](#)
- [12] Lewinsohn PM, Rohde P, Seeley JR, Baldwin CL. Gender differences in suicide attempts from adolescence to young adulthood. *J Am Acad Child Adolesc Psychiatry*. 2001; 40(4):427-34. [\[DOI:10.1097/00004583-200104000-00011\]](#) [\[PMID\]](#)
- [13] Green CA. Gender and use of substance abuse treatment services. *Alcohol Res Health*. 2006; 29(1):55-62. [\[PMID\]](#)
- [14] Orlewska K, Orlewski P, Klusek J. Suicide among Polish adolescents-a 20 year analysis. *Int J Environ Res Public Health*. 2021; 18(6):3190. [\[DOI:10.3390/ijerph18063190\]](#) [\[PMID\]](#)
- [15] Moçambique M, Hoffmann A, Roglio VS, Kessler FHP, Dalbosco C, Schuch JB, et al. Prevalence of suicide in cocaine users accessing health services: A systematic review and meta-analysis. *Braz J Psychiatry*. 2022; 44(4):441-8. [\[DOI:10.47626/1516-4446-2021-2207\]](#) [\[PMID\]](#) [\[PMCID\]](#)
- [16] Zoroglu SS, Tuzun U, Sar V, Tutkun H, Savaş HA, Ozturk M, et al. Suicide attempt and self-mutilation among Turkish high school students in relation with abuse, neglect and dissociation. *Psychiatry Clin Neurosci*. 2003; 57(1):119-26. [\[PMID\]](#)
- [17] Borges G, Walters EE, Kessler RC. Associations of substance use, abuse, and dependence with subsequent suicidal behavior. *Am J Epidemiol*. 2000; 151(8):781-9. [\[DOI:10.1093/oxfordjournals.aje.a010278\]](#) [\[PMID\]](#)
- [18] Makara-Studzińska M, Sygit K, Sygit M, Goździewska M, Zubilewicz J, Kryś-Noszczyk K. Analysis of the phenomenon of attempted suicides in 1978-2010 in Poland, with particular emphasis on rural areas of Lublin province. *Ann Agric Environ Med*. 2012; 19(4):762-9. [\[PMID\]](#)
- [19] Swahn MH, Bossarte RM, Sullivent EE 3rd. Age of alcohol use initiation, suicidal behavior, and peer and dating violence victimization and perpetration among high-risk, seventh-grade adolescents. *Pediatrics*. 2008; 121(2):297-305. [\[DOI:10.1542/peds.2006-2348\]](#) [\[PMID\]](#)
- [20] Kim DS, Kim HS. Early initiation of alcohol drinking, cigarette smoking, and sexual intercourse linked to suicidal ideation and attempts: Findings from the 2006 Korean youth risk behavior survey. *Yonsei Med J*. 2010; 51(1):18-26. [\[DOI:10.3349/ymj.2010.51.1.18\]](#) [\[PMID\]](#)

- [21] Wichstrøm L. Predictors of adolescent suicide attempts: A nationally representative longitudinal study of Norwegian adolescents. *J Am Acad Child Adolesc Psychiatry*. 2000; 39(5):603-10. [DOI:10.1097/00004583-200005000-00014] [PMID]
- [22] Kelly TM, Lynch KG, Donovan JE, Clark DB. Alcohol use disorders and risk factor interactions for adolescent suicidal ideation and attempts. *Suicide Life Threat Behav*. 2001; 31(2):181-93. [DOI:10.1521/suli.31.2.181.21512] [PMID]
- [23] Wu P, Hoven CW, Liu X, Cohen P, Fuller CJ, Shaffer D. Substance use, suicidal ideation and attempts in children and adolescents. *Suicide Life Threat Behav*. 2004; 34(4):408-20. [DOI:10.1521/suli.34.4.408.53733] [PMID]
- [24] Nock MK, Green JG, Hwang I, McLaughlin KA, Sampson NA, Zaslavsky AM, et al. Prevalence, correlates, and treatment of lifetime suicidal behavior among adolescents: Results from the national comorbidity survey replication adolescent supplement. *JAMA Psychiatry*. 2013; 70(3):300-10. [DOI:10.1001/2013.jamapsychiatry.55] [PMID]

This Page Intentionally Left Blank