Drugs during pregnancy in low-risk prenatal care and associated factors

Drogas na gestação em pré-natal de baixo risco e fatores associados

Drogas en embarazos en controles prenatales de bajo riesgo y factores asociados

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Abstract

Objective: To identify the prevalence of the use of legal and illicit drugs by pregnant women who received prenatal care in Primary Health Care and factors associated with their usage.

Methods: Cross-sectional study carried out using a structured script, composed of gestational sociodemographic variables and drug use by pregnant women and their families, applied to 270 women undergoing low-risk prenatal care at 15 Basic Health Units, in two municipalities in a metropolitan region of Southern Brazil, where there are negative socioeconomic and demographic differences in relation to the hub city. Data collection took place from December 2019 to February 2020. Data were analyzed using Pearson's chi-square test, with associations with a value of p<0.05 being considered significant.

Results: Young people aged 25 to 35 accounted for 77% of the sample; brown/black were 60.4%; multigravidae accounted for 41.8% (with more than three children). 86.6% had a steady marital partner. The prevalence of current drug use was 46.2%. There was a statistically significant association between alcohol consumption and having had pregnancy complications (odds ratio of 2.5; confidence interval of 1.17-5.22); between marijuana consumption and the age of 15 to 19 years (odds ratio of 2.7; confidence interval of 1.01-7.03); between tobacco consumption and drug use by the husband (odds ratio of 4.1; confidence interval of 1.75-9.55) and between tobacco use and single-parent family classification (odds ratio of 6.6 ; confidence interval 1.55 - 28.43).

Conclusion: The prevalence between current usage and lifetime use was high. The multipregnancies in women were undergoing low-risk prenatal care. Drug use, age, drug use by the husband and single-parent family classification were associated with gestational complications.

Resumo

Objetivo: Identificar a prevalência do uso de drogas lícitas e ilícitas por gestantes que realizavam pré-natal na Atenção Primária à Saúde e fatores associados ao seu uso.

Métodos: Estudo transversal realizado por meio de roteiro estruturado, composto de variáveis sociodemográficas gestacionais e uso de drogas pela gestante e seus familiares, aplicado a 270 mulheres em pré-natal de baixo risco de 15 Unidades Básicas de Saúde, de dois municípios de uma região metropolitana do Sul do Brasil, onde existem diferenças socioeconômicas e demográficas negativas em relação a cidade-polo. A coleta de dados ocorreu no período de dezembro de 2019 a fevereiro de 2020. Os dados foram analisados por meio do teste do qui-quadrado de Pearson, sendo consideradas significativas as associações com valor de p<0,05.

Resultados: Jovens de 25 a 35 anos corresponderam a 77% da amostra; pardas/negras foram 60,4%; multigestas somaram 41,8% (com mais de três filhos). Tinham parceiro conjugal fixo 86,6%. A prevalência de

uso atual de drogas foi de 46,2%. Houve associação estatisticamente significativa entre consumo de álcool e ter tido intercorrências gestacionais (razão de chance de 2,5; intervalo de confiança de 1,17-5,22); entre o consumo de maconha e a idade de 15 a 19 anos (razão de chance de 2,7; intervalo de confiança de 1,01- 7,03); entre consumo de tabaco e uso de drogas pelo esposo (razão de chance de 4,1; intervalo de confiança de 1,75- 9,55) e entre uso de tabaco e classificação familiar do tipo monoparental (razão de chance de 6,6; intervalo de confiança de 1,55 - 28,43).

Conclusão: A prevalência entre uso atual e uso na vida foi elevada. As gestantes eram multigestas em pré-natal de baixo risco. O uso de drogas esteve associado a intercorrências gestacionais, idade, uso de drogas pelo esposo e a classificação familiar do tipo monoparental.

Resumen

Objetivo: Identificar la prevalencia del consumo de drogas lícitas e ilícitas por mujeres embarazadas que realizaban control prenatal en la Atención Primaria de Salud y factores asociados a su uso.

Métodos: Estudio transversal realizado por medio de guion estructurado, compuesto por variables sociodemográficas gestacionales y el uso de drogas por parte de la mujer embarazada y sus familiares, aplicado a 270 mujeres en control prenatal de bajo riesgo de 15 Unidades Básicas de Salud, de dos municipios de una región metropolitana del sur de Brasil, donde existen diferencias socioeconómicas y demográficas negativas con relación a la ciudad principal. La recopilación de datos se llevó a cabo en el período de diciembre de 2019 a febrero de 2020. Los datos se analizaron mediante la prueba χ² de Pearson, donde se consideraron significativas las relaciones con valor de p<0,05.

Resultados: Jóvenes de 25 a 35 años compusieron el 77 % de la muestra. El 60,4 % era parda/negra. El 41,8 % era multigesta (con más de tres hijos). El 86,6 % tenían pareja conyugal. La prevalencia de consumo actual de drogas fue del 46,2 %. Hubo asociación estadísticamente significativa entre el consumo de alcohol y haber tenido complicaciones gestacionales (razón de momios de 2,5; intervalo de confianza de 1,17-5,22); entre el consumo de marihuana y la edad de 15 a 19 años (razón de momios de 2,7; intervalo de confianza de 1,01-7,03); entre el consumo de tabaco y el consumo de drogas por parte del esposo (razón de momios de 4,1; intervalo de confianza de 1,75-9,55) y entre el consumo de tabaco y la clasificación familiar monoparental (razón de momios de 6,6; intervalo de confianza de 1,55-28,43).

Conclusión: La prevalencia entre el consumo actual y el consumo en la vida fue elevada. Las mujeres embarazadas eran multigestas con control prenatal de bajo riesgo. El consumo de drogas estuvo asociado a complicaciones gestacionales, edad, consumo de drogas por parte del esposo y la clasificación familiar monoparental.

Introduction

In recent decades, when considering the impact of drugs on women's lives, specifically those during pregnancy, it appears that there has been an increase in the consumption of psychoactive drugs and a gradual expansion in female consumption, making this a social and health problem of global concern, demanding robust public policies to minimize social consequences and health problems.[1,2]

The use of psychoactive drugs causes changes in brain functioning, which does not only affect the user. It constitutes a serious social and public health problem. Legal (for example: alcohol, tobacco and their derivatives) or illicit (for example: marijuana, cocaine and crack), drugs involve several instances, being a phenomenon that generates social, health, legal, criminal and family costs. Due to the ease of use due to the legalization of some of the drugs, they are in the spotlight, with increasing use, including among women of childbearing age and pregnant women.[1,3,4]

Globally, 10% of women consume alcohol during pregnancy.[3] The National Survey on Drug Use and Health (NSDUH) used data from 2015 to 2018 to estimate the general and specific prevalence of drug use in the last 12 months, finding that, among pregnant women aged 15 to 44, 64.7% were alcohol drinkers; in the general analysis, 38.2% of interviewees who reported using alcohol also admitted using tobacco and marijuana.[5]

In Brazil, there is evidence of increased drug consumption by women of childbearing age.[6-8] A study carried out with poor pregnant women in a socially vulnerable scenario showed that 6.2% of women reported using drugs during pregnancy, and 62.5% admitted to using drugs at some point.[9]

In addition to health problems, the use of drugs by women causes dissociation from their role in society, as they are generally perceived as people who pose danger and behave inappropriately. The image, associated with the loss of moral value and personality deviations, makes it difficult to seek treatment and recovery; adequate prenatal care to promote maternal and fetal health and screening for risk and drug use during pregnancy, with a view to early intervention.[2]

The question of this study was: What is the magnitude of the prevalence of legal and illicit drug consumption among pregnant women at-

tending low-risk prenatal care in the cities Sarandi and Paiçandu? The nurse plays a fundamental role in welcoming these pregnant women, to create a bond. This makes it possible to track drug usage, as well as to identify factors associated with this usage during pregnancy, in addition to considering the different social influences and aspects involved, which allows for specific and early interventions, focusing on prevention and harm reduction, inherent to drug use.[10]

In this sense, the objective of this study was to identify the prevalence of the use of legal and illicit drugs by pregnant women who received prenatal care in Primary Health Care and factors associated with their use.

Methods

This is a cross-sectional and observational study, developed in two medium-sized municipalities Paiçandu and Sarandi, located in the northwest of the state of Paraná, in the Southern Region of Brazil. These make up the urbanized area of the most significant population arrangement in the Metropolitan Region of Maringá (MRM) and have high levels of vulnerability and negative socioeconomic and demographic differences compared to the hub city - Maringá.[11,12]

The study was developed based on the 270 women self-report followed in low-risk prenatal care at 15 Basic Health Units in the two cities, six Basic Health Units in Paiçandu and nine Basic Health Units in Sarandi.

Eligibility criteria for the study were pregnant women at any gestational age; aged 18 or over, or younger, if accompanied by a legal guardian; who received low-risk prenatal care in Primary Health Care. Pregnant women residing in other cities and those classified as high-risk prenatal care were excluded.

The sample calculation by strata was carried out based on the projection of births for the year 2019 (when data collection began), which took into account the average growth rate of births, based on data from the Information System on Live Births

(Sinasc) in the years 2015, 2016 and 2017. For the year 2019, in Sarandi and Paiçandu, 2,254 births were expected.

From this number, the sample calculation was carried out by strata, based on a sampling error (α) of 5%, a confidence level of 95% and a maximum percentage of consumption of tobacco, alcohol and other drugs of 15%, which resulted in a sample of 270 births.

A structured form was used, constructed by the research team, with variables organized into three blocks: sociodemographic and economic characteristics of the pregnant woman; gestational data (current and past); and drug use by the pregnant woman and in her family (current and past). The form was adapted from the questions in the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) instrument made available by the World Health Organization (WHO), version 3.1.[13]

The face-to-face interview method was used, with the application of a standardized form by a previously trained research team. The interviews took place from December 2019 to February 2020.

The collected data received statistical treatment using descriptive statistics, using relative and absolute frequency, in addition to measures of dispersion and central tendency, such as mean, mode, median and standard deviation. Subsequently, they were dichotomized and received treatment by univariate analysis with Pearson's chi-square test, with associations with a value of $p<0.05$ being considered significant. Subsequently, and in order to indicate the direction of the associations, the value of the odds ratio and its respective 95% confidence interval were calculated.[14]

The study was approved by the Research Ethics Committee, number 3.255.326 and Certificate of Presentation of Ethical Appreciation number 10301918.8.0000.0104.

Results

A higher proportion of young pregnant women was observed, with similar average ages in the two cities: Paiçandu at 26.4 years old (standard devia-

tion ±6.7) and Sarandi at 26.0 years old (standard deviation ±5.9). They were brown/black (69.8%), married or in a stable relationship (86.7%) and had 9 years of education or more (84.4%). The majority reported they were Catholics (45.9%) and protestants (43.0%). Per capita income was above the minimum wage from 2020. Women were employed (47.4%) or were housewives (40.0%). They belonged to economic classes D or E (52.6%); and, in 17.4% of families, one of the members received social benefits, with the highest number in Paiçandu (37.1%) (Table 1).

Table 1. Characteristics of pregnant women, according to sociodemographic and economic variables.

Variables	City		Total n(%)
	Paiçandu n(%)	Sarandi n(%)	
Age, years			
15-19	6(8,6)	26(13,0)	32(11,9)
20-35	55(78,6)	153(76,5)	208(77,0)
36 or more	9(12,8)	21(10,5)	30(11,1)
Race/color			
Brown	33(47,2)	88(44,0)	121(44,8)
White	25(35,7)	82(41,0)	107(39,6)
Black	12(17,1)	28(14,0)	40(14,8)
Yellow	-(-)	2(1,0)	2(0,8)
Marital Status			
Married/Stable relationship	60(85,7)	174(87,0)	234(86,7)
Single	10(14,3)	26(13,0)	36(13,3)
Religian			
Catholic	35(50,0)	89(44,5)	124(45,9)
Protestant	30(42,9)	86(43,0)	116(43,0)
Not informed	4(5,7)	20(10,0)	24(8,9)
Other	1(1,4)	5(2,5)	6(2,2)
School Background, Years			
Until 8	12(17,1)	30(15,0)	42(15,6)
9 or more	58(82,9)	170(85,0)	228(84,4)

Regarding gestational and prenatal data, on average, the gestational age of women in Paiçandu was 23.5 weeks (standard deviation ± 10.6 weeks), and the average prenatal care at the Basic Health Unit was 4.1 consultations (standard deviation ±2.7). In Sarandi, on average, the gestational age was 25.6 weeks (standard deviation ± 9.6 weeks), and the average prenatal care at the BHU was 5.2 consultations (standard deviation ±3. 3). They were pregnant either for the third time or more (41.8%), with the highest number of third time pregnant women in Paiçandu (54.3%). Regarding the number of children, 11.8% reported more than three children.

Of the total number of interviewees, 169 (62.6%) reported having already used tobacco products in their lives, with an average age of experimentation of 15.5 years (standard deviation ± 3.4) in Paiçandu and 16 years (standard deviation ± 3.5) in Sarandi. Regarding the lifetime use of alcoholic beverages, 241 (89.3%) reported use, with an average age of experimentation of 16.8 years (standard deviation ±3.5) in Paiçandu and 16.4 (standard deviation ± 3.2) in Sarandi. There was a higher prevalence of lifetime use of marijuana among pregnant women from Sarandi 49 (24.5%), with an average age of experimentation of 17 years (standard deviation ±4.0); In total, 58 (21.5%) pregnant women reported lifetime use of marijuana, with an average age of experimentation of 15.2 years (standard deviation ± 3.8) in Paiçandu. Regarding cocaine, 20 (7.4%) reported lifetime use, with a mean age of experimentation of 21.6 years (standard deviation ± 8.3) in Paiçandu and 18.1 years (standard deviation ± 4 ,0) in Sarandi. Two pregnant women from Paiçandu reported using amphetamines (0.7%), with a mean age of experimentation of 19.5 years (standard deviation ± 2.1). A pregnant woman from Paiçandu reported using inhalants (0.4%), with an average age of experimentation of 18.0 years. A pregnant woman from Sarandi reported using sedatives (0.4%), with an average age of experimentation of 20.0 years, and two pregnant women from Paiçandu reported using hallucinogens (2.9%), with an average age of 21 years old (standard deviation ±7.0). Regarding current drug use, the prevalence of use during pregnancy for the 270 women was (46.2%) (Table 2).

Pregnant women reported tobacco use by their husbands (104; 38.5%), 22 (31.4%) in Paiçandu and 82 (41%) in Sarandi; alcoholic beverages (187; 69.3% of the total; 38; 54.3% in Paiçandu and 149; 74.5% in Sarandi); marijuana (33; 11.8%, of the total; 9; 12.9%, in Paiçandu, and 23; 11.5%, in Sarandi) and cocaine and other drugs by the husband (19; 7.0%, of the total ; 5; 7.1%, in Paiçandu, and 14; 7.0%, in Sarandi). Pregnant women also reported tobacco use by their father (36; 13.3%), 6 (8.6%) in Paiçandu and 30 (15.0%) in Sarandi; alcoholic beverages (43; 16.0%), 3 (4.3%) in

Table 2. Current drug abuse by pregnant women during data collection

Drug abuse	City		Total
	Paiçandu	Sarandi	
Tobacco			
Present	14(20,0)	63(31,5)	77(28,5)
Absent	56(80,0)	137(68,5)	193(71,5)
Alcoholic beverage			
Present	15(21,4)	23(11,5)	38(14,0)
Absent	55(78,6)	177(88,5)	232(86,0)
Marijuana			
Present	2(2,9)	7(3,5)	9(3,3)
Absent	68(97,1)	193(96,5)	261(96,7)
Cocaine			
Present	1(1,4)	0(0)	1(0,4)
Absent	69(98,6)	200(100,0)	269(99,6)

Results expressed by n(%)

Paiçandu and 40 (20.0%) in Sarandi; cocaine (3; 1.1%), 1 (1.4%) in Paiçandu and 2 (1.0%) in Sarandi. The father reported using tobacco associated with alcohol (44; 16.3%), 15 (21.4%) in Paiçandu and 29 (14.5%) in Sarandi, and tobacco associated with other drugs (2; 0.7%), 1 (1.4%) in Paiçandu and 1 (0.5%) in Sarandi. Drug use by the mother was also reported: 37 (13.7%) reported tobacco, 6 (8.6%) in Paiçandu and 31 (15.5%) in Sarandi, and 35 (13.0%) use of alcohol, 5 (7.1%) Paiçandu and 30 (15.0%) Sarandi. A pregnant woman from Sarandi reported cocaine use by her mother (0.5%), and there was a report of tobacco use associated with alcohol by 30 (11.1%) participants, 9 (12.9%) in Paiçandu and 21 (10.5%) in Sarandi. Drug use by the brother was reported; 16 (5.9%) reported tobacco, 2 (2.9%) in Paiçandu and 14 (7.0%) in Sarandi; 37 (13.7%) reported alcohol, 1 (1.4%) in Paiçandu and 36 (18.0%) in Sarandi; marijuana was mentioned by 2 (0.7%), 1 (1.4%) in Paiçandu and 1 (0.5%) in Sarandi. A pregnant woman from Sarandi reported the use of cocaine by brother 1 (0.5%), and there was a report of the use of tobacco associated with alcohol by 42 (15.6%) pregnant women, 11 (15.7%) in Paiçandu and 31 (15.5%) in Sarandi. The use of tobacco and alcohol associated with other drugs was described by 5 (1.9%) women, 2 (2.9%) in Paiçandu and 3 (1.5%) in Sarandi. Table 3 presents the chi-square association analysis and its respective relative risk, with a 95% confidence interval between the proximal, intermediate and distal variables, in relation to the

Table 3. Association of tobacco, alcohol and marijuana use and proximal variables in current pregnancy

Drug	Variables	Categories	Current usage		Chi-square test		RC (IC95%)
			Absent	Present	X^{2*}	p-value†	
Tobacco							
Proximal	Religion	Protestants	91	25	4,26	0,038	0,5 (0,93-0,31)
Intermediate	Prenatal consultations	7 or more	61	14	4,30	0,038	0,5 (0,92-0,25)
Distal	City of residence	Paiçandu	56	14	12,63	<0,001	0,3 (0,57-0,16)
		Sarandi	137	63			3,3 (1,74-6,09)
	Drug use by husband	Yes	127	60	9,56	0,002	4,1 (1,75-9,55)
		No	52	6			0,2 (0,57-010)
	Family classification	Single parent	2	5	4,51	0,033	6,6 (1,55-28,43)
Alcohol							
Intermediate	Pregnancy complications	Yes	14	16	4,65	0,031	2,5 (1,17-5,22)
		No	164	76			0,4 (0,86-0,19)
Distal	City of residence	Paiçandu	55	15	5,99	0,014	0,4 (0,82-0,23)
		Sarandi	123	77			2,3 (1,23-4,30)
	Drug use by husband	Yes	49	9	10,68	0,001	0,3 (0,61-0,14)
		No	115	72			3,4 (1,63-7,14)
	Family classification	Nuclear	147	69	10,94	<0,001	0,3 (0,63-0,19)
		Extensive	29	18	0,25	0,615	1,2 (0,65-2,39)
		Single parent	2	5	2,92	0,034	5,1 (1,12-22,75)
Marihuana							
Proximal	Age	15 to 19	26	6	2,72	0,048	2,7 (1,01-7,03)
Distal	City of residence	Paiçandu	68	2	3,64	0,031‡	0,2 (0,88-0,06)
		Sarandi	177	23			4,4 (1,14-17,15)
	Drug use by husband	No	57	1	3,47	0,032	0,1 (0,86-0,03)
		Yes	166	21			7,2 (1,24-41,31)

* Corrected continuity; † test significance level; ‡ Fisher's exact test; OR - odds ratio; IC95% - confidence interval 95%

use of tobacco, alcohol and marijuana during pregnancy. Only significant associations were reported.

Discussion

Potential limitations of the study include the use of a cross-sectional design, as it makes it impossible to establish cause and effect relationships between the event and the variables investigated; and information bias, given the stigmatization associated with drug use during pregnancy, which must be considered, as well as the regionality of the study, given that it is only a local section. However, the results support greater efforts to develop and implement evidence-based interventions to prevent and reduce the use of drugs of abuse during pregnancy.

The results of this research contribute to the visibility of the drug problem in the female population, especially for pregnant women, with a view to minimizing the impacts on the mother-fetus binomial and improving health care for pregnant women involved with drugs. The results may have several implications for better coordination between prevention and support services for pregnant women.

The sociodemographic characteristics were similar to those of studies carried out in other regions of the country, with a predominance of young, non-white, Catholic, married women, with more than 8 years of study, income of one to two minimum wages and multipregnancy.[6,15-17]

The average gestational age of the women interviewed (25 weeks) indicated that pregnant women were not screened for drug use early. For the most part, the pregnant women were pregnant for the second, third or more time, and reported starting to use drugs at an early age, which may indicate that they used the drugs reported to be in current use in previous pregnancies, which may also indicate failures in the prenatal care of the pregnant woman. low risk in capturing cases.

It is recommended that drug use be recognized during prenatal care, with a view to identifying and treating women who use drugs. Although information is often omitted in spontaneous reports by pregnant women who use drugs, especially illicit drugs, prenatal team professionals must be able to question them about drug use, regardless of their socioeconomic status, since pregnancy can be a motivation for women who seek treatment.[18,19]

Regarding the use of drugs in life, the age of initiation occurred before the age of 18, corroborating a study carried out with pregnant women attended at the Center for Comprehensive Health Care in Campinas (SP), who reported using drugs in their lives before the age of 18. tobacco (88.9%), alcohol (84.9%), marijuana (69.6%), cocaine (59%) and crack (50%).[20]

The prevalence of drugs among young women and women of reproductive age is the result of a culture that influences use, permeating acceptance, despite the problems arising from use. Also, insertion into a new social context, as an adult, increases the influence of groups of friends, boyfriends/husbands and the social environment of coexistence. The use of alcohol, for example, is part of socialization rituals and recreational activities in different spheres of social life, becoming common in meetings with friends or family.[17]

Reports of drug use by family members and intra-family addictive behavior suggest double involvement with drug use: direct, as a woman, mother and pregnant woman, in the user's social space; and indirect, reflecting the presence of drugs and their effects on the family environment, both harmful to the health of women and children.

In the present study, there was a significant statistical relationship, in the sense of protection for not using tobacco and not using drugs by the husband. Tobacco use by a partner is associated with a greater chance of alcohol use during pregnancy. It is known that women who live with people who use drugs or are involved in drug trafficking are more vulnerable to the use of drugs of abuse.[10,17]

Considering that individual decisions are influenced by social factors, the use of drugs of abuse by family members can generate family instability, creating situations of social vulnerability related to conflicts and the breakdown of affectionate relationships between family members - both predictors for the maintenance of the continuous circle of vulnerabilities experienced by women.[21]

In this study, the prevalence of the use of drugs of abuse was 46.2%, that is, higher than that found in other studies.(6,22) Although methodological and socioeconomic differences prevent deeper visibility into the use of drugs of abuse by pregnant woman, despite recommendations not to use, at least one in ten pregnant women uses drugs during pregnancy, this being a frequent problem worldwide, with great differences in relation to levels of economic development and cultural differences. (22,23)

Different factors have already been identified as risk factors for the use of drugs of abuse during pregnancy. Younger age, white race, non-religious, low socioeconomic status, non-immigrant, less frequent prenatal consultation, zero parity, partner's consumption of alcohol or tobacco, criminal record, previous history of alcohol and other drug use abuse, unplanned pregnancy, lack of knowledge about the harmful effects of alcohol on the fetus and peer pressure were factors associated with alcohol and tobacco consumption.(4,24,25)

Conclusion

The study revealed the prevalence of current drug use, with tobacco and alcohol being the most used. Regarding risk factors, there was a statistically significant association between alcohol consumption and having had pregnancy complications; between marijuana use and ages 15 to 19; and between tobacco consumption and drug use by the husband and tobacco use and single-parent family classification. The results occurred with pregnant women undergoing low-risk prenatal care, which can facilitate the detection of susceptible pregnant women, allowing health professionals to strengthen health promotion actions, with a view to minimizing impacts on the mother-fetus binomial.

Acknowledgments

Collaborations

Dias LE, Oliveira MLF, Fernandes CAM, Bernardy CCF, Santos GA, Guedes MRJ, Gavioli A e Marangoni SR contributed to the design of the project, relevant critical review of the intellectual content, writing of the article, interpretation of the data and approval of the final version to be published.

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