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# Incidence, prevalence and risk factors related to anxiety symptoms during pregnancy

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# Abstract

Symptoms of anxiety are one of the most prevalent emotional responses in women during their reproductive phase and especially during pregnancy. **Objective:** Estimate the incidence and prevalence of anxiety throughout the three trimesters of pregnancy in addition to studying the possible risk factors associated with anxiety symptoms. **Method:** A sample of 385 pregnant women participated in a longitudinal study in which the GAD-7 questionnaire was used. **Results:** Anxiety prevalence was 19.5% in the first trimester. In the second trimester, it was 16.8%, with an incidence of 0.048%. In the third trimester, it was 17.2%, with an incidence of 0.068%. The following predictive factors of anxiety symptoms were identified: being a smoker, presence of previous illness and changes in social relationships. **Conclusions:** High incidence and prevalence of anxiety symptoms occur during pregnancy; consequently, applicable preventive policies should be developed.

Keywords: Incidence, prevalence, anxiety, risk factors, pregnancy.

## Resumen

Incidencia, prevalencia y factores de riesgo relacionados con los síntomas de ansiedad durante el embarazo. Los síntomas de ansiedad son una de las respuestas emocionales más prevalentes en las mujeres durante su fase reproductiva y especialmente en el embarazo. Objetivo: estimar la incidencia y prevalencia de la ansiedad a lo largo de los tres trimestres del embarazo además de estudiar los posibles factores de riesgo asociados a los síntomas de ansiedad. Método: una muestra de 385 gestantes participaron en un estudio longitudinal en el que se utilizó el cuestionario GAD-7. Resultados: la prevalencia fue de 19.5% en el primer trimestre. En el segundo trimestre fue de 16,8%, y una incidencia de 0.048%. En el tercer trimestre fue de 17,2%, y la incidencia de 0.068%. Como factores predictores de los síntomas de ansiedad se han encontrado: ser fumadora, la presencia de enfermedades previas y cambios en las relaciones sociales. Conclusiones: durante el embarazo aparecen unas altas tasas de incidencia y prevalencia en los síntomas de ansiedad, por lo que se deberían desarrollar políticas preventivas al respecto.

*Palabras clave:* incidencia, prevalencia, ansiedad, factores de riesgo, embarazo.

Anxiety disorders are among the most prevalent mental disorders in women during the reproductive phase (Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012; Wittchen et al., 2011). Pregnancy involves intense changes for women on both physiological and psychological levels, which increase their likelihood of suffering from anxiety during this period (Wenzel, 2011).

Anxiety during pregnancy is associated with adverse outcomes, including spontaneous abortion, preeclampsia, preterm delivery and low birth weight (Zhong et al., 2015). It is also linked to poor adherence to medical advice, poor nutrition, loss of resources and substance abuse (Dunkel, & Tunner, 2012) as well as to insecure attachment (Field, 2017); it is also a predictor of perinatal depression (Robertson, Grace, Wallington, & Stewart, 2004). The

literature indicates that it also has a high healthcare cost because it is associated with a high level of utilization of health services (Sutter, Giaconne, Glatigny, & Verdoux, 2004).

Despite the importance of the problem described, few studies have provided data on the incidence and prevalence of anxiety (Giardinelli et al., 2012). Most studies have been based on small samples, clinical populations or retrospective designs (Goodman, Cheanusky, & Freeman, 2014). Anxiety levels may vary during pregnancy, so conducting longitudinal studies would help to understand the symptoms of anxiety and its severity (Zhong et al., 2015), as well as its evolution throughout gestation.

In addition, it is important to identify which risk factors influence prenatal anxiety. As noted by Leach, Poyser & Fairweather-Schmidt (2017), it would require major effort to synthesize the findings regarding prenatal anxiety and its correlates due to the disparity and paucity of the studies conducted.

The objective of this study is to (1) estimate the incidence and prevalence of anxiety throughout pregnancy and (2) to study the role of possible risk factors (sociodemographic, obstetric and various sources of stress) and its evolution during pregnancy.

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# Method

#### Participants

Of a total of 664 women contacted (Figure 1), 385 participated at Time 1 (first trimester of pregnancy), for a response rate of 57.9%; 286 participated at Time 2 (second trimester), for a response rate of 43.07%; and 261 participated at Time 3 (third trimester), for a response rate of 39.30%. The criteria for inclusion in the study were being pregnant, receiving prenatal care services at the Hospital Universitario Central de Asturias (HUCA) and understanding Spanish.

Of the women who refused to be evaluated, 32.4% (N = 215) declined to participate due to lack of time or lack of interest in participating in the study.

Exclusion due to not knowing the language applied to 9.7% of the women (n = 64).

In the first trimester sample (n = 385), the average age of the participants was 33 years and 6 months (SD = 4.8, range: 16-45).

Regarding marital status, 7.6% were single, 63.7% were married, 28.2% lived with their partner, and 0.5% were separated.

Regarding the participants' level of academic studies, the majority (50.5%) had a university education, 26.6% had secondary education, 20.6% had primary education, and 2.3% had basic education. Spanish origin was reported by 90.5% of the sample, and 72.3% were actively employed. Primiparous women composed 51.1% of the sample. Assisted reproduction techniques were reportedly used by 6.9% of the women.

#### Abandonment analysis

Comparing the results of the sociodemographic characteristics of women who did not complete the follow-up compared to those who completed the three measurements, the results showed no significant differences with respect to age (t = -1,087, p < 0.072), origin ( $\chi^2 = 1.277$ , p < 0.258), marital status ( $\chi^2 = 3.184$ , p < 0.304), schooling completed ( $\chi^2 = 1.653$ , p < 0.294) or employment status ( $\chi^2 = 0.417$ , p < 0.519). There were also no differences with regard



Figure 1. Participants

to whether they were first-time mothers ( $\chi^2 = 0.891$ , p < 0.345) or if the pregnancy resulted from assisted reproduction techniques ( $\chi^2 = 0.008$ , p < 0.927). Of the participants who failed to complete follow-up, 8 lost the pregnancy due to abortion, whereas the remaining pregnant women declined to participate due to lack of time or lack of interest in participating in the study. We also studied whether there were differences in symptoms of anxiety between the pregnant women who completed the study (X = 4.03, SD = 4.2) and those who left (X = 3.9, SD = 4.06). The results between the two groups showed no significant differences (t = -.192, p < 0.848).

## Instruments

Sociodemographic and medical data. These data were collected by an ad hoc questionnaire. This questionnaire collected data on age, marital status, education level, place of birth and work activity, as well as different medical data such as substance use (tobacco and alcohol), number of pregnancies, current pregnancy by assisted reproduction, cesarean sections and previous abortions.

*Generalized Anxiety Disorder 7-item Scale (GAD-7).* The GAD-7 questionnaire (Spitzer, Kroenke, Williams & Lowe, 2006) has been recommended for use as a tool to measure anxiety symptoms during the gestation period (NICE, 2014).

In a recent systematic review of self-report measures during pregnancy, the GAD-7 exhibited superior psychometric results in terms of internal consistency and structural validity compared with 17 other instruments (Evans, Spiby, & Morrell, 2015). The GAD-7 consists of 7 items with Likert-response formats (0 to 3 points), yielding a value in the response range from 0 to 21 points (Spitzer et al., 2006). The highest scores reflect the presence of severe symptoms (between 15-20), indicating the need for treatment to control them; scores between 10 and 14 are considered moderate cases, in which the need for treatment would correspond to the clinical judgment of an expert; and scores less than 10 indicate the presence of symptoms that do not require interventional therapy. The GAD-7 has been validated in the general Spanish population by García-Campayo et al. (2010).

The cut-off points of the GAD-7 recommended for the general population are scores  $\geq 10$  (Spitzer et al., 2006); in the population of pregnant women, the cut-off point has been established as GAD-7  $\geq$  7 (Zhong et al., 2015). Cronbach's alpha in the first trimester was 0.89; in the second trimester, it was 0.88; and in the third trimester, it was 0.89.

Stressful life events: (Lara, Navarro, Navarrete, & Le, 2010): This scale is a *checklist* in which different stressful events usually described in the literature are evaluated. The life events were measured using a scale of 12 items having a Likert-response format with a range of 0=No to 4=Much; the life events represent different potential stressors, such as a personal or a family member's illness, financial problems, alcoholism or drug addiction of the partner, possible mistreatment by the partner and relationship difficulties in the last six months.

# Procedure

Each participant completed some questionnaires provided by the HUCA nurses while awaiting obstetric ultrasound during the three trimesters of pregnancy (1st, 2nd and 3rd times). All were informed of the purpose of the investigation, signed the informed consent and participated voluntarily. This research project was approved by the Ethics and Research Committee of the Principality of Asturias.

#### Data analysis

The statistical package SPSS version 24.00 was used. Frequencies were calculated for categorical data, with means and standard deviations calculated for continuous variables. An analysis of the prevalence and incidence of anxiety symptoms was made in all three periods (corresponding to the three trimesters of pregnancy). The analyses examined pregnant women with versus without anxiety and compared their demographic characteristics. Finally, regression analysis was carried out.

# Results

#### Incidence and prevalence of perinatal anxiety

For the first estimated cut-off point, GAD  $7 \ge 7$  (pregnant women), there was an anxiety prevalence of 19.5% (N = 75) at the first measurement point (i.e., the first trimester of pregnancy). For the second time point (i.e., the second trimester), a prevalence of 16.8% (N = 48) and an incidence of 0.048% were obtained. For the third time point (i.e., the third trimester), the prevalence was 17.2% (N = 45), and the incidence was 0.068%.

Regarding the second cut-off point, GAD  $7 \ge 10$  (general population), a prevalence of 10.5% (N = 40) was found at the first time point. Upon the second measurement, the prevalence was 6.3% (N = 18), and the incidence was 0.014. In the third trimester

| <i>Table 1</i><br>Demographic characteristics (n = 385) |     |      |      |         |         |  |  |
|---|-----|------|------|---------|---------|--|--|
|   | N   | М    | SD   | Minimum | Maximum |  |  |
| Age   |     | 33.5 | 4.51 | 16      | 45      |  |  |
|   | Ν   | %    |      |         |         |  |  |
| Marital status  |     |      |      |         |         |  |  |
| Single  | 29  | 7.6  |      |         |         |  |  |
| Married   | 245 | 63.7 |      |         |         |  |  |
| Cohabitating  | 109 | 28.2 |      |         |         |  |  |
| Separated / Divorced                                    | 2   | 0.5  |      |         |         |  |  |
| Education   |     |      |      |         |         |  |  |
| No schooling  | 9   | 2.3  |      |         |         |  |  |
| Primary   | 79  | 20.6 |      |         |         |  |  |
| Secondary   | 102 | 26.6 |      |         |         |  |  |
| University  | 195 | 50.5 |      |         |         |  |  |
| Origin  |     |      |      |         |         |  |  |
| Spanish   | 248 | 90.5 |      |         |         |  |  |
| Immigrants  | 37  | 9.5  |      |         |         |  |  |
| Employment situation                                    |     |      |      |         |         |  |  |
| Employed  | 273 | 72.3 |      |         |         |  |  |
| Unemployment  | 107 | 27.7 |      |         |         |  |  |
| Primiparous   |     |      |      |         |         |  |  |
| Yes   | 197 | 51.1 |      |         |         |  |  |
| No  | 188 | 48.9 |      |         |         |  |  |
| Assisted pregnancy                                      |     |      |      |         |         |  |  |
| No  | 358 | 93.1 |      |         |         |  |  |
| Yes   | 27  | 6.9  |      |         |         |  |  |

(i.e., the third measurement), the prevalence was 7.7% (N = 48), and the incidence was 0.034% (Table 2).

### Risk factors predicting prenatal anxiety

The investigation of risk factors (viz., sociodemographic factors, medical-obstetric factors and stressful life events) as predictors of symptoms of prenatal anxiety was performed by regression analysis at each of the time periods evaluated (Table 3).

In the first regression equation, corresponding to the sociodemographic risk factors, none of the evaluated factors were significant. Medical factors explained 2.6% of the variance at the first time point [F = 1.843, p < 0.01]. A significant factor was smoking (tobacco consumption) ( $\beta = 0.123$ , p <0.05). In the remaining two trimesters, no significant results were found. Life events accounted for 18.7% of the variance explained at the first time point [F = 6.820, p < 0.01], 26.3% at the second time point [F = 6.736, p < 0.01] and 25.3% at the third time point [F = 6.343, p < 0.01]. "Disease or injury" ( $\beta$  = 0.174, p < 0.01) was predictive only in the first trimester. "Changes in the frequency in which you see family or friends" was a stable predictor across all three trimesters: first trimester,  $\beta = 0.158$ , p < 0.05; second trimester,  $\beta = 0.255$ , p < 0.01; and third trimester,  $\beta = 0.188$ , p < 0.01. "Changes in the behavior of a relative" was a predictor at all three measurement points: first trimester,  $\beta = 0.154$ , p < 0.05); second trimester,  $\beta = 0.211$ , p < 0.05; and third trimester,  $\beta =$ 0.251, p < 0.05. "Alcoholism or drug addiction" in the partner was significantly explanatory at the first time point ( $\beta = 0.117$ , p < 0.05) but not at subsequent measurements. "Serious financial problems" explained some of the variance at the second time point ( $\beta = 0.211$ , p < 0.05) but not at the first and third time points.

## Discussion

The first objective was to estimate the incidence and prevalence of self-reported anxiety responses throughout the three trimesters of pregnancy. The second consisted of studying the possible risk factors and how they varied throughout pregnancy.

The prevalence of prenatal anxiety symptoms was characterized by a U-curve (i.e., decreasing from the first trimester to the second and increasing from the second to the third trimester). The results are in line with other studies, whose conclusions are similar to ours. Specifically, in the study by Lee, Lam, Sze, Chong, Chui, & Fong. (2007), a prevalence estimate of 36.3% was obtained in the first trimester, 32.3% in the second trimester, and 35.8% in

| Table 2   Incidence and prevalence                |                 |                  |                 |  |  |  |
|---|-----------------|------------------|-----------------|--|--|--|
| GAD7≥7  | First trimester | Second trimester | Third trimester |  |  |  |
| Prevalence  | 19.5% (n = 75)  | 16.8% (n = 48)   | 17.2% (n = 45)  |  |  |  |
|   | Incidence       | 0.048%           | 0.068%          |  |  |  |
| GAD7≥10   | 10.5% (n = 40)  | 6.3% (n = 18)    | 7.7% (n = 48)   |  |  |  |
| Prevalence  | Incidence       | 0.014%           | 0.034%          |  |  |  |
| Level of severity<br>No or mild<br>symptoms (0-9) |                 |                  |                 |  |  |  |
| Moderate (10-14)                                  | 7.6%            | 4.8%             | 6.1%            |  |  |  |
| Severe (15-20)                                    | 2.9%            | 1.5%             | 1.6%            |  |  |  |

the third trimester. In another study, by Figueiredo and Conde (2011), the prevalence results also exhibited a U-shape: 13.1% in the first trimester, 12.2% in the second trimester and 18.2% in the third trimester. These data could be explained by uncertainty in the trajectory of a continued healthy pregnancy, in addition to the presence of the somatic discomfort typical of pregnancy. In our study, anxiety was moderately diminished in the second trimester, when perhaps women are better adapted and more secure; it again increased slightly in the third trimester due to the imminence of childbirth.

With respect to the data obtained for incidence, our data are also in line with the results of other similar studies (Fairbrother, Janssen, Antony, Tucker & Young, 2016; Lee et al., 2007).

It is important to emphasize that despite the loss to followup, there were no significant differences in terms of the

| Prenatal anxiety (GAD-7)                    | First<br>trimester | Second<br>trimester | Third<br>trimester  |
|---|--------------------|---------------------|---------------------|
|   | $R^2 = 0.009$      | $R^2 = 0.019$       | $R^2 = 0.02$        |
| Sociodemographic factors                    | F(.675) =<br>.643  | F(.934) =<br>.459   | F(1.082) :<br>0.371 |
|   | В                  | В                   | В                   |
| Age   | ,020               | -0.47               | .075                |
| Origin                                      | 085                | 063                 | .048                |
| Schooling                                   | -0.24              | 0.55                | -0.034              |
| Employment status                           | -0.16              | 0.58                | 0.095               |
| Marital status                              | -0.039             | -0.093              | -0.071              |
|   | $R^2 = 0.26$ ,     | $R^2 = 0.020$       | $R^2 = 0.02$        |
| Medical factors                             | F(1,843) =         | F(0.879) =          | F(1.089)=           |
|   | .104*              | .496                | .367                |
|   | В                  | В                   | В                   |
| Smoking                                     | .123*              | 0.094               | 0.097               |
| Drinking alcohol                            | -0.29              | 0.087               | 0.056               |
| First-time                                  | -0.37              | 0.043               | -0.027              |
| Assisted pregnancy                          | 0.80               | -0.093              | -0.033              |
| Cesarean                                    | 0.67               | 0.011               | 0.108               |
| Abortions                                   | 0.25               | 0.041               | -0.041              |
|   | $R^2 = .187,$      | $R^2 = .263$ ,      | $R^2 = .187$        |
| Life events                                 | F(6.820) =         | F(6.736) =          | F(6.820)            |
|   | 0.000**            | **000.              | 0.000**             |
|   | В                  | В                   | В                   |
| Illness or injury                           | 0.174**            | 0.055               | 0.086               |
| Illness of immediate family member          | 0.007              | 0.064               | -0.083              |
| Change in the frequency of seeing friends   | 0.158*             | 0.255**             | 0.188*              |
| Work changes                                | -0.016             | -0.103              | 0.009               |
| Family changes (weddings separation)        | 0.006              | -0.030              | -0.036              |
| Changes in a family member's behavior       | 0.154*             | 0.211*              | 0.251*              |
| Difficulty in how to educate prior children | 0.063              | 0.17                | 0.019               |
| Difficulty with other relatives             | 0.112              | -0.083              | 0.057               |
| Serious economic problems                   | 0.051              | 0.204*              | 0.073               |
| Alcoholism or drug addiction in the         | -0.117*            | 0.068               | 0.137               |
| partner                                     |                    |                     | 0.010               |
| Threats or insults from the partner         | _0.040             | 0.05                | 0.012               |

sociodemographic factors in the sample that remained during the three trimesters versus those participants who did not remain in the study across all three periods.

From these data, the importance of longitudinal studies can be deduced, both at the research level and in clinical practice, with a screening of the pregnant women. An accurate evaluation would help us develop preventive measures throughout pregnancy that avoid the negative consequences of anxiety in pregnant women and their children (Zhong et al., 2015).

The second objective of the present study examined which risk factors could be influencing prenatal anxiety. The existing literature precisely suggests that risk factors differ throughout pregnancy (Lee et al., 2007), although there has been disparity across studies with regard to which factors produce a low, medium, or high risk of suffering from anxiety.

Regarding the sociodemographic variables, no significant relationships were found with prenatal anxiety in any of the trimesters. Other studies have associated younger age of the mother to anxiety in pregnancy (Martini, Petzoldt, Einsle, Beesdo-Baum, Hofler & Wittchen 2015, Rubertsson, Hellstrom, Cross, & Sydsjo, 2014). The absence of a significant relationship in our study could be attributable to the average-high age of our sample compared to that of other studies. The participant's origin (immigrant versus not) did not yield significant results either. As noted by Biaggi, Conroy, Pawlby and Pariante (2016), no agreement exists regarding the influence of this variable because other factors, such as not understanding the language or time living in the host country, could be mediating or moderating the results, rather than such results being directly attributable to a specific ethnic group; thus, more studies are needed.

Education level was not a significant predictor of symptoms of prenatal anxiety, in line with the findings of Agostini, Neri, Salvatori, Dellabartola, Bozicevic, & Monti (2015) and Srinivasan, Murthy, Singh, Upadhyay, Mohan, & Joshi (2015). Studies that have found a relationship have yielded contradictory results: on the one hand, some researchers (Martini et al., 2015 and Shu, Jian, Ya, Szu, & Yi, 2016) have reported relationships between symptoms of anxiety in samples with little schooling, whereas other researchers (Stewart, Umar, Tomenson, & Creed, 2014) have found that women with more years of schooling are more likely to experience anxiety symptoms. Thus, further studies will be necessary to better establish this relationship.

In terms of employment status, we also did not find significant relationships. The studies that have found such a relationship during pregnancy have specifically established it between unemployed women and anxiety (Bodecs et al., 2013, Giardinelli et al., 2012). In contrast, the majority of the sample in the present study was employed; hence, this could have a protective effect during pregnancy (Silva, Alves, Clapis, & Peres, 2017).

Marital status showed no significant relationship with anxiety. Our data are in line with the findings of Agostini et al. (2015), who also did not find marital status to be a significant predictor of perinatal anxiety.

It is interesting to note that these sociodemographic data show the need to establish comparisons between populations with sociodemographic disparity (high-low resources, with or without schooling) to be able to estimate more accurately if there are significant relationships between the sociodemographic variables and anxiety. In a comparative study of three samples of pregnant women (Caucasian African-American and Latina) carried out in the USA (Gurung, Fairbrother-Shetter, Collins, Rini, & Hobel, 2005), a weak relationship between sociodemographic factors and anxiety was found among American women with medium-high schooling and resources, in contrast to the two samples with low resources. Consequently, sociodemographic factors could influence samples with low resources, although this influence may not be so clear in samples with medium-high resources, as is the case in the present work.

Among the medical factors, the relationship between smoking and anxiety symptoms was significant. The previous literature corroborates this relationship (Rubertsson et al., 2014). A study by Shu-Chuan Weng et al. (2016) related mere exposure to smoke during pregnancy with a higher rate of suicide. Therefore, it would be important that women could benefit from preventive policies to stop smoking during the first months of pregnancy.

The consumption of alcohol was not linked to symptoms of prenatal anxiety in our research. On the other hand, other studies have found samples for which anxiety is related to alcohol intake at the time of pregnancy (Marcus, Flynn, Blow, & Barry, 2003) and in the past (Lee et al., 2007). In any case, our data can be explained by the social desirability of the question itself or by the possibility that mothers did not consider themselves to have a problem with alcohol; thus, this factor should be delimited in future work based on what amount of alcohol might have a negative effect on pregnancy.

Neither has being a first-time mother been associated with anxiety symptoms. A portion of the literature has linked primiparity with high levels of anxiety (Paul, Downs, Schaefer, Beiler, & Weisman, 2013). On the other hand, other studies have shown being multiparous to be associated with an increase in anxiety during pregnancy (Redshaw, & Henderson, 2013). Our data might be explained by the presence of other potential influencing variables, such as the age of the woman (with our sample representing a relatively high average) or social support; thus, in future studies, a moderation analysis will be required to further investigate these results in order to explain their apparent contradictions.

No significant link was found between infertility treatments and prenatal anxiety symptoms. These data are in line with Rubertsson, Waldenströn and Wickberg (2003), who also did not find a significant relationship. In our longitudinal study beginning in the eleventh week of pregnancy, the risk of abortion had practically disappeared; consequently, the pregnant women could develop a certain resilience and therefore not experience anxiety even though they may have undergone fertility treatments.

Regarding the last two medical variables—i.e., a history of previous abortions and a history of previous caesarean section— no significant relationships were found, in line with studies by Bicking, Baptiste-Roberts, Zhu, and Kjerulff (2015) on abortions and Clout and Brown (2015) on previous cesareans.

The stressful life events in our study were the predictors that best explained the variance associated with anxiety during the three trimesters of pregnancy. Specifically, regarding social support, the results indicate an association between changes in how often you see family or friends as well as an association between how to behave and anxiety symptoms over the three trimesters. This is consistent with what is already documented in the literature, where changes in social relationships have been associated with an increase in anxiety during the perinatal period (Giardinelli et al., 2012). In fact, social support and satisfaction in the couple are protective factors that have been identified in other studies (Edwards, Galletly, Semmler-Booth, & Dekker 2008; Zeng, Cui, & Li, 2015), including Spanish samples (Peñacoba, Carmona, Marín, & Naber, 2012).

There was a relationship in our study between suffering previous injury or illness and having symptoms of anxiety, specifically in the first trimester; such relationships fall out in the second and third trimesters. To our knowledge, no previous studies on this topic have been performed. These data can be interpreted as the coexistence of a previous condition at this time of pregnancy; perhaps being in a period for which there is greater concern about the loss of the baby would increase the level of anxiety. Alcoholism or drug addiction in the partner was positively related in our study in the first trimester but not in the second or third. This relationship does not seem to have been studied previously in the literature; however, it is interesting to take it into account because it could influence the lack of support received by the pregnant woman.

The relationship between financial problems and the symptoms of anxiety in our study was significant in the first trimester but not so in the second and third trimesters. The literature shows contradictory results, with some studies associating them in a relevant way (Bodecs et al., 2013, Zeng et al., 2015). On the other hand, other studies have found no such relationship (Srinivasan et al., 2015).

The remaining life events, such as problems of family violence, changes in family life or conflict with other members of the family, were not predictive. The absence of any relationship could be explained by the present study's sample characteristics (i.e., urban, with a university education, and with good levels of support), where this type of risk factor barely appears in the sample. Other studies with different samples could increase knowledge in this area.

It is important to note that based on the quantitative data, the research confirms the presence of anxiety symptoms throughout the three trimesters of pregnancy at high rates, which respond to multiple factors that interact with each other and that fluctuate over time. We can say that in our study, the most stable relationship over time has been problems related to social support; thus, they have a significantly greater predictive power than sociodemographic or medical factors.

It would be important in relation to smoking that this behavior be controlled by prevention campaigns specifically targeting pregnant women, although it is also hoped that the woman herself would acquire those healthy habits during pregnancy (Silva et al., 2017) On the other hand, it is important to evaluate the symptoms of anxiety during pregnancy in order to develop preventive and intervention programs and supervision in pregnant women, as proposed by the Nice Guides (NICE, 2014) or the Healthy Child Program (Department of Health, 2009). In this screening, it would be interesting to incorporate new measures of individual, ideographic analysis in order to establish what function the symptoms of anxiety fulfill (Vallina- Fernández, Pérez-Álvarez, Fernández-Iglesias, Soto-Balbuena, Perona-Garcelán, & García-Montes, 2014).

This work has focused on the symptoms of anxiety rather than on the diagnosis. Not having a diagnosis does not mean that the symptoms are not important because even these symptoms can have a clinical significance beyond diagnosis, as they do for the so-called "Z codes," which refer to these adaptive problems (Echeburúa, Salaberria, & Cruz-Díez, 2014). In this way, it is believed that some women may have anxiety related to the worry about their pregnancy while not meeting the criteria for an anxiety disorder (Brunton, Dryer, Saliba, & Kohlhoff, 2015).

As limitations, first, the response rate of 57.9% might affect the accuracy of the data provided. Second, no analysis has been made as to whether there are differences in the risk factors between the sample that leaves and the study sample, which could affect some of the conclusions obtained.

In conclusion, the present study provides evidence on incidence rates and prevalence of anxiety symptoms during pregnancy. Likewise, evidence is also provided on how changes in support and in alcoholism or drug addiction in the partner influence anxiety during pregnancy, as well as the importance of smoking and the presence of pre-pregnancy diseases as risk factors. The prenatal period is an opportunity for the prevention and treatment of anxiety; even if it does not involve any clinical disorder, it would be good to contextualize the symptoms and promote access to preventive interventions in order to avoid the effects that anxiety may have on the health of pregnant women and their relationship with their children.

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