Int J Med Invest 2021; Volume 10; Number 3; 122-127 http://intjmi.com

Original Research

Epidemiology Of Suicide Attempt In Noor City, 2017-2020

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Abstract

Background: Suicide is a phenomenon that has plagued mankind for many years from traditional relationships to complex urban relationships today and in the ups and downs of social developments, it has hurt the hearts and souls of families and society. Suicide as a behavior is a death committed by oneself.

Method: The present study is a descriptive-analytical cross-sectional study. The sample includes all clients of the emergency center of Imam Khomeini Hospital in Noor city and forensic medicine in the province from 2017 to 2020. By completing a questionnaire in the hospital and being visited by an emergency physician and following up with psychologists in the health network, suicide attempts of these clients have been confirmed. Data were analyzed using Spss software.

Results: The results showed that in the years 2017-2020, more than half (67-73%) of those who attempted suicide were women and included age groups between 15-34 years (44-45%) of which about (51-62%) are married and (53-56%) are in urban areas motivated by family problems and disputes; And they attempted suicide by the predominant method of drug poisoning.

Conclusion: The findings show that the number of suicide attempts is increasing and the number of married women who have attempted suicide is significant, which indicates the need to increase education in communication and life skills and it may be possible to program people's access to controlled drugs.

Keywords: Suicide attempt, drug and method of suicide attempt, motive for suicide attempt.

Submitted: 11 November 2021 , Revised: 20 February 2021 , Accepted: 17 April 2021

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[DOR: 20.1001.1.23222913.2021.10.3.9.7]

Introduction

In 1737, Defontaine first used the word suicide. The term was later adopted in 1762 by the French Academy of Sciences. The word suicide is derived from the French and Latin words “sui” meaning self and “cide” meaning to destroy and kill, which in general means to destroy and kill oneself [1]. In his definition of suicide, Aristotle says: The act by which a person commits to exterminate himself, while this act is not for the purpose of sacrifice, that is, the person does not commit suicide to become a victim. Pierre Moren defines suicide as a conscious act of self-destruction that uses death as a tool or target. Achieving a comprehensive definition of suicide is not an easy task [2]. According to Emile Durkheim, suicide is any kind of death that is a direct or indirect result of the positive or negative actions of the victim himself who knew it would have such consequences. In 1897, Emile Durkheim conducted the first systematic study of suicide. Common terms for suicide include: A) Suicide attempt: In this behavior, suicide attempt is made but it does not lead to death. B) Complete or successful suicide: The act of killing oneself and ending one's life successfully are other terms used in suicide [2].

The World Health Organization estimates that more than 2,500 people commit suicide every day.

Nearly one million people die of suicide every year. In general, international comparisons of suicide rates are not easy, as countries vary widely in their definition of suicide, legal and medical approaches, and cultural issues. In the United States as a whole, 30,000 people die each year as a result of suicide, and the estimated suicide rate is 650,000. Another report from the World Health Organization (WHO) predicts that by 2020, approximately 1.53 people will die from suicide, and that suicide rates around the world will increase 10 to 20 times. On average, we will have one death every 20 seconds and a suicide attempt every 1 to 2 seconds [3,4]. Suicide biology covers a wide range of topics, from the study of neurotransmitters to research on militancy, genetic factors, and family history. Recent research suggests that serotonin has a calming effect on the brain. Decreased serotonin levels in the brain can lead to depression, violent behavior, and sudden decisions. Usually in psychoanalytic studies, mental disorders and psychological disorders such as personality disorders, mood disorders, depression and anxiety underlie suicide. Some researchers, especially sociologists, social psychologists, and criminologists, pay more attention to unfavorable cultural conditions. According to them, environmental, family and social factors such as methods of education, socialization, lack or weakness of communication and social ties and major changes in economic conditions and social status can cause failure, despair and frustration in the individual and lead to suicide [5].

Method

The present study is a descriptive cross-sectional study and the samples are from all clients who referred to the emergency center of Imam Khomeini Hospital in Noor city from April 2017 to February 2019 and committed suicide at the diagnosis of the emergency physician and were approved by the psychologists of the centers.

The required information was collected by a questionnaire that included information such as age, sex, education, occupation, method of suicide attempt and region. Data were analyzed using SPSS statistical software, frequency distribution table, central indices and dispersion were used to describe the data, and chi-square test was used to analyze the qualitative data. Significance level in this study is considered 0.05.

It was explained to the patient's companions that the information is without mentioning the patient's name and only for the purpose of evaluating the information, along with the confidentiality of the patients' personal and

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identity information.

Results

In this study, 138 people committed suicide in 2017, of which 93 were women (67.39%) and 45 were men (32.60%). And in 2018, 151 suicide attempts were registered, of which 111 were women (73.5%) and 40 were men (26.49%). In 2019, out of 188 suicide attempts, 127 were women (67.55%) and 61 were men (32.44%). Data from 2020 show 225 suicides, of which 156 were female (69.33%) and 69 were male (30.66%). The relationship between gender and suicide attempt was statistically significant. The age range of the subjects is 15 to 80 years. The highest percentage of the year 2017 is related to the age group of 15-24 years with 62 people and 44.92%. But in 2018, the highest percentage is related to the age group of 25-34 years with 69 people and is equivalent to 45.96%. The year 2019 has the highest percentage related to the age group of 25-34 years with 65% and 34.57%. And the year 2020 is the highest category related to the age position of 15-24 with 86 people and 38.22%.

Table 1- Frequency of suicide attempts in relation to age variable in order of frequency in 2017-2020

Age Category	2017		2018		2019		2020	
	n	%	n	%	n	%	n	%
15-24	62	%44.90	44	%29.13	57	%30.31	86	%38.22
25-34	47	%34.05	69	%45.69	65	%34.57	65	%28.88
35-44	10	%7.24	28	%18.54	32	%17.20	47	%20.88
55-64	7	%5.07	4	%2.64	15	%7.79	12	%5.33
45-54	5	%3.62	3	%1.98	10	%5.31	8	%3.55
5-14	4	%2.89	2	%1.32	7	%3.27	5	%2.22
Above 64	3	%2.17	1	%0.66	2	%1.60	2	%0.88

Statistics show that in 2017 out of 138 cases of suicide attempt: 71 married cases equivalent to 51.44%, 66 single cases equal to 47.82%, and 1 divorced item equal to 0.72%. And in 2018 out of 151 suicide attempts: 95 married cases equal to 62.91%, 54 single cases equal to 35.76%, and 2 divorces equivalent to 1.32%. And in 2019 out of 188 suicide attempts: 120 married cases equivalent to 63.82%, 64 single cases equal to 34.40%, and 4 divorces equivalent to 12.2%. And in 2020 out of 225 cases of suicide attempt: 136 married cases equivalent to 60.44%, 85 single cases equivalent to 37.77%, and 3 divorces equivalent to 1.33%. Out of 138 suicide attempts in 2017: 74 urban cases which is equivalent to 53.62% and 64 rural cases which is equivalent to 46.37%. Out of 151 suicide attempts in 2018: 86 urban cases equivalent to 56.95% and 65 rural cases which is equivalent to 43.04%. Out of 188 suicide attempts in 2019: 149 urban cases equivalent to 79.25% and 39 rural cases which is equivalent to 20.74%. Out of 225 suicide attempts in 2020: 132 urban cases which is equivalent to 58.66% and 93 rural cases which is equivalent to 41.33%.

Discussion

suicide is a tragedy that is prevalent in all societies and causes great economic, cultural, social and emotional burden. The results of research in two consecutive years in Noor city show that the suicide rate is significantly higher among women than men. From a sample of 138 people in 2017 - 67.39% women and 32.60% men; [Out of 151 people in 2018 - 73.50% women and 26.49% men; Out of 188 cases in 2019- 67.55% female and 32.44% male; Out of 225 cases in 2020 - 69.33% women and 30.66% men].

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Table 2- characteristics of suicide attempts in 2017-2020

		2017		2018		2019		2020	
		n	%	n	%	n	%	n	%
Educational level	Illiterate	3	2.17	2	1.32	4	2.17	9	4
	High school	61	45.64	67	44.37	52	27.60	65	28.88
	Diploma	63	44.20	69	45.96	111	59.40	147	65.33
	University	11	7.97	13	8.60	21	11.17	4	1.77
tools of suicide	Drug poisoning	110	79.70	124	82.11	149	79.25	204	90.66
	Rice tablets	9	6.52	8	5.29	6	3.19	4	1.77
	Poisoning	7	5.07	7	4.63	23	12.23	6	2.66
	Cold weapon	7	5.07	1	0.66	3	1.59	3	1.33
	Other	5	5.07	11	7.27	7	3.72	8	3.55
occupation	Housewife	71	51.44	90	59.44	103	54.78	146	64.88
	Freelance	36	26.08	44	26.08	63	32.44	57	25.33
	student	16	11.59	6	12.59	11	5.85	6	2.66
	Unemployed	9	6.52	6	6.52	7	73.72	10	4.44
	University Student	4	2.89	4	2.89	2	1.60	0	0
	Other	2	1.44	1	6.44	2	1.60	6	2.66
Reason of suicide	Family issues	81	58.69	126	83.44	159	84.57	220	97.77
	Emotional problems	41	29.70	12	7.94	5	2.60	1	0.44
	Unemployment	9	6.52	3	1.98	2	1.06	0	0
	Neuropsychiatric illness	4	2.89	7	4.63	11	5.85	0	0
	Other	3	2.17	1	0.66	11	5.85	4	1.77

A report by the World Health Organization (WHO) on women's health studies in several countries has shown that suicide is more common among women than men and is one of the leading causes of suicidal ideation in women. Among women, we can mention violence perpetrated by the husband, physical violence, divorce, widowhood and sexual abuse in childhood [6]. A report by the World Health Organization (WHO) on women's health studies in several countries has shown that suicide is more common among women than men and among the leading causes of suicidal ideation in women, spouse violence,

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physical violence, divorce, widowhood, and child sexual abuse can be mentioned [6]. A study conducted in Isfahan concluded that many social and cultural factors cause suicidal behaviors among women, some of which are family conflicts, marriage and problems with husbands, social prejudices and high expectations of women. [7]. Of course, the observed rates and their differences in different countries indicate the differences in culture, religion, attitudes and way of life in the societies of those countries, although even in different cities of a country there are many differences. An examination of age groups shows that the number of victims of suicide attempts varied in terms of age, from 24-24 years to 25-34 per year. Of course, this is not consistent with the results of research conducted by Mohammadi et al. in Neishabour and Zohour et al. in Jiroft, Kerman [8]. But in general, it includes the age group of young people, i.e. 15-34 years. In this research in 2017, the highest statistics of suicide efforts were in undergraduate education with 45.64% and in 2018, 2019 and 2020, the highest number of applications was for diplomas with a percentage above 45%. Studies by Behmanesh Pour et al. in Zahedan and Keyvan Ara et al. in Isfahan show that most of those who have attempted suicide have undergraduate education [9,10] and in another study conducted in 2011 by Bakhsha et al. in Golestan, most of the people who attempted suicide were at a low level of education [11]. And the results of our studies were not consistent with the increase in suicide in primary education with studies conducted in Zahedan, Golestan and Isfahan. Of course, we can also mention the awareness of the educated not to go to government and local emergencies. In this study, there is a significant relationship between suicide attempt and celibacy status - in other words, in both consecutive years, more suicide efforts were observed in married people than single ones. The year 2017 is equal to 51.44% and the year 2018 is 62.91% and 2019 is 63.82% and the year 2020 is 60.44% which is not consistent with the study of Bakhsha et al. in Golestan. However, with the study of Cheng Jin Zhao et al. in China, the number of suicide attempts in married people is more than single people, which is consistent with the results of the study [12]. According to the results of the study, the average annual suicide attempt in cities in 2017 was equal to 53.62%, in 2018 was equal to 56.95%, in 2019 was equal to 79.25% and in 2020 was 58.66%, which shows that it was more in the city than in the villages. This finding is consistent with some studies conducted in other provinces, which can be due to the effect of stressful environment in cities compared to villages [13]. In Noor city, methods used for suicide in 2017-2020 include: Poisoning with drugs and poisons, rice pills and cold weapon, and other items such as hanging, falling from heights, and self-harm with the winning tools. Of course, the statistics of the Ministry of Health show that most cases of suicide in the country have included self-immolation, hanging, use of drugs, narcotics and firearms [14]. In general, there are significant differences in suicide methods between different countries. Rice pills are known to be very fatal; while some reports show survival in case reports [15]. In Sweden, 4 more common methods include: Poisoning - hanging - firearms and drowning. In America: Firearms - Poisoning and sharp and cutting objects. In India: Poisoning - hanging - self-immolation and drowning. And in China: Hanging, drowning, poisoning and throwing from a height are the most common methods [16]. In our study in 2017-2020 in Noor city, the most common cause of suicide was related to family conflicts and quarrels with the spouse. This result is consistent with studies conducted by Jafari Fard et al. in Lordegan [17], Rahbar et al. in Rasht [18] and Ansari et al. in Rafsanjan [19]. Of course, it should be noted that because the questionnaire was completed by the patient

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and colleagues, there may be other reasons behind the scenes that are not mentioned for some reason. But insecure family environments and parental conflicts with adolescents can be a major reason for suicide in this group, which requires the training of communication and life skills. The results of the research show that the most common method of suicide has been taking pills, which due to the growing depression and psychiatric problems in the country, the availability of these drugs is not far from the mind that better measures should be taken by policy makers in this regard and care should be taken in prescribing a large number of these drugs to patients. Cheng Jin Zhao's study in China showed that the most common way to commit suicide is the use of drugs and pills, which is consistent with the results of the present study, which shows that the use of drugs and chemicals worldwide has alarming dimensions. The limitation of the present study is the referral of patients to subspecialty poisoning centers, which may not have definitively available statistics on suicides leading to death. Another issue is that some cases of suicide attempts by families may not have been explicitly announced and the questionnaire on them may not have been completed.

Conclusion

Given the growing number of suicides among young people, it is necessary to establish macro-policies on the media so that news and information in the media do not cause stress and depression in people, but aspects of happiness and motivation should be induced to them; Life skills, including the skills of self-awareness, communication with others, and acceptance and boldness should be Strengthened and medicines use and availability should be regarded with greater caution.

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