

Depressive symptoms in primary care pregnant women: prevalence and associated factors

Sintomas depressivos em gestantes da atenção básica: prevalência e fatores associados

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ABSTRACT

Introduction: The onset of emotional disorders early in pregnancy is frequent, including depressive symptoms (DS) such as guilt, lack of appetite and energy. **Objective:** To measure the prevalence of depressive symptoms and associated factors in pregnant women attending primary care. **Methods:** Cross-sectional observational epidemiological study of pregnant women, who attend primary care in Caxias do Sul, Rio Grande do Sul, Brazil. Depressive symptoms were assessed using Patient Health Questionnaire (PHQ-9). Gross analysis was performed, in which prevalence ratios (PR) and respective confidence intervals (CI 95%) were calculated. The comparison of categorical variables occurred through the Chi-square test. The adjusted analysis was performed by Poisson regression, using the backwards technique, where the final model was constructed from the variables with $p \leq 0.20$ in the gross analysis.

Results: The sample consisted of 76 pregnant women, of these 46.1% had depressive symptoms. The average age was 26.6 years (± 5.95) and 72.4% were married or in a stable union. There was a significant association between depressive symptoms and marital status (PR: 1.54; 95% CI 1.00-2.37; $p=0.045$) and the occurrence of abortion in other pregnancies (PR: 1.72; 95% CI 1, 08-2.74; $p=0.022$).

Conclusion: There was a high prevalence of depressive symptoms compared to regional studies in the pregnant women investigated. Factors associated with the outcome were marital status and history of abortion, which may cause problems during pregnancy and postpartum. Thus, there is a need for tools and strategies to identify the presence of depressive symptoms in early pregnancy, so that they can be diagnosed and treated.

Keywords: depression; epidemiology; risk factors; pregnancy; primary health care.

RESUMO

Introdução: O aparecimento de transtornos emocionais no início da gestação é frequente, entre eles estão os sintomas depressivos (SD), como sentimento de culpa, falta de apetite e de energia.

Objetivo: Medir a prevalência de sintomas depressivos e fatores associados em gestantes atendidas na Atenção Básica. **Métodos:** Estudo epidemiológico observacional transversal, constituído por gestantes, usuárias da Atenção Básica de Caxias do Sul/RS. Os SD foram avaliados por meio Patient Health Questionnaire (PHQ-9). Realizou-se a análise bruta, onde calculou-se as razões de prevalência (RP) e respectivos intervalos de confiança (IC 95%). A comparação de variáveis categóricas ocorreu por meio do teste de Qui-Quadrado. A análise ajustada foi realizada por regressão de Poisson, utilizou-se a técnica de *backwards*, onde o modelo final foi construído a partir das variáveis com $p \leq 0,20$ na análise bruta.

Resultados: A amostra constituiu-se de 76 gestantes, destas 46,1% apresentaram SD. A média de idade foi de 26,6 anos ($\pm 5,95$) e 72,4% estavam casadas ou em união estável. Houve associação significativa entre SD e estado civil (RP: 1,54; IC 95% 1,00-2,37; $p=0,045$) e a ocorrência de aborto em outras gestações (RP: 1,72; IC 95% 1,08-2,74; $p=0,022$). **Conclusão:** Observou-se uma elevada prevalência de SD, comparando a estudos regionais, nas gestantes investigadas. Identificou-se como fatores associados ao desfecho, o estado civil e histórico de aborto, podendo trazer problemas na gestação e no pós-parto. Assim, percebe-se a necessidade de instrumentos e estratégias para identificar a presença de SD na fase inicial da gestação, para que sejam diagnosticados e tratados.

Palavras-chave: depressão; epidemiologia; fatores de risco; gravidez; atenção primária à saúde.

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INTRODUCTION

Pregnancy is a relevant physiological phase in a woman's life, occurring several changes, including hormonal, psychological and social changes^{1,2}. Thus, requiring health care, it is essential to identify and monitor the psychological state and depressive symptoms (DS) during the gestational period^{1,2}.

The onset of emotional disorders in early pregnancy is frequent, and there are numerous reports of depression³. This is known to be the most common mental disorder, being the leading cause of disability in the world and occurring mainly in women⁴. In general, DS are similar to those that occur in depression, such as guilt, lack of appetite and energy⁵⁻⁸. In Primary Care, DS should be screened even at the first prenatal visit⁹. However, it is known that during pregnancy mental health has not received the necessary attention, probably because it is associated with a well-being phase, also because DS present higher hospitalization rate in the postpartum period¹⁰. Currently, it is noteworthy that the prevalence of DS in pregnant women has been increasing, ranging from 19.6% to 58.4%^{3,11-13}. Thus, studies and early screening of this population are necessary³.

It is known that the presence of DS in the first gestational trimester is common, so the presence of this emotional disorder can have consequences for the pregnant woman, such as increased risk for developing postpartum depression¹⁰. According to a study conducted in pregnant women in Canada, most of them with postpartum depression, already had prenatal depression or DS during pregnancy, of which only 6.6% were identified as new cases¹². It is noticed that DS suffer a regression throughout the gestational trimesters, making them stronger and more noticeable at the beginning of pregnancy. In addition, the consequences may extend to the newborn, impairing fetal development, leading to reduced birth weight, risk of premature birth, and increased chances of hospitalization in neonatal intensive care units^{2,3}.

In this perspective, there is a risk of developing depression during the gestational period and postpartum depression, corresponding to the presence of DS, bringing risks to both the pregnant woman and the baby². Given the magnitude of the problem and possible consequences for pregnant women and newborns and the few regional studies found, there is a need for further studies directed to this population, as well as the need to verify DS tracking and its importance in Primary Care. Therefore, the present study aims to measure the prevalence of depressive symptoms and associated factors in pregnant women attending primary care in Caxias do Sul, Rio Grande do Sul, Brazil.

METHODS

Design and population of the study

A cross-sectional observational epidemiological study was conducted, based on the research project "Health risk behaviors of

pregnant women and the impact on maternal and newborn health on Primary Health Care in Caxias do Sul-RS".

Sample characteristics

The city of Caxias do Sul has 46 Unidades Básicas de Saúde (UBS/Basic Health Units) in the urban area, being 24 UBSs with Family Health Strategy (FHS). Due to logistic criteria and economic limitations, it was decided to draw only 16 UBSs with FHS, enough to guarantee the representation of the total area of the municipality. Were included 76 pregnant women who underwent prenatal care at UBS in the Primary Care of Caxias do Sul, Rio Grande do Sul, Brazil, over 18 years of age, first trimester (up to 13 weeks of gestation) enrolled in Sistema de Acompanhamento da Gestante (SIS-Prenatal/ Pregnant Woman Tracking System) in each of the drawn UBSs. Women who were illiterate or who did not speak Portuguese or who were at risk of pregnancy were not included in the study.

Data collection

For the data collection, the first trimester pregnant women were identified through previous contact with the community health agents and nurses responsible for the tracking and follow-up of the pregnant women from each UBS. Subsequently, we contacted the first trimester pregnant women, users of UBS drawn and enrolled in SIS-Prenatal, who were invited to participate in the study. Pregnant women who agreed to participate in the study were instructed to attend the UBS to apply the questionnaire. The application of the questionnaire and data collection were performed by a team of undergraduate health students, previously trained, composed of 19 people, from July to October 2017.

Data collection instrument

A standardized pre-coded questionnaire containing validated instruments and questions elaborated by the researchers was used. A pilot study was conducted with five pregnant women from a randomly selected UBS, but these were not included in the final sample. It is noteworthy that part of the instrument used for data collection, consisting of behavioral questions, was obtained through a self-administered questionnaire.

The study included socioeconomic, demographic, obstetric, lifestyle, anthropometric, and eating behavior variables. Regarding socioeconomic and demographic aspects (Table 1), the following variables were investigated: age (categorized by the mean value ≥ 27 ; ≤ 26), marital status (married/stable union; single/separated/divorced), self-declared skin color (non-white; white), number of people living in the household (categorized by the average value of ≤ 3 people; ≥ 4 people), years of schooling (≤ 10 years; ≥ 11 years), paid work (yes; no) and socioeconomic level (from A to C1; from C2 to E). The classification of socioeconomic level is made by a scoring system, which evaluates the

possession of items, education of the reference person and access to public services, the class of points is divided into: A (from 45 to 100), B1 (38-44), B2 (29-37), C1 (23-28), C2 (17-22), and D/E (0-16)¹⁴.

The obstetric variable investigated was the history of abortion (yes; no), collected directly from the medical record information. Regarding lifestyle variables, it included: smoker (yes; no), pre-pregnancy smoker (yes; no), alcohol consumption (yes; no) and physical activity weekly (yes; no). Alcohol consumption was considered when the pregnant woman had a habit of drinking at least one dose of alcohol per week. One serving was the equivalent of a beer (330ml) or a glass of wine (100ml) or a distillate (30ml)¹⁵. Regarding the practice of physical activity, we considered those who practiced at least 150 minutes per week¹⁶.

Regarding anthropometric measurements, data such as pre-gestational and gestational weight and height were collected directly from the medical records, thus calculating the following variables: Pre-gestational and current Body Mass Index (BMI). The pre-gestational BMI classification is divided into: underweight/malnourished (less than 18.5 kg/m²), adequate/eutrophic (from 18.5 to 24.9 kg/m²), overweight (from 25.0 to 29.9 kg/m²) and obesity (≥ 30.0 kg/m²) (eutrophic; non-eutrophic). The current BMI variable was classified according to gestational week, divided into: low weight, adequate, overweight and obesity (adequate; not adequate)¹⁷ (Table 2).

Regarding the eating behavior variables were studied: food insecurity (yes; no), body image (absence of distortion; presence of distortion), binge eating and risk for eating disorders (ED) (no

risk; with risk). Regarding folic acid supplementation, it was identified whether or not it was performed (yes; no) (Table 2).

As a tool to evaluate food insecurity, the Brazilian Food Insecurity Scale (EBIA) was used, which is a scale with 14 answer questions "yes" or "no"¹⁸. Body image was assessed according to the Body Shape Questionnaire (BSQ), using a validated Portuguese version of Cordás and Castilho¹⁹, which allows to verify dissatisfaction with body image. Regarding the ED risk behavior variable, the following practices were evaluated in the last three months: binge eating (compulsive eating, loss of control); use of laxatives; use of diuretics; induce vomiting; without eating or eating little in order to lose weight. Considering risk behavior for eating disorder the pregnant woman who presented any of these behaviors for at least once a week²⁰ (Table 2).

Outcome variable - Depressive symptoms

It was analyzed through the Patient Health Questionnaire (PHQ-9). It was a standardized and translated questionnaire consisting of 9 questions related to the last two weeks²¹, are they: 1) How many days did you have not much interest or pleasure in doing things?; 2) How many days did you feel down, depressed or without perspective?; 3) How many days did you have trouble falling asleep or staying asleep or did you sleep longer than usual?; 4) How many days did you feel tired or low on energy?; 5) How many days did you lack your appetite or overeat?; 6) How many days did you feel bad about yourself or did you think you were a failure or did you disappoint your family or yourself?; 7) How many days did you have trouble focusing on things (like reading the newspaper or watching

Table 1: Socioeconomic and demographic variables in relation to the prevalence of depressive symptoms in pregnant women attending primary care in Caxias do Sul, Rio Grande do Sul, Brazil, 2017 (n = 76).

Exposure variables	N (%)	DS prevalence*	Gross PR** (CI 95%)	P value***
Age				0,420
≥27	38 (50.0)	47.4	1	
≤26	38 (50.0)	54.1	1.20 (0.76-1.88)	
Marital Status				0.063
Married/Stable Union	55 (72.4)	44.4	1	
Single/Separated/ Divorced	21 (27.6)	66.7	1.50 (0.97-2.30)	
Skin color				0.420
Other	40 (52.6)	46.2	1	
White	36 (47.4)	55.6	1.20 (0.76-1.88)	
No. people live in the house				0.533
≤3 people	46 (60.5)	47.8	1	
≥4 people	30 (39.5)	55.2	1.15 (0.73-1.80)	
Years of study				0.917
≥11 yeas	34 (44.7)	50.0	1	
≤10 yeas	42 (55.3)	51.2	0.97 (0.62-1.53)	
Paid work				0.706
Yes	45 (59.2)	48.9	1	
No	31 (40.8)	53.3	1.09 (0.69-1.71)	
Socioeconomic status				0.315
From A to C1	24 (31.6)	54.9	1	
From C2 to E	52 (68.4)	41.7	0.75 (0.44-1.30)	

*DS: Depressive Symptoms; **PR: Prevalence Ratio; *** Values in bold have statistical significance (p≤0,05).

television)?; 8) How many days were you slow to move or talk (to the point where other people noticed), or were you so agitated that you were pacing more than usual?; 9) How many days did you think of injuring yourself somehow or would you rather be dead?. With the following answer options: no days, less than a week, a week or more, and almost every day. The classification is generated by the sum of the points and can fit the following criteria: absence of DS (≤ 4), mild DS (5–9), moderate DS (10–14), moderately severe DS (15–19) and severe SD (≥ 20)²². Nevertheless, the dichotomous variable was categorized by average and median values, presence of DS (≥ 9) and absence of DS (< 9)²³.

Data analysis

Database structuring and statistical analysis were performed using the SPSS Statistic Data 23 program, bivariate analyzes were

performed using the chi-square test to compare categorical variables. Gross analysis was performed using STATA 11 and the prevalence ratios and respective confidence intervals were calculated at 95% (95%CI). Poisson regression was performed in the adjusted analysis using the backwards method, in which variables with significance of up to 20% in the gross analysis ($p \leq 0.20$) (1 to 2) were included in the final model (Table 3). Statistical significance was considered $p \leq 0.05$, identifying an association between DS and exposure variants.

Ethical aspects

The research was approved by a Research Ethics Committee, according to the Resolution of the National Health Council, nº 466/12, under opinion number: 2,184,991. The Free and Informed Consent Form was read and signed by all pregnant women

Table 2: Obstetric, lifestyle, anthropometric and eating behavior variables in relation to the prevalence of depressive symptoms in pregnant women attending primary care in Caxias do Sul, Rio Grande do Sul, Brazil, 2017 (n=76).

Exposure variables	N (%)	DS Prevalence*	Gross PR** (CI 95%)	p value***
Smoker				0.494
No	66 (86.8)	49.2	1	
Yes	10 (13.2)	60.0	1.21 (0.69-2.14)	
Smoker BP [†]				0.268
No	47 (61.8)	45.7	1	
Yes	29 (38.2)	58.6	1.28 (0.82-1.99)	
Alcohol consumption				<0.001
No	73 (96.1)	48.6	1	
Yes	3 (3.9)	100.0	2.05 (1.61-2.61)	
BMI* pre-gestational				0.571
Eutrophic	36 (47.4)	53.8	1	
Non-eutrophic	40 (52.6)	47.2	0.87 (0.55-1.38)	
IMC* current				0.380
Adequate	29 (38.2)	57.1	1	
Not adequate	47 (61.8)	46.8	0.81 (0.52-1.27)	
Practice physical activity				0.746
Yes	9 (11.8)	55.6	1	
No	67 (88.2)	50.0	0.90 (0.47-1.70)	
History of abortion				0.035
No	59 (77.6)	44.8	1	
Yes	17 (22.4)	70.6	1.57 (1.03-2.40)	
Folic Acid				0.732
Yes	38 (50.0)	52.6	1	
No	38 (50.0)	48.6	0.92 (0.58-1.45)	
Food insecurity				0.737
No	35 (46.1)	48.6	1	
Yes	41 (53.9)	52.5	1.08 (0.68-1.70)	
Body dissatisfaction				0.575
No distortion	61 (80.3)	49.2	1	
With distortion	14 (18.4)	57.1	1.16 (0.68-1.96)	
Binge Eating				0.002
No risk	43 (57.3)	34.9	1	
With risk	32 (42.7)	71.9	2.06 (1.29-3.28)	
ED* Risk				0.003
No risk	41 (54.7)	34.1	1	
With risk	34 (45.3)	97.1	2.06 (1.27-3.34)	

*DS: Depressive Symptoms; **PR: Prevalence Ratio; †BP: Before Pregnancy; *BMI: Body Mass Index; *ED: Eating Disorders ***Values in bold have statistical significance ($p \leq 0.05$).

participating in the study, under which the participation was authorized, as well as the disclosure of the results anonymously.

RESULTS

The sample consisted of 76 pregnant women users of Primary Care in Caxias do Sul, Rio Grande do Sul, Brazil. Of these, 46.1% had DS. Regarding age, the average found was 26.6 years (\pm 5.95 SD), ranging from 18 to 41 years. Regarding skin color, slightly more than half of the pregnant women referred as non-white (52.6%). Most of the pregnant women were married or in a stable union (72.4%), lived with up to three people (60.5%), had up to 10 years of schooling (55.3%) and reported having paid work (59.2%). Regarding income, 68.4% belonged to socioeconomic level C2 to E (Table 1).

Table 2 presents the obstetric, lifestyle, anthropometric and eating behavior variables. Most (86.8%) denied smoking during pregnancy, while 38.2% reported being smokers before the gestational period. However, 96.1% denied the consumption of alcohol during pregnancy, 88.2% reported not having the habit of performing physical activity and 77.6% did not have abortion in other pregnancies. Regarding the anthropometric variables, it was observed that 52.6% of pregnant women had pre-gestational BMI classifying them as non-eutrophic. Regarding nutritional status at the time of the interview, 61.8% were classified as inappropriate in the current BMI²⁴. Also, 50% of respondents were supplemented with folic acid and 53.9% had food insecurity. Regarding body image and eating disorders, it was observed that 18.4% presented distortion of body image, 42.7% were at risk for binge eating disorder and 45.3% were identified with risk behaviors for ED.

Table 3: Analysis of the adjusted prevalence ratio in relation to the outcome depressive symptoms (DS) in pregnant women attending the Primary Care of Caxias do Sul, Rio Grande do Sul, Brazil, 2017 (n=76).

Exposure variables	PR* adjusted (CI 95%)	p value**
Marital status		0.045
Married/Stable union	1	
Single/Separated/Divorced	1.54 (1.00-2.37)	
Alcohol consumption		0.473
No	1	
Yes	1.29 (0.64-2.61)	
Abortion history		0.022
No	1	
Yes	1.72 (1.08-2.74)	
Eating disorders		0.482
No risk	1	
With risk	1.70 (0.38-7.60)	
ED risk*		0.835
No risk	1	
With risk	1.17 (0.25-5.40)	

*PR: Prevalence Ratio; *ED: Eating Disorders; **Values in bold have statistical significance ($p \leq 0.05$). Final model adjusted according to Poisson regression technique, variables with $p \leq 0.20$ in crude analysis.

Regarding the outcome, pregnant women aged 26 and younger (PR: 1.20; 95%CI 0.76-1.88; $p = 0.420$), single/separated/divorced (PR: 1.50; 95%CI 0.97-2.30; $p=0.063$), self-declared white skin color (PR: 1.20; 95%CI 0.76-1.88; $p=0.420$) and with socioeconomic status from A to C1 (PR: 0.75; 95%CI 0.44-1.30; $p=0.315$) were more likely to develop DS (Table 1).

Smokers before the gestational period (21%) (PR: 1.21; 95%CI 0.69-2.14; $p=0.494$), with the habit of consuming alcohol (PR: 2.05; 95%CI 1.61-2.61; $p=0.000$) and with a history of abortion (PR: 1.57; 95%CI 1.03-2.40; $p=0.035$) are more likely to develop DS. Pre-gestational BMI (PR: 0.87; 95%CI 0.55-1.38; $p=0.571$) and current BMI (PR: 0.81; 95%CI 0.52-1.27; $p=0.380$) were not significantly associated with the outcome. There was a significant association with risk for ED (PR: 2.06; 95%CI 1.27-3.34; $p=0.003$) and binge eating (PR: 2.06; 95%CI 1.29-3.28; $p=0.002$) where participants at risk for ED and binge eating were 2 times more likely to develop DS. Still, it is noticed that food insecurity (PR: 1.08; 95%CI 0.68-1.70; $p=0.737$) and the presence of body image distortion (PR: 1.16; 95%CI 0.68-1.96; $p=0.575$) are weakly associated with the outcome (Table 2).

After the adjusted analysis (Table 3) the study identified significant associations between presence of DS and marital status and the occurrence of abortion in previous pregnancies. Single/separated/divorced pregnant women were 54% more likely to develop the outcome (PR: 1.54; 95%CI 1.00-2.37; $p=0.045$) when compared to those who were married or in a stable union. Regarding the history of abortion, a 72% higher prevalence of the outcome was observed (PR: 1.72; 95%CI 1.08-2.74; $p=0.022$). However, a high prevalence of binge eating was identified (70%) (PR: 1.70; 0.38-7.60; $p=0.482$) for the outcome when compared to pregnant women who did not have binge eating, although not statistically significant.

DISCUSSION

The present study aimed to measure the prevalence of DS and associated factors in pregnant women from Caxias do Sul, Rio Grande do Sul, where a prevalence of 46.1% was found for the outcome. The prevalence found in the present study can be interpreted as a warning to the investigated community.

When comparing the prevalence found internationally, we realize the importance of paying attention to DS during the gestational period. One study identified higher levels of DS in Brazil compared to developed countries²⁵. In an investigation conducted in Jamaica with 3,517 pregnant women, it is observed that the prevalence in this population (19.6%) is lower than what was found in this study¹¹. In a study conducted in Canada with 364 pregnant women, the prevalence of DS during pregnancy was 28.3%¹². On the other hand, in a study conducted in Melbourne, Australia with 1,102 pregnant women, a prevalence of 58.4% was

found¹³. Therefore, the prevalence is similar to a study conducted in Saudi Arabia, where the prevalence was 57.5%²⁶. These findings are close to the prevalence found in this study.

Compared to national and regional studies, a survey conducted in Rio de Janeiro with 172 pregnant women showed a prevalence of 33.7% of DS²⁷. In relation to the south of the country, in a study conducted in Pelotas, Rio Grande do Sul, Brazil, with 4,130 pregnant women, a prevalence of SD of 16% was observed²⁵. The vast majority of studies had lower prevalences compared to the present study, it is believed that due to differences between populations and their lifestyle.

When comparing the possible associations between DS and exposure variables, the present study showed significant associations with marital status and history of abortion. Thus, it is clear that single/separated/divorced pregnant women are more likely to develop DS. However, it is known that the lack of intimacy in relationships is associated with DS, thus, the occurrence can be explained by the lack of intimacy with a partner²⁸. Still, a study identified that pregnant women who did not live with their partners had a prevalence of 36% of DS²⁵, where increasing concerns during pregnancy are reported to be associated with DS²⁸. It is suggested that these concerns are possibly impairing and increasing DS in single/separated/divorced pregnant women, feeling lonely or lacking support.

Studies show that women with a history of abortion were associated with DS^{28,29}. According to Costa *et al.*²⁸, concerns about pregnancy were also associated with the outcome. However, in the present study, it is clear that pregnant women with a history of abortion had 72% more chances of developing DS. These probabilities are believed to occur due to increased concern about the gestational period, based on the possibility of a new miscarriage, interrupting pregnancy.

There is a high possibility to develop DS (70%) in pregnant women with binge eating, although not significantly associated. However, according to Easter *et al.*³⁰, who conducted a study with 137 women, binge eating is associated with DS. It is suggested that pregnant women with binge eating have greater concerns about pregnancy, their weight and body image, making them more vulnerable to psychiatric disorders related to eating behavior and DS.

Regarding age, the study identified younger women (≤ 26 years old) who were more likely (20%) to develop DS during pregnancy, going in the opposite direction to the literature observed^{2,25}. However, it should be noted that the association was not significant and potential confounders not measured by the researchers can be ruled out.

In the present study, it is observed that pregnant women who do not have paid work are more likely to develop the outcome, although not significantly associated. These results are similar to those found in studies^{12,29} in which pregnant women who do not have paid work were more likely to develop DS. Still, study linked

the presence of DS to concerns, these may be associated with financial concerns¹³. It is suggested that pregnant women who do not have paid work are exposed to financial concerns and instability, therefore tend to develop DS during pregnancy.

It was identified that the outcome is predominant in pregnant women with higher income (25%), although it was not significantly associated. According to Bawahab *et al.*²⁶, financial concerns are associated with DS. Despite the high family income, it is suggested that financial concerns are present due to the number of residents in the residence and the expenses generated during the gestational period. Therefore, it is believed that the high family income associated with financial concerns are risk factors for the development of DS during pregnancy¹³.

It was observed that pregnant women who had a smoking habit before pregnancy had a higher prevalence in relation to the outcome, although not significant. Studies have shown that pregnant women who smoked before pregnancy are less likely to develop depression compared to those who continued smoking during pregnancy³¹. In addition, women who quit smoking and develop DS tend to relapse to smoking³². It is suggested that the symptoms related to a possible tobacco abstinence are related to the higher presence of DS during pregnancy, thus requiring more attention to the pregnant woman's psychological health during this process.

Regarding alcohol consumption, this study shows that pregnant women who use alcohol have 29% more chances of developing DS, although it does not present statistical significance in the adjusted prevalence. According to Leis *et al.*³³, alcohol use during pregnancy is associated with DS, resembling the results of this study. According to Davis *et al.*³⁴, mothers with DS and depression are more likely to drink alcohol. The use of alcohol is believed to aggravate DS, however, there is a possibility that pregnant women will use it after the onset of DS.

Food insecurity is strongly associated with worse DS³⁵. In this study, it increases the probability of developing the outcome by 8%. It is suggested that it is associated with low income, the number of residents of the residence and increased concerns about eating during pregnancy^{2,28}.

Regarding body image distortion, it is noted that the variable was weakly associated with the outcome. On the other hand, it is known that body image distortion is commonly associated with severe DS³⁶. This result is believed to have an influence on gestational age, as it is the first gestational trimester, few changes in body and low weight gain³⁷.

As a limitation of this study, we highlight the reverse causality bias, since it is a cross-sectional study and no other facts that may have occurred influencing the results were considered. The homogeneity of the sample, composed exclusively of first trimester pregnant women, the possible memory bias, due to the long questionnaire that may confuse the pregnant woman,

besides the small number of interviewees. Nevertheless, there are limited national studies relating gestational risk factors with DS.

However, the present study had as potential the scope of UBS included in the study and the collected data, thus obtaining a large and diverse amount of relevant information. In addition, we emphasize the control and care for the treatment of data, minimizing typing errors. All study participants received training and were able to perform the collection, thus increasing the veracity of the data collected and the results obtained in the present study.

It is concluded that DS are present in some cases during pregnancy, observing a high prevalence, compared to regional studies, in pregnant women attended by Primary Care in the city. Still, an association between the outcome with marital status and history of abortion was identified, which can bring problems in pregnancy and postpartum. The high prevalence found in this study may be associated with the interviewed public, the dependence on the Sistema Único de Saúde (SUS/Unified Health System) for care and monitoring of pregnancy. Thus, there is a need for instruments and strategies to identify the presence of DS early in pregnancy, so that cases are diagnosed and treated.

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