Risk of suicide in high-risk pregnancy: an exploratory study

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Summary

Objective: To identify the risk of suicidal behavior in high-risk pregnant women at a public hospital in São Paulo. **Methods:** We conducted a semi-structured interview with each of the participants (n = 268) through a previously prepared questionnaire. Risk of suicidal behavior was assessed by the Portuguese version of PRIME-MD. **Results:** The mean age of patients was 29 years (SD = 0.507) and gestation period was 30 weeks (SD = 0.556). Of the total sample, specific risk of suicide was found in 5% (n = 14). Of these, 85% have a stable relationship (married or cohabitating), the pregnancy was planned in 50% of cases, and 71% have no religion or professional activities. The correlation of risk of suicide with data from marital status, planned birth, age, education, professional practice, risk of prematurity, and religion showed that having a religion is statistically significant (p = 0.012). There were no positive associations for any of the other selected variables when compared with the risk of suicide. By correlating the risk of suicide with other characteristic symptoms of major depression, there was statistical significance in the sample with regard to insomnia or hypersomnia (p = 0.003), fatigue or loss of energy (p = 0.001), decreased or increased appetite (p = 0.005), less interest in daily activities (p = 0.000), depressed mood (p = 0.000), feelings of worthlessness or guilt (p = 0.000), decreased concentration (p = 0.002), and agitation or psychomotor retardation (p = 0.002). **Conclusion:** We found that religion can be a protective factor against suicidal behavior. Besides providing a social support network needed by women during pregnancy, religion supports belief in life after death and in a loving God, giving purpose to life and self-esteem and providing models for coping with crises. The results show the importance of prevention and early diagnosis of suicidal behavior, since suicide is an attempt to move from one sphere to another by force, seeking to solve what seems impossible.

Keywords: Self-destructive behavior; self-risk pregnancy; suicide.

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Introduction

Suicide is a complex and universal phenomenon that affects all social classes. It has multivariate etiology that involves the biological, genetic, social, psychological, cultural, and environmental factors related to personal and collective life[1]. Suicide is understood as the act of stopping human life[2], and has been studied from different scientific fields, which perceive it in a complementary or antagonistic way.

In the sociological study of suicide, Durkheim[3] pointed to the collective nature of the phenomenon, highlighting its social causes and noting that, despite the way in which the person knowingly threatens against his/her own life, the mode of carrying it out varies according to culture; country; societies; gender; and social class[4]. Contrary to this view, psychiatry understands the phenomenon of suicide as an individual process by which a person, independently, intends or desires to achieve his/her own death, which may be associated with some kind of illness or psychiatric disorder, such as severe mood disorder[5].

The exact number of people who commit suicide is unknown because such deaths are under-reported. The World Health Organization (WHO)[6] estimates that suicide victimizes approximately one million people worldwide each year. It is estimated that the records of deaths caused by suicide are 2-3-fold smaller than the real ones[7]. Suicide is a public health problem that can be associated with a variety of factors and contexts[6]. Some studies seek to understand the causes of an individual attempting to take his life. In England, the most important risk factors for the male population are unemployment, chronic illness, disability and/or retirement[8]. In Brazil, the occurrence of suicide seems to be related directly to situations of loss, frustration, and emotional distress[9].

Due to the popular belief that women would be protected from any psychological disorder during pregnancy, studies of depression and suicidal behavior during pregnancy have been neglected, and all attention was focused on the evaluation of women in postpartum period.

An epidemiological study conducted in England has shown that suicide is among the leading causes of maternal death, affecting 10% of the population. There is evidence that in 86% of maternal deaths a psychiatric diagnosis could have been performed and suicide prevented[10].

It is currently known that the frequency of suicidal behavior, which includes ideation to suicidal attempt, can reach up to one quarter of the pregnant population[11] and is associated with diagnosis of depression, which affects 22% of women of reproductive age[6]. The increased rate of depression is a trend found in developing countries[12].

Given these data, it is necessary to improve knowledge about how depression, socioeconomic, and obstetric conditions are associated with suicidal ideation in high-risk pregnancy. Thus, this study aims to identify the risk of suicidal behavior in high-risk pregnancy.

Methods

This study was conducted from March 2005 to March 2006 at a university hospital in São Paulo. High-risk pregnant women in specialized prenatal care were enrolled in the study. The research design and informed consent were previously approved by the Institutional Ethics Committee.

Patients were initially informed about the purpose of the study and agreed to participate. The inclusion criteria were singleton pregnancies, intact membranes, absence of fetal congenital or chromosomal abnormalities, and high-risk pregnancy (i.e., complicated by clinical and/or obstetric problem). Exclusion criteria were fetal anomalies or malformations diagnosed after birth. Data were collected through semi-structured interviews conducted with pregnant women while waiting for consultation at the prenatal clinic. The interview lasted approximately 30 minutes.

The questionnaire consisted of closed questions, which included demographic data such as age (years), education (primary, secondary, and higher education), religion (yes, no); planning pregnancy (yes, no), marital status (with a partner, without a partner), and professional activity (yes, no).

Risk of suicide was assessed using the structured interview Primary Care Evaluation of Mental Disorders (PRIME-MD)[13]. This instrument allows the investigation of psychological disorders. This study used the module specific for assessment of major depression, specifically the question assessing the risk of suicide.

Data were analyzed using SPSS for windows version 16.0. Association tables were assessed by chi-square test, applying Yates' correction for continuity. In situations where the chi-square could not be applied, and in the case of 2 x 2 tables, the Fisher's exact test was used. The significance level adopted was 0.05 (alpha = 5%). Descriptive levels (p) below this value were considered significant ($p < 0.05$).

Results

We interviewed 268 high-risk pregnant women. The sociodemographic characteristics are shown in Table 1. The mean gestational period in which the interview was conducted was 30 weeks (SD = 0.56).

Clinical and/or obstetric conditions included hypertension (preeclampsia and/or chronic hypertension) (n = 105); heart disease (n = 59); *diabetes mellitus* (n = 61); anemia (n = 16); collagen (n = 30); and risk of preterm birth (n = 17). Twenty women had associated diseases.

In this study, 5% (n = 14) of the total sample of pregnant women attending the outpatient clinic were at specific risk of suicide, that is, they reported thinking that it would be better to die or be injured in some way, considering a period of 15 days until the date of interview.

Pregnant women were divided into two groups (those with and those without risk of suicide); the results are

shown in Table 1. Data correlation between religion and marital status, planned birth, age, education, professional activity, risk of prematurity and religion at the risk of suicide, showed that lack of a religious belief was significantly more frequent in patients at risk of suicide (28.6%, p = 0.012). No positive association was found for any of the other selected items, compared with the risk of suicide.

When comparing data of risk of suicide with clinical and/or obstetric complications, we found no significant differences regarding risk of suicide (Table 2).

By correlating the risk of suicide with other characteristic symptoms of major depression, there was statistical difference in the proportion of depressive symptoms (Table 3).

Discussion

Religion has been identified as an important protective factor against suicidal behavior because it generally condemns the voluntary termination of life[13]. From a sociological standpoint, it can be said that the protection comes more from the social integration promoted by the religious activities than the religious precepts[3].

Considering the pregnant-puerperal period in which women are especially vulnerable[14], religions, besides providing a social support network in this important phase of life, support the belief in life after death and in a welcoming God; give purpose to life; promote self-esteem; provide models for coping with crises; and help to coup with life's difficulties.

Literature reports lower rates of depression in patients who turn to religion[15], understands that such practices can alleviate the stress associated with pregnancy[16]. People who turn to religion (any faith or belief) can give meaning to life and the difficulties through the safety net and hope offered, not needing to find a solution in death to relieve the suffering experienced[17].

Diagnosis of psychiatric disorders during pregnancy is more common than one might expect, being found in 14.1% of women, and major depression is particularly found in 3.3% of pregnant women[18]. Therefore, depression during high-risk pregnancy should be routinely investigated with the use of specific instruments in order to treat the depressive disorder, particularly when accompanied by suicidal ideation[16].

Table 1 – Distribution according to sociodemographic data of 268 high-risk pregnant women

Sociodemographic data	Outpatient clinic		p
	With risk (n = 14) n (%)	Without risk (n = 254) n (%)	
Age			
Between 12 and 18 years	2 (14.3)	22 (8.5)	0.729*
Between 19 and 30 years	7 (50.0)	116 (46.1)	
Between 31 and 35 years	3 (21.4)	51 (20.1)	
Over 36 years	2 (14.3)	65 (25.3)	
Education			
Primary (incomplete/complete)	7 (50.0)	89 (35.2)	0.452*
Secondary (incomplete/complete)	6 (42.8)	147 (58.4)	
Higher education (incomplete/complete)	1 (7.1)	17 (6.4)	
Religious belief			
Yes	10 (71.4)	239 (94.1)	0.012
No	4 (28.6)	15 (5.9)	
Planned pregnancy			
Yes	7 (50.0)	90 (35.4)	0.413
No	7 (50.0)	164 (64.6)	
Marital status			
With partner	12 (85.7)	184 (72.4)	0.365
Without partner	2 (14.3)	70 (27.5)	
Professional activity			
Yes	4 (28.6)	114 (44.9)	0.357*
No	10 (71.4)	140 (55.1)	

*Data obtained by Fisher's exact test.

Tabela 2 – Distribution according to the conditions of 268 high-risk pregnant women

Conditions	Suicide risk (n = 14) n (%)	No risk (n = 254) n (%)	p
Heart disease	4 (28.6)	55 (21.7)	1.0
Hypertension	5 (35.7)	100 (39.4)	0.52
Diabetes	3 (21.4)	58 (22.8)	1.0
Collagenase	2 (14.3)	28 (11.0)	0.66
Prematurity	0 (-)	16 (6.3)	0.61
Sickle cell anemia	0 (-)	17 (6.7)	1.0

Table 3 – Frequency of depressive symptoms regarding risk of suicidal behavior in 268 high-risk pregnant women at an outpatient clinic

Depressive symptoms	Suicide risk		p
	Yes (n = 14)	No (n = 254)	
Insomnia or hypersomnia	8 (57.6)	52 (15.6)	0.003
Fatigue or loss of energy	7 (50.4)	31 (09.3)	0.001
Decreased or increased appetite	7 (50.4)	41 (12.3)	0.005
Less interest in daily activities	8 (57.6)	31 (09.3)	0.000
Depressed mood	11 (79.2)	39 (11.7)	0.000
Worthlessness or guilt feelings	10 (72.0)	27 (08.1)	0.000
Decreased concentration	8 (57.6)	32 (09.6)	0.002
Agitation or psychomotor retardation	8 (57.6)	45 (13.5)	0.002
Diagnosis of depression	10 (72.0)	13 (03.9)	0.000

In general, suicide rates worldwide are considered high. A study of mortality rates in 36 countries revealed that Estonia had the highest suicide rate with 40.9 deaths per 100,000 inhabitants. In Brazil, the coefficient was found to be 3.4 deaths per 100,000 inhabitants[16]. However, a study conducted between 1980 and 1995 in Brazil[15] showed that suicide rates have increased from 3.3/100,000 to 4.1/100,000 inhabitants, showing an increase in the young adult male age group[9].

Association between suicidal ideation and social isolation, statements of suicidal intent, specific socioeconomic and demographic variables[19], increased prevalence of depressive disorders[20], use of psychoactive substances, number of social stressors[21], and self-destruct desire[22] was found in the literature.

In the United States and Europe, drug addiction and mental problems, found in 90% of individuals who have attempted against their own lives, are reported as important factors for suicide[23]. In Brazil, specifically in São Paulo, the high socioeconomic level is regarded as a predisposing factor[24].

Among the factors considered protective against suicide are low prevalence of alcoholism, religion, attitudes toward social skills and role performance in life[25].

Pregnancy is considered a period in which the woman is especially vulnerable to the negative consequences of depression symptoms, which are exacerbated by hormonal changes often experienced during this period[14].

It is interesting to note that many suicidal individuals have contacted their physicians in the period before the suicidal act[11]. Most suicidal patients (45-75%) visited a primary care service before committing suicide, while others (20-33%) went to a specialist service in mental health and were prescribed psychotropic drugs[26]. Thus, the diagnosis of depression during pregnancy is extremely important because it may be indicative of suicidal ideation and/or psychotic symptoms[14,27].

To put an end to one's own life; extinguish the self, find the end or limit of what one is would be a quest for being what we are not – yet. The suicide then would be an attempt to shift from one sphere to another by force, by means of death, finding solution to what seems impossible[17].

The results of this study suggest the importance of prevention and early diagnosis in the assessment of suicide risk in high-risk pregnant women.

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