













## Emotions in Mayan pregnant women: barriers to care and proposals to reduce them





### Emociones en mujeres embarazadas mayas: barreras de atención y propuestas para reducirlas

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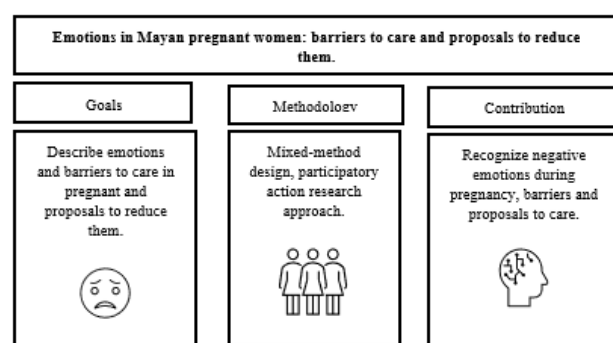


#### Abstract

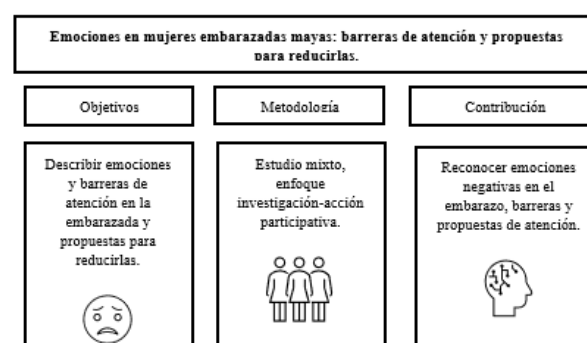
Negative emotions during pregnancy can lead the mother to states of anxiety and depression. In Mexico, one in two pregnant women suffers from emotional disorders that are beyond their ability to control. Objective. To describe the main emotions perceived and barriers to care in a sample of pregnant women who attended prenatal care at a community hospital in the southern state of Yucatán, Mexico; and put forward proposals to incorporate the emotional care and risk prevention service. Methodology. A mixed-method design, participatory action research approach, with workshops with focus groups of pregnant women and healthcare personnel. Narrative analysis was used for the qualitative and descriptive analysis for the quantitative. Results. 34 pregnant women and twenty health personnel participated. The emotions perceived were despair, anger, anxiety, euphoria, sadness, fear, frustration, anguish, happiness, and melancholy. Cultural barriers prevailed. Social and personal support for addressing emotional disorders were the main proposals.

#### Resumen

Las emociones negativas en el embarazo pueden llevar a la madre a estados de ansiedad y depresión. En México, una de cada dos embarazadas presenta trastornos emocionales que rebasan su capacidad para controlarlos. Objetivo. Describir las principales emociones percibidas y barreras de atención, en una muestra de embarazadas que acudieron a un hospital comunitario del sur del estado de Yucatán, México; y plantear propuestas para incorporar el servicio de atención emocional y prevención de riesgos. Metodología. Diseño mixto, enfoque investigación-acción participativa con talleres con grupo focal de embarazadas y personal de salud. Análisis narrativo para lo cualitativo y descriptivo para lo cuantitativo. Resultados. Participaron 34 embarazadas y 20 miembros del personal de salud. Las emociones percibidas fueron: desesperación, enojo, ansiedad, euforia, tristeza, miedo, frustración, angustia, felicidad y melancolía. Predominaron las barreras culturales. El apoyo social y especialistas para tratar los trastornos emocionales fueron las principales propuestas.



Emotions, barriers, proposals



Emociones, barreas, propuestas.

**Area:** Advocacy and attention to national problems

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## Introduction

Paying attention to the emotions experienced by women during pregnancy should be an important task, just as monitoring the risk of maternal complications is. Failure to pay attention to emotions can lead to disorders such as anxiety and depression. For this reason, more and more studies are reporting the need to monitor the mental health of pregnant women in order to detect these disorders in a timely manner and be able to treat them [Crane et al., 2021].

In Mexico, according to data from the National Institute of Perinatology (INPer), one in two women experience emotional disorders during pregnancy; and although these disorders originate from issues of adaptation to the new reproductive stage, when they exceed the woman's ability to control them, psychological support is required to provide her with tools to adapt to the condition and restore emotional balance [Ministry of Health, 2024].

During prenatal check-ups carried out by doctors and midwives to monitor pregnant women, clinical signs such as uterine height, abdominal circumference, foetal position, foetal heartbeat, blood pressure, and vaginal discharge, among others, are monitored. However, there are few occasions when questions are asked about the emotional state of the pregnant woman, who uses her own skills and resources to adapt to the changes that occur during this stage [Carpinelli et al., 2022]. Although the Official Mexican Standard establishes comprehensive health care for pregnant women, including mental health, as a guiding principle, centred on the individual [Official Mexican Standard, 2025]; in everyday life, more importance continues to be given to the biological aspect, underestimating the emotional aspect. There is also the Clinical Practice Guideline for Multidisciplinary Care and Attention during Pregnancy, which provides measurement tools to assess biopsychosocial risk, but it is not applied during prenatal care [Clinical Practice Guideline, 2022]. Therefore, prenatal care provides a good opportunity to address emotional disorders.

Several studies conducted with women during pregnancy have reported that having had a miscarriage led to emotional imbalance.

For this reason, it has been recommended that psychological interventions focus more on women who have experienced a miscarriage and are now pregnant again, as they are more prone to anxiety or depression [Donegan, 2023; Silverio et al., 2021]. Several of these studies were conducted during the COVID-19 pandemic and clearly show that a lack of attention to the emotional state of pregnant women leads to loneliness and anxiety, which have an impact on their mental health. The recommendations are based mainly on the importance of social support during pregnancy for a happy outcome [Silverio et al., 2024], through training doctors and midwives in specific programmes on family support using online education [Wash, 2025].

In addition, when women are transferred outside their community to receive care for childbirth, they require the support of family members, friends, the midwife and community health personnel, i.e. a support network that provides the pregnant woman not only with material assistance but also makes her feel accompanied and safe during this stage; as was the case with women in India who considered the support of their mother or husband to be the main source of support in reducing stress [Silverio et al., 2024; Patil et al., 2024].

In rural communities, where healthcare services for pregnant women are more limited than in urban areas, the importance of taking into account the emotional impact of a lack of support during consultations is often overlooked. This can cause feelings of fear and loneliness due to going through this stage without the support of family or friends [Jin et al., 2023].

Similarly, barriers to access to mental health care for pregnant women have been studied, and it has been found that the lack of psychiatrists and psychologists, the lack of medication in local health facilities, as well as social stigma that prevents women from deciding to seek help, are important barriers that must be considered in order to improve the quality of maternal health services [Dennis, 2024].

In a previous study conducted with a sample of pregnant women who attended the participating hospital, STAI and BID-II inventories were applied to explore levels of anxiety and depression and their association with risk factors.

The results revealed that 85.1% and 20.9% of women had high levels of anxiety and depression, respectively. The associated risk factors were lack of paid work associated with depression (OR=5.5,  $p=0.01$ ) and being in the third trimester of pregnancy associated with anxiety (OR=3.3,  $p=0.02$ ). This demonstrates the need to implement preventive, diagnostic, care and follow-up protocols for women in the perinatal period and the importance of intersectoral work to promote employment [Rodríguez et al., 2025].

In places where prenatal consultations do not include mental health screening for pregnant women, there is a failure to identify negative emotions that can affect the overall health of the mother and the unborn child. Barriers to care have been identified, such as the failure to identify changes in emotions during pregnancy, which are considered 'natural' and can lead to mental disorders such as depression and anxiety during the perinatal period if there are no management tools to deal with them [Ministry of Health, 2024].

Therefore, the objective of the study was to describe the main emotions perceived and barriers to care in a sample of pregnant women who attended prenatal check-ups at a community hospital in the southern state of Yucatán, Mexico, and to provide tools for emotional self-care and risk prevention.

## Methodology

A mixed medical-social study with a participatory action research approach [López de Ceballos, 2023], carried out with a sample of pregnant women of Mayan descent from communities in the southern state of Yucatán. From March to June 2024, participatory workshops were scheduled to reflect on emotions during pregnancy, their meaning, and ways of managing them. Three focus groups were formed with pregnant women who attended their prenatal appointment on the day scheduled for each workshop. A survey was administered to determine sociodemographic and gynaecological-obstetric characteristics. For the variable 'residence far from the hospital,' all women who came from a municipality outside the municipal capital of Ticul were considered.

The workshops were held in a designated area of the community hospital where the women could be calm, comfortable, and free to express their emotions. Using participatory techniques, attendees were encouraged to express the emotions they felt during pregnancy and their impact on the health of the mother and the foetus. Through brainstorming, the participants commented on their emotional state and what they do when they feel emotions that affect them. Subsequently, questions about emotions were written on flipchart paper, such as: What is melancholy? What is sadness? What is fear? What is happiness? The questions were numbered and posted on the walls around the group of participants, taking care to ensure that they were visually accessible to everyone. For the answers, the women were asked to voluntarily spin the wheel, and the number that came up would correspond to the question they had to answer. Next, with the participation of a psychiatrist and a psychologist, feedback was provided, comments were made, and emotional management techniques used for negative emotions were reinforced. Other facilitators who supported the workshops were a Mayan language translator, a public health doctor, a general practitioner, and medical students, all of whom had been trained beforehand. In this way, the meanings of the main emotions perceived and how to control them were obtained in both Mayan and Spanish. Another topic addressed in the workshops was the cultural, geographical, social (institutional), and economic barriers that women face in seeking care for emotional disorders. This information was also obtained from hospital health personnel through meetings attended by medical, psychology, nursing, and social work staff.

The qualitative data were transcribed, incorporating predefined codes and those that emerged during the workshops. Through discourse analysis [Sayago, 2014], the codes led to defined categories. A list was made of the main emotions perceived, how they are expressed in the Mayan language and their meaning in Spanish; the types of barriers were described and proposals were made to reduce them. Percentages were calculated for the qualitative variables and averages for the quantitative variables. Finally, tables were created to show the results.

The study was reviewed and approved by the ethics committee of the Dr. Hideyo Noguchi Regional Research Centre of the Autonomous University of Yucatán, with registration number CIRB-2024-0004. Prior to the participation of the women and health personnel in the workshops, their voluntary consent was requested, with the support of the head of teaching and the hospital director, who gave their authorisation to carry out the study.

## Results

Thirty-four women with incomplete primary education participated in the three workshops. Their sociodemographic and gynaecological-obstetric characteristics are shown in Table 1

### Box 1

**Table 1**

Sociodemographic and gynaecological-obstetric profile of pregnant women who attended the participatory workshops (n= 34)

Variables	Media [DE]; Núm. (%)
Age (in years)	27 ± 9.6
No. Current pregnancy	2.04 ± 1.07
Months of pregnancy	6.7 ± 1.8
Number of children	1.7 ± 1.01
Number of caesarean sections	1.06 ± 0.40
Number of abortions	1 ± 0.56
No. Prenatal consultations	3.6 ± 1.58
Quarter of pregnancy.	
First	13 [37.31]
Second	3 [8.21]
Third	18 [54.48]
Marital status	
In a relationship	31 [93.3]
Not in a relationship	3 [6.7]
Contraceptives	
No	24 [70.1]
Yes	10 [29.9]
Work	
Unpaid	32 [93.3]
Paid	2 [6.7]
Residence	
Away from the hospital	22 [64.7]
Near the hospital	12 [35.3]

Table 2 presents the main emotions perceived during pregnancy, their translation into the Mayan language, the ways in which women express them in Mayan, and their meaning in English. The women expressed each emotion differently in Mayan, but agreed on their meaning in English; therefore, they repeated their meaning more than once.

### Box 2

**Table 2**

Main emotions perceived during pregnancy and their meaning

Perceived emotion (name in Yucatec Maya)	Expression in Maya	Meaning
Despair (Yáayanki)	Va'in pool	Thinking
	Tu'ukul	Thinking
	Ma'u pa'ajtal in be'etik	I can't do it
	Munkaxtik ba'al u be'ete	Despair
Anger (Tachi'achil)	T'ak in be'etik ma'u pa'ajtal	I did something but it's not working.
	K'uxil	Be upset
	Te'ne'dz'iikem	I am upset
Anxiety (Ansiedad)	Dz'iiki (2)	Be upset
	Ta'an in dz'iiki	Be upset
	Ta'ak in k'aati'k in cha'amba'l	I want to meet my baby.
	Se'e ma'anak tu la'kal	I want it to happen.
Euphoria (Euforia)	Ta'ak in be'etik miin tza'li	Anxious
	We'ki'imak o'ol	Very happy
	Ja'achta'ki'imak o'ol (2)	Very happy (2)
Sadness. (Yaayaj óolal)	Ki'imak o'ol	Very happy
	Ta'ki'imak o'ol	Very happy
	Ta'ak in wok'ol	I want to cry.
Fear. (Saajkilil)	O'ok'ol	Cry.
	Ma'ki'imak in wo'oli (2)	Sad, I am sad.
	Ta'j sa'akech	You are afraid.
	Ja'ach tá sa'akem	I am afraid.
Frustration. (Frustración)	Sa'ajak	Fear.
	Ta'j sa'akem	Fear.
	Sa'akem	Fear.
	Munjo'ok'ol biix in k'aat	It didn't turn out the way I thought it would.
Distress. (Ok'ol óol)	Ma'pa'ajchái	Something isn't working out for me.
	Ma'tu pa'jtal in be'etik	I can't do it.
	Ta'an in tu'ukul	Thoughtful
Happiness. (Ki'imak óolal)	Ja'ach ta'ki' tuklik	I'm thinking about it
	Tu'ukul	Thinking
	Sa'ba'axten sa'akem	Fear
	Ti'in tu'ukul	I'm thinking
Melancholy (Melancolía)	Kiimak o'ol (4)	Happy
	Ja'ach ta'kiimak yo'ol	Happy
	Ti'in tuklik ba'ax uchil	I'm thinking about something sad.
	Tu'ukul	Thinking.
	Ke'en k'aajak te'ene ma'kiimak in wo'oli	Sadness about something in the past.
	Ta'an in tuklik lé ba'ax uchtenó	Thinking about something sad

With regard to managing their emotions, the women commented that they put into practice some actions that helped them to cope, such as listening to music, talking to someone else, or thinking about something nice.

The participating health personnel consisted of two obstetrician-gynaecologists, two general practitioners, five general nurses, three nursing assistants, one psychologist, two social workers, and five medical students. Their ages ranged from 26 to 42, with 5-10 years of experience.

The main perceived barriers were cultural, with 73.4% for women and 60.0% for healthcare personnel (Table 3).

**Box 3**

**Table 3**

Percentage of barriers perceived by women and healthcare personnel for the care of mental disorders.

Type	Women		Healthcare personnel	
	Number	%	Number	%
Cultural	11	73.4	6	60.0
Institutional	2	13.3	4	40.0
Economic	2	13.3	-	-
TOTAL	15	100.0	10	100.0

Women mentioned cultural, institutional (social), and economic barriers, while health personnel mentioned cultural and institutional barriers.

Both groups had similarities in their discourse on most cultural barriers, such as rejection of the newborn, failure to recognise warning signs of emotional disorders, poor relationship with the husband, among others (Table 4).

**Box 4**

**Table 4**

Barriers to accessing mental health care perceived by women and health personnel.

Type of barrier	Women	Healthcare personnel
Cultural	<ul style="list-style-type: none"> <li>-Influence of family members in deciding to seek help</li> <li>-Poor communication with partner</li> <li>-Fear of seeking help</li> <li>-Not knowing when to seek help</li> <li>-Taboo about being judged if their condition becomes known</li> <li>-Religions that do not allow them to seek help</li> <li>-Lack of self-confidence and shame</li> <li>-Lack of culture for going to a psychologist</li> <li>-Not knowing where to go for help</li> <li>-Not being allowed to cry because it is bad for the baby</li> <li>-No support from family or neighbours</li> <li>-Rejection of the baby</li> </ul>	<ul style="list-style-type: none"> <li>-Rejection of the baby</li> <li>-They do not recognize warning signs</li> <li>-They attribute their emotions to pregnancy</li> <li>-They are afraid of “what people will say,” of being judged</li> <li>-They are pressured by their husbands</li> <li>-Healthcare personnel do not know where and to whom to refer women</li> </ul>
Geographical	<ul style="list-style-type: none"> <li>-They do not perceive distance as a barrier, nor other geographical barriers.</li> </ul>	<ul style="list-style-type: none"> <li>They did not comment on the matter.</li> </ul>
Institutional (social)	<ul style="list-style-type: none"> <li>- There are no psychologists or psychiatrists. They give appointments for a month or a month and a half away at a distant hospital.</li> </ul>	<ul style="list-style-type: none"> <li>- There is no one to treat cases of mental disorders.</li> <li>-Isolated cases have been referred to another institution.</li> <li>-They do not make home visits.</li> <li>-There is no specialised centre.</li> </ul>
Economical	<ul style="list-style-type: none"> <li>- They don't have money to go to a psychologist</li> <li>-You have to pay for transport</li> </ul>	<ul style="list-style-type: none"> <li>They did not comment on the matter.</li> </ul>

In this regard, some proposals were made that could be implemented to reduce barriers.

Women proposed more talks and specialised staff to support them emotionally, especially in difficult pregnancies; in addition to the talks, health personnel proposed having access to courses on emotional support tools, in order to help women and activate code 100\* (Table 5).

### Box 5

**Table 5**

Proposals from women and health personnel to reduce barriers to access to mental health care

Barriers	Proposals from women	Proposals from healthcare personnel
- They do not know when to seek help.	- More conversations to stay informed	- Go to the hospital when you feel unwell.
-They are unaware of the signs of mental disorder.	-Local visits to the family circle	-Identify cases among our staff and refer them for help.
-Fear of being judged.	-Talking to someone when you are angry	-Seek out a support network to help you cope.
-No attention is paid to emotional disorders.	-Do your part to move forward	-Thanatology is very helpful in overcoming depression.
-Rejection of the newborn.	-Go out to distract ourselves when we are bored	-Do not judge women in postpartum if they refuse to feed their newborn.
-Long waiting times for treatment.	-Get psychological support when pregnancy is difficult	-Connect with social services for referral, appointment, and referral to DIF
	-As a maternity hospital, there should be a psychologist and psychiatrist, medicines	-Specialised centre not only for talks, but also for emotional, mental, and spiritual support.
		-Take support workshops that help express emotions and control negative ones
		-Be well informed so we can help women with these issues and recognise them in time
		-Activate code 100*, communication via WhatsApp.

\*Code 100 is a clinical decision support system for suicidal behaviour in general hospitals or care centres within integrated health system networks (RISS). It allows the care of a mental health service user to be equated with that of a public health service user, minimising stigma and within the framework of the four cross-cutting themes of gender equality, interculturality, life cycle and human rights.

### Discussions

Caring for the emotions of pregnant women is as important as monitoring obstetric warning signs that can lead to complications [UNICEF, 2025]. Feelings of fear, sadness, and uncertainty that can lead to despair due to lack of information are common in pregnant women, as observed in the women in this study, who had no one to turn to when they needed support because they were experiencing strong emotions that disrupted their daily tasks. However, emotions may differ depending on the trimester. In the case of this study, the majority of participants were in their third and first trimesters, with emotions such as fear of childbirth and the baby's health and how to care for it in the newborn stage prevailing in the third trimester, and uncertainty and fear of losing the baby in the first trimester, although happiness is also more present in this trimester. In the second trimester, fear becomes minimal, especially if tests confirm that the pregnancy is going well [Jiménez, 2025; Silverio et al., 2022].

With regard to the expression of emotions in the Mayan language and their meaning in Spanish, it was noted that there are different ways of naming an emotion that mean the same thing in Spanish. Several of them include the word o'ol, which in modern Mayan refers to emotions such as euphoria, sadness, frustration, happiness and melancholy. Some studies mention that these different ways of expressing moods (emotions) are due to the fact that the Maya do not separate emotions from the biological body, but rather unite mind and body, in which the mental, not material, heart is the target organ for them [Jiménez et al., 2020].

Regarding how women manage their emotions during pregnancy, they reported that it has been through what they have learned at home from family and friends, because they do not have the support of a specialist who can provide psychological management tools to help them control their emotions.

However, despite the lack of such support in the community, the management methods were similar to those of women who have received information, as reported by pregnant women in Ecuador, who, although they were university students, had very similar practices [Andino et al., 2024].

In a study on barriers to access to prenatal care (PNC) for pregnant women treated at the Dr. Arnaldo Calderón Type C Health Centre in Tosagua, Manabí, Ecuador, the main individual/psychosocial barriers were identified as unplanned, unwanted pregnancies, symptoms of depression and demotivation, and difficulty attending appointments due to caring for other children. Economic difficulties (90.2%), difficulties in travelling to the institution (93.46%) and difficulties with domestic chores (87.58%) were the socioeconomic barriers that most affected prenatal care. Other factors that had an impact were difficulty in accessing appointments (98.69%), long waiting times for care (97.38%) and short consultation times (96.08%) [Cano et al., 2024]. In another study conducted in Australia with disadvantaged pregnant women, economic barriers were also reported as the main barriers [Penman et al., 2023]. However, in our study, although most of the women who attended the workshops came from places far from the participating hospital, only a few considered lack of financial resources and lack of transport to be the main barriers, because cultural barriers, such as stigma and fear of being judged, and institutional barriers, such as the lack of psychologists and psychiatrists to treat emotional disorders, were more prevalent among them. These same barriers were reported by health personnel in a similar way to the women, adding that they do not know how to identify emotional disorders in them.

These cultural and institutional barriers, which are part of the social determinants of health, have been analysed in other studies, which demonstrated the lack of questions about cultural aspects and their relationship with emotional health and institutional care [Osorio, 2023]. These studies report that it is very important to incorporate questions about social determinants of health during interviews in order to better understand the cultural aspects that limit the care of emotional issues, such as stigma and lack of human resources to address mental health [Aggarwal et al., 2023], which were the main cultural and social barriers for the participants.

In 2023, a model emerged to reconsider cultural intersubjectivity in clinical practice, which takes into account the similarities and differences in mental health care through collaborative work between doctors and patients.

This model could serve as a guide and be adapted to the conditions of women in communities who attend community hospitals, in the ongoing search for factors that are determinants in mental health care [Aggarwal, 2023].

The review of the Official Mexican Standard for the care of women during pregnancy, childbirth and the postpartum period, and of newborns, mentions a wide range of policies to address maternal and perinatal health, but in terms of mental health, there are only indications against addictions, neglecting those aimed at managing emotions during the perinatal period to prevent mental disorders such as anxiety and perinatal depression [Official Mexican Standard, 2016]. This is a pending task.

It is necessary to highlight the need to address the mental health of pregnant women, taking into account that health is a right, especially in vulnerable populations with less access and who are also disadvantaged, even more so if they live far from healthcare facilities [Negash et al., 2025], as was the case with the women in this study. Since 2024, work has been underway in collaboration with the health personnel of the participating hospital and the pregnant women who attend their prenatal check-ups, in the search for better strategies, such as dissemination materials and online education [Carrión, 2025], which allow for the incorporation of mental health care services, for equitable access to comprehensive health care that includes emotional health.

## Conclusions

Although the traditional prenatal care system at the participating community hospital seeks to be universally accessible, the incorporation of emotional management care, identification of mental disorders, as well as treatment and follow-up for disadvantaged pregnant women is very limited; these women mainly face cultural and institutional barriers. This study revealed that social stigma and fear of being judged are barriers to seeking prenatal care for emotional disorders, which are often experienced simultaneously and cause women considerable despair and fear.

Although the women in this study did not perceive the lack of financial resources for transportation to the hospital as important, the findings indicate that the current prenatal care system is an area of opportunity for improvement in providing adequate emotional support to many disadvantaged women and their families. For these women and health personnel, the main barriers to accessing emotional prenatal care stemmed from social determinants of health, such as cultural stigmas and limited knowledge about tools for emotional management and identification of cases with mental disorders. However, the findings also suggest several avenues to guide the development of specific strategies to improve timely and adequate assistance for emotional prenatal care consultations. With the participatory methodology implemented in this study, the foundation was laid for continuing community workshops at the hospital. Social determinants of health are complex and addressing them requires interventions that take multidisciplinary approaches into account. Nevertheless, incorporating psychological and psychiatric care services in the hospital will be an important step toward more equitable health and development outcomes for women and children in these communities.

### Declarations

### Conflict of interest

The authors declare that there is no financial or personal conflict of interest that could influence the publication of this article.

### Author contribution

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

*Ojeda-Rodríguez, Ricardo*: Conceptualisation of ideas, methodology, software, analysis, revision of the final manuscript.

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

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

### Availability of data and materials

The data collected in this research are stored in confidential archives under the custody of the first author, both qualitative and quantitative. Any requests for consultation should be sent to the following email address: [rangulo@correo.uady.mx](mailto:rangulo@correo.uady.mx)

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### Abbreviations

BID-II	Beck Inventory Depression II
CENETEC	Centro Nacional de Excelencia Tecnológica en Salud
CIRB	Centro de Investigaciones Regionales Biomédicas
COVID-19	Coronavirus Disease-19
INPer	Instituto Nacional de Perinatología
STAI	State-Trait Anxiety Inventory
UNICEF	United Nations International Children’s Emergency Fund

### References

#### Antecedents

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