

An epidemiological study of suicide attempts and to determine the correlation between attempted suicide causes and demographic characteristics of people in Kermanshah Province during a year

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Abstract

Introduction: Suicide is a hidden problem, avoidable and tragic in the public health community. Suicide is due to consequences of social, economic and psychological damages imposed by the community. The suicide rate in Kermanshah province is very high and alarming. This study was carried out with the aim to evaluate the personal characteristics and risk factors of suicide attempts.

Materials and Methods: The population of this descriptive and analytical study was people who committed suicide in 2014 and have been transferred to hospitals in Kermanshah and this study examined people who had acknowledged individually or through companions, their wish to suicide. To collect information the Check list consisting of information regarding suicide and social effective factors in suicide, was used.

Findings: A total of 2,501 people who had committed suicide were studied. Most suicide attempts in both genders were seen in the category less than 20 years and a total of 74.4 percent of people who commit suicided were below 30 years. In all age groups more women than men had

committed suicide. Statistics on suicide in married women was twice that of single women. More unmarried men than married men had attempted suicide. In most of them, the most common cause was conflict with parents and conflict with their wife and so it was due to psychological problems. Relationships causing suicides, by individual characteristics of suicide attempters, was significant.

Discussion and Conclusion: Identifying some factors for predicting the risk of suicide from looking at epidemiological studies on people who have attempted suicide can be a good practice for prevention by social planners, and health officers.

Key words: attempted suicide, causes of attempted suicide

Introduction

Nowadays, suicide is being considered as a general problem of Public health in all communities, meanwhile it is a sad and preventable problem of public health(1). Suicide due to social, economic and mental consequences imposes great damage to society(2). Suicide isn't an accidental and meaningful action, rather it is a way to get out of a predicament or crisis that causes a person extreme suffering, without exception(3). However it seems that suicide is a personal action but social bonds have an important role in causing it and suicide is followed by grave consequences. In Iran, suicide is in tenth place in cause of death classifications and almost 11 persons daily and more than 4000 persons annually are dying because of suicide. According to official statistics the suicide rate is about 6 persons per 100,000 persons yearly(5). In Ilam, Boshehr, Khuzestan, Kohgiluyeh Va Boyer Ahmad, Fars and Kerman provinces the suicide rate is higher in women than men(3). However there is much progress in identification of causes and risk factors and persons at risk, but there is a significant gap in knowledge relevant to suicide and acting upon that(6). Results of Naghavi and et al (1379) showed that suicide in ages 10 to 80 is more than rage, in ages 15 to 29 more than cancer, in ages 10 to 40 more than infectious diseases, in ages 15 to 24 more than death caused by cardiovascular diseases and this shows it is a real health problem(7). A study has been done by Tanomand (1378) in Maragheh city and results show that the most important reason for attempted suicide was family and marital problems(8).

Based on Yusofi et al (2001) those in stress prior to suicide were 86.2% and Family involvement was found in 83.1% of the highest numbers of suicide attempts(9). Khazayi and Parvizi Fard (1382) showed in a study that the highest rate of suicide attempts was in singles, housewives, unemployed people and persons with secondary school education(10). Sayad Rezayi et al's study concluded that the highest successful suicide attempts was in the age of 15 to 24 (34.8%), in females (62.5%) in the married (57.8%) and in urban society (65.6)(11). Heydari Pahlavian showed in a study that the most important reasons for suicide are family conflict, spouse involvement, mental illness and unemployment in men. Depression is the most common psychiatric disorder in suicide attempters(12). Tuckman and his colleague showed in a study that between age, gender and racial groups, persons who are 45 years old and older, men and caucasians have the higher suicide risk(13). Gouda et al in a study concluded that 75% of all suicide attempters were farmers, housewives and normal workers(14). Findings of Milner et al are claiming that male and female suicide rates correspond increasingly in women's workforce participation, unemployment and people above 65 years old proportionately. Reduction in suicide rate of both men and women is related to increasing per capita health expenditure and higher fertility is related to reducing the male suicide rate. This study showed that participation of women in the workforce is a more effective factor in men's suicide rate(15). In Haw et al's study, potential risk factors for suicide consist of male gender as

a teenager abusing drugs or alcohol and history of self-harm (16). In Gunter et al's study results showed that mental and psychiatric disorders are the most important predictive factors for suicidal thoughts and self-harm without attempt to kill(17). Based on Xia et al study results, family conflicts, chronic diseases and economic problems are the most important risk events of suicide attempts in middle aged people(18).

Materials and Methods

This is a descriptive analytical study. Studying society consists of all people who attempted suicide during a one year period by self confession or reports from their companions, who visited hospitals in Kermanshah province. For data gathering, a check list including suicide attempters' demographic information and effective social factors in acting on suicide was used. Content Validity of this check list was confirmed by professors. Data was entered into the checklist from questionnaires in each hospital after identification of suicide attempters through interviewing the client or the aware companion. The data was entered into SPSS 16 program after gathering, and correction and coding and it was analyzed using descriptive statistics indexes including Frequency distribution tables, two dimensional tables and statistical tests including square K test.

Findings

In the recent survey, the number of suicide attempters who came to Educational Therapy centers and hospitals of Kermanshah province during 2014 was 2,501, that 1,406 were female and 1,095 were men. Average age in male suicide attempts was 28.77 and in females was 28.92. Imposing t test on average age didn't provide a meaningful difference between the two sides from the age aspect. Totally, 74.4% of suicide attempters were below 30 years old and the most attempts to suicide in both sexual groups in age classification is found below 20 years old (58.3%). In all age groups, the female number is significantly more than male attempters. In single men (29.7%) and in married women (29.5%) rate of suicide was higher.

By using X² test between gender and cause of attempt to suicide, age and reason for attempting suicide there was a meaningful connection. The most common reason to suicide in men was conflict with parents (21.8%) and in women was conflict with husband (17.9%). In age group below 30 years old the most common cause for taking action to suicide was conflict with parents (below 20 years old 16.4% and for 20 – 29 years old 18.2%) and in the age group above 30 years old conflict with husband (9.9%) was the most common reason to suicide. Relationship between living area and suicide attempt cause became meaningful. The highest number of attempts to suicide (78.8) was observed in city residents. The highest number of attempts to suicide in both urban and country areas was attributed to family conflict with parents.

Relationship between education and the reason for suicide attempt became meaningful. The most common reason for suicide attempt in illiterates was marital conflict (2.7%) and in other people with educational level below high school diploma and above that was conflict with family (below diploma 23.6%, diploma 11.8%, above diploma 3.2%). Relationship between occupation and the reason to suicide attempt became meaningful. The most common reason for suicide attempt in working people (3.4%), school and college student (8.6%), unemployed (18.4%) and the other (2.3%) was conflict with parents and in housekeeping people (16.6%) was marital conflict. In women the highest number of suicide attempts was in housekeepers in (34%) and in men the highest number of suicide attempts was in unemployed people (21.9%) and the least number were observed in retired people (0.2%).

In total, the highest and the least number of suicide attempts took place in summer and in winter, respectively. Rate of suicide attempts in men was observed more than women in autumn (13.2%). The result of this study has shown totally 4.1% of participants in suicide action, had a successful outcome and 64.1% of them were for women and 35.9% were men. The mortality rate due to suicide in women was 1.7 times more than men. Burning Self-immolation (58.3%) was the most method taken to suicide that led to death. As you see in Table and Diagram 1, in both male and female groups suicide attempt was made by taking pills and using poison and the biggest causes were conflict with parents and spouse and after that mental health problems and then family and economic problems. Connection between suicide attempt causes with personal features of people who attempted suicide became meaningful. Using burning/self-immolation was the most painful and the most excruciating suicide ways that were common in women and in ages 20 – 29.

Discussion

Suicide problems originate from different aspects and it is a multi-cause phenomenon. These people feel the only way out of their problems is to suicide. Most studies showed that most cases of suicide attempts happened in people below 20 years old (2, 19 and 20). In this study, the most common reason to suicide was seen below 20 years old which indicates the vulnerability of people in adolescence to the teenager period, to suicide attempts(2). Higher rates of suicide in teenagers and recognition and paying attention to counteracting factors and reasons to suicide must be considered as a serious and important health issue.

The result of previous studies showed that women attempt to suicide more than the other gender (12, 21, 23). In this study, women attempted to suicide significantly in all age groups. Totally the proportion of women to men was almost 1.3. The idea of "Successful suicide in men is more than in women" didn't prove to be the result of this study and the proportion of successful suicides in women was more than in men. The result of study shows that married women take action more than single ones. This is despite the fact that in bachelor men the suicide rate was more than

married ones. This result matches with recent results(12, 20, and 24). The reason that married women attempt to suicide more than singles must be found in post-marriage problems and their spouses' behavior. About women, the highest number of suicide attempts in was observed in housekeepers while in men, the highest number was seen in unemployed men. This study's result matches recent results in Iran(2, 12, 20, and 25). There is a meaningful connection between not having a job and suicide attempt that matches Nojumi et al (22). The most common reason of suicide attempt in men, unemployed and age below 30 was conflict with parents and in women, housekeepers and ages above 30 was conflict with spouse. This result matches the studies(12, 20).

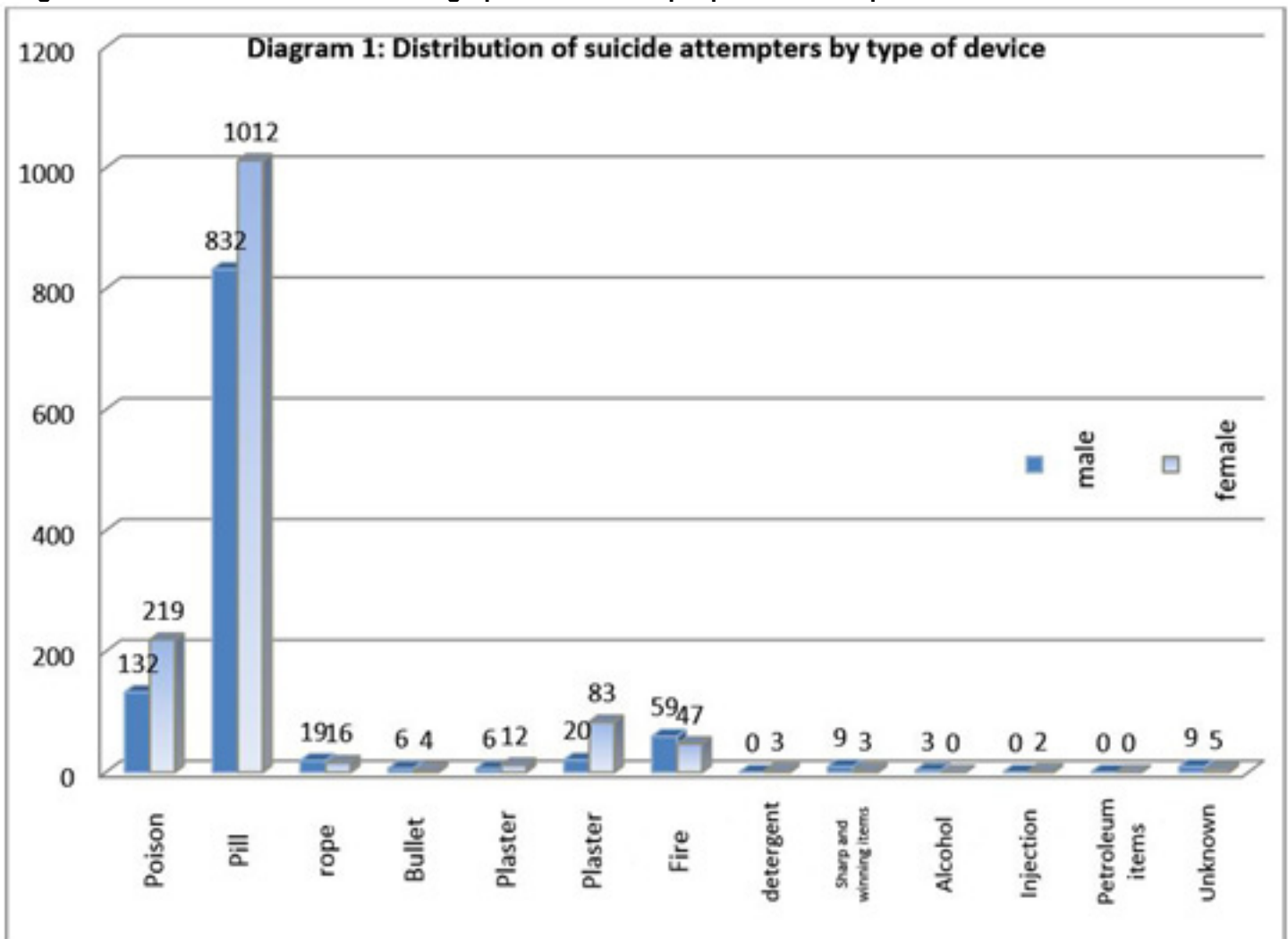
In the current study, most suicide attempt cases were seen in urban residents and the biggest reason for suicide attempts in both urban and rural groups was family conflict which matches the study result(3); but Xia et al who showed that suicide rate in rural middle aged people in China is three to five time more than urban middle aged people didn't match(18). Most women who attempted suicide had the wife role and in men had the child role in the family. In people with Head of the family and spouse role, the most common cause for taking action to suicide was marital conflict and in children the most common reason to suicide was conflict with parents. The most common reason to suicide attempt in single people was conflict with parent, in married and divorced people was conflict with spouse and in widows was mental health problems. Most suicide attempt cases were in men and women with education less than diploma and the least that were seen were within academic educated men and women which is matched with previous results(2, 12, 20). Illiteracy and low educational level are from the factors that are known risk factors for suicide attempt.

In this study most suicide attempt causes were conflict with parents, family and then mental health problems. Shakeri concluded in his study that female suicide attempters had experienced distresses like marital struggles, family conflicts, emotional problems and failure in education as factors more than other mental, social and psychosocial stress factors, while in men occupational and economic problems had effects more than mental, or social factors(20). Recognition of some risk predictive factors after doing epidemiological studies on people attempting to suicide can present a proper way for prevention for social, and health care planners.

Teenagers, especially young women and probably people who have more marital, domestic and educational problems are the more vulnerable groups(21). Young ages between 15-24 years old, female gender, lack of education, unemployment, single life and history of social and economic deprivation are potential suicide risk factors(14). In our study, most common way to suicide in married women was burning by self-immolation and the reason was marital conflict which matches the study of Amir Moradi and et al (26). In this survey it has been cleared that the suicide proportion that led to death in

Demographic features		Cause of suicide												P value			
		Family conflicts with parents		Family Conflict with Spouse		Family conflicts with children and others		Divorce and forced marriage		Physical and mental illness		Individual Addictions, Parents and Spouse			Family problems and economic poverty and academic failure		Other and unknown
		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Gender	Male	545	21.8	154	6.2	36	1.4	5	0.2	193	7.7	32	1.3	89	3.6	41	1.6
	female	472	18.9	447	17.9	78	3.1	11	0.4	241	9.6	16	0.6	99	4	42	1.7
Age	Under 20 years old	410	16.4	93	3.7	25	1	2	0.1	141	5.6	7	0.3	59	2.4	33	1.3
	20 to 29 years	456	18.2	260	10.4	37	1.5	13	0.5	187	7.5	27	1.1	80	3.2	30	1.2
	30 to 39 years old	109	4.4	150	6	12	0.5	1	0.039	56	2.2	7	0.3	28	1.1	10	0.4
	40 to 49 years old	34	1.4	61	2.4	12	0.5	0	0	28	1.1	4	0.2	10	0.4	5	0.2
	50 and above	8	0.3	37	1.5	28	1.1	0	0	22	0.9	3	0.1	11	0.4	5	0.2
Married	Single	840	33.6	47	1.9	42	1.7	7	0.3	250	10	27	1.1	130	4.8	49	2
	Married	158	6.3	551	22	68	2.7	6	0.2	171	6.8	19	0.8	60	2.4	28	1.1
	Wife died	11	0.4	0	0	3	0.1	0	0	7	0.3	1	0.039	0	0	1	0.039
Level of Education	divorced	8	0.3	3	0.1	1	0.039	3	0.1	6	0.2	1	0.039	8	0.3	5	0.2
	illiterate	25	1	67	2.7	30	1.2	0	0	33	1.3	4	0.2	9	0.4	8	0.3
	Under the diploma	591	23.6	546	13.8	48	1.9	11	0.4	209	8.4	27	1.1	105	4.2	36	1.4
Level of Education	Diploma	294	11.8	126	5	17	0.7	2	0.1	123	4.9	12	0.5	46	1.8	21	0.8
	Super-diploma and higher	79	3.2	50	2	16	0.6	3	0.1	48	1.9	2	0.1	22	0.9	7	0.3
Level of Education	Unknown	28	1.1	12	0.5	3	0.1	0	0	20	0.8	3	0.1	6	0.2	11	0.4

Table 1 shows connection between demographic features of people who attempted to suicide and the cause

Diagram 1 - Connection between demographic features of people who attempted to suicide and the cause

men and burning self-immolation is the most common way. 49.5% were housekeepers and 28.2% were unemployed.

In the study of Judd et al study that checked the dead people due to suicide, one third of them were married and more than one third of them were working (39.2%) and one fifth of them were unemployed (20.8%)²⁷. In this study, motive and reason to suicide of 1.9% was due to addiction to drugs and 1.5% of surveyed people attempted to suicide because of that reason. In the study of Skala et al the suicidal thoughts in teenagers with Alcohol dependence problems, illicit consumers of drugs and teenagers with low education have been reported (28). As the Haw et al study reported, potential risk factors for male gender suicide attempts are being a teenager or young, drugs or alcohol abuse and history of self-harm⁽¹⁶⁾. It seems that addiction and drug overuse problems lead to suicide attempts more than is reported and it may be not mentioned in suicide attempters self-reporting or their aware companions due to social considerations.

Conclusion

This study's result showed that being young, female gender, low educational level, unemployment in men and domestic conflicts and mental problems especially married status,

and domestic conflicts with husband in women are important factors of suicide attempts in surveyed people. Married and housekeeper women, unemployed bachelor men and teenager, and less than 30 years old are the most vulnerable social strata in this case. It seems that work is a protective factor against suicide. Unemployed people have a higher rate of suicide, probably due to stressful life, creation of a mental illness background and economic – social matters are unemployment consequences. Social and government support for married women against husband's misbehavior can reduce suicide rate in these women.

Since most reasons for suicide attempts is domestic conflict and psychological-mental health problems, developing governmental and publicly available counseling centers and encouraging families to visit there for solving domestic and psychological-mental problems can be an effective way to manage family problems and stresses that lead to suicide. Also education through media is an important factor that will lead to awareness and suicide rate reduction. Stemming social problems and difficulties and trying to resolve them are the factors that can lead to decreasing suicide.

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