# Mexican pregnant women show higher depression and anxiety with rising age and in the case of being single

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<sup>3</sup> Faculty of Medicine, Autonomous University of the State of México (UAEMex) **Background.** Pregnancy is an important predisposition period to develop anxiety and depression, with a direct impact on the woman's offspring. The aim of this study was to report the correlation between depression and anxiety in pregnant women and its association with the marital status and age.

**Materials.** A descriptive, retrospective and cross-sectional study was conducted in the outpatient care of the Psychology Service at the "Mónica Pretelini Sáenz" Maternal Perinatal Hospital (HMPMPS), Toluca, Mexico, from June 2012 to March 2019. As routine, the Beck Depression Inventory (BDI-II) and the Beck Anxiety Inventory-Trait (BAIT), were applied to all women seeking attention at the HMPMPS. Only pregnant patients were selected for this study, with the women referred for the first time to the external Psychology Clinic as inclusion criteria. Pearson's correlation coefficient and the frequency of cases for age, BDI-II, and BAIT were obtained using the IBM SPSS Statistics \* v.23 software.

**Results.** The study included 2947 pregnant patients with a mean age of 28.6 ± 6.9 years. Of these, 2616 (88.8%) presented with mild anxiety, 269 (9.1%) with moderate, and 62 (2.1%) with severe anxiety. On the other hand, 2149 (72.9%) patients presented with minimal depression, 341 (11.6%) mild depression, 268 (9.1%) moderate depression, and 189 (6.4%) had severe depression. The correlations between age and BDI-II was -0.026 (P = 0.152), between age and BAI was -0.038 (P = 0.037), and between BAIT and BDI-II 0.650 ( $P \le 0.001$ ).

**Conclusions.** The age group with the highest frequency of depression and anxiety was from 20 to 29 years. The absence of a stable partner represented an important risk factor for anxiety and depression during pregnancy.

**Keywords:** age, anxiety, depression, marital status, pregnancy, risk factors

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## INTRODUCTION

Anxiety disorders are the most prevalent psychiatric disorders worldwide, with a presentation peak in the third decade of life that coincides with the period in which most women become pregnant (1). The increase in mood disorders is prevalent during the reproductive age. In fact, perinatal depression, that is, depression during pregnancy or 12 months postpartum (2) is one of the most frequent complications of pregnancy. However, the percentage of the affected women varies considerably among countries and economic status (3–5).

Evidence shows that depression and anxiety during pregnancy have adverse effects on the foetus, such as intrauterine growth restriction and preterm birth, poorer child neurodevelopment, among other complications for the baby (6, 7), as well as preeclampsia, arterial hypertension (8) in the mother. It is also recognized as an association between gestational diabetes and postpartum depression (9). Even more, pregnancy depression may lead to long-lasting or permanent mood disorders throughout life (10).

A study conducted by Oberlander et al. showed that some epigenetic changes occur in the foetus when it is exposed to alterations in the mother's mood, especially anxiety and depression alterations, which cause an increase in the methylation of the *Nr3C1* glucocorticoid receptor gene that is expressed in the hippocampal region. An increase in the methylation of this gene causes an increase in the reactivity towards stress of the hypothalamic-pituitary-adrenal cortex axis in the offspring of mothers who had depression or anxiety during pregnancy (11).

The American College of Obstetricians and Gynaecologists (ACOG) recommends performing at least once during pregnancy psychological screening for early detection of psychiatric disorders (12). Both in the general population and in pregnant women, the diagnosis of a depressive condition is based on the Diagnostic and Statistical Manual for mental illnesses (DSM-V) criteria. However, there are other tools, among which are such questionnaires as as the Beck Depression Inventory (BDI) (13), the Center for Epidemiologic Studies Depression Scale, the Zung Self-Assessment Depression Scale, the General Health Questionnaire, the Hopkins Symptom Checklist, the Mental Health Inventory and the Hospital Anxiety and Depression Scale (14). Likewise, there are several options for anxiety evaluation: the Beck Anxiety Inventory (BAI) (15), State-Trait Anxiety Inventory (STAI), Beck Anxiety Inventory-Trait (BAIT), Cognitive Somatic Anxiety Questionnaire (CSAQ), Endler Multidimensional Anxiety Scales-Trait (EMAS-T), Four Systems Anxiety Questionnaire (FSAQ), State-Trait Inventory for Cognitive and Somatic Anxiety (STIC-SA), and the Three Systems Anxiety Questionnaire (TSAQ) (16).

Both the BDI-II and the BAIT consist of 21 criteria, each with a score that varies between 0 and 3 points, which detect both depressive and anxiety symptoms and their severity; therefore, the final score of the patient can be between 0 and 63 points, which is classified as follows: 0-13 – minimum depression; 14-19 – mild depression; 20-28 – moderate depression; and 29-63 – severe depression for BDI-II. For the BAIT, the classification according to its score is: 0-21 – mild anxiety; 22-35 – moderate anxiety; >36 – severe anxiety.

In Mexico, there is a high rate of teenage pregnancy and women face the challenge of living in a country ranked 73 in the Gender Inequality Index Rank (17), which presupposes greater risk of stress and anxiety during pregnancy. The aim of this study was to report the correlation of depression and anxiety in pregnant women and its association with the marital status and age.

#### MATERIALS AND METHODS

#### Type and setting

This was a descriptive, retrospective and cross-sectional study conducted at the "Mónica Pretelini Sáenz" Maternal Perinatal Hospital (HMPMPS), Health Institute of the State of Mexico (ISEM), Toluca, Mexico, reviewing the records of the outpatient care service of the Psychology Service from June 2012 to March 2019.

#### Patients

The HMPMPS is a third-level hospital focused on the medical care of low-income population which in general is of mestizo nature. The inclusion criteria were exclusively pregnant patients referred for the first time to the external Psychology Clinic. Medical files with missing information on psychological evaluation were excluded from the final analysis.

# Tests and personal information

As part of the routine psychology consultation, the BDI-II, which has a specificity of 97–100%, (18) and the BAIT test are applied to all women seeking attention at the HMPMPS. The following marital status was considered: consensual union couple, married, single, separated, divorced, widowed, and not recorded. The types of occupation activities were: a housewife, an informal type employee, individual commercial work, a student, office work, a healthcare professional, teaching work, and not recorded. This information was kept in an Excel sheet.

#### Statistical analysis

Age was reported in mean  $\pm$  SD for the full population and in 10-year ranges to describe the results for BDI-II and BAIT tests. Statistical processing and analysis were performed with IBM SPSS Statistics<sup>®</sup> v.23 software, through which Pearson's correlation coefficient and the frequency of cases for age, BDI-II, and BAIT were obtained. In all cases, the level of significance was set at  $p \le 0.05$ .

## Ethics

This project was approved by the Ethics and Research Committee of the HMPMPS (code:

217B500402017030). No risk was attributed to pregnant women or their neonates according to the regulations of the General Law on Health in Research Matters, and it was in compliance with the Declaration of Helsinki (Fortaleza, Brazil) not requiring the signing of informed consent.

## RESULTS

Taking into account the inclusion and exclusion criteria, after data analysis the information of 2947 patients was processed. The average age of the patients in this study was  $28.6 \pm 6.9$  years. Regarding the anxiety classification according to the BAIT, 2616 (88.8%) presented with mild anxiety, 269 (9.1%) with moderate, and 62 (2.1%) with severe anxiety.

On the other hand, based on the BDI-II depression test, 2149 (72.9%) patients presented with minimal depression, 341 (11.6%) had mild depression, 268 (9.1%) showed moderate depression, and 189 (6.4%) patients had severe depression. Table 1 illustrates the distribution of depression severity by age range in the population studied and Table 2 illustrates the distribution of the degree of anxiety severity by age range.

Table 1. Comparison between the age groups and their BDI-II classification

Age range (years)	Depression classification according to BDI-II				Total
	Minimal	Mild	Moderate	Severe	
Count	130	18	16	7	171
% within age groups	76.0	10.5	9.4	4.1	100.0
% within depression classification according to BDI-II	6.0	5.3	6.0	3.7	5.8
% of the total	4.4	0.6	0.5	0.2	5.8
Count	1106	191	157	107	1561
% within age groups	70.9	12.2	10.1	6.9	100.0
% within depression classification according to BDI-II	51.5	56.0	58.6	56.6	53.0
% of the total	37.5	6.5	5.3	3.6	53.0
Count	739	110	73	64	986
% within age groups	74.9	11.2	7.4	6.5	100.0
% within depression classification according to BDI-II	34.4	32.3	27.2	33.9	33.5
% of the total	25.1	3.7	2.5	2.2	33.5
	Count % within age groups % within depression classification according to BDI-II % of the total Count % within age groups % within depression classification according to BDI-II % of the total Count % within age groups % within age groups % within age groups	Age range (years)         Image           Minimal         Minimal           Count         130           % within age groups         76.0           % within depression classification according to BDI-II         6.0           % within depression classification according to BDI-II         4.4           Count         1106           % within age groups         70.9           % within depression classification according to BDI-II         51.5           % within depression classification according to BDI-II         37.5           % within depression classification according to BDI-II         739           % within age groups         74.9           % within depression classification according to BDI-II         34.4	Age range (years)         Image of the second s	Age range (years)         Image of the second s	Age range (years)         Image of the second s

Age range (years)		Depression classification according to BDI-II				Total
		Minimal	Mild	Moderate	Severe	
	Count	173	22	21	11	227
40-49	% within age groups	76.2	9.7	9.3	4.8	100.0
40-49	% within depression classification according to BDI-II	8.1	6.5	7.8	5.8	7.7
	% of the total	5.9	0.7	0.7	0.4	7.7
	Count	1	0	1	0	2
50-59	% within age groups	50.0	0.0	50.0	0.0	100.0
50-59	% within depression classification according to BDI-II	0.0	0.0	0.4	0.0	0.1
	% of the total	0.0	0.0	0.0	0.0	0.1
	Count	2149	341	268	189	2947
	72.9	11.6	9.1	6.4	100.0	
	100.0	100.0	100.0	100.0	100.0	
	72.9	11.6	9.1	6.4	100.0	

Table 1. (Continued)

BDI-II: The Beck Depression Inventory.

 Table 2. Comparison between the age groups and their BAIT classification

			Anxiety classification according to BAIT			
	Age range (years)	Mild	Moderate	Severe	Total	
	Count	155	14	2	171	
_	% within age groups	90.6	8.2	1.2	100.0	
10–19	% within anxiety classification according to BAIT	5.9	5.2	3.2	5.8	
	% of the total	5.3	0.5	0.1	5.8	
	Count	1368	162	31	1561	
	% within age groups	87.6	10.4	2.0	100.0	
20-29	% within anxiety classification according to BAIT	52.3	60.2	50.0	53.0	
	% of the total	46.4	5.5	1.1	53.0	
	Count	887	74	25	986	
-	% within age groups	90.0	7.5	2.5	100.0	
30-39	% within anxiety classification according to BAIT	33.9	27.5	40.3	33.5	
-	% of the total	30.1	2.5	0.8	33.5	
	Count	205	18	4	227	
40-49	% within age groups	90.3	7.9	1.8	100.0	
	% within anxiety classification according to BAIT	7.8	6.7	6.5	7.7	
	% of the total	7.0	0.6	0.1	7.7	

Age range (years)		Anxiety clas	Anxiety classification according to BAIT			
		Mild	Moderate	Severe	Total	
	Count	1	1	0	2	
- 50–59 <sup>–</sup>	% within age groups	50.0	50.0	0.0	100.0	
	% within anxiety classification according to BAIT	0.0	0.4	0.0	0.1%	
	% of the total	0.0	0.0	0.0	0.1	
- Total - -	Count	2616	269	62	2947	
	88.8	9.1	2.1	100.0		
	100.0	100.0	100.0	100.0		
	88.8	9.1	2.1	100.0		

#### Table 2. (Continued)

BAIT: Beck Anxiety Inventory-Trait.

The occupation activity was as follows: 2285 (77.5%) patients did household chores or referred to themselves as housewives, 13.7% represented informal employees, 3.3% individual commercial work, 2% students, 1.2% office work, 0.8% health professionals, 0.5% teaching work, and 0.8% of the study population had not recorded their occupation. Table 3 shows the comparison between the occupation of the study population and the BDI-II score, and Table 4 shows the comparison between the occupation of the study population and the BAIT score.

Regarding the marital status of the population studied, 1295 (43.9%) of the patients were in a sta-

ble relationship of free union type, 1239 (42%) were married, 10.2% reported being single, 0.4% separated, 0.2% divorced, 0.1% widowed, and 3.1% of the study population did not have their marital status recorded. Table 5 depicts the comparison of the marital status and the BDI-II and BAIT scores, showing that the absence of a stable partner represents an important risk factor for anxiety and depression during pregnancy.

While the correlation between age and BDI-II was -0.026 (P = 0.152), the correlation of age with BAIT was -0.038 (P = 0.037), and the correlation between BAIT and BDI-II was 0.650 ( $P \le 0.001$ ).

			BDI-II Classification					
		Minimal N (%)	Mild N (%)	Moderate N (%)	Severe N (%)	Total		
	Housewife	1698 (74.31)	262 (11.47)	192 (8.4)	133 (5.82)	2285		
	Informal type employees	269 (66.58)	47 (11.63)	49 (12.13)	39 (9.65)	404		
	Individual commercial work	62 (63.27)	13 (13.27)	13 (13.27)	10 (10.2)	98		
Oceannation	Student	39 (65.00)	10 (16.67)	7 (11.67)	4 (6.67)	60		
Occupation	Office work	29 (80.56)	2 (5.56)	4 (11.11)	1 (2.78)	36		
	Healthcare professionals	20 (83.33)	2 (8.33)	0 (0)	2 (8.33)	24		
	Teaching work	13 (81.25)	2 (12.50)	1 (6.25)	0 (0)	16		
	Not recorded	19 (79.17)	3 (12.50)	2 (8.33)	0 (0)	24		
	Total	2149	341	268	189	2947		

Table 3. Comparison between occupation and BDI-II classification

BDI-II: The Beck Depression Inventory.

		BAIT classification				
		Mild	Moderate	Severe	Total	
		N (%)	N (%)	N (%)		
	Housewife	2047 (89.58)	201 (8.80)	37 (1.62)	2285	
	Informal type employees	346 (85.64)	42 (10.40)	16 (3.96)	404	
	Individual commercial work	87 (88.78)	7 (7.14)	4 (4.08)	98	
Occupation	Student	49 (81.67)	10 (16.67)	1 (1.67)	60	
Occupation	Office work	31 (86.11)	4 (11.11)	1 (2.78)	36	
	Healthcare professionals	21 (87.50)	2 (8.33)	1 (4.17)	24	
	Teaching work	15 (93.75)	0 (0)	1 (6.25)	16	
	Not recorded	20 (83.33)	3 (12.50)	1 (4.17)	24	
Total		2616	269	62	2947	

Table 4. Comparison between occupation and BAIT classification

BAIT: Beck Anxiety Inventory-Trait.

Table 5. Comparison between the marital status and BDI-II classification

		BDI-II classification		BAIT	classification	n		
		Minimal	Mild	Moderate	Severe	Mild	Moderate	Severe
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
	Consensual union couple	945 (72.97)	149 (11.51)	126 (9.73)	75 (5.79)	1146 (88.49)	119 (9.19)	30 (2.32)
	Married	937 (75.63)	138 (11.14)	93 (7.51)	71 (5.73)	1116 (90.07)	103 (8.31)	20 (1.61)
Marital	Single	192 (63.79)	38 (12.62)	35 (11.63)	36 (11.96)	255 (84.72)	38 (12.62)	8 (2.66)
status	Separated	5 (41.67)	0 (0)	4 (33.33)	3 (25.00)	10 (83.33)	1 (8.33)	1 (8.33)
	Divorced	4 (80.00)	1 (20.00)	0 (0)	0 (0)	5 (100)	0 (0)	0 (0)
	Widowed	3 (75.00)	1 (25.00)	0 (0)	0 (0)	4 (100)	0 (0)	0 (0)
	Not recorded	63 (69.23)	14 (15.38)	10 (10.99)	4 (4.40)	80 (87.91)	8 (8.79)	3 (3.30)
	Total	2149	341	268	189	2616	269	62

BAIT: Beck Anxiety Inventory-Trait.

BDI-II: The Beck Depression Inventory.

# DISCUSSION

According to the data of our study, 27.1% of the patients presented with mild or more severe depression, which is three times higher than in the USA (19). A highly probable explanation of this difference is the summary of unfavourable conditions for a happy and satisfactory pregnancy, and more violence of any kind against pregnant women that increases the risk of depression (20, 21). Also, it can be inferred that phenomena such as machismo, sexism, and even feminicide contribute to a very dangerous situation for pregnant women in some Mexican municipalities.

Ramos et al. reported high levels of anxiety during the middle and the last stages of pregnancy associated with a shorter gestational period and preterm birth; also, a relationship was observed between ethnicity and anxiety levels, and as such, pregnant women of Latin origin showed the highest levels of anxiety (22).

Risk factors that influence the development of anxiety during pregnancy include health (psychiatric comorbidity, previous history of abortion, foetal loss, a preterm birth, a neonatal death), social (low income, social violence), and family factors (absence of a stable partner, having more than three children, family or partner violence); having a higher incidence of pregnancy among women under 19 years old compared to pregnant women of over 25 years (23, 24). In this study, it was found that the age group that presented the highest proportion of severe anxiety was 30 to 39 years (2.5%), followed by the group between 20 and 29 years of age (2%). A previous study in Mexico, depression was associated with depression before pregnancy, anxiety during pregnancy, smoking, unhappiness with the foetal sex, and unintended pregnancy (25). Although the last three variables were not analyzed in the present study, it is highly probable that unhappiness with the foetal sex could be more critical for a depressive disorder in the older group.

Regarding moderate anxiety, the age group of 50–59 years old presented the highest proportion with 50%; it was followed by the age ranges of 20–29 years (10.2%) and 10–19 years (8.2%). When analyzing the moderate and severe anxiety groups as a single set of data, the age group with the highest percentages was that of 50–59 years with 50%, followed by the group of 20–29 years with 12.4%, and then by the age group of 30–39 years with 10%.

As for depression, it was found that the age group with the highest levels of severe depression was between the ages of 20 to 29 (6.9%), followed by the ages of 30 to 39 years with 6.5%. Both age groups also showed the highest data of the sum of severe, moderate, and mild depression with 29.2% and 25.1%, respectively. The group of 50–59 years of age presented 50% of moderate depression. This fact points to the relevance of evaluating the age group of 20 to 29 years as an extreme risk group because it has the highest frequency of anxiety and depression during pregnancy.In a country with high indexes of violence against women, higher indexes of perinatal depression could be related with previous cases of physical abuse (26).

This study further established an analysis of the anxiety and depression data compared to the patient's marital status, finding that there was a higher frequency of both conditions in patients who did not have a stable partner. For example, the marital status that presented the highest percentage (58.3%) of depression (mild, moderate, and severe) was the group of patients who said they were separated from their partner, followed by the group of single women, which comprised 36.21% at the time of the study. Married marital status presented the sum of 24.37% of mild (11.14%), moderate (7.51%), and severe depression (5.73%); and free union marital status presented 27.02% for the three above-mentioned levels of depression (11.51%, 9.73%, and 5.79%, respectively).

In the case of anxiety, the group that had no stable partners had a higher percentage of a positive diagnosis of this affliction than those with a stable partner. Similarly, the group that presented the highest percentage of moderate and severe anxiety (16.66%) was classified as separated marital status, followed by those who said they were single (15.28%), in a free union (11.50%), and those who were married (9.92%). These results confirm the findings of other studies, according to which the absence of a stable partner is a risk factor for anxiety and depression (27).

In relation to the patients' occupation, according to the BDI-II and BAIT scores, the group that presented the highest percentage (36.73%) of depression (mild, moderate, and severe) was that of the women engaged in individual economic activities, followed by students (35%), and by the patients employed in the informal sector of economy (33.42%). The group of housewives comprised 25.68%, women working in offices 19.44%, women in teaching work 18.75%. The patients in the sector of health professionals had the lowest depression percentage (16.66%). A very clear difference can be observed between the patients who had a stable job in the formal sector and those who did not have a formal job, and/or those engaged in individual trades and students. Regarding anxiety, it was found that the group that designated themselves as students had the highest percentage of moderate and severe anxiety (18.33%); it was followed by those employed in the informal sector (14.36%).

It might be argued that a limitation of this study is that the recommended test for pregnancy is the Edinburgh Postnatal Depression Scale (EPDS), but the BDI-II was chosen by the Psychology Service of our hospital, because the screening is generalized for pregnant and non-pregnant women. According to our sample characteristics and the number of patients, the results could be extrapolated to Mexican and Latin-American pregnant women of the medium-low or low economic status.

# CONCLUSIONS

The absence of a stable partner represents an important risk factor for anxiety and depression during pregnancy. This could be explained by the fact that not having a stable partner represents a lack of economic, emotional, and social support.

According to the results of our study, being engaged in individual business activities, having a job in the informal sector of economy, or being a student at the time of pregnancy represented a risk factor for depression compared to pregnant women who had an office job, those in the health or in the education sectors. This variation could be due to the uncertainty generated by pregnancy with respect to all the changes that occur with it, compared with the variability of economic income and the lack of security in stability of their jobs.

## **CONFLICT OF INTEREST**

Authors do not have any conflict of interest to declare.

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## References

 Bowen A, Bowen R, Maslany G, Muhajarine N. Anxiety in a socially high-risk sample of pregnant women in Canada. Can J Psychiatry. 2008; 53(7): 435–40.

- Becker M, Weinberger T, Chandy A, Schmukler S. Depression during pregnancy and postpartum. Curr Psychiatry Rep. 2016; 18(3): 32. doi: 10.1007/ s11920-016-0664-7.
- Martínez-Paredes JF, Jácome-Pérez N. Depression in pregnancy. Rev Colomb Psiquiatr. 2019; 48(1): 58–65.
- Nidey N, Tabb KM, Carter KD, Bao W, Strathearn L, Rohlman DS, et al. Rurality and risk of perinatal depression among women in the United States. J Rural Health 2019 Oct 11. doi: 10.1111/jrh.12401.
- Duko B, Ayano G, Bedaso A. Depression among pregnant women and associated factors in Hawassa city, Ethiopia: an institution-based cross-sectional study. Reprod Health. 2019; 16(1): 25. doi: 10.1186/ s12978-019-0685-x.
- Pinto TM, Caldas F, Nogueira-Silva C, Figueiredo B. Maternal depression and anxiety and fetal-neonatal growth. J Pediatr (Rio J). 2017; 93(5): 452–9.
- Tuovinen S, Lahti-Pulkkinen M, Girchenko P, Lipsanen J, Lahti J, Heinonen K, et al. Maternal depressive symptoms during and after pregnancy and child developmental milestones. Depress Anxiety. 2018; 35(8): 732–41.
- Thombre MK, Talge NM, Holzman C. Association between pre-pregnancy depression/anxiety symptoms and hypertensive disorders of pregnancy. J Womens Health (Larchmt). 2015; 24(3): 228–36.
- Azami M, Badfar G, Soleymani A, Rahmati S. The association between gestational diabetes and postpartum depression: A systematic review and meta-analysis. Diabetes Res Clin Pract. 2019; 149: 147–55.
- Pawlby S, Hay DF, Sharp D, Waters CS, O'Keane V. Antenatal depression predicts depression in adolescent offspring: prospective longitudinal community-based study. J Affect Disord. 2009; 113(3): 236–43.
- Oberlander TF, Weinberg J, Papsdorf M, Grunau R, Misri S, Devlin AM. Prenatal exposure to maternal depression, neonatal methylation of human glucocorticoid receptor gene (NR3C1) and infant cortisol stress responses. Epigenetics. 2008; 3(2): 97–106.
- ACOG Committee Opinion No. 757: Screening for perinatal depression. Obstet Gynecol. 2018; 132: e208–12.
- Beck AT, Ward CH, Mendelsohn M, Mock J, Erbaugh J. An inventory for measuring depression. Arch Gen Psychiatry. 1961; 4: 561–71.

- Feightner JW, Worrall G. Early detection of depression by primary care physicians. CMAJ. 1990; 142(11): 1215–20.
- Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. J Consult Clin Psychol. 1988; 56(6): 893–7.
- Elwood LS, Wolitzky-Taylor K, Olatunji BO. Measurement of anxious traits: a contemporary review and synthesis. Anxiety Stress Coping. 2012; 25(6): 647–66.
- United Nations Organisation. The global database on violence against women. Available at: https:// evaw-global-database.unwomen.org/fr/countries/ americas/mexico
- ACOG. American College of Obstetricians and Gynecologists. Screening for Perinatal Depression – ACOG. https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/ Committee-on-Obstetric-Practice/Screening-for-Perinatal-Depression?IsMobileSet=false. [cited 23 Oct 2019].
- Ashley JM, Harper BD, Arms-Chavez CJ, LoBello SG. Estimated prevalence of antenatal depression in the US population. Arch Womens Ment Health. 2016; 19(2): 395–400.
- Zhang S, Wang L, Yang T, Chen L, Qiu X, Wang T, et al. Maternal violence experiences and risk of postpartum depression: A meta-analysis of cohort studies. Eur Psychiatry. 2019; 55: 90–101.
- 21. Bitew T, Hanlon C, Medhin G, Fekadu A. Antenatal predictors of incident and persistent postnatal depressive symptoms in rural Ethiopia: a popula-

tion-based prospective study. Reprod Health. 2019; 16(1): 28.

- 22. Ramos IF, Guardino CM, Mansolf M, Glynn LM, Sandman CA, Hobel CJ, et al. Pregnancy anxiety predicts shorter gestation in Latina and non-Latina white women: The role of placental corticotrophin-releasing hormone. Psychoneuroendocrinology. 2019; 99: 166–73.
- 23. Ricardo-Ramírez C, Álvarez-Gómez M, Ocampo-Saldarriaga MV, Tirado-Otálvaro AF. [Prevalence of positive screening for depression and anxiety in high obstetric risk pregnant women in a clinic in Medellin, between January and August 2013, and associated risk factors]. Rev Colomb Obstet Ginecol. 2015; 66(2): 94–102. Spanish.
- 24. Silva MM de J, Nogueira DA, Clapis MJ, Leite EPRC. Anxiety in pregnancy: prevalence and associated factors. Rev Esc Enferm USP 2017; 51: e03253.
- 25. Alvarado-Esquivel C, Sifuentes-Álvarez A, Salas-Martínez C. Unhappiness with the fetal gender is associated with depression in adult pregnant women attending prenatal care in a public hospital in Durango, Mexico. Int J Biomed Sci. 2016; 12(1): 36–41.
- Lara MA, Navarrete L, Nieto L, Le HN. Childhood abuse increases the risk of depressive and anxiety symptoms and history of suicidal behavior in Mexican pregnant women. Braz J Psychiatry. 2015; 37(3): 203–10.
- Lancaster CA, Gold KJ, Flynn HA, Yoo H, Marcus SM, Davis MM. Risk factors for depressive symptoms during pregnancy: a systematic review. Am J Obstet Gynecol. 2010; 202(1): 5–14.

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# TIESIOGINĖ SU NĖŠTUMU SUSIJUSIOS DEPRESIJOS IR NERIMO KORELIACIJA SU SOCIALINIU STATUSU

## Santrauka

Bendrosios aplinkybės. Nerimas ir depresija yra du dažniausi psichikos sutrikimai visame pasaulyje. Nėštumas yra svarbus veiksnys vystytis šioms ligoms, turinčioms įtakos ne tik nėščiai moteriai, bet ir jos palikuoniams. Šio tyrimo tikslas buvo išanalizuoti koreliaciją tarp nėščių moterų depresijos ir nerimo, jų šeiminės padėties bei amžiaus.

Medžiaga ir metodai. Aprašomasis, retrospektyvus ir skerspjūvio tyrimas buvo atliktas ambulatoriškai teikiant psichologijos tarnybos paslaugas "Mónica Pretelini Sáenz" perinatalinėje ligoninėje (HMPMPS, Toluka, Meksika) 2012 m. birželio–2019 m. kovo mėnesiais. Moterims, prižiūrimoms HMPMS, įprastai taikytas Beko depresijos įvertinimo klausimynas BDI-II ir Becko nerimo nustatymo klausimynas BAIT. Tyrimui atrinktos nėščios pacientės, kurios pirmą kartą buvo nukreiptos į psichologijos kliniką. Pearsono koreliacijos koeficientui apskaičiuoti, atvejų analizei pagal amžių, BDI-II ir BAIT klausimynus naudota IBM SPSS Statistics <sup>®</sup> programa v.23.

**Rezultatai.** Ištirtos 2947 nėščios pacientės. Koreliacija tarp amžiaus ir BDI-II buvo -0,026 (P = 0,152), tarp amžiaus ir BAI -0,038 (P = 0,037), tarp BAIT ir BDI-II -0,650 ( $P \le 0,001$ ).

**Išvada.** Depresija ir nerimas dažniausiai pasireiškė 20–29 metų nėščiosioms. Stabilaus partnerio nebuvimas, oficialaus darbo trūkumas padidina abiejų nuotaikos sutrikimų riziką.

**Raktažodžiai:** amžius, nerimas, depresija, šeiminė padėtis, nėštumas, rizikos veiksniai