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DEPRESSIVE SYMPTOMS AND ASSOCIATED FACTORS IN PREGNANT WOMEN ATTENDED IN PRIMARY HEALTHCARE

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ABSTRACT

Objective: to analyze the prevalence and factors associated with depressive symptoms in pregnant women attended in primary healthcare.
Method: this is an epidemiological, cross-sectional and analytical study conducted in Montes Claros, in the north of the state of Minas Gerais, Brazil. The dependent variable (depressive symptoms) and independent variables (sociodemographic characteristics, social support, obstetric characteristics, sexuality and health conditions) were collected through a questionnaire and validated scales. The collection took place between October 2018 and November 2019. Descriptive, bivariate and multiple analyzes were performed through multinomial logistics regression.
Results: a sample of 1,279 pregnant women was evaluated. The estimated prevalence of moderate and serious depressive symptoms was 16.2% and 25.2%, respectively. Low social support ($p<0.001$), low sexual performance ($p = 0.002$) and a high level of perceived stress ($p<0.001$) were factors associated with moderate depressive symptoms. First gestational trimester ($p = 0.006$), low social support ($p<0.001$), low sexual performance ($p<0.001$) and a high level of perceived stress ($p<0.001$) were factors associated with serious depressive symptoms.
Conclusion: the prevalence of moderate and serious depressive symptoms in pregnant women attended in primary healthcare was considerable. Factors related to social support, gestational quarter (first quarter), sexuality and perceived stress showed association with these symptoms. Caution and the promotion of mental health is necessary for pregnant women in this scenario.

DESCRIPTORS: Pregnancy. Depression. Mental health. Primary healthcare. Nursing in community health. Epidemiological inquiries.

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SINTOMAS DEPRESSIVOS E FATORES ASSOCIADOS EM GESTANTES ASSISTIDAS NA ATENÇÃO PRIMÁRIA À SAÚDE

RESUMO

Objetivo: analisar a prevalência e os fatores associados aos sintomas depressivos em gestantes assistidas na Atenção Primária à Saúde.
Método: trata-se de um estudo epidemiológico, transversal e analítico, realizado em Montes Claros, norte do estado de Minas Gerais – Brasil. A variável dependente (sintomas depressivos) e as variáveis independentes (características sociodemográficas, apoio social, características obstétricas, sexualidade e condições de saúde) foram coletadas por meio de questionário e escalas validadas. A coleta ocorreu entre outubro de 2018 e novembro de 2019. Realizaram-se análises descritivas, bivariada e múltipla mediante Regressão Logística Multinomial.
Resultados: avaliou-se amostra de 1279 gestantes. As prevalências estimadas de sintomas depressivos moderados e graves foram de 16,2% e 25,2%, respectivamente. Baixo apoio social (p<0,001), baixo desempenho sexual (p=0,002) e elevado nível de estresse percebido (p<0,001) foram fatores associados aos sintomas depressivos moderados. Primeiro trimestre gestacional (p=0,006), baixo apoio social (p<0,001), baixo desempenho sexual (p<0,001) e elevado nível de estresse percebido (p<0,001) foram fatores associados aos sintomas depressivos graves.
Conclusão: as prevalências de sintomas depressivos moderados e graves em gestantes assistidas na Atenção Primária à Saúde foram consideráveis. Fatores relativos ao apoio social, ao trimestre gestacional (primeiro trimestre), à sexualidade e ao estresse percebido apresentaram associação a esses sintomas. Nesse cenário, fazem-se necessários o cuidado ampliado às gestantes e a promoção da saúde mental.

DESCRITORES: Gravidez. Depressão. Saúde mental. Atenção primária à saúde. Enfermagem em saúde comunitária. Inquéritos epidemiológicos.

SÍNTOMAS DEPRESIVOS Y FACTORES ASOCIADOS EN GESTANTES ATENDIDAS EN ATENCIÓN PRIMARIA DE SALUD

RESUMEN

Objetivo: analizar la prevalencia y factores asociados a síntomas depresivos en gestantes atendidas en Atención Primaria de Salud.
Método: se trata de un estudio epidemiológico, transversal y analítico, realizado en Montes Claros, norte del estado de Minas Gerais – Brasil. La variable dependiente (síntomas depresivos) y las variables independientes (características sociodemográficas, apoyo social, características obstétricas, sexualidad y condiciones de salud) se recogieron mediante un cuestionario y escalas validadas. La recolección se realizó entre octubre de 2018 y noviembre de 2019. Se realizaron análisis descriptivos, bivariados y múltiples mediante Regresión Logística Multinomial.
Resultados: se evaluó una muestra de 1279 gestantes. Las prevalencias estimadas de síntomas depresivos moderados y graves fueron del 16,2% y el 25,2%, respectivamente. El bajo apoyo social (p<0,001), el bajo rendimiento sexual (p=0,002) y el alto nivel de estrés percibido (p<0,001) fueron factores asociados con síntomas depresivos moderados. El primer trimestre del embarazo (p=0,006), el bajo apoyo social (p<0,001), el bajo rendimiento sexual (p<0,001) y el alto nivel de estrés percibido (p<0,001) fueron factores asociados con síntomas depresivos severos.
Conclusión: la prevalencia de síntomas depresivos moderados y graves en gestantes atendidas en Atención Primaria de Salud fue considerable. Factores relacionados con el apoyo social, el trimestre gestacional (primer trimestre), la sexualidad y el estrés percibido se asociaron con estos síntomas. En este escenario, es necesaria una mayor atención a las mujeres embarazadas y la promoción de la salud mental.

DESCRIPTORES: Gestante. Depresión. Salud mental. Atención primaria de salud. Enfermería en salud comunitaria. Encuestas epidemiológicas.

INTRODUCTION

Pregnancy is an important phase in a woman's life and brings together diverse experiences from conception to the arrival of the newborn. The physical, hormonal, emotional and psychosocial transformations arising from this period can have an impact on their mental health[1–2].

The occurrence of depressive symptoms during pregnancy is recognized as a public health problem, with a negative impact on women's health and children's development[1,3]. Major depression during pregnancy is characterized by symptoms such as depressed mood, decreased interest in daily activities, changes in weight, sleep quality, psychomotor activities, fatigue and feelings of worthlessness or guilt[4]. Symptoms of gestational depression are conditions with high and variable prevalence across the world[5].

Mental healthcare requires care during prenatal care, especially within the scope of Primary Healthcare (PHC), in which the aforementioned symptoms can be tracked during initial consultations without postponing an assessment of maternal well-being until the puerperal phase[6]. Pregnant women attended in PHC services may be prone to social and mental health situations which encourage development of depressive symptoms. This situation demands that socio-affective and psychological aspects are also addressed by professionals in order to provide humanized and comprehensive care that goes beyond the biological dimension[7]. In this context, investigation of factors associated with depression symptoms during pregnancy should be considered[8,9,10].

It is important to highlight the impacts on the health of the maternal-fetal binomial and the possible future repercussions on the health of women, newborns and children[5], as well as the evidence that depressive symptoms constitute a risk factor for post-partem depression[11]. Therefore, there is a need to expand scientific research on the topic to identify risk factors in pregnant women in PHC in order to contribute to design policies and strategies for preventing, tracking, monitoring and promoting mental health[12]. Population-based epidemiological surveys with large samples in the community context may be relevant given the regional differences present in Brazil, the evidence gaps in PHC and in interior settings such as in the north of Minas Gerais State (MG).

Furthermore, epidemiological evidence can support holistic care for pregnant women using the Unified Health System (*Sistema* Único *de Saúde* – *SUS*) and PHC, which also includes early identification of depressive symptoms. An examination of this event must consider interfering aspects in specific sociocultural environments, such as in communities covered by PHC family health teams. The majority of nurses conduct prenatal care in PHC, which signals the relevance of research for community nursing and preventing depression. It is necessary for them and their teams to be qualified to identify and conduct the processes that involve the mental health of pregnant women, aiming to promote maternal and child health.

Therefore, this study aimed to analyze the prevalence and factors associated with depressive symptoms in pregnant women attended in PHC.

METHOD

This is a population-based, cross-sectional and analytical observational epidemiological study. Its setting was the municipality of Montes Claros, located in the northern region of the state of MG, Brazil, which has an estimated population of 417,478 inhabitants[13]. Local PHC offers full population coverage[14].

Pregnant women registered in all PHC family health teams in the urban area of the municipality of Montes Claros, in 2018, constituted the study population. It was not possible to include pregnant women living in rural areas due to logistical reasons and access difficulties. The sample size was

established aiming to estimate population parameters with a prevalence of 50% (to maximize the sample size and due to the original project contemplating several events and variables), a 95% confidence interval (95% CI) and a precision level of 2.0%. A correction was made for the finite population (N=1,661 pregnant women, which represents the number of pregnant women registered in the 15 PHC centers), and an increase of 20% to compensate for possible non-responses and losses. The calculations highlighted the need for at least 1,180 pregnant women to participate.

All PHC poles in the urban area of the city, which totaled 15 during the period of this study, were considered for sample selection. The number of pregnant women sampled at each center was proportional to the representation of this sample in relation to the total population of registered pregnant women.

For data collection, consent was requested from the municipality's PHC coordination managers. After consent from the coordination, professionals from the teams responsible for prenatal care provided a list of pregnant women in their coverage area. A member of the interviewing team made initial contact with the pregnant woman to explain and raise awareness about the study, invite her to participate and schedule data collection.

Data were collected between October 2018 and November 2019 in basic PHC health units or in the participants' homes, depending on their availability, by health professionals and undergraduate scientific students (Nursing, Medicine and Physical Education courses). Data collection took place in the form of a face-to-face interview, lasting an average of one hour. Interviewer training occurred prior to data collection. A pilot study with pregnant women registered in a PHC unit (who were not included in the study analyses) was conducted with the aim of standardizing research procedures.

The following selection criteria for the sample of pregnant women interviewed were adopted: being registered with a PHC family health team in the urban area, and at any gestational age. The exclusion criteria used were being pregnant with twins, as this could affect certain variables measured in the study, or having cognitive impairment according to a previous medical diagnosis reported by the family member and/or the family health team professional.

Data were collected using a structured questionnaire with the questions prepared by the project authors, and scales validated in Brazil. The following independent variables were considered: sociodemographic characteristics (age group, marital status, education, family income); social support; obstetric characteristics (gestational trimester, parity); sexuality; health conditions (self-reported pathologies, perceived stress); and the dependent variable (depressive symptoms).

The dependent variable (depressive symptoms in pregnant women) was assessed using the Population Screening Scale for Depression (CES-D), validated in Brazil[15–16]. The CES-D is composed of 20 items which assess the frequency of depressive symptoms experienced in the week prior to the interview, using the following grading for the signs and symptoms presented: 0 = never or rarely (symptoms present for a very short time, for less than 1 day); 1 = for a short time (symptoms present for 1 or 2 days); 2 = for a moderate period of time (symptoms present for 3 to 4 days); 3 = most of the time (symptoms present for 5 to 7 days). The final score varies from 0 to 60 points, with items 4,8, 12 and 16 being scored in descending order as the questions signal a state of well-being. The cut-off point of the CES-D scale to identify the presence of depressive symptoms was originally ≥16 points[15]. Depressive symptoms were categorized as follows: no depressive symptoms (CES-D<16); moderate depressive symptoms (CES–D ≥16 or ≤21); and severe depressive symptoms (CES-D ≥22)[16].

Sociodemographic variables were categorized as follows: age (up to 19 years, from 20-35, over 35); marital status (with and without partner); education (higher/post-secondary, secondary/high school, and primary/elementary education); family income (above two minimum monthly salaries, from one to two, and below one).

The Brazilian version of the Social Support Scale from the Medical Outcome Studies (MOS) was used to investigate the social support variable, which measures the individual's perception of the social support received as present or absent. The instrument is composed of 19 items, comprising five functional dimensions of social support (material, affective, emotional, positive social interaction and information) guided by the following question: "how often do you count on someone if you need it?". For each item, the pregnant woman indicated how often she considered each type of support using a Likert scale from never (1) to always (5). The total score of the 19 variables was calculated from the sum of their items and results with values > 66 were considered as high social support, while values with low social support were considered as ≤ 66[17].

For obstetric characteristics, the gestational trimester was calculated using the date of the last menstruation or the first ultrasound examination according to data from the prenatal card, and categorized according to gestational age into first trimester (up to 13 weeks and 6 days), second trimester (from 14 weeks to 27 weeks and 6 days) and third trimester (over 28 weeks). Parity was categorized as primiparous for women who were in their first pregnancy and multiparous for those who were in their second pregnancy or more.

The sexuality variable was assessed using the validated Sexual Quotient – Female Version (QS-F) questionnaire. The instrument is composed of 10 questions, each of which must be answered on a scale of 0 to 5. The result of the sum of the 10 answers must be multiplied by 2, which results in a total score that varies from 0 to 100. The seventh question requires different treatment, meaning that the value of the answer given (from 0 to 5) must be subtracted from 5 to obtain the final score for that question. The points were added according to the following equation: 2x (Q1 + Q2 + Q3 + Q4 + Q5 + Q6 + [5- Q7] + Q8 + Q9 + Q10), where Q = question. A cut-off point was established at 60 points to categorize female sexual function into high sexual performance (>60 points) and low sexual performance (≤ 60 points)[18].

For the health condition self-reported pathologies, the pregnant woman was asked about the presence of some possible pathologies and at the end there was the possibility of spontaneously mentioning other diseases, being categorized as yes (if the pregnant woman reported any disease before or during pregnancy) and no (I don't have a response).

The level of perceived stress was assessed using the Perceived Stress Scale (PSS-14), an instrument validated for the Brazilian population[19]. It consists of 14 items that relate events and situations that occurred in the last 30 days, with answer options ranging from zero to four (0 = never; 4 = always). Questions with a positive connotation have their summed scores reversed. The sum of the question scores provides scores which can range from 0 (no symptoms of stress) to 56 (symptoms of extreme stress)[19]. The PSS-14 scale was dichotomized into <28 and ≥28. Pregnant women with scores <28 were classified as having a low stress level and those with scores ≥28 as having a high stress level[20].

Descriptive, bivariate and multiple analyzes were performed in statistically treating the data. Frequency distributions were calculated in the descriptive analysis to describe the categorical variables. Prevalences were estimated with 95%CI for the depressive symptom variable categories: no symptoms, moderate symptoms and severe symptoms. The variable of depressive symptoms was considered the study outcome. Sociodemographic variables and social support, obstetric characteristics, sexuality and health conditions were treated as independent variables.

Bivariate analyzes were processed to identify variables associated with the outcome. The prevalence of "no depressive symptoms", "moderate depressive symptoms" and "severe depressive symptoms" were compared at this stage according to the categories of independent variables using the Chi-squared test. The variables that presented a descriptive level (p-value) up to 0.20 were selected for multiple analysis. The Multinomial Logistic Regression model was chosen for the multiple analysis,

and the adjusted odds ratios (OR) were estimated with the respective 95% CI adopting a significance level of 0.05. The model's goodness-of-fit was assessed using the Deviance test and Nagelkerke's Pseudo-R^2. All analyzes were performed using the IBM SPSS version 23.0 program.

This study was conducted in accordance with the standards for studies involving human beings determined by the National Health Council. The project was approved by the Research Ethics Committee.

RESULTS

A total of 1,279 pregnant women participated in the study, with ages ranging from 14 to 46 years and an average of 26.6 years. The majority of women (72.4%) were aged between 20 and 35 years, had high social support (78.4%), were in the second trimester of pregnancy (40.3%), reported having high sexual performance (72.6%), did not report pathologies during pregnancy (69.2%), and presented a low level of perceived stress (75.8%). The other evaluated variables are shown in Table 1.

The distribution of depressive symptom scores in the pregnant women studied presented the following descriptive measures: mean=15.8 (standard deviation=±10.3); minimum value=0.0; maximum value=57; 25th percentile=8.0; 50th percentile=13.0; and 75th percentile=22.0. The estimated prevalence of moderate and severe depressive symptoms were respectively equal to 16.2% (95% CI=14.2-18.3) and 25.2% (95% CI=22.9-27.7).

Table 1 – Characterization of pregnant women attended in Primary Healthcare in Montes Claros, MG, Brazil, 2018-2019.(n=1,279).

Variables	n*	%
Sociodemographic characteristics and social support		
Age range		
Up to 19 years	194	16.1
20-35 years	873	72.4
Over 35 years	138	11.5
Marital status		
No companion	297	23.3
With companion	979	76.7
Education		
Post-secondary	254	19.9
High school	829	64.9
Elementary	194	15.2
Family income (minimum monthly salary)		
Over 2 salaries	431	35.2
One to two salaries	479	39.1
Under one salary	316	25.7
Social support		
Low social support	272	21.6
High social support	989	78.4

Table 1 – Cont.

Variables	n*	%
Obstetric characteristics		
Gestational trimester		
First trimester	341	26.7
Second trimester	515	40.3
Third trimester	422	33.0
Parity		
Primiparous	607	48.6
Multiparous	641	51.4
Sexuality		
Low sexual performance	343	27.4
High sexual performance	907	72.6
Health conditions		
Self-reported pathologies		
Yes	387	30.8
No	869	69.2
Perceived stress		
Low perceived stress	954	75.8
High perceived stress	304	24.2
Depressive symptoms (outcome variable)		
No symptoms	728	58.6
Moderate symptoms	201	16.2
Severe symptoms	314	25.2

* Totals vary due to information loss (missing).

Table 2 presents the bivariate analysis results which compared the prevalence of the categories no depressive symptoms, moderate depressive symptoms and severe depressive symptoms according to the independent variables. It was found that the following variables were associated with depressive symptoms: age group, income, education, marital status, social support, gestational trimester, parity, sexuality and perceived stress, considering a significance level of 0.20. These variables were selected for the multiple model.

The following factors associated with moderate depressive symptoms were identified in the final model: low social support (OR=2.60; 95%CI=1.74-3.90); low sexual performance (OR=1.77; 95%CI=1.24-2.54); and high level of perceived stress (OR=3.80; 95%CI=2.52-5.73). Regarding severe depressive symptoms, low social support (OR=3.89; 95%CI=2.69-5.62), first trimester of pregnancy (OR=1.77; 95%CI=1.18-2.65), low sexual performance (OR=1.97; 95%CI=1.39-2.79); and high level of perceived stress (OR=10.27; 95%CI=7.17-14.71), if it remained associated with the outcome (Table 3).

Table 2 – Bivariate analysis of the categories of depressive symptoms according to sociodemographic, obstetric variables, sexuality and health conditions of pregnant women attended in Primary Healthcare in Montes Claros, MG, Brazil, 2018-2019. (n=1,279).

Variables	Depressive symptoms			P-value*
	No symptoms	Moderate symptoms	Severe symptoms	
	n (%)	n (%)	n (%)	
Sociodemographic characteristics and social support				
Age range				0.115
Up to 19 years	102 (53.1)	34 (17.7)	56 (29.2)	
20-35 years	519 (61.1)	136 (16.0)	195 (22.9)	
Over 35 years	79 (58.5)	16 (11.9)	40 (29.6)	
Marital status				0.003
No companion	275 (65.5)	60 (14.3)	85 (20.2)	
With companion	274 (59.6)	72 (15.6)	114 (24.8)	
Education	159 (51.0)	57 (18.3)	96 (30.7)	
Post-secondary				0.004
High school	159 (64.4)	29 (11.7)	59 (23.9)	
Elementary	478 (59.4)	135 (16.7)	193 (23.9)	
Family income (minimum monthly salary)	89 (47.3)	37 (19.7)	62 (33.0)	
Over 2 salaries				0.021
One to two salaries	148 (52.3)	59 (20.8)	76 (26.9)	
Under one salary	578 (60.4)	142 (14.8)	237 (24.8)	
Social support				<0.001
Low social support	78 (29.4)	57 (21.5)	130 (49.1)	
High social support	645 (66.5)	141 (14.6)	183 (18.9)	
Obstetric characteristics				
Gestational trimester				0.022
First trimester	167 (50.9)	59 (18.0)	102 (31.1)	
Second trimester	304 (60.6)	79 (15.8)	118 (23.6)	
Third trimester	256 (62.0)	63 (15.3)	94 (22.7)	
Parity				0.019
Primiparous	364 (61.8)	89 (15.1)	136 (23.1)	
Multiparous	351 (56.0)	110 (17.5)	166 (26.5)	
Sexuality				<0.001
Low sexual performance	144 (42.9)	66 (19.6)	126 (37.5)	
High sexual performance	568 (64.2)	134 (15.1)	183 (20.7)	
Health conditions				
Self-reported pathologies			0.206	
Yes	218 (57.7)	61 (16.1)	99 (26.2)	
No	502 (59.2)	137 (16.2)	208 (24.6)	
Perceived stress				<0.001
Low perceived stress	660 (70.5)	139 (14.8)	138 (14.7)	
High perceived stress	63 (21.2)	60 (20.2)	174 (58.6)	

*Chi-squared test.

Table 3 – Final model of factors associated with depressive symptoms in pregnant women attended in Primary Healthcare in Montes Claros, MG, Brazil, 2018-2019. (n=1,279).

Variables	Depressive symptoms*			
	Moderate†		Severe	
	ORa [95%CI]	P-value	ORa [95%CI]	P-value
Sociodemographic characteristics and social support				
Social support				
High social support	1.00	<0.001	1.00	<0.001
Low social support	2.60 [1.74-3.90]		3.89 [2.69-5.62]	
Obstetric characteristics				
Gestational trimester				
Third trimester	1.00		1.00	
Second trimester	1.05 [0.72-1.55]	0.801	1.07 [0.74-1.56]	0.709
First trimester	1.39 [0.91-2.13]	0.128	1.77 [1.18-2.65]	0.006
Sexuality				
High sexual performance	1.00	0.002	1.00	<0.001
Low sexual performance	1.77 [1.24-2.54]		1.97 [1.39-2.79]	
Health conditions				
Perceived stress				
Low perceived stress	1.00	<0.001	1.00	<0.001
High perceived stress	3.80 [2.52-5.73]		10.27 [7.17-14.71]	

* Reference category: no depressive symptoms. †Deviance Test: x^2 (82)=87.4; p-value=0.322; Nagelkerke's pseudo R^2=0.302. OR: Adjusted Odds Ratio, 95%CI: 95% confidence interval.

DISCUSSION

This study showed a significant prevalence of moderate and severe depressive symptoms in pregnant women attended in PHC. This result is in line with a study which analyzed 10 systematic reviews and demonstrated that the overall prevalence of gestational depression can reach 65%[5]. In a study conducted in PHC in Brazil, 14.8% of 209 pregnant women in a city in the interior of MG presented depressive symptoms[21]. Another study carried out with 1264 pregnant women from Pelotas, RS, Brazil, demonstrated a prevalence of 21.1% of depressive symptoms in pregnant women attended in *SUS*[22]. There are variations in prevalence, which can be attributed to different methodological criteria such as study setting, instrument used for screening and the population studied[5].

Despite the high prevalence, historically there is little preventive effort to deal with depression and its risk factors during the gestational period, even though it is a condition related to several complications such as increased risk of mental and behavioral disorders in mothers and their children, in addition to damage to the child's development[5]. Furthermore, prenatal depressive symptoms constitute a consistent risk factor for postpartum depression, which in turn significantly increases the likelihood of suicide in the postpartum period[11,23–24]. When these symptoms are not diagnosed and treated early they have maternal-fetal consequences, which is why an appropriate approach can lead to better results for the health of women and children[12].

The following factors associated with the assessed condition were recorded: low social support, the first trimester of pregnancy, low sexual performance and a high perceived stress level.

Low social support was positively associated with greater chances of developing moderate and severe depressive symptoms in the pregnant women studied. Similar results were evidenced

in a study conducted with Chinese pregnant women[25] and in a systematic review with a sample of 64,449 pregnant women[26]. Not having social, family and marital support can result in a feeling of isolation for the pregnant woman and the impossibility of expressing desires, frustrations and fears with consequent psychological impact[8,25–26].

Social support provides a support network for pregnant women, providing them with emotional and social care in facing the changes which encompass the gestational period, and must be offered by the health service, partners, family and friends, constituting a protective factor for mental health[23]. It is an important strategy for coping with the consequences of mental illness during pregnancy and helps prevent and/or reduce the risk of adverse outcomes in pregnancy and childbirth[8,26].

This study showed an association between severe depressive symptoms and the first trimester of pregnancy when compared to the third trimester, which is in agreement with a Chinese study carried out with 5780 pregnant women that found that the first trimester is the period with the highest prevalence of depression among pregnant women[27]. The prevalence of depression in a prospective cohort study carried out in Soweto, South Africa, with 946 pregnant women in the first trimester was 27%[8]. The first trimester is considered a time of strong psychological vulnerability in association with hormonal, physical, psychological and emotional factors typical of pregnancy[2].

A possible explanation may be related to the fact that the beginning of pregnancy can cause fears due to the thought of an uncertain future in leading a new life, which results in maternal emotional and physical suffering[2,8]. It is speculated that somatic symptoms associated with early pregnancy, such as nausea, vomiting, polyuria, fatigue and constipation, may also be related to the higher prevalence of depression in the first trimester[27].

It was found that low sexual performance was also a factor associated with the outcome in this study, similar to an investigation performed with pregnant Iranian women[9]. A woman's sexuality and sexual functioning are part of her psychosocial well-being, thus understanding that low sexual performance during pregnancy may be due to the severity of the depressive symptoms presented and possible stigmas involving physical appearance arising from the physiological changes that occur during the gestational period, and is an important aspect in providing care to women at this stage[2,9,28].

Furthermore, an association was recorded between depressive symptoms and a high perceived stress level. Previous studies demonstrate that if a woman experiences a stressful event during pregnancy she will be subject to mental health problems, especially prenatal depressive symptoms[2,8,25]. Physical and psychological changes, such as concerns about the child's future and changes after motherhood experienced by women during pregnancy can cause anxiety and emotional suffering, influencing behavior for the new role of raising children. This change process can make pregnant women more vulnerable to stress and mental illness, with the consequent emergence of depressive symptoms[2,25].

Finally, it is worth highlighting that recognizing gestational depression as an important morbidity is essential for diagnosis. The use of screening instruments for depressive symptoms during pregnancy, which involves the work of a multidisciplinary team, can be an effective way of preventing this condition and promoting maternal-fetal health[6,29]. PHC plays a fundamental role in this context, as professionals have the opportunity to evaluate pregnant women in their social, family and marital relationships. This contributes to recognizing predisposing factors and attention to mental health, which is still neglected in care focused on the physical changes of the pregnancy period[7,23].

Research on gestational depression, one of the least investigated and undertreated disorders during pregnancy, encourages discussion on the importance of strengthening public policies that value women's mental health during the pregnancy-puerperal cycle and on prevention and control strategies for this morbidity in the PHC scenario[11,26,30]. Human resource deficits, stigma, knowledge gaps and financial constraints may be factors that contribute to failure to provide primary mental

healthcare. Improvement in public policies for qualifying the healthcare network for pregnant women provides comprehensive health for the mother-fetus binomial. Consequently, there is a reduction in the negative impacts of maternal depression on women's health and the child's cognitive and behavioral development[26,29–30].

This work was limited by the use of self-reported information, which can be influenced by memory bias and social acceptability. The non-inclusion of pregnant women from rural areas was another limitation. It is suggested that future research be carried out with a longitudinal design, which may better elucidate the predictive factors found in this study, in addition to other possible associated factors such as previous depression, pregnancy losses and unwanted pregnancy.

Despite these limitations, it is worth highlighting positive aspects of this investigation. Nationally validated instruments were applied, which gave greater reliability to the observed findings. It was a broad population-based epidemiological study with a significant sample and coverage of the entire urban area covered by the PHC teams. The Multinomial Logistic Regression analysis provided greater robustness to the study. It is believed to have contributed to new epidemiological evidence for public health sector managers, researchers and health professionals involved in primary healthcare for women and children.

CONCLUSION

This study revealed a significant prevalence of moderate and severe depressive symptoms in pregnant women attended in PHC. The variables identified as factors associated with the analyzed outcome were low social support, first trimester of pregnancy, low sexual performance and a high perceived stress level. The need for expanded, humanized and comprehensive care for pregnant women during prenatal care in the context of PHC is evident, including mental health promotion and preventing depressive symptoms.

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NOTES

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CONFLICT OF INTEREST

There is no conflict of interest.

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