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Suicide attempt, Post-traumatic stress disorder and associated factors in women of Recife

Tentativa de suicídio, transtorno de estresse pós-traumático e fatores associados em mulheres do Recife

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ABSTRACT: ***Objective:*** To investigate the association of suicide attempt (SA) with Post-Traumatic Stress Disorder (PSTD), Intimate Partner Violence (IPV) and variables related to socioeconomic and demographic aspects in a cohort of women enrolled in the Family Health Strategy in Recife. ***Methods:*** A cross-sectional study was carried out, nested in a prospective cohort study with 644 women aged 18 to 49 enrolled in the Family Health Strategy of the Sanitary District II of Recife, PE, between July 2013 and December 2014. The SA was evaluated by the question "Have you ever tried to end your life?" PTSD was diagnosed through the Post-traumatic Stress Disorder Checklist — Civilian Version (PCL-C). A hierarchical modeling was performed, applying the χ^2 test and Standardized Waste Analysis. The association of the independent variables with SA was estimated through simple and adjusted Logistic Regression. ***Results:*** The prevalence of SA was 10.9%, and the frequency of PSTD was 16%. Women who had PTSD and those who did not have a religion showed higher risk for suicide (odds ratio — OR = 5.11, 95%CI 2.9 – 8.7, OR = 1.76, 95%CI 1.0 – 2.9 respectively). ***Conclusions:*** There was a higher risk of SA in women who had PTSD and low adherence to a religion. Thus, it was understood that coping with PTSD comes from preventing, treating and promoting greater knowledge about this disorder, in addition to aggregating and social protective effect promoted by religiosity, which can be a strategy for the reduction and prevention of SA.

Keywords: Post traumatic stress disorder. Suicide attempted. Intimate partner violence.

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RESUMO: ***Objetivo:*** Investigar a associação da tentativa de suicídio (TS) com o transtorno de estresse pós-traumático (TEPT), a violência por parceiro íntimo (VPI) e variáveis relacionadas aos aspectos socioeconômicos e demográficos em uma coorte de mulheres cadastradas na Estratégia Saúde da Família do Recife. ***Métodos:*** Foi realizado um estudo transversal, aninhado em um estudo de coorte prospectivo, com 644 mulheres de 18 a 49 anos, cadastradas na Estratégia Saúde da Família do Distrito Sanitário II da cidade do Recife (PE), entre julho de 2013 e dezembro de 2014. A TS foi avaliada pela pergunta "Já tentou pôr fim à sua vida?", e o TEPT, diagnosticado por meio do Post-traumatic Stress Disorder Checklist — Civilian Version (PCL-C). Foram realizadas uma modelagem hierarquizada, a aplicação do teste χ^2 e a análise de resíduos padronizados. A associação das variáveis independentes com a TS foi estimada por meio de regressão logística simples e ajustada. ***Resultados:*** A prevalência da TS foi de 10,9%, e a frequência de TEPT, de 16%. As mulheres que tinham TEPT e também as que não possuíam religião tiveram maior chance de tentar o suicídio (*odds ratio* — OR = 5,11, intervalo de confiança de 95% — IC95% 2,9 – 8,7; OR = 1,76, IC95% 1,0 – 2,9, respectivamente). ***Conclusões:*** Houve maior risco de TS nas mulheres que tiveram TEPT e baixa adesão a uma religião. Sendo assim, compreendeu-se que o enfrentamento do TEPT se dá prevenindo esse transtorno, tratando dele e promovendo mais conhecimentos sobre ele, além do efeito agregador e protetor social que a religiosidade promove, que também podem ser estratégias de redução e prevenção da TS.

Palavras-chave: Transtornos de estresse pós-traumáticos. Tentativa de suicídio. Violência por parceiro íntimo.

INTRODUCTION

Suicidal behavior is intrinsic to humans and represents a major public health problem. The specter of this behavior involves suicide (self-inflicted death), suicide attempt (SA) (self-injurious behavior without fatal outcome) and suicidal ideation (thinking about ending one's life)[1].

In 2012, 804,000 suicide deaths were recorded worldwide, representing an age-adjusted annual rate of 11.4 per 100,000 inhabitants (15 deaths by suicide per 100,000 inhabitants for men and eight for women)[2].

SA is a complex and multidimensional phenomenon that may result from the interaction of different factors (social, economic, demographic), and may still be related to intimate partner violence (IPV) and Post-traumatic Stress Disorder (PTSD)[3].

According to Durkheim[4], suicide and SA are not just individual acts that depend solely on personal factors that are exclusively in the field of psychology. That is, the joint study of suicidal behavior in a given society, in a given unit of time, has its own nature and is eminently social.

Durkheim states that social factors such as family, income, education, the groups in which individuals participate, friends and society strongly influence the production of a suicidal episode, both to cause it and to prevent it. According to the author, the greatest protection against suicide is the close coexistence between religion, family and society[4].

PTSD represents one of the main triggering factors of suicidal behavior, and its occurrence is conditioned to stressful events, which are pointed as precursors for the development of traumatic situations[5]. It is an anxiety disorder characterized by a set of physical, psychic

and emotional signs and symptoms as a result of the individual being the victim of or witness to violent acts or traumatic situations that posed a threat to their or to another individual's life[6]. This disorder is more prevalent in females. Although women are less exposed to life-long traumatic events, they are twice as likely to develop PTSD than men[7].

In Northern Ireland, a study found that people with PTSD are more likely to develop a suicide plan than people without PTSD. This risk is even higher in females (4.3%) when compared to males (2.3%)[8].

In women, an important precursor of PTSD is violence, particularly IPV, which is part of the universe of stressful and/or traumatic factors and events that may increase the chances of SA[9].

IPV is conceptualized as a power relationship between men and women. It occurs by the acceptance of roles that were historically imposed on both, leading the man to play the role of power, dominator, disciplinarian against the woman[10]. It is more prevalent among women of reproductive age and may occur in the pregnancy/puerperal period, which is even more worrying because of the damage and adverse health effects to the mother, fetus and child[11]. In Recife, it was found that the prevalence of IPV was 32.4% before, 31.0% throughout and 22.6% after pregnancy[12].

PTSD may be a common psychopathological consequence of IPV, but not the only one. Suicidal behavior, also associated with PTSD and IPV, can have an even more tragic consequence for women and their families[13].

Studies by Kubany et al.[14] with women raped in Hawaii and by Bargai et al.[15] with women residing in Israel, but of Soviet, Arab, European, North American, South American and Ethiopian origin, found that PTSD affected between 33 and 83% of women in a situation of IPV.

In Ribeirão Preto (SP), a sample of pregnant women from the 36th gestational week who suffered IPV was studied. The prevalence of PTSD and suicidal ideation were 17.0 and 7.8%, respectively. Pregnancy possibly explains the disparity in the prevalence of PTSD between the populations of Hawaii and Israel compared to Ribeirão Preto[16].

Thus, the process of illness in women due to the routinization of trauma seems to have its consequences on their health status. The experience of trauma destroys self-esteem, exposing women to a higher risk of mental problems[17].

In this sense, the aim of this article was to investigate the association of SA with PTSD, IPV and variables related to socioeconomic and demographic aspects in a cohort of women enrolled in the Family Health Strategy in Recife (PE).

METHODS

This is a cross-sectional study conducted in the Sanitary District II of Recife between July 2013 and December 2014, with women participating in the third stage of a cohort study designed to investigate the consequences of IPV to women's mental health before and throughout

pregnancy, in the postpartum period and for the past seven years. The occupation in Sanitary District II is predominantly residential, focused on the middle and low income segment[12].

In the cohort study, three stages of data collection were conducted. The first two occurred in 2005 and 2006. In the first stage, all pregnant women (n = 1,133), aged 18 to 49 years, in the 31st week of pregnancy or more, registered in the Family Health Strategy of Sanitary District II from Recife, were considered eligible. Contact with the pregnant women who did not attend prenatal care at the Family Health Unit (FHU) and those who did not do it regularly were made at their home. These pregnant women were identified through the records of community health agents and included in the study.

Of the 1,133 eligible women, 1,121 (98.9%) were interviewed and of these, 1,057 were re-interviewed postpartum (second stage). In the third stage of the cohort, 644 (61.5%) women who participated in the second stage were interviewed. Between the second and third stages, five women died, 391 were not found due to a change of address, and 17 refused to continue participating in the study.

Data were collected by trained professionals with higher education and experience in research on women's health and violence. In training, ethical issues and the need for accurate information gathering were emphasized. Simulated interviews were conducted, and a pilot study was also conducted in Sanitary District VI of Recife. Most of the interviews took place at the participants' homes privately, or at another convenient location for them.

As a collection instrument, a questionnaire was used that included questions regarding the identification and the socioeconomic and demographic characteristics of women and their partners.

The questions related to IPV were elaborated with reference to the questionnaire of the Multi-Country Study on Women's Health and Domestic Violence, conducted by the World Health Organization (WHO). To identify violence, the issues characterized physical violence all physical aggression or the use of objects to produce injuries; as psychological violence, threatening behavior, humiliation and insults; and as sexual violence, sexual relations through physical force or threats and imposition of acts considered humiliating. Women who answered "yes" to at least one of the questions that make up each type of violence was considered a positive case.

An intimate partner was defined as the partner or former partner with whom women live or lived, regardless of formal union, including current boyfriends, as long as they maintain sexual relationships with them.

The Post-traumatic Stress Disorder Checklist - Civilian Version (PCL-C), an instrument developed in 1993 by Weathers, Litz, Huska and Keane from the National Center for PTSD (United States) to assess the consequences of various types of traumatic experiences on the civilian population[18], was used in this study to identify signs and symptoms that were suggestive of PTSD. PCL-C assesses 17 symptoms for PTSD diagnosis, which meet the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

SA was investigated through the question "Have you tried to end your life?"

Data from the third interview were entered using Epi Info version 3.5.2, with double data entry done by different typists. Subsequently, the Validate application was used to check for typos.

Hierarchical modeling was performed based on theoretical models for the explanatory variables of SA[19]. These models were based on the theories of social determinants of health (SDH)[20].

The dependent variable was SA, stratified into two categories: yes or no. Independent variables were divided into four hierarchical blocks and data was organized from distal (first block) to proximal (fourth block) to the outcome[19]. The first block (sociodemographic aspects related to the woman's partner) was composed of the variables: age (20–30; 31–59; 60 or older), knowing how to read and write (yes; no), years of schooling (0–4, 5 or more), income (none; less than BRL 678; BRL 678 or more), alcohol use (yes; no), and drug use (yes; no). In block 2 (sociodemographic aspects related to women), the variables included: age (20–30; 31–59), religion (yes; no), race/color (white; black; others), knowing how to read and write (yes; no), years of schooling (0–4; 5 years or more), income (none; less than BRL 678; BRL 678 or more), occupational integration (yes; no), had how many marriages (no; only one; two or more), age when got married (not married; 10–19; 20–59), marital status (unmarried; married), number of close friends (none; only 1; 2–10), smoker (yes; no) and alcohol use (yes; no). In block 3 (IPV), variables were: IPV before pregnancy (yes; no), IPV in pregnancy (yes; no), IPV in postpartum period (yes; no), and IPV seven years after childbirth (yes; no). In block 4 (PTSD), the frequency of PTSD was analyzed (yes; no).

Data analysis was performed with the aid of the Statistical Package for Social Sciences (SPSS) for Windows (version 20), covering the use of descriptive and analytical procedures. The frequency distribution of SA and independent variables was estimated. Association analysis between independent and dependent variables was performed by applying the χ^2 test and standardized residue analysis.

The χ^2 test clarifies whether the distribution of SA, according to the independent variables of the four blocks of the hierarchical model, is random or if there is a pattern determined by dependence between these variables. A significance level of 5% was used for this test. Standardized residuals were analyzed for the association between the dependent and independent variable category pairs, which enabled the comparison of the characteristic patterns of each category. Residues (standardized difference between observed and expected counts) resulted in excess or lack of occurrence, with values with positive excess count greater than 1.96 being recognized, with a one tailed significance level of 2.5%, due to it being only the observation of excesses (Table 1).

The effect of the association of independent variables with SA was estimated through hierarchical models of simple and multiple logistic regression, aiming at odds ratio (OR) as a measure of effect. Simple analysis was initiated in each association block (Table 2). In each hierarchical block, variables with $p < 0.25$ were tested in multiple models. At the end, the variables that were statistically significantly associated ($p < 0.05$) remained in the final model of each block and were considered adjustment factors for subsequent blocks (Table 3).

The previous stages of the research were approved by the Research Ethics Committee (CEP) of the Health Sciences Center (CCS) of Universidade Federal de Pernambuco (UFPE)

Table 1. Association and distribution of sociodemographic, behavioral and morbidity characteristics (independent variables) with suicide attempt. Recife, PE, 2016.

Variables		Suicide Attempt			
		N (%)	N (%) Yes	N (%) No	p
Block 1) Partner's characteristics					
Age	20–30 years old	137 (22.1)	19 (13.7)	118 (86.3)	0.338
	31–59 years old	475 (76.3)	48 (10.1)	427 (89.9)	
	60 years old or more	10 (1.6)	2 (20.0)	8 (80.0)	
Can read and write	Yes	602 (95.1)	63 (10.5)	539 (89.5)	0.121
	No	31 (4.9)	6 (19.4)	25 (80.6)	
Years of schooling	0–4	56 (10.4)	6 (10.7)	50 (89.3)	0.787
	5 or more	480 (89.6)	461 (9.6)	19 (90.4)	
Income[a,b]	**None**	23 (4.1)	**4 (17.4)[a]**	19 (82.6)	**0.001**
	Less than 678	134 (23.9)	13 (9.7)	121 (90.3)	
	678 or more	404 (72.0)	42 (10.4)	362 (89.6)	
Alcohol use	Yes	428 (66.9)	52 (12.1)	376 (87.9)	0.163
	No	212 (33.1)	18 (8.5)	194 (91.5)	
Drug use	Yes	35 (5.6)	3 (8.6)	32 (91.4)	0.682
	No	585 (94.4)	63 (10.8)	522 (89.2)	
Block 2) Woman's characteristics					
Age	20–30 years	226 (35.2)	28 (12.4)	198 (87.6)	0.373
	31–59 years	416 (64.8)	42 (10.1)	374 (89.9)	
Religion	Yes	443 (68.8)	40 (9.0)	403 (91.0)	**0.026**
	No	201 (31.2)	**30 (14.9)[a]**	171 (85.1)	
Race/color	White	114 (17.7)	8 (7.0)	106 (93.0)	0.201
	Black	509 (79.0)	61 (12.0)	448 (88.0)	
	Other	21 (3.3)	1 (4.8)	20 (95.2)	
Can read and write	Yes	602 (93.5)	57 (9.5)	545 (90.5)	0.772
	No	42 (6.5)	5 (11.0)	37 (89.0)	
Years of schooling	0–4 years	105 (16.3)	16 (15.2)	89 (84.8)	0.116
	5 years or more	539 (83.7)	54 (10.0)	485 (90.0)	
Income[b]	None	54 (8.4)	5 (9.3)	49 (90.7)	0.921
	Less than 678	375 (58.2)	41(10.9)	334 (89.1)	
	678 or more	215 (33.4)	24 (11.2)	191 (88.8)	

Continue ...

Table 1. Continuation.

Variables		Suicide Attempt			
		N (%)	N (%) Yes	N (%) No	p
Occupational integration	Yes	311 (48.3)	33 (10.6)	278 (89.9)	0.839
	No	333 (51.7)	37 (11.1)	296 (88.9)	
Number of marriages [a]	None	33 (5.1)	3 (9.1)	30 (90.9)	**0.004**
	Only one	360 (55.9)	27 (7.5)	333 (92.5)	
	Two or more	251 (39.0)	**40 (15.9)[a]**	211 (84.1)	
Age of marriage	Did not marry	34 (5.3)	4 (11.8)	30 (88.2)	0.289
	10–19 years	360 (56.1)	45 (12.5)	315 (87.5)	
	20–59 years	248 (38.6)	21 (8.5)	227 (91.5)	
Marital status	Unmarried	121 (18.8)	17 (14.0)	104 (86.0)	0.212
	Married	523 (81.2)	53 (10.1)	470 (89.9)	
Number of close friends	None	256 (39.9)	30 (11.7)	226 (88.3)	0.601
	Only 1	168 (26.2)	20 (11.9)	148 (88.1)	
	2–10	218 (34.0)	20 (9.2)	198 (90.8)	
Smoker	Yes	111 (17.2)	13 (11.7)	98 (88.3)	0.754
	No	533 (82.8)	57 (10.7)	476 (89.3)	
Alcohol use	Yes	274 (42.5)	35 (12.8)	239 (87.2)	0.182
	No	370 (57.5)	35 (9.5)	335 (90.5)	
Block 3) Period of intimate partner violence					
Before pregnancy	Yes	207 (32.1)	25 (12.1)	182 (87.9)	0.498
	No	437 (67.9)	45 (10.3)	392 (89.7)	
In pregnancy	Yes	218 (33.9)	25 (11.5)	193 (88.5)	0.727
	No	426 (66.1)	45 (10.6)	381 (89.4)	
Postpartum	Yes	143 (22.2)	15 (10.5)	128 (89.5)	0.869
	No	501 (77.8)	55 (11.0)	446 (89.0)	
Seven years after childbirth	Yes	213 (33.1)	26 (12.2)	187 (87.8)	0.443
	No	431 (66.9)	44 (10.2)	387 (89.8)	
Block 4) Post-traumatic Stress Disorder (PTSD)					
PTSD[a]	**Yes**	103 (16.0)	**29 (28.2)[a]**	74 (71.8)	**0.001**
	No	541 (84.0)	41 (7.6)	500 (92.4)	
Total			70 (10.9)	574 (89.1)	

[a]In the residual analysis of the χ^2 test, it was evident that there was a discrepancy between the observed and expected frequencies of the variables. Thus, the null hypothesis was rejected and the hypothesis of the dependence of the variables with the presence of association was accepted; [b]the income variable refers to the monetary value in Brazilian Real, relative to the minimum wage in Brazil in 2013.

Table 2. Suicide attempt in women according to estimates of the univariate binomial regression model for contextual (independent) variables (sociodemographic, behavioral and morbidity). Recife, PE, 2016.

Variables		Simple model		
		OR	95%CI	p
Block 1) Partner's characteristics				
Age	10–30 years old	0.63	0.12 – 3.21	0.581
	31–59 years old	0.45	0.09 – 2.19	0.324
	60 years old or more	1	---	---
Can read and write	Yes	1	---	---
	No	2.05	0.81 – 5.19	0.12
Years of schooling	0–4 years	1.13	0.46 – 2.78	0.787
	5 years or more	1	---	---
Income[a]	None	1.81	0.59 – 5.58	0.299
	Less than 678	0.92	0.48 – 1.78	0.818
	678 or more	1	---	---
Block 2) Woman's characteristics				
Woman's age	20–30 years	1.25	0.75 – 2.09	0.374
	31–59 years	1	---	---
Religion	Yes	1	---	---
	No	**1.76**	1.06 – 2.93	**0.027**
Race/color	White	1	---	---
	Black	1.8	0.83 – 3.88	0.131
	Other	0.66	0.07 – 5.59	0.705
Can read and write	Yes	1	---	---
	No	0.86	0.29 – 2.47	0.772
Years of schooling	0–4 years	1.61	0.88-2.94	0.119
	5 years or more	1	---	---
Income[a]	None	0.81	0.29 – 2.23	0.687
	Less than 678	0.97	0.57-1.66	0.932
	678 or more	1	---	---

Continue...

Table 2. Continuation.

Variables		Simple model		
		OR	95%CI	p
Occupational integration	Yes	1	---	---
	No	1.05	0.64 – 1.73	0.839
Number of marriages	None	1	---	---
	Only one	0.81	0.23 – 2.83	0.742
	Two or more	1.89	0.55 – 6.51	0.31
Age of marriage	Did not marry	1	---	---
	10–19 years	1.07	0.36 – 3.18	0.901
	20–59 years	0.69	0.22 – 2.15	0.528
Marital status	Unmarried	1	---	---
	Married	0.69	0.38 – 1.24	0.214
Number of close friends	None	1.31	0.72 – 2.38	0.37
	Only 1	1.33	0.69 – 2.57	0.384
	2–10	1	---	---
Smoker	Yes	1.1	0.58 – 2.10	0.75
	No	1	---	---
Alcohol use	Yes	1.4	0.85 – 2.30	0.183
	No	1.0	---	---
Block 3) Period of intimate partner violence				
Before pregnancy	Yes	1.19	0.71 – 2.01	0.498
	No	1	---	---
In pregnancy	Yes	1.09	0.653 – 1.84	0.727
	No	1	---	---
Postpartum	Yes	0.95	0.52 – 1.73	0.869
	No	1	---	---
Seven years after childbirth	Yes	1.22	0.73 – 2.04	0.444
	No	1	---	---
Block 4) Post-traumatic Stress Disorder (PTSD)				
PTSD	**Sim**	**4.77**	2.80 – 8.15	**< 0.001**
	No	1	---	---

OR: odds ratio; 95%CI: 95% confidence interval; [a]the income variable refers to the monetary value in Brazilian Real, relative to the minimum wage in Brazil in 2013.

Table 3. Suicide attempt among women according to estimates of the multilevel hierarchical binomial regression model. Recife, PE, 2016.

Variables		Multiple model		
		OR[a]	95%CI	p
Religion	Yes	1	---	---
	No	**1.76**	1.06 – 2.93	**0.027**
Post-traumatic Stress Disorder (PTSD)	**Yes**	**5.11**	2.97 – 8.79	**< 0.001**
	No	1	---	---

OR: *odds ratio*; 95%CI: 95% confidence interval; [a]adjusted by variables with $p < 0.05$.

(research protocol number 303/2004-CEP/CCS). The third stage was submitted and approved by UFPE's CEP (Protocol No. 194.672), issued on February 6, 2013.

All participants signed an informed consent, read at the beginning of the interview, when they were informed about the place and the coordination of the research, its voluntary and confidential nature, and the delicate and personal nature of some questions.

RESULTS

Most of these women's partners were between 31 and 59 years old (76.3%), could read and write (95.1%), studied for five years or more (89.6%), had income greater than BRL 678 (72%), used alcohol (66.9%) and did not use illicit drugs (94.4%). Among women, most were between 31 and 59 years old (64.8%), had a religion (68.8%), were black (79%), could read and write (93.5%), studied for five years or more (83.7%), earned less than BRL 678 (58.2%), did not work (51.7%), were married (81.2%), married only once (55.9%), married between 10 and 19 years of age (56.1%), had no close friends (39.9%), did not smoke (82.8%) and did not use alcohol (57.5%) (Table 1).

The frequency of IPV was 32.1% before pregnancy; 33.9% in pregnancy; 22.2% postpartum; and 33.1% seven years after childbirth. The frequency of symptoms suggestive of PTSD present in these women was 16%, and the prevalence of SA was 10.9% (Table 1).

The results of the analysis of the association of variables with SA showed that SA was more frequent in women whose partner had no income, in women who had no religion, in those who were married for two or more times, and in those who had symptoms suggestive of PTSD (Table 1).

In women who had symptoms suggestive of PTSD, the chance of attempting suicide was approximately five times higher (OR = 4.77) than in women who did not have PTSD (Table 2). Women who had no religion had a greater chance of attempting suicide (OR = 1.76) compared to those who were adherent to a religion.

Multiple binomial logistic regression analysis was performed including all variables that were associated with SA in the unadjusted analysis. In the adjusted model, the variables religion and PTSD remained associated with SA. The results showed that women who were not adherent to any religion had a higher chance of SA (OR = 1.76) than those who were adherent, and women who had symptoms suggestive of PTSD were five times more likely (OR = 5.11) to try to end their own lives than women without PTSD (Table 3).

DISCUSSION

Research states that among the risk factors for SA, sociodemographic and clinical-epidemiological variables, past suicide attempt and mental disorders stand out[21].

The prevalence of SA was considered high in this study, when compared to a study conducted under the auspices of WHO in the urban area of Campinas, in 2003. There, based on household listings made by the Brazilian Institute of Geography and Statistics (IBGE), 515 people were drawn and interviewed in person by researchers from the Universidade Estadual de Campinas (Unicamp), and it was found that, throughout their lives, 2.8% of them effectively attempted suicide[22].

On the other hand, the study by Stevens found SA prevalence almost three times higher than this study, 28%[23].

According to WHO[2], 78% of suicides occur in middle and low income countries. Therefore, the high percentage of SA may be a result of the low income of the studied population. In this study, the prevalence and chance of SA were higher in women who had symptoms suggestive of PTSD and in those who were not adherent to a religion.

In Northern Ireland, research found higher risk for SA in people with a mental disorder, but the risks were higher for people with PTSD[8].

PTSD can interfere with the patient's quality of life, as well as that of their family members. It is noteworthy that responses to stressful events evolve as an adaptive process. When these responses are given in a severe and prolonged manner, they may lead to some damage, disorder or illness[24].

Several factors may influence the duration and prevalence of PTSD, such as type of trauma, duration of trauma, chronicity of the disorder, socioeconomic development of the country, seeking professional help and social support. In addition to these factors, there is also the resilience capacity, found in the fact that some people, for reasons not yet well understood, such as personality traits, current moment of life, particular history of psychological development, even when exposed to a traumatic agent, have only certain initial changes in their psychic state or show no reaction to stress[25].

Thus, resilience may explain why for some people the stressful event produces personal growth and positive lifestyle reformulations. This information could possibly explain the fact that 71.8% of women who had PTSD in this study did not attempt suicide, but PTSD increases and adds to the risk and severity of SA.

Human beings participate in an interpersonal network that shapes them from birth to death. This network is formed early in their family, but a few years later expands to include friends, school colleagues, co-workers, and relationships based on social, cultural, sports, healthcare, and religious activities[26].

Corroborating and supporting the findings of this study, Durkheim's[4] theory argues that weak religiosity is associated with a higher level of suicide by embedding in the individual a greater sense of independence. Therefore, the lower occurrence of SA among women may be related to adherence to religiosity, which causes a beneficial effect of social cohesion, creating support networks, in which they can recognize early signs of risk for mental disorders, including SA.

In Brazil, it was observed that religiosity was associated with fewer previous SA[27]. In Ukraine, a study evaluated the complex impact of risk and protective factors on suicide mortality in the general population, and religiosity was the protective factor most strongly associated with suicide mortality[28].

Considering that most studies support the hypothesis that resilient psychological characteristics may be influenced by the positive effects of religiosity, the valuation and observance of social protection and cohesion, of the individual's sense of belonging to their community, are necessary. Adherence to a religious group can provide that to human beings[29].

Another risk factor for SA studied here was IPV, which in other studies was of great importance in its association with SA[30]. In this study, in the three moments when women suffered IPV (before pregnancy, during pregnancy and seven years after childbirth), the chance of attempting suicide was higher than those who did not suffer abuse (OR > 1), but there was no statistically significant association. The loss of statistical significance could be hypothetically explained by the stratification of the IPV variable in four moments.

IPV, PTSD and SA are complex, delicate and intimate topics. Thus, women's psychic resources to cope with the trauma suffered and their difficulties and their blocks resulting from this experience may interfere with their willingness to talk about this subject. In some situations, women may not recognize the experience of IPV when questioned or minimize the importance of IPV, as it is considered natural, which may contribute to the underestimation of its seriousness. In addition to these factors, which are intrinsic to women, others may cause underestimation of the topics, such as the non-empathic relationship between interviewer and interviewed, interview location, women's insecurity about the confidentiality of their report, the current relationship with the aggressive partner, the feeling of fear towards the aggressive partner, and the protection women give to the partner wishing to maintain the relationship, especially if he is the father of their child, the stigma and the shame of being assaulted and of having attempted suicide, apart from so many other factors.

CONCLUSION

The findings of this study suggest that suicide prevention needs to be mainly targeted at two segments. Firstly, it is necessary to raise more awareness on PTSD, new research and

strategies for prevention and treatment of this disorder, considering all the lethal and morbid potential that it can cause to the population. Secondly, one should consider the importance of the social aggregating and protective effect that religiosity is capable of promoting in people, as more socially cohesive groups are more resilient to SA.

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