

Suicidal ideation and the use of illicit drugs in women

Ideação suicida e consumo de drogas ilícitas por mulheres

Ideas suicidas y consumo de drogas ilícitas en mujeres

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Keywords

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Descritores

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Descriptores

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Abstract

Objective: To analyze the relationship between suicidal ideation and illicit drug use in women.

Methods: An analytical study conducted with 369 women receiving care in the Basic Health Units, using the Non-Student Drug Use Questionnaire and the Self-Reporting Questionnaire for investigating suicidal ideation.

Results: Association between suicidal ideation and the use of tranquilizers without medical prescription ($p=0.005$), solvents ($p=0.006$), and marijuana ($p=0.003$) was identified. Utilization of tranquilizers increased the chances of suicidal ideation in women by 2.7 times ($CI=1.372-5.608$) when compared to those who did not use these drugs; the use of solvents increased it by 10.1 times ($CI=2.197-46.967$), and marijuana use by 3.3 times ($CI=1.865-13.900$).

Conclusion: The indicators indicate that illicit drug use by women has serious implications and, therefore, requires effective interventions that should focus above all on the prevention of suicidal ideation, as the progression of this ideation may converge in tragic outcomes that include attempted suicide, self-mutilation, and suicide.

Resumo

Objetivo: Analisar a relação entre ideação suicida e consumo de drogas ilícitas em mulheres.

Métodos: Estudo analítico realizado com 369 mulheres atendidas em Unidades Básicas de Saúde utilizando para investigação do consumo de drogas ilícitas o *Non-Student Drugs Use Questionnaire* e para investigação da ideação suicida o *Self-Reporting Questionnaire*.

Resultados: Verificou-se que existe associação entre ideação suicida e o uso de tranquilizantes sem prescrição médica ($p=0,005$), de solventes ($p=0,006$) e de maconha ($p=0,003$). O consumo de tranquilizantes aumenta em 2,7 vezes ($IC=1,372-5,608$) as chances de as mulheres terem ideação suicida quando comparadas com aquelas que não fazem uso das referidas drogas, bem como pelo uso de solventes em 10,1 vezes ($IC=2,197-46,967$) e o uso de maconha em 3,3 vezes ($IC=1,865-13,900$).

Conclusão: Os indicadores produzidos apontam que uso de drogas ilícitas pelas mulheres tem implicação grave e, portanto, necessita de intervenções efetivas que devem focalizar, sobretudo, na prevenção da ideação suicida, uma vez que a progressão dessa ideação poderá convergir para desfechos trágicos que incluem tentativa de suicídio, automutilação e suicídio.

Resumen

Objetivo: Analizar la relación entre ideas suicidas y consumo de drogas ilícitas en mujeres.

Método: Estudio analítico realizado con 369 mujeres atendidas en Unidades Básicas de Salud utilizando para investigación del consumo de drogas ilícitas el *Non-Student Drugs Use Questionnaire* y para investigar las ideas suicidas el *Self-Reporting Questionnaire*.

Resultados: Se verificó que existe asociación entre ideas suicidas y uso de tranquilizantes sin prescripción médica ($p=0,005$), solventes ($p=0,006$) y marihuana ($p=0,003$). El consumo de tranquilizantes aumenta en 2,7 veces ($IC=1,372-5,608$) las chances de que las mujeres tengan ideas suicidas, comparadas con las que no usan dichas drogas; así como el uso de solventes las aumenta en 10,1 veces ($IC=2,197-46,967$) y el uso de marihuana en 3,3 veces ($IC=1,865-13,900$).

Conclusión: Los indicadores elaborados establecen que el uso de drogas ilícitas por parte de mujeres tiene grave implicación, precisando de intervenciones efectivas que deben hacer foco, principalmente, en la prevención de ideas suicidas, toda vez que la progresión de tales ideas conduce a desenlaces trágicos, incluyendo tentativas de suicidio, automutilación y suicidio.

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Introduction

Illicit drug use has become more worrying, both for causing serious consequences for the individual's health and raising the morbidity and mortality indicators, as well as for its social, economic and criminal consequences.^(1,2)

This consumption crosses several social groups, age groups, and gender. Regarding gender, although it is a common practice among men, the use among the female population has increased,⁽³⁾ which is demonstrated by a meta-analysis performed which included 135 primary studies, in which 21.5% of women were taking drugs.⁽⁴⁾

This increase was also described in a study conducted in Brazilian outlying communities, where women exceeded men in rates of illicit drug use, especially among sex workers. In these cases, the easy access, low cost of psychoactive substances (PAS), and the recognition of sex as a bargaining chip are considered to be facilitating factors for this practice.⁽⁵⁾

Given the presence of many women in this statistical scenario, and that consumption of illicit drugs is still associated with promiscuity and immorality, this exposes them to situations of violence, and promotes the emergence of comorbidities, including psychiatric disorders such as: depression, bipolar disorder, and personality disorders, among others.⁽⁶⁾ These factors can contribute to the loss of existential value and, consequently, to suicidal behavior.⁽⁷⁾

The female population presents higher rates of suicidal ideation and attempts than the male population, and intoxication is the most commonly used method.⁽⁸⁾ Suicidal ideation is characterized by ideas, planning, and the desire to end one's own life.⁽⁹⁾

In this scenario, discussion about these problems must be conducted, especially in the female universe, in which the expansion of illicit drug use is extremely recent and its outcomes still need to be studied, especially those involving suicidal behavior. Therefore, the objective of this study was to analyze the relationship between suicidal ideation and illicit drug use by women.

Methods

This was a cross-sectional and analytical study, conducted from August of 2015 to March of 2016, in five cities in the state of Piauí: Teresina, Bom Jesus, Floriano, Parnaíba, and Picos.

The sample was calculated using a population of 347,414 women, aged 20 to 59, residing in those cities as a reference.⁽¹⁰⁾ The presumed 39% prevalence of alcohol consumption among women was adopted.⁽¹¹⁾ The level of confidence established was 95%, with a tolerable error of 5%. The sample consisted of 369 women. By proportional distribution, 232 women were selected in Teresina city, 36 in Parnaíba, 46 in Picos, 38 in Floriano and 17 in Bom Jesus. There were no losses from the calculated sample.

The inclusion criterion was women who participated in the Family Health Strategy (FHS) of their region. The exclusion criterion adopted in the study was women with a record of mental illness in their medical charts. When a woman met the exclusion criterion, she was recruited as a new participant.

The data collection occurred from August of 2015 to March of 2016. The women were recruited using a drawn lot. Microsoft Excel 2010 software was used, considering the numerical listing of the women receiving care in the respective cities that was available from the Basic Health Units (BHU).

Three instruments were used: one for socio-demographic characteristics (developed by the researchers to describe the variables of age, skin color/race, marital status, number of children, place of origin, education, and religion), the Non-Student Drug Use Questionnaire (NSDUQ) (for identification of illicit drugs), an instrument recommended by the World Health Organization (WHO), which was translated and tested in various countries,⁽¹²⁾ and the Self-Reporting Questionnaire (SRQ-20), also recommended by the WHO for studies conducted in primary care, which is translated and validated for the Brazilian culture, and is composed of 20 objective questions that include four dimensions: depressive-anxious mood, somatic symptoms, vital energy decrease, and depressive thoughts.⁽¹³⁾ This study focused on a specific question of the dimen-

sion “depressive thoughts”, which asks if the participant “has had ideas of ending one’s life”.

A pilot test was performed with 10% of the sample (37 women), with the aim of testing the instruments and the researcher’s ability. The information from this stage was not included in the database for analysis.

The Statistical Package for Social Science (SPSS) software, version 20.0, was used to analyze the data. The central tendency, dispersion, frequencies, and percentages were calculated, which allowed for the determination of the prevalence of illicit drug use by women. The Chi-square test was used to verify association between qualitative variables. When the frequency of the cells was less than 20%, or less than 5, an exact Fischer test was performed. The strength of associations between variables was calculated using the odds ratio (OR) and confidence intervals (95% CI). Logistic regression was performed with variables that presented $p > 0.010$, with the purpose of verifying which illicit drugs best explain the effect on women’s suicidal ideation. The stepwise forward modeling process was used.

The study was approved by the Research Ethics Committee of the Federal University of Piauí (Opinion No. 1,630,831). The participation of the women was voluntary, and only began after they read, received any clarifications, and signed the Terms of Free and Informed Consent form (FPIC).

Results

A predominance of women who were young adults (20 to 39 years old) (75.1%), with a mean age of 33.1 years (standard deviation=9.9), with a self-report of: brown skin color (59.4%), married/stable union (71.8%), Catholic (60.9%), having children (70.7%), and originating from the interior of the state (58.8%). On average, they had ten years of education (standard deviation=3.5).

Table 1 shows a statistically significant association between suicidal ideation and the use of non-prescription tranquilizers ($p=0.005$), solvents ($p=0.006$), and marijuana ($p=0.003$).

Table 1. Association between illicit drug use and suicidal ideation among women (n=369)

Independent variables	Suicidal ideation		p-value	OR	CI 95%
	No n(%)	Yes n(%)			
Non-prescription tranquilizer use			0.005*	2.774	1.372-5.608
No	279(75.6)	32(8.7)			
Yes	44(11.9)	14(3.8)			
Solvent use			0.006**	10.159	2.197-46.967
No	320(86.7)	42(11.4)			
Yes	3(0.8)	4(1.1)			
Marijuana use			0.003*	5.091	1.865-13.900
No	312(84.5)	39(10.6)			
Yes	11(3.0)	7(1.9)			
Cocaine and derivatives use			0.609**	1.1174	0.138-9.978
No	317(86.0)	45(12.2)			
Yes	6(1.6)	1(0.2)			
Total	323(100)	46(100)			

Pearson’s chi-square test; * Exact Fischer test; OR - Odds ratio; CI - Confidence interval

After logistic regression between the independent categorical variables (use of tranquilizers, solvents, and marijuana) with the dependent variable (suicidal ideation), this association was maintained. The use of tranquilizers increased by 2.7 times (CI=1.372-5.608), the chances of suicidal ideation when compared to those who did not use these drugs, as well as the use of solvents by 10.1 times (CI=2.197-46.967), and marijuana use by 3.3 times (CI=1.865-13.900) (Table 2).

Table 2. Logistic regression of illicit drug use with suicidal ideation (n = 369)

Independent variables	n	Suicidal ideation	
		OR(adj)*	CI** 95%
Tranquillizer use	58	2.772	1.328-5.786
Solvent use	7	10.179	2.05050.550
Marijuana use	18	3.334	1.128-9.858

* OR (adj) - adjusted odds ratio; ** CI - Confidence interval. The statistical significance established at 0.05, with the interval not passing the value 1.0

Discussion

The limitation of this study is the cross-sectional design which, although capable of demonstrating a relationship between the phenomena studied (suicidal ideation and use of illicit drugs), does not allow for the affirmation of the existence of causality. Although the instrument used is not specific for investigation of suicidal ideation, the evaluation of the participants regarding the dimension “depressive thoughts”, of the SRQ-20, enabled the identification of ideation.

However, the results obtained are in addition to the statistical panorama to expand the discussion on drug consumption in the female universe, and its interface with suicidal ideation, as the knowledge produced on the subject is still limited, considering that the problem of PAS use by women is relatively recent.

The data from this research present socio-demographic and economic characteristics similar to the findings of other studies, also performed with women who: are receiving care in primary care, generally young, in an economically active and reproductive stage of life, unemployed, with a low purchasing power, and with a level of education below the expected level for their age.⁽¹⁴⁻¹⁷⁾

In addition to these characteristics, some particularities in the relationships established between women and drugs included the type of drug chosen, the purpose, and the expectations implied in that utilization.

In this context, the World Drug Report, published in 2016, shows a gender difference in the use of PAS; men are three times more likely to use marijuana, cocaine, and amphetamines, and women to use opioids and tranquilizers without a prescription.⁽¹⁸⁾

This reality ratifies the idea that the phenomenon of drugs is part of the daily life of women, although with symbolic values and distinct characteristics from a gender perspective. This scenario also expresses a risk of exposure to other situations of physical and mental vulnerability.

When analyzing the quality of life and the mental health of chemically dependent individuals, the results show that women present lower quality of life and mental health than men, although they start consuming later, for less time, and with a lower consumption pattern.⁽¹⁹⁾

In addition, the use of PAS in the female population is considered a risk factor for suicidal behavior.⁽²⁰⁾ The abuse of PAS interferes in, and may even increase the chances of such behavior.⁽²¹⁾ A study conducted in Serbia indicates that the use of PAS by women can increase the risk of suicidal behavior from 6.5 to 9 times, when compared to women who do not use drugs.⁽²²⁾

Suicidal behavior is a multifaceted problem, in which the presence of mental disorders increases

their vulnerability.⁽²³⁾ Most people with this type of behavior (more than 90%) have diagnosed chronic mental disorders, with depression schizophrenia and abuse of PAS being more common. It is interesting to note that the association of suicidal behavior with the use of illicit PAS has been reported, specifically heroin, cocaine, and tranquilizers without medical prescription.⁽²⁴⁾

In the present study, suicidal ideation is also associated with the use of tranquilizers. These, mostly the benzodiazepines, are depressants of the central nervous system. They are usually used by women, who are searching of relief for frustration and/or stress (49%).⁽²⁵⁾

Although these substances act biologically on the mood and anxiety dimensions, recreational and indiscriminate use can generate physical and psychological dependence, in addition to the risk of paradoxical effects, such as depression and suicidal ideation.^(26,27)

Another important finding of this research is on the use of solvents, whose use increases the chances of suicidal ideation among women. The literature indicate that the risk associated with solvent/inhalant utilization is erroneously considered low when, in fact, it may be responsible for tragic outcomes, including death.⁽²⁸⁾

The misuse of solvents is among the most prevalent and pernicious forms of drug use in the Americas. These include a large group of substances with different utilities and consequences, with legalized use in industry/residences, and therefore readily available. Scientists and health professionals have neglected the repercussions of this practice on the female environment. However, one review study described recent advances in preclinical and clinical data on severe complications associated with this practice by women: sudden death and fetal solvent syndrome, neurotoxicity, cognitive impairment, headache, impaired sensory abilities (loss of vision, hearing and coordination), sleep disorders, and increased mental disorders, which even potentiate suicidal thoughts.⁽²⁹⁾

Researchers at the University of Washington (USA) discussed the use of solvents and their interface with suicidal behavior. The authors found that, when

comparing users of solvents with non-users, a significantly higher rate of suicide in the users was identified, including ideation (52.1%, 32.2%, respectively) and attempts (25.8%, 12.5% respectively).⁽³⁰⁾

This study indicated that the use of marijuana increases the chances of suicidal ideation among women. Although the use of this substance is of great epidemiological relevance, the natural course of the disorders caused by its use is still relatively unexplored.⁽³¹⁾ In addition, as men constitute 75% of the population of marijuana users, women have been historically underrepresented in investigations of issues related to its use. Thus, the understanding of gender-specific risks and consequences are limited.⁽³²⁾

Research states that women have advanced from experimentation to regular use more rapidly, and presented a larger decrease in quality of life, as a consequence of marijuana use.⁽³³⁾ A study conducted in Mexico describes that the use of marijuana by young people, in the last 12 months, increases the risk of suicidal ideation and attempted suicide. Other drugs are generally associated, but to a lesser extent.⁽³⁴⁾

In the female context, specifically, a study with 600 participants found that women who seek treatment for compulsive use of marijuana, in late adolescence and in young adulthood, showed significantly higher rates of anxiety and suicide risk compared to men who sought treatment during the same stages of development.⁽³⁵⁾

The indicators produced indicate that the use of illicit drugs by women has a serious implication and, therefore, requires effective interventions that should focus, above all, on the prevention of suicidal ideation, as the progression of this ideation may converge in tragic outcomes that include attempted suicide, self-mutilation, and suicide.

Conclusion

The findings of this study showed a predominance of young adult women, with brown skin color, married/stable union, Catholic, with children, and who were from the interior of the state. The women who used illicit drugs, such as non-prescription tranquilizers, solvents, and marijuana, were more likely to

have suicidal ideation than those who did not report use.

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Collaborations

Silva Júnior FJG, Monteiro CFS, Veloso LUP, Sales JCS, Costa APC and Gonçalves LA declare that they contributed to the study design, analysis, data interpretation, and final approval of the version to be published.

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