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Frequency Suicide Ideation and Attempt among Rafsanjan Pregnant Women in 2012

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ABSTRACT

Suicide is a conscious and voluntary act that the person ends his/her life by a life threatening and fatal act. Pregnancy is the most important and vital life stage for every woman. Because of the different stress in pregnancy as well as prevalence of psychiatric disorders such as depression .Suicide risk during pregnancy is also available. We investigate the prevalence of suicide thoughts and attempt among pregnant women in Rafsanjan, a city in center of Iran.In this cross-sectional study, all of pregnant women that attending urban health centers of Rafsanjan University of medical sciences in 2012 were the target population. Six hundred pregnant women were selected after exclusion criteria applied. Beck standard questionnaire for suicide was used to data collection. Suicidal thoughts were higher in women higher than >35 years (p<0/001) and multi gravid women (p=0.003) and Practitioner women (p<0.001). Unwanted pregnancies and dost date pregnancies have been characterized two factors for Suicidal thoughts. Women with history of divorce or stress during in pregnancy have been Suicidal thoughts and attempt, but women with the importance of child's gender did not differ significantly (p=0.513). The frequency of suicidal thoughts in women with malicious behavior during pregnancy were higher (p=0.004).Also the frequency of suicidal thoughts in women with history of Psychiatric disorder or familial history of suicide or Psychiatric disorder was higher (p<0.001).Suicide isn't common among pregnant women. Psychiatric approach is recommended as part of routine prenatal care.

Keywords: *Suicide ideation; Suicide attempt; Pregnancy; Women*

1. INTRODUCTION

Many social and psychological factors have been studied in this context, including: low maternal age, smoking, previous history of depression,severevomiting, physical illness, low self-confidence, high stress levels, inadequate social support, negative life events ,Marital problems, unwanted pregnancy, concern of childcare (1-3).

Based on Table of stressful life events that categorizes stressful life events and crises depending on the severity, the stress of pregnancy is 66 (the highest-level of stress related to the death of husband and about 123unitsare included) (4).

Psychiatric disorders, particularly depressive disorders, suicide ideation and attempt are common in pregnancy and they can direct affection the process of pregnancy and childbirth and therapeutic and health care of the individuals. Clearly, one of the most important etiologies of suicide attempt is depressive and anxiety disorders (5, 6).

Marzuk and colleagues in a study investigate the cause of women's death. Study of 315 women, 10-44

years old, living in New York, according to autopsy reports between 1993-1990 which had been laid for pregnancy diagnosis and who commit suicide, which was made Based on this study, the prevalence of suicide among pregnant women are significantly less than other women of reproductive age (7).

It is known that during pregnancy suicidal ideation can be found that is sometimes associated with suicide attempt, that factors such as unwanted baby, the importance gender of newborn, household income and education level can influence the rate of suicide (8).

In another study by Appleby in 1973-1984, review rate of suicide attempting women during pregnancy and a year after pregnancy. Based on information obtained fromwomenaged15_44 in England and Wales, that thoughts of suicide and suicide attempt during pregnancy and a year later had. Based on his study, although women's Psychological health after the baby was not in good shape, but rate of suicidal ideation in them significantly reduced (9).

In another study by Benute GR and colleagues in Brazil in 2011, the frequency of suicidal ideation (5%) was measured. Among these variables having a religion specifically as a factor preventing the thoughts and suicidal behaviors were considered. Other variables were not significantly associated with outcome (10).

In a study conducted in 2010by Andrew E. Czeizel Center for Toxicology Budapest in 1960-1993on1044pregnant women who had attempted suicide with drugs and congenital abnormalities in children of these womenwastoinvestigate, 46%cigarettessmoked,

22.5% alcohol consumption, but depression and panic disorders were found only17 of them. Trying to commit suicide with the drug in the second month of pregnancy and 4weeks after delivery had the highest prevalence (11).

In 2010, Pakistan's Asad and his colleagues studied the prevalence of suicidal ideations and attempts on 1369 pregnant women at 20 to 26 week of pregnancy, rate of suicidal ideation, suicide attempt, and sexual, verbal and physical harassment was measure.148 patientshad history of suicidal ideation and attempt that 18% of them had depressions and anxiety criteria.48% experience of verbal harassment and 20% history of sexual abuse and physical harassment. According to the study, women had some degree of depression or anxiety or some kind of abuse had more suicidal thoughts and suicide attempt (12).

Stallones and colleagues in a study in 2008 to assess suicidal ideation in 2112 women with low incomes after the pregnancy began., In this study it was found that factors such as emotional problems, substance abuse, addiction, maim and damage the body by causing suicidal ideation associated. This study results differ from previous studies had shown that pregnancy and increased revenue is associated with increased Psychological health and reduced suicidal ideation in them (13).

Mittendorfer-Rutz and colleagues in a study in 2004 showed that low maternal age (under 19 years), low education level ,low socio - economic level, low birth weight, high susceptibility to stress, high parity (Four labor and higher), alcohol consumption and smoking during pregnancy are more likely to attempt suicide (14).

In another study by kaslow and colleagues on 285 African - Americans women in 2000 were in Atlanta, other risk factors for suicide during pregnancy was found to include marital problems, problems in interpersonal relationships, drug and alcohol abuse, violence Family, psychological stress, socio - economic level down, frustration, anxiety disorders such as panic disorder and PTSD (post traumatic stress disorder), low maternal age, homelessness and the high number of children (15).

Since no research has not been done in Rafsanjan city to evaluate the prevalence of psychiatric disorders in pregnant women, therefore we decided to survey prevalence of suicide ideation and attempt in this population.

2. MATERIALS AND METHODS

2.1 Sampling and Determining Sample Size

The total population is 142,076 persons in seven health centers.

2.2 Method of Data Analysis

After data collection, coding and computer entry with Spss software 18, using descriptive and inferential statistical tests such as Correlation coefficient and chi-square and analysis of variance .Analysis and will be reported in the tables.

2.3 Data Collection Methods and Procedures

This is a cross-sectional descriptive study to determine the frequency of suicidal ideation and attempt among pregnant women referred to health centers in Rafsanjan city in 2012.Environmental study of the prevalence of the population of all pregnant women attending urban health centers in Rafsanjan University in 2012 and a sample of the study consisted of seven health centers in urban and randomly stratified multi-stage selection be due to the lack of information on the state variables, i.e. the maximum number of 600 pregnant women will be selected. Data collection is a questionnaire consisting of two parts, the first part and the second part of the questionnaire included demographic and BECK‘s standard respectively .sample of study are interviewed by medical student with assistance manager of unit responsible for pregnancy care. Interview in a private setting and obtaining the written consent of each person is doing.The personal information will be kept safe and will be explained to patients who continued treatment and medical procedures, it is not necessary to participate in this project. Among the questions to be ask edin this interview, are suicidal ideation and attempting the past and in the present and Patterns used for suicidal attempt. After data collection, coding and computer entry with Spss-18, using descriptive and inferential statistical tests such as Correlation coefficient and chisqu are and analysis of variance and analysis and will be reported in the tables .Validity and reliability of the questionnaire have been previously and There is a standard form of questionnaire in Iran.

2.4 Ethical Considerations

All patients will be enrolled with the personal satisfaction and their information will be kept completely confidential. At all stages of this study was to safe guard the data, until results are not misleading and unrealistic and any prejudice or interfere with the amount of data is strictly avoided.

Our duty is protect patient information and only if necessary, make the information available to authorities. Cooperation from the patient in the study was completely voluntary and the patient's acceptance or rejection of patients did not have any effect on the proceedings.

3. RESULTS

In 41 samples (6.8%) of the subjects had a history of suicidal ideation, Also, 16 (2.7%) of the subjects had a history of suicide attempts, family history of sample (the first degree relatives) about suicides in 17 patients (2/8 %) was reported. 13 (2.1%) of the samples had a history of talking about suicide to the other person (Table 1).

History of self-harm behaviors, abortion and stillbirth, history of wife abuse, experience of stress

during pregnancy, drug use during pregnancy in samples was 1%, 18%, 4.5%, 9.3%, and 1%, respectively. And one of the majority ways to suicide attempt in samples was poisoning by drugs or toxins (Table 1).

In total 375 patients (62.5 %) of those surveyed had no suicidal ideation, 184 (30.8 %) of them were in the low-risk group, among which 139 (23.2 %) of them have been in the high risk group and 29 patients (4.8 %) did not respond to this question. No one else was in the dangerous group (Table 2).

20 (3.3 %) of those had history of psychiatric illness (mainly depression and anxiety were noted) and There was a significant relationship between suicidal ideation and attempt with pregnant women age ($p<0.001$, df =4, Chi-square =76/14), parity ($p =0/003$, df = 2, Chi-square = 11.39). 33 (53.2%), occupation ($p<0.001$, df =2, Chi-square=18.05), child bearing($p=0/004$, df =2, Chi-square= 11.006) and with history of suicide attempt ($p<0/001$, df =2, Chi-square = 99.34) (Table 3).

Frequency of thoughts in the third group (over 35 years) is higher than any of the 42 patients (100%) of these 38 patients (92.7%) of those in the low-risk group were examined, but none of them was not in high-risk group. in the age group below 20 years, 9 patients (20/0%) in the low-risk group were, but most people in high-risk women in group 1 (age< 20) comprised. So that 4.4% of them were ready to committed suicide.

33 (53.2%) of those were in group III (G>3) in the low risk group and 2 patients (3.2%) were in the high risk group that suicide ideation among those with high parity was more common. While most normal persons (184 patients (76%) in the first group (one pregnancy) are located.

Frequency of suicidal thoughts and preparation for suicide are more in employed people. So that 50 (0.45%) of employed persons in the low-risk group and 6 patients (5.4%) were in the high risk group.

Rate of suicidal thoughts and preparation for that are more in unwanted pregnancies. So that 42 (47.2%) of those in the low-risk group and 2 patients (2.2%) of them are in the high risk group.

There were a significant relationship between suicidal ideation and attempt and history of suicidal ideation ($p<0/001$, df =2, Chi-square = 99.84), family history of suicide ($p<0/001$, df =2, Chi-square = 39.85), history of harmful behavior($p<0/001$, df =2, Chi-square =58.53), history of post term labor($p=0.015$, df =2, Chi-square=8.39) (Table 4).

Rates of suicidal thoughts and preparation for suicide are more in person with a history of suicidal ideation, so that 21 (52.5%) of those in the low-risk group and 9 patients (22.5%) of them are in the high risk group.

Rates of suicidal ideations and preparation for suicide are more in persons with a family history of suicide, so that 6 (35/3%) of those in the low-risk group and 4 patients (23.5%) of them are in the high risk group.

Rates of suicidal thoughts and preparation for suicide are more in persons with a history of harmful behaviors, so that 8 (42/1%) of those in the low-risk group and 5 patients (26.3%) of them are in the high risk group.
Rates of suicide ideation and preparation for suicide are more in person with a history of post date labor.

There were a significant relationship between suicide ideation and attempt and history of divorce ($p=0.010$, df =2,Chi-square=9.16), planning for pregnancy($p<0/001$, df =2, Chi-square=21.4), stress during pregnancy ($p<0/001$, df =2, Chi-square =9.13), History of wife abuse ($p=<0/001$, df =2, Chi-square =65.78), history of psychiatric illness ($p<0/001$, df =2, Chi-square =26.10), (Table 5).

Rates of suicide ideation and preparation for suicide are more in person with a history of divorce, so that 6 (37.5%) of those in the low-risk group and 2 patients (12.5%) of them are in the high risk group.

Rates of suicide ideation and preparation for suicide are more in persons without planning for pregnancy are more, so that 67 cases(47.5%) of those in the low-risk group and 4 patients (2.8%) of them are in the high risk group.

Rates of suicidal thoughts and preparation for suicide are more in person with stress during pregnancy, so that 18 (34.6%) of those in the low-risk group and 4 patients (7.7%) of them are in the high risk group.

Rates of suicide ideation and preparation for suicide are more in individuals with history of domestic violence , so that 13 (50%) of those in the low-risk group and 6 patients(23.1%) of them were in the high risk group.

Rates of suicide ideation and preparation for suicide are more in person with history of psychiatric illness so that 11 people (57.9%) of the patients in the low risk group and 3 patients (15.8%) of them are in the high risk group.
In this study, a significant relationship between the other variables and thoughts of suicide were not found.

Table1: Distribution frequency of samples according to history of suicide ideation, history of suicide attempt, family history of suicide in sample, history of self-harm behaviors, ways to suicide attempt, abortion and stillbirth, history of wife abuse, experience of stress during pregnancy, drug use during pregnancy.

Frequency		Absolute	Relative
History of suicide ideation	Yes	41	6.8
	No	550	91.6
	Not answered	9	1.8
History of suicide attempt	Yes	16	2.7
	No	578	96.3
	Not answered	6	1
Frequency history of talking about suicide to the other person	Yes	13	2.1
	No	583	97.2
	Not answered	4	0.7
Family history of suicide in sample	Yes	17	2.8
	No	581	96.8
	Not answered	2	0.4
History of self-harm behaviors	Yes	6	1
	No	590	98.3
	Not answered	4	0.7
Ways to suicide attempt	Drug intoxication	16	2.7
	Fall from height	0	0
	Use of firearm sorcold	0	0
	Hanging	0	0
	No suicide	584	97.3
Abortion and stillbirth	Yes	108	18
	No	488	81.3
	Not answered	4	0.7
History of wife abuse	Yes	27	4.5
	No	570	95
	Not answered	3	0.5
Experience of stress during pregnancy	Yes	56	9.3
	No	541	90.2
	Not answered	3	0.5
Drug use during pregnancy	Yes	6	1
	No	579	96.5
	Not answered	15	2.5
Total		**600**	**100**

Table2: Distribution frequency of BECK Score in samples

Frequency	Absolute	Relative
No suicide ideation	375	62.5
Suicide ideation(Low Risk)	184	30.8
Suicide attempt(High Risk)	139	32.2

Table3: Distribution frequency of BECK Score in samples according to Age group, Parity, Job, Wanted child

Variable	Sub Variable	BECK Score			P -value	Df	Chi square
		Normal	Low risk	High risk			
		N (%)	N (%)	N (%)			
Age group	<20	34 (75.6)	9 (20)	2 (4.4)	<0.001	4	76.14
	20-35	3 (7.3)	38 (92.7)	10 (2.1)			
	>35	3 (7.3)	53 (21.9)	0 (0)			
Parity	1	184 (76)	53 (21.9)	5 (2.10	0.003	2	11.39
	2-3	164 (61.4)	98 (36.7)	5 (1.9)			
	>3	27 (43.5)	33 (53.2)	2 (3.2)			
Job	Housekeeper	291 (68.3)	130 (30.5)	5 (1.2)	<0.001	2	18.05
	Practitioner	55 (49.5)	50 (45)	6 (5.4)			
Wanted child	Yes	230 (68.5)	142 (29.5)	10 (2.1)	0.004	2	11.01
	No	45 (50.6)	42 (47.2)	2 (2.2)			

Table4: Distribution frequency of BECK Score in samples according to History of suicidal attempt, History of suicidal ideation, Family history of suicide, History of harmful behavior, History of post term labor

Variable	Sub Variable	BECK Score			P -value	Df	Chi - Square
		Normal	Low risk	High risk			
		N (%)	N (%)	N (%)			
History of suicidal attempt	Yes	7 (43.6)	3(18.8)	6 (37.5)	<0.001	2	99.35
	No	364 (66.2)	180 (32.7)	6 (1.1)			
History of suicidal ideation	Yes	10 (25)	21 (52.5)	9 (22.5)	<0.001	2	99.84
	No	358 (68.5)	162 (31)	3 (6)			
Family history of suicide	Yes	7 (41.2)	6 (35.3)	4 (23.5)	<0.001	2	39.85
	No	367 (66.4)	178 (32.2)	8 (1.4)			
History of harmful behavior	Yes	0 (0)	5 (83.3)	1 (16.7)	<0.001	2	58.53
	No	374 (66.4)	179 (31.8)	10 (1.8)			
History of post term labor	Yes	14 (42.4)	18 (54.5)	1 (3)	<0.015		8.39
	No	358 (67)	165 (30.9)	11 (2.1)			

Table5: Distribution frequency of BECK Score in samples according to History of divorce, Planning for pregnancy, Stress during pregnancy, History of wife abuse and History of psychiatric disorders

Variable	Sub Variable	BECK Score			P value	Df	Chi square
		Normal	Low risk	High risk			
		N (%)	N (%)	N (%)			
History of divorce	Yes	8(50)	6 (37.5)	2 (12.5)	<0.001	2	9.12
	No	363 (65.9)	178 (32.3)	10 (1.8)			
Planning for pregnancy	Yes	305 (49.6)	117 (27.2)	8 (1.9)	<0.001	2	21.4
	No	70 (68.5)	67 (47.5)	4 (2.8)			
Stress during pregnancy	Yes	30 (57.7)	18 (34.6)	4 (7.7)	<0.001	2	9.13
	No	344 (66.4)	166 (32.3)	8 (1.5)			
History of wife abuse	Yes	7 (26.9)	13 (50)	6 (23.1)	<0.001	2	65.78
	No	367 (67.5)	171 (31.4)	6 (1.1)			
History of psychiatric disorders	Yes	5 (26.3)	11 (57.9)	3 (15.8)	<0.015		26.10
	No	369 (67)	173 (31.4)	9 (1.6)			

4. DISCUSSION

In a study by Benute and colleagues in Brazil in 2011, 268 pregnant women were studied. Frequency of suicidal ideation was measured at 5% (10). In other study, about 6-12% of reproductive age women who had committed suicide were pregnant(16).

20% of the age group below 20 years had suicidal ideation. Highest rates of high-risk women in group 1 (age< 20) comprised. So that (4.4%) of them were ready to suicide attempt .However, about 93 % of people over age 35 had suicidal ideation. Overall suicide

rate rises with increasing age. Older less than young people had suicide attempted , In a study in 2010 by Czeizel in Budapest Toxicology Centre ,majority were young women who had suicide attempt (11).

Mittendorfer-Rutz and colleagues in 2004 showed that low maternal age (under 19 years) were more likely to suicide attempt during pregnancy (14). In another study in Atlanta by kaslow and colleagues on 285 African - Americans women in 2000, low maternal age as a risk factor for suicide was considered (15). It can be concluded that although suicide thought is higher in older womenbut young women, more suicidal thoughts will lead to action. Probably a higher incidence of suicide in young pregnant women for various reasons such as not having to pregnancy and childcare, forced marriages, which are common in this age, is associated. Most people that experience their first birth experience with a variety of stress encountered during this period that they will deal with the stress. In most cases of suicidal ideation in older women, these possibilities can be considered: Those with a history of abortion or still birth or death of a child is likely to have a pregnancy at this age have been decided likely to have a pregnancy at this age. Fear of abortion or still birth or repeated child abnormalities in these individuals will cause stress. There may be many of these pregnancies are unintended. It should also be noted that pregnancy in older culturally and socially in our society it is not acceptable. All these factors together can cause fear and stress. There is clearly a psychological stress or sis an important factor in creating thoughts and suicide attempts.

Rates of suicidal thoughts and preparation for suicide are more in person with high parity. Mittendorfer-Rutz and colleagues in a study in 2004 indicated, high parity (four deliveries and higher), is associated with more suicidal attempts during pregnancy (14).In a study in Taiwan, Yang and colleagues , showed that the mortality rate of suicide among women with two or three children is less than mothers with only one child. Therefore, childrenmay make emotional support for their motherand give her a positive social role (16).

Possible etiologies of increased suicidal ideation in women with high parity can be mentioned the following: unwanted children in this group are more, as there was a significant relationship between unwanted children, and suicide. More likely abortion and stillbirths was higher in this group, which caused fear and stress during recent pregnancy .The older women are often noted that the incidence of suicide increases with age (3).

The frequency of suicidal thoughts and preparation for suicide was more in workers. Job can be considered a protective factor against suicide attempt. Eventually, in some high economic status risk of suicide is higher, but low social status also increases risk of suicide. Suicide can be related with unemployment, but the nature of this relationship is complex. Likely impact of unemployment through factors such as poverty, social exclusion, family problems and frustration applies (3) .In a study of assigned suicide rates in West Azerbaijan province in 1998, the housewives and students had the highest suicide rate (17).As regards , our target population were pregnant women, can be assumed , although having a job for a woman in our society is the cause of independence and self-esteem but Pregnancy would be considered threat to her job , because The person with the ability to get pregnant, do not take the job to former quality and may even result in the loss of her job as a short-term. In other words, If having a job is to consider an agent prevent suicide, Becoming pregnant at heat of job loss and increased risk of suicide.

Prevalence of suicidal ideation and preparation for suicide is higher in unplanned pregnancy. Also frequency of suicidal ideation and preparation for suicide was higher in those with unwanted pregnancies. In one study it was found that the unwanted children and abortions can be effective on suicidal thoughts, especially in early pregnancy (11).

Likely cause of this increase can be attributed to these factors: people with unwanted or unplanned pregnancy, Economicand Physical_ psychological read in are to deal with pregnancy and child cares are not. These people have feelings of in adequacy regarding their Mom duties and they are not prepared to care for the child. Many of these people may have trouble in Marriage relationships that Pregnancy can cause more stress in couples. Even more important, intrinsic Preoccupation to continue the pregnancy or its termination will face a person with a great challenge. All these factors to get her can cause fear and stress and depression in a person. There is clearly psychological stress or is an important factor in creating suicide ideation and attempt.

The frequency of suicidal thoughts and preparation for suicide was more in person with history of suicidal ideation and attempt and harmful behavior .Perhaps the best indicator of increased risk of suicideis, previous suicide attempts. Studies show that about 40% of depressed patients who are suicidal, have a history of suicide attempts. Risk of second suicide attempt within 3months after the first attempt is at its highest.10%of people who attempt suicide have to repeat this action over the next 10 years.behavior damaging to themselves (eg, self-injury) usually occurs in patients who are relatively the injury themselves are great, but they do not want usually die.Most of them do self-injurywith elegance and not with violence. Most of these people have a history ofsuicide.25% of all those with a history of impulsive behavior or acts of violence are also at high risk for suicide (3).

Frequency ofsuicidal thoughts and preparation for suicide was more in person with family history of suicide.

Frequency ofsuicidal thoughts and preparation for suicide are more in pregnant women with history of post term labor.

Probably stress about repeat this event will be tension. Recalling the concerns and expectations of a previous pregnancy and fears of a repeat it, is painful for the mother. Fears ofthis happening again, will increase, especially if thecomplications above, happened in previous pregnancies. These factors caused fear, anxiety and depression disorders inpatients that all factors are leading to suicidal ideation.

There was a significant relationship between suicidal ideation and attempt and history of divorce.Frequency ofsuicidal thoughts and preparation for suicide are more inpersons with history of divorce.

Frequency ofsuicidal thoughts and preparation for suicide are more inpersons with stress during pregnancy.In kaslow study ,marital problems, problems in interpersonal relationships, domestic violence, psychological stress (such as ostracism or death of a loved one) were identified as risk factors for suicide (15).
Mittendorfer-Rutz and et al showed that people with high susceptibility to stress are more likely to attempt suicide during pregnancy (14).

In the study by Stallones and colleagues, emotional problems as a risk factor for suicide was been introduced (13). It looks incidence stressful events such as divorce, death of a loved one, family conflicts, sudden illness cause psychological stress, depression and impulsive behavior that all these factors have a direct connection with suicidal ideation and attempt.

Suicide risk in patients with psychiatric disorders is 15%. Single, divorced, widowed, depressed patients or have suffered recent bereavement are more likely to committed suicide. Studies have shown that social isolation reinforces suicide in depressed patients. Approximately 20% of patients with panic disorders and agoraphobia have aborted suicide (11). In our study, the persons with suicide ideation showed more psychiatric disorder.

5. CONCLUSION

It concludes that the variables discussed with suicidal ideation among older women Rafsanjan pregnancy multi gravid, employment, unwanted children, divorce history, history of postdate pregnancy, history of ideas and suicide attempt, familial history of suicide, history of mental illness and suicidal thoughts associated with it. Fortunately, suicide isn't common in pregnant women. Psychiatric approach is recommended as part of routine prenatal care. We suggest more studies in this area in this field.

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