Journal of Social Researches December 2024 Vol.10 No.26 1-6
Article

Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan

Prevalencia del estado de ansiedad en mujeres embarazadas Mayas de comunidades del sur de Yucatán

Rodríguez-Angulo, Elsa María [a], Santana-Carvajal, Andrés [b], Andueza-Pech, Guadalupe [c] and Caballero-Canul, Ricardo [d].

[a] Autonomous University of Yucatán • S-4625-2018 • 0000-0001-5959-1341 • 111408
[b] Autonomous University of Yucatán • JMP-4395-2023 • 0000-0002-3956-8969 • 237654
[c] Autonomous University of Yucatán • S-4702-2018 • 0000-0002-3083-0529 • 84374
[d] Autonomous University of Yucatán • KXR-4316-2024 • 0000-0002-5813-5915 • 2043140

CONAHCYT classification:

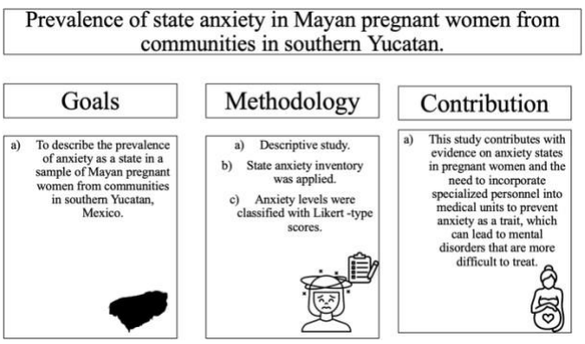
Area: Medicine and Health Sciences
Field: Medical Sciences
Discipline: Clinical Sciences
Subdiscipline: Clinical psychology

https://doi.org/10.35429/JSR.2024.26.10.1.6
History of the article:
Received: July 05, 2024
Accepted: August 11, 2024

* ✉ [rangulo@correo.uady.mx]

Abstract

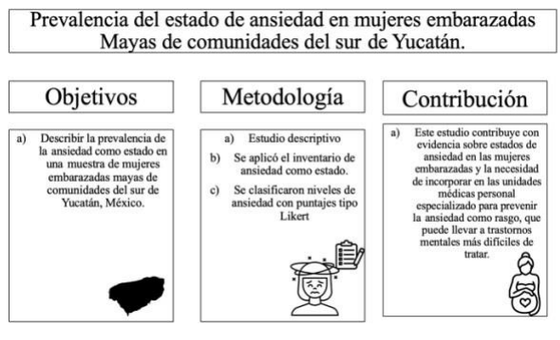
During the pregnancy stage, both biological and mental alterations can occur in mothers, which put their health and that of the future being at risk. In Mexico there are few studies on mental disorders in pregnant women. This study describes the prevalence of anxiety as a state in a sample of Mayan pregnant women from communities in southern Yucatan, Mexico. State anxiety inventory was applied. Anxiety levels were classified. The prevalence of anxiety as a state was 100%, with 85.1% at high risk and 14.9% above average. The pregnant women studied were found in transitory states of anxiety that could progress to permanent states of trait-anxiety, which would place them in a "gateway" for depression, if resilience tools are not provided that allow them to control these states. It is important to incorporate human resources in medical units to address care emotional disorders in pregnant women.



Prevalence, Transitory, Disorders

Resumen

En el embarazo pueden ocurrir alteraciones biológicas y mentales en las madres, que ponen en riesgo su salud y la del futuro ser. En México existen pocos estudios sobre trastornos mentales de las embarazadas. En este estudio se describe la prevalencia de ansiedad como estado en una muestra de mujeres embarazadas mayas de comunidades del sur de Yucatán, México. Se aplicó el inventario de ansiedad como estado. Se clasificaron niveles de ansiedad. La prevalencia de ansiedad como estado fue del 100%, con 85.1% en alto riesgo y 14.9% sobre el promedio. Se encontraron estados de ansiedad transitorios que podrían progresar a estados permanentes de ansiedad-rasgo, "puerta de entrada" para la depresión, si no se proveen herramientas de resiliencia que les permitan controlar esos estados. Es importante la incorporación de recursos humanos en las unidades médicas para atender los trastornos emocionales en las embarazadas.



Prevalencia, Transitorios, Trastornos

Citation: Rodríguez-Angulo, Elsa María, Santana-Carvajal, Andrés, Andueza-Pech, Guadalupe and Caballero-Canul, Ricardo. Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan. Journal of Social Researches. 2024. 10-26: 1-6.

ISSN 2414-4835 /© 2009 The Authors. Published by ECORFAN-México, S.C. for its Holding Republic of Nicaragua on behalf of Journal of Social Researches. This is an open-access article under the license **CC BY-NC-ND** [http://creativecommons.org/licenses/by-nc-nd/4.0/]

Peer review under the responsibility of the Scientific Committee MARVID®- in the contribution to the scientific, technological and innovation **Peer Review Process** through the training of Human Resources for the continuity in the Critical Analysis of International Research.

RENIECYT
Registro Nacional de Instituciones y Empresas Científicas y Tecnológicas
1702902 CONAHCYT

Introduction

Women during pregnancy, childbirth or postpartum experience biological, physiological, psychological, mental and emotional changes that can affect not only their health but also that of the baby (Goodman, 2019).

The detection of these alterations is more focused on attending to the biological aspects of the mother, such as obstetric complications such as pre-eclampsia-eclampsia, haemorrhage, obstructed labour, miscarriage and infections, among the main ones; in the baby, those derived from these complications such as preterm birth, neonatal asphyxia, congenital anomalies and central nervous system disorders (Horner-Jhonson et al. 2022; Palomo-Gómez et al. 2024).

However, less interest has been given to the detection and care of maternal mental health-related disorders; although in some countries support for mothers with difficulties related to their emotions and behaviours has become evident (McLeish, Ayers and McCourt, 2023).

In Latin American countries, the detection of mental disorders during the perinatal period is still considered a privilege of the wealthier classes. During prenatal care, there are well-established actions through Clinical Practice Guidelines and Standards and Guidelines Programmes and Manuals on what to do to prevent or detect biological complications in a timely manner; but those aimed at detecting and treating emotional disorders in women are not identified (Government of El Salvador, 2022; Government of Mexico, 2015; Government of Mexico, 2019).

In Mexico, few medical services carry out detection and treatment of mental disorders, with difficulties in the control and follow-up of cases (Evalúa, 2023).

One of the main emotional disorders reported is anxiety, which is present in 10-15% of pregnant women, affecting the quality of life of women and their children. The South of the Mexican Republic is one of the regions with the least maternal mental health care services and few studies have studied its magnitude (De Castro, Place, Allen-Leigh, Rivera-Rivera and Billings, 2016).

The high suicide rate in the State of Yucatán, which occupies the first places of this public health problem in Mexico (INEGI, 2023), as well as the disposition towards improving the quality of care of the users of the obstetric service presented in the community hospital of southern Yucatán, is an opportunity to carry out a study to identify the magnitude of the problem of anxiety in pregnant Mayan women from the surrounding communities who come for prenatal care and childbirth.

The aim of the study was to describe the prevalence of anxiety as a condition in Mayan pregnant women attending the community hospital in southern Yucatan, in order to identify women at risk of complication of the mental disorder.

Methodology

The study design was cross-sectional, with the participation of pregnant Mayan women who attended their prenatal check-up at the community hospital of gynaeco-obstetrics in the south of the state of Yucatan, in the period from March to May 2024. Their voluntary consent was requested and each was administered the STAI inventory to detect their state of anxiety (Spielberger, Gorsuch and Lushene, 1970).

The state of anxiety was considered to be a disturbance in emotions that are transient or transitory, but which if left untreated can progress to a permanent state of anxiety. The inventory included 20 statements about different emotional states, such as sadness, hopelessness, joy, uneasiness, etc. It uses a Likert-type scale to score and classify the different states of anxiety, with a score of 0-14 low risk, 15-19 tendency to average, 20-22 average, 23-31 above average and 32-60 high risk. The questionnaire was self-administered, and for this purpose, an area was set aside in the hospital where the women could answer the questionnaire freely and confidentially, which lasted approximately 30 minutes. The variables age, marital status, occupation and months of pregnancy were also collected. Subsequently, the information was entered into an Excel database and frequencies and percentages were calculated with the Epi Info vs.7 programme. Finally, the scores of each woman were added up and classified according to anxiety levels. Tables and graphs were produced.

ISSN: 2414-4835
RENIECYT-CONAHCYT: 1702902
ECORFAN® All rights reserved.

Rodríguez-Angulo, Elsa María, Santana-Carvajal, Andrés, Andueza-Pech, Guadalupe and Caballero-Canul, Ricardo. Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan. Journal of Social Researches. 2024. 10-26: 1-6.
https://doi.org/10.35429/JSR.2024.26.10.1.6

Journal of Social Researches December 2024 Vol.10 No.26 1-6
Article

Results

The sample consisted of 134 pregnant Mayan women who responded to the questionnaires. The age range was 13-43 years, mean 26 years, SD ±7 years. The most frequent age groups were 20 to 24 years and 25 to 29 years, with 23.9% and 24.6%, respectively; regarding marital status, 59.7% lived in a union; 93.3% were housewives; and 60.4% were in the third trimester of pregnancy (Table 1).

Box 1

Table 1

Socio-demographic and clinical characteristics of pregnant women

Age groups	Number	%
15-19	28	20.9
20-24	32	23.9
25-29	33	24.6
30-34	16	11.9
35-39	17	12.7
40-43	5	3.8
13	2	1.4
14	1	0.7
		n=134
CIVIL STATUS		
Soltera	8	5.9
Married	46	34.3
Free union	80	59.7
		n= 134
OCCUPATION		
Housewife	125	93.3
Employee	2	1.4
Worker	1	0.74
Another	6	4.4
		n=134
MONTHS OF PREGNANCY		
First trimester	5	3.7
Second quarter	48	35.8
Third trimester	81	60.4
		n=134

Most of the women responded that they were relaxed (74.7%), rested (87.4%) and comfortable (81.4%); but the predominant negative emotions were feeling tense (59.7%), nervous (55.2%) and worried (51.5%) (Table 2).

Box 2

Table 2

Prevalence of responses to pregnant women's statements about emotions

Frase/Num	%	Frase/ Num	%
I feel calm		I have self-confidence	
Yes 99	73.9	Yes 68	50.8
No 35	26.1	No 66	49.2
I feel safe		I feel nervous	
Yes 77	57.5	Yes 64	55.2
No. 57	42.5	No 70	44.8
I am tense		I am uneasy	
Yes 54	59.7	Yes 25	18.6
No 80	40.3	No 109	81.4
I am contracted		I feel very tied down	
Yes 44	32.8	Yes 20	14.9
No 90	67.2	No 114	85.1
I feel comfortable		I am relaxed	
Yes 80	59.7	Yes 100	74.7
No 54	40.3	No 34	25.3
I feel upset		I feel satisfied	
Yes 25	18.6	Yes 93	69.4
No 109	81.4	No 41	30.6
I am concerned		I am concerned	
Yes 48	35.8	Yes 69	51.5
No 86	64.2	No 65	48.5
I feel rested		I feel dazed	
Yes 117	87.4	Yes 18	13.4
No 17	12.6	No 116	86.6
I feel distressed		I feel joyful	
Yes 43	32	Yes 65	48.5
No 68	68	No 69	51.5
I feel comfortable		At the moment I feel good	
Yes 109	81.4	Yes 67	50
No 25	18.6	No 67	50

When classifying women's anxiety states, the majority (85.1 %) were in a high state and above average 14.9 % (Figure); no women were classified in other anxiety levels.

Box 3

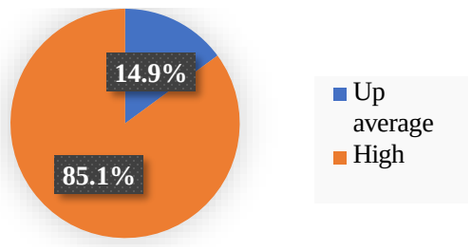


Figure 1

Levels of anxiety-status in the studied pregnant women

ISSN: 2414-4835
RENIECYT-CONAHCYT: 1702902
ECORFAN® All rights reserved.

Rodríguez-Angulo, Elsa María, Santana-Carvajal, Andrés, Andueza-Pech, Guadalupe and Caballero-Canul, Ricardo. Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan. Journal of Social Researches. 2024. 10-26: 1-6.
https://doi.org/10.35429/JSR.2024.26.10.1.6

Discussion and Conclusions

The study presents evidence of the high level of anxiety that the Mayan women in the sample are subjected to during pregnancy. A state of anxiety that is transitory reflects the fact that women have tools that they put in place so that their emotions can be controlled. However, it is well known that there are other factors that can influence states of anxiety to become permanent and progress towards a state of trait anxiety, which conditions the woman and her baby to risk situations derived from states of anxiety that are not attended to in a timely manner (Giménez, Fatjó, González, & Arranz, 2019).

The transitory emotions of anxiety, which were most prevalent in the women who participated, were related to feeling tense, nervous and worried; and in general, half of them reported not feeling well. In this regard, it has been documented that worries in pregnant women in the third trimester of pregnancy are associated with fear of childbirth and newborn care (Chen et al. 2023; Xu et al. 2024). The age of the women, most of whom were at the peak of fertility, is similar to other studies where anxiety disorders have been reported (Baldeón, 2019). But much attention should be paid to the detection of these disorders in adolescent women and those at the extreme ages of pregnancy, whose risk is higher for not only obstetric but also mental complications (Cattane et al., 2020).

The stage of pregnancy is a very good opportunity to address issues related to the emotional states of women and their babies, given that they are receptive and willing to understand more about what can lead to some complication in them or with the future being in order to try to avoid or prevent them. It will be necessary to continue studying which situations are conditioning women to experience states of anxiety that put their mental health at risk, despite the fact that they feel relaxed when answering the inventories. In studies carried out in groups of pregnant women with similar characteristics in communities in the state of Yucatan, social, cultural and gender inequalities have been found that could be influencing these states of anxiety, such as lack of income, taboos and partner violence; as well as delays in making decisions to attend to their health and to receive the service, which has to do with the low quality of access to care for emotional disorders in pregnant women and in the perinatal period (Rodriguez, Oliva and Andueza, 2023).

It has also been widely evidenced in the literature that women's insecurity during pregnancy, childbirth and perinatal period is influenced by the lack of good relationships with partners and family members (Papapetrou, Panoulis, Mourouzis and Kouzoupis, 2020), although in the women in the present study, the highest percentage reported feeling secure (57.5 %). However, it will be important to direct efforts towards the other percentage who experience states of insecurity during pregnancy, in order to find out what factors are causing them. Misconceptions about motherhood should be avoided and the transfer of quality information on the physiology of pregnancy, childbirth, the postpartum period and newborn care should be promoted, as well as social support networks, which can be important mechanisms for reducing mothers' insecurity and anxiety (McCarthy, Houghton and Matvienko-Sikar, 2021).

At the level of the health system in Mexico, there are still limitations in the detection of anxiety states in pregnant women and during the perinatal period. Over time, the importance of taking into account emotional states during these stages has gained relevance. Currently, at the national level, we hear in official speeches that among the priorities for the national development plan will be attention to the mental health of the population (Government of Mexico, 2024).

Strategies for the detection and care of pregnant women's mental health will be a very important challenge in order to comply with the guidelines established in the country's mental health programmes and guidelines. The incorporation of human resources such as psychologists and psychiatrists in medical units, as well as health personnel to support mental health promotion actions, is already a felt and demonstrated need. The incorporation of human resources with this profile will contribute to the timely detection and treatment of cases to prevent complications in mothers and children.

Declarations

Conflict of interest

The authors declare no interest conflict. They have no known competing financial interests or personal relationships that could have appeared to influence the article reported in this article.

ISSN: 2414-4835
RENIECYT-CONAHCYT: 1702902
ECORFAN® All rights reserved.

Rodríguez-Angulo, Elsa María, Santana-Carvajal, Andrés, Andueza-Pech, Guadalupe and Caballero-Canul, Ricardo. Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan. Journal of Social Researches. 2024. 10-26: 1-6.
https://doi.org/10.35429/JSR.2024.26.10.1.6

Author contributions

Rodríguez-Angulo, Elsa: Conceptualization of the project idea, design, methodology, original writing, analysis, software, discussion and conclusions.

Santana-Carvajal, Andrés: Conceptualization of ideas, methodology, techniques, analysis, revision of the final manuscript.

Andueza-Pech, Guadalupe: Methodology, analysis, revision of the final manuscript.

Caballero-Canul, Ricardo: Methodology, supervision and analysis.

Funding

This work was funded by the Centro de Investigaciones Regionales "Dr. Hideyo Noguchi", Universidad Autónoma de Yucatán. Reg. CIRB-2024-0004.

Abbreviations

SD: standard deviation; INEGI: Instituto Nacional de Estadística, Geografía e Informática; STAI: State-Trait Anxiety Inventory.

References

Antecedents

Gobierno de El Salvador. (2022). Norma técnica de atención integral en salud mental, Diario oficial;6(434):2-47.

Gobierno de México. (2015). NORMA Oficial Mexicana NOM-025-SSA2-2014, Para la prestación de servicios de salud en unidades de atención integral hospitalaria médico-psiquiátrica. DOF 2015.

Gobierno de México. (2019). Programa de acción específico en salud mental 2013-2018. Pp 1-86

Goodman, J.H. (2019). Perinatal depression and infant mental health. Arch Psychiatr Nurs.;33(3):217-224.

McLeish, J., Ayers, S., & McCourt, C. (2023). Community-based perinatal mental health peer support: a realist review. BMC Pregnancy Childbirth; 23(1):570.

Horner-Johnson, W., Garg, B., Darney, B.G., Biel, F.M., & Caughey, A.B. (2022). Severe maternal morbidity and other perinatal complications among women with physical, sensory, or intellectual and developmental disabilities. Paediatr Perinat Epidemiol. ;36(5):759-768.

Palomo-Gómez, R., Rúger-Navarrete, A., Antúnez-Calvente, I., Vázquez-Lara, J.M., Rodríguez-Díaz, L., Gómez-Salgado, J., Riesco-González, F.J., Vázquez-Lara, M.D., Muñoz-Vela, F.J., & Fernández-Carrasco, F.J. (2024). Prenatal Stress as a Risk Factor for Maternal-Foetal Morbidity: A Longitudinal Study. Healthcare (Basel). 25;12(3):312.

Basics

De Castro, F., Place, JM., Allen-Leigh, B., Rivera-Rivera, L., & Billings D. (2016). Provider report of the existence of detection and care of perinatal depression: quantitative evidence from public obstetric units in Mexico. Salud Publica de Mex., 58: 468-71 DOI: 10.21149/spm.v58i4.8028

Evalúa. Ciudad de México (2023). Diagnóstico y evaluación de los servicios de salud mental de la ciudad de México, 2018-2022. Informe final.

INEGI. (2023). Estadísticas de defunciones registradas. Defunciones registradas por suicidio por entidad federativa y causa según sexo, serie anual de 2010 a 2022

Spielberger, C..D. Gorsuch, R.L. & Lushene, R.E. (1970). Manual for the State-Trait Anxiety Inventory. Consulting Psychologists Press.

.

Supports

Baldeón, A. (2019). Riesgos obstétricos en gestantes con edades extremas (menores de 15 años; mayores de 35 años) atendidas en el Hospital Universitario de Guayaquil [Universidad de Guayaquil].

Cattane, N., Richetto, J., & Cattaneo, A. (2020). Prenatal exposure to environmental insults and enhanced risk of developing Schizophrenia and Autism Spectrum Disorder: focus on biological pathways and epigenetic mechanisms. Neuroscience & Biobehavioral Reviews, 117, 253-278.

ISSN: 2414-4835
RENIECYT-CONAHCYT: 1702902
ECORFAN® All rights reserved.

Rodríguez-Angulo, Elsa María, Santana-Carvajal, Andrés, Andueza-Pech, Guadalupe and Caballero-Canul, Ricardo. Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan. Journal of Social Researches. 2024. 10-26: 1-6.
https://doi.org/10.35429/JSR.2024.26.10.1.6

Rodríguez-Angulo, E.M., Oliva-Peña, Y., & Andueza-Pech, G. (2023). Inequidades en el acceso a la atención de la salud materna: una mirada con perspectiva de género. CienciaUAT, 17(2), 52-67.

Discussions

Baldeón, A. (2019). Riesgos obstétricos en gestantes con edades extremas (menores de 15 años; mayores de 35 años) atendidas en el Hospital Universitario de Guayaquil [Universidad de Guayaquil].

Chen, X., Liu, Y., Liu, M,. Min, F., Tong, J., Wei, W., Sun, L., Zhang, T., & Meng, Q. (2023). Prevalence and associated factors of insomnia symptoms among pregnant women in the third trimester in a moderately developing region of China. BMC Public Health; 23(1):2319

Giménez Peñalba, Y., Fatjó Hurios, F., González Plaza, E., & Arranz Betegón, Á. (2019). New care challenges: detection of anxiety in pregnant women at risk. Enferm Clin (Engl Ed). 29(4):248-253. English, Spanish.

Gobierno de México. (2024). Secretaría de Salud. 165. Embarazo y maternidad, procesos críticos que generan cambios emocionales en las mujeres. 10 de mayo, día nacional de la salud materna.

McCarthy, M., Houghton, C., & Matvienko-Sikar, K. (2021). Women's experiences and perceptions of anxiety and stress during the perinatal period: a systematic review and qualitative evidence synthesis. BMC Pregnancy Childbirth; 21(1):811.

Papapetrou, C., Panoulis, K., Mourouzis, I., & Kouzoupis A. (2020). Pregnancy and the perinatal period: The impact of attachment theory. Psychiatriki; 31(3):257-270.

Rodríguez-Angulo, E.M., Oliva-Peña, Y., & Andueza-Pech, G. (2023). Inequidades en el acceso a la atención de la salud materna: una mirada con perspectiva de género. CienciaUAT, 17(2), 52-67.

Xu, R., Wang, J., Li,Y., Chen,Y., Zhang, W., Pan, X., Zou, Z., Chen, X., & Huang, S. (2024). Pre- and postpartum fear of childbirth and its predictors among rural women in China. BMC Pregnancy Childbirth; 24(1):394.

ISSN: 2414-4835
RENIECYT-CONAHCYT: 1702902
ECORFAN® All rights reserved.

Rodríguez-Angulo, Elsa María, Santana-Carvajal, Andrés, Andueza-Pech, Guadalupe and Caballero-Canul, Ricardo. Prevalence of state anxiety in Mayan pregnant women from communities in southern Yucatan. Journal of Social Researches. 2024. 10-26: 1-6.
https://doi.org/10.35429/JSR.2024.26.10.1.6