Original contribution

Prevalence of anxiety and depression during pregnancy in a private setting sample

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Summary

Objectives: To estimate the prevalence and risk factors for antenatal anxiety (AA) and antenatal depression (AD).

Methods: We performed a cross sectional study of 432 women attending a private clinic in the city of Osasco, São Paulo, from 5/27/1998 to 5/13/2002. The following instruments were used: Spielberger state-trait anxiety inventory (STAI), Beck depression inventory (BDI), and a questionnaire for socio-demographic and obstetric data. Inclusion criteria were: pregnant women with no past or present history of depression, psychiatric treatment, alcohol or drug abuse and no clinical and obstetric complications. The prevalence of AA, according to STAI, and AD, according to Beck Inventory, were estimated with 95% confidence intervals (95% CI). Odds ratios and 95% CI were used to examine the association between AA and AD and exposures variables.

Results: The prevalence of AA, state and trait were 59.5 (95 CI%: 54.8:64.1%) and 45.3% (95% CI: 40.6:50.0), respectively. The prevalence of AD was 19.6 (95% CI:15.9:23.4). In the multivariate analysis, AA-trait (OR: 5.26; 95% CI 2.17:12.5, $p < 0.001$), AA-state (OR: 2.27; 95% CI 1.08:4.76, $p = 0.02$) and AD (OR: 2.43; 95% CI 1.40:4.34, $p = 0.002$) were associated with lower women's educational level. AA-trait (OR: 3.43; 95% CI 1.68:7.00, $p = 0.001$), AA-state (OR: 2.22; CI 95% 1.09:4.53, $p = 0.02$) and AD (OR: 2.82; CI 95% 1.35:5.97, $p = 0.005$) were also associated with not being married. AA-trait was associated with lower women's income (OR: 2.22; 95% CI 0.98:5.26, $p = 0.05$) and not being white (OR: 1.7; 95% CI 1.00:2.91, $p = 0.04$), while AD was associated with lower couple's income (OR: 2.43; 95% CI 1.40:4.34, $p = 0.001$) and greater number of previous abortions (OR: 2.21; 95% CI 1.23:3.97, $p = 0.009$).

Conclusions: Prevalence of AA and AD were high in this sample of women attending a private care setting, particularly AA state and trace. AA and AD were associated with similar socio-demographic and socio-economic risk factors, suggesting some common environmental stressors may be involved.

Keywords: Antenatal anxiety; antenatal depression; prevalence; risk factors; screening.

Introduction

Most research about psychiatric problems during pregnancy that has been done so far is on depression, but less is known about anxiety. Some studies have focused pregnant women attending public services (Cooper et al, 1996; Nordentoft et al, 1996; Paarlberg et al, 1999), but there has been no attention paid to women from private care settings. Anxiety and depression during pregnancy have been associated with prematurity, low birth weight and fetal growth restriction (Rondo et al, 2003; Hickey et al, 1995; Cooper et al, 1996; Dayan et al, 2002), obstetric complications, increased nausea and vomiting, prolonged sick leave during pregnancy, planned cesarean delivery and use of epidural analgesia (Anderson et al, 2004). Depression has also been associated with lower mental child development at the age of 8 months (Huizink et al, 2003) and 2 years (Browers et al, 2001). A fetal programming hypothesis has been proposed to explain the long-lasting effects of depression and anxiety on child behavior (O'Connor et al, 2003).

Scarce work in this area is related to some methodological difficulties: absence of clear definitions of anxiety and stress, few validated instruments for the assessment of anxiety, comorbidity with depression, small samples and measures of anxiety that incorporate physical symptoms (Ayers, 2001; Johnson & Slade, 2003). There is some agreement about the prevalence of depression during pregnancy and postpartum. It is expected

that up to 13% of all pregnant women may develop postpartum depression (O'Hara & Swain, 1996; Benett et al, 2004), and most of those who develop postpartum depression were depressed during pregnancy. According to a prospective study, two-thirds of women with high levels of anxiety in the postnatal period also report elevated symptoms of anxiety at early/mid late pregnancy, and anxiety during pregnancy was a strong predictor of postpartum depression (Heron et al, 2004). In that community-based sample, 13% of the women presented elevated anxiety only in the antenatal period. Using different instruments and criteria for measuring anxiety symptoms, Rondo et al (2003), in a Brazilian cohort with 865 pregnant women from a public service, found prevalence of stress and distress varying from 22.1 to 52.9%. However, in Brazil, patients from public services may face several difficulties in gaining access to pre-natal care, including lack of available professionals, health care units far from women's homes, less than sub-optimal number of appointments, shortage of blood and imaging exams and less support from the health care team, compared to women seen in private settings, which makes it difficult to generalize findings.

Considering the possible adverse effects of anxiety upon pregnant women and the fact that in several countries many obstetric patients may have a private insurance, further knowledge is needed about the prevalence of antenatal anxiety in such settings, and which factors may be associated with it. The aims of the present study were to estimate the prevalence of anxiety and depression during pregnancy in a sample of pregnant women seen in a private health care setting in Brazil, and to examine their association with socio-demographic and obstetric factors.

Methods

Study design and sample

We performed a cross-sectional study with 453 pregnant women, recruited when attending pre-natal appointments in a private obstetric clinic in Osasco, São Paulo, during the period of 05/27/1998 to 05/13/2002. Osasco is one of the cities forming part of the Metropolitan region of São Paulo, and has a population of approximately 700,000. Its main economic activities consist of trading and industry. The clinic is attended by mainly middle-class women with a private health insurance policy. *Inclusion* criteria were: to be pregnant for 21 weeks or more, without clinical and obstetric complications; with no past or present history of depression, psychiatric treatment, or alcohol or drug abuse. All interviews were done by one investigator (AFC), who was in charge of pre-natal care at the clinic.

Instruments

Beck depression inventory (BDI)

The Portuguese translation (Andrade et al, 2001) of the BDI (Beck et al, 1961) was used to identify probable cases of depression. The scale consists of 21 items including symptoms and attitudes with intensities ranging from neutral to a maximum level of severity, ranked from 0 to 3. This inventory has been used in several studies in different countries (Chung et al, 2001; Teissedre & Chabrol, 2004; Faisal-Cury et al, 2004). The cut-off point 15/16 was used, according to a previous validation in Brazil (Gorenstein & Andrade, 1996).

Spielberg state and trait inventory (STAI)

The STAI (Spielberg et al, 1970) was used to identify the probable cases of anxiety. It comprises two self-report scales for the measurement of two distinct anxiety concepts: state-anxiety and trait-anxiety. State anxiety is considered a transitory emotional state, while trait-anxiety is related to relatively stable individual characteristics in proneness to anxiety. Each scale contains 20 statements about how the respondent feels at a particular moment in time (state-anxiety) or about how she/he generally feels (trait-anxiety). Internal consistency ranges from 0.86 to 0.95 for the state subscale and 0.89 to 0.91 for the trait subscale. Chronbach's alpha was >0.88 for state anxiety and >0.83 for trait anxiety (Spielberg et al, 1970). This instrument has been widely used in research about anxiety, including studies about anxiety during antenatal (Hickey et al, 1995) and postnatal periods (Czarnocka & Slade, 2000). The STAI was translated and validated in Brazil (Biaggio et al, 1979). Following that validation, a cut-off point of 40/41 was employed in the present study.

Additional instruments

A questionnaire was employed to obtain information on characteristics of participants that might be connected to risk of AA or AD. Demographic and socio-economic information included age, religion, ethnicity, years of education, length of marriage, employment, personal and family income. Information on past obstetric history included parity, number of children alive and number of abortions and miscarriages.

Procedures

The research project was approved by the ethics committee from Monte Líbano Hospital, also located in Osasco. Pregnant women who met inclusion criteria were approached by one of the investigators (AFC), when they attended antenatal appointments. They were then informed about the research project. During the interview, the participants answered the questionnaire, the BDI and STAI.

Statistical analysis

All variables were categorized. The prevalence of AA (state and trait) and AD, according to the STAI and BDI, respectively, were estimated with 95% confidence intervals (95% CI). Odds ratios (OR) and 95% CI were used to examine the associations

between AA and AD and women's characteristics. Hypothesis testing was done with x^2 tests, or x^2 tests for linear trend, when categories were ordered. Multivariate analyses were performed using a stepwise regression logistic procedure, and adjusted odds ratios and 95% CI were then obtained. A *p*-value <0.05 was considered statistically significant. Statistical analysis was performed using STATA 6 software (STATA, 1997).

Results

Subjects

Four-hundred-and-fifty-three women were invited to participate. Sixteen (3.5%) refused, mainly due to shortage of time. Five women (1.1%) had missing data in one outcome and were also excluded. Therefore, the sample for analysis consisted of 432 (95.3%) pregnant women. Non-participants were slightly younger than participants (24.6 years vs. 26.2 years, respectively). Participants were mainly white (83.0%), Catholic (58.2%) and married or living with a partner (89.5%). One-hundred-and -seventy-nine women were in their first pregnancy (41.4%), while for the remainder the number of previous pregnancies varied from 1 to 8. The mean number of years married was 4.8 (SD = 4.1), with 10.3% of women being in their first year of the current relationship,

Table 1. Characteristics of the sample, number and percentage of antenatal depression (*AD*), according to BDI, crude odds ratios (*OR*), 95% confidence intervals (95% *CI*), *p*-values and order of entrance in the logistic regression model

Women's characteristics	N	AD cases (%)	OR	CI (95%)	*p*-value[a]	Entrance order[b]
Age (years)					0.44	
14/19	50	12 (24.0)	1			
20/29	259	53 (20.4)	0.81	0.39:1.66		
30/44	123	20 (16.2)	0.61	0.27:1.38		
Ethnicity					0.91	
White	357	71 (19.9)	1			
Others	73	14 (19.1)	0.95	0.50:1.81		
Religion					0.06	6
Catholic	250	50 (20.0)	1			
Evangelic	103	14 (13.5)	0.63	0.32:1.20		
Others	76	21 (27.6)	1.52	0.84:2.76		
Education (years)					0.002	2
<8	104	30 (28.8)	1			
8–11	266	50 (19.1)	0.58	0.34:0.99		
>11	59	4 (6.7)	0.17	0.05:0.56		
Women's income (US$)					0.09	
0	217	45 (20.7)	1			
1–335	167	36 (21.6)	1.05	0.64:1.72		
336–2000	48	4 (8.3)	0.34	0.11:1.02		
Partner's income (US$)					0.008	3
0	150	36 (24.0)	1			
1–335	145	34 (23.4)	0.96	0.56:1.66		
336–3330	137	15 (10.9)	0.38	0.20:0.75		
Couple's income (US$)					<0.001	1
Up to 335	237	63 (26.6)	1			
336–3750	195	22 (11.3)	0.35	0.20:0.60		
Number of children alive					0.71	
0	216	41 (19.0)	1			
1/7	216	44 (20.4)	1.09	0.67:1.75		
Number of previous abortions					0.01	5
0	351	61 (17.4)	1			
1/3	81	24 (29.6)	2.00	1.14:3.48		
Number of pregnancies					0.42	
1	179	32 (17.9)	1			
2/8	253	53 (20.9)	1.21	0.74:1.98		
Marital status					0.01	4
Married	387	70 (18.1)	1			
Others	45	15 (33.3)	2.26	1.15:4.45		
Length of marriage (years)					0.47	
0	40	9 (22.5)	1			
1/5	220	37 (16.8)	0.69	0.30:1.58		
6/27	131	28 (21.4)	0.93	0.39:2.19		

[a] *p*-value for chi square test to evaluate liner tendency.
[b] Variables entrance order into multivariate model.

56.2% between 1 and 5 years and 33.5% had had their relationship for 6 years or more. Almost 2/3 had less than eight years of education, 50.2% had no income of their own, while 38.6% had a monthly income of less than 350 US dollars. The mean family income was 500 US dollars (SD = 150).

Prevalence of AA and AD

The means for STAI-state and trait scores were 43.5 (SD = 10.2) and 40.8 (SD = 9.7), respectively. The prev-

alence of AA, state and trait were 59.5 (95% CI: 54.8–64.1%) and 45.3 (95% CI: 40.6–50.0), respectively. The prevalence of AD was 19.6 (95% CI: 15.9–23.4).

In the univariate analysis (Tables 1–3), lower partner and family income, not being married and poorer education were associated with AD, AA-trait and AA-state. Lower women's income was associated with AA-trait and AA-state. Lower women's age and greater number of previous abortions were associated with AD and AA-trait, respectively. In the multivariate analysis (Table 4), poorer women's education was associated with AA-trait

Table 2. Characteristics of the sample, number and percentage of antenatal anxiety-trait (AA-trait), according to STAI, crude odds ratios (OR), 95% confidence intervals (95% CI), p-values and order of entrance in the logistic regression model

Women's characteristics	N	AA-trait cases (%)	OR	CI (95%)	p-value[a]	Entrance order[b]
Age					0.05	6
14/19	28	50 (56.0)	1.00			
20/29	259	122 (47.1)	0.69	0.37:1.28		
30/44	123	46 (37.4)	0.46	0.23:0.92		
Ethnic origin					0.07	7
White	357	155 (43.4)	1.00			
Others	73	40 (54.8)	1.57	0.94:2.62		
Religion					0.25	
Catholic	250	118 (47.2)	1.00			
Evangelic	103	39 (38.8)	0.71	0.44:1.13		
Others	76	38 (50.0)	1.11	0.66:1.87		
Education (years)					<0.001	1
<8	104	60 (57.7)	1.00			
8–11	266	118 (46.2)	0.58	0.39:0.99		
>11	59	12 (22.0)	0.18	0.09:0.45		
Mother's income (US$)					0.001	2
0	217	107 (49.3)	1.00			
1–335	167	79 (47.3)	0.92	0.61:1.38		
336–2000	48	10 (20.8)	0.27	0.12:0.58		
Husband's income (US$)					0.002	3
0	150	72 (48.0)	1.00			
1–335	145	79 (54.4)	1.29	0.81:2.05		
336–3330	137	45 (32.8)	0.52	0.32:0.86		
Couple's income (US$)					0.003	5
Up to 335	237	123 (51.9)	1.00			
336–3750	195	74 (37.4)	0.55	0.37:0.81		
Number of children alive					0.84	
0	216	99 (45.8)	1.00			
1/7	216	97 (44.9)	0.96	0.65:1.40		
Number of previous abortions	0.46					
0	351	162 (46.1)	1.00			
1/3	81	34 (41.9)	0.84	0.51:1.37		
Number of pregnancies					0.58	
1	179	84 (46.9)	1.00			
2/8	253	112 (44.2)	0.89	0.61:1.32		
Marital status	0.002	4				
Married	387	166 (42.9)	1.00			
Others	45	30 (66.6)	2.66	1.37:5.14		
Length of marriage (years)					0.95	
0	40	18 (45.0)	1.00			
1/5	220	97 (44.1)	0.96	0.48:1.90		
6/27	131	56 (42.7)	0.91	0.44:1.86		

[a] p-value for chi square test to evaluate liner tendency.
[b] Variables entrance order into multivariate model.

Table 3. Characteristics of the sample, number and percentage of antenatal anxiety-state (AA-state), according to STAI, crude odds ratios (OR), 95% confidence intervals (95% CI), *p*-values and order of entrance in the logistic regression model

Women's characteristics	Total (n)	AA-state cases (%)	OR	CI (95%)	*p*-value[a]	Entrance order[b]
Age					0.85	
14/19	50	31 (62.0)	1.00			
20/29	259	155 (59.8)	0.91	0.48:1.70		
30/44	123	71 (57.7)	0.83	0.42:1.64		
Ethnic origin					0.50	
White	357	210 (58.8)	1.00			
Others	73	46 (63.0)	1.19	0.70:2.00		
Religion					0.22	
Catholic	250	145 (58.0)	1.00			
Evangelic	103	59 (57.2)	0.97	0.61:1.54		
Others	76	52 (68.4)	1.61	0.90:2.71		
Education (years)					0.014	2
<8	104	70 (67.3)	1.00			
8–11	266	160 (60.1)	0.73	0.45:1.18		
>11	59	25 (44.7)	0.38	0.19:0.75		
Mother's income (US$)					0.005	1
0	217	141 (64.9)	1.00			
1–335	167	97 (58.0)	0.74	0.49:1.13		
336–2000	48	19 (39.5)	0.35	0.18:0.68		
Husband's income (US$)					0.05	4
0	150	84 (56.0)	1.00			
1–335	145	100 (67.6)	1.63	1.01:2.64		
336–3330	137	76 (54.7)	0.95	0.59:1.51		
Couple's income (US$)					0.07	5
Up to 335	237	152 (63.3)	1.00			
336–3750	195	107 (54.8)	0.70	0.47:1.03		
Number of children alive					0.37	
0	216	124 (57.4)	1.00			
1/7	216	133 (61.5)	1.18	0.80:1.74		
Number of previous abortions					0.19	
0	351	214 (60.9)	1.00			
1/3	81	43 (53.1)	0.72	0.44:1.17		
Number of pregnancies					0.92	
1	179	106 (59.2)	1.00			
2/8	253	151 (59.6)	0.92	0.69:1.50		
Marital status					0.04	2
Married	387	224 (57.8)	1.00			
Others	45	33 (73.3)	2.00	0.99:4.00		
Length of marriage (years)					0.77	
0	40	24 (60.0)	1.00			
1/5	220	126 (57.2)	0.89	0.44:1.77		
6/27	131	80 (61.0)	1.04	0.50:2.16		

[a] *p*-value for chi square test to evaluate liner tendency.
[b] Variables entrance order into multivariate model.

(OR: 5.26; 95% CI 2.17:12.5, *p* < 0.001), AA-state (OR: 2.27; 95% CI 1.08:4.76, *p* = 0.02) and AD (OR: 2.43; 95% CI 1.40:4.34, *p* = 0.002). Similar associations were observed between not being married and AA-trait (OR: 3.43; 95% CI 1.68:7.00, *p* = 0.001), AA-state (OR: 2.22; 95% CI 1.09:4.53, *p* = 0.02), and AD (OR: 2.82; 95% CI 1.35:5.97, *p* = 0.005). AA-trait was also associated with lower women's income (OR: 2.22; 95% CI 0.98:5.26, *p* = 0.05) and not being white (OR: 1.7; 95% CI 1.00:2.91, *p* = 0.04), while AD was associated with a lower couple's income (OR: 2.43; 95% CI 1.40:4.34,

p = 0.001) and greater number of previous abortions (OR: 2.21; 95% CI 1.23:3.97, *p* = 0.009).

Discussion

As far as we are aware, this is the first study about anxiety and depression based on women from a private clinic in Brazil. Before discussing its possible contribution to the understanding of anxiety and depression during pregnancy, some limitations have to be considered. The sample was constituted of lower-middle-class women, attending

Table 4. Final logistic regression models with crude and adjusted odds ratios, 95% confidence intervals and *p*-values

Women's characteristics	Crude OR	95% CI	Adjusted OR	95% CI	*p*-value
Anxiety trait					
Education (years)					<0.001
<8	1.00				
8–11	0.58	0.39:0.99	0.60	0.37:0.96	
>11	0.18	0.09:0.45	0.19	0.08:0.46	
Mother's income (US$)					0.05
0	1.00				
1–335	0.92	0.61:1.38	0.97	0.63:1.14	
336–2000	0.27	0.12:0.58	0.45	0.19:1.02	
Ethnic origin					0.04
White	1.00				
Others	1.57	0.94:2.62	1.7	1.00:2.91	
Marital status					0.001
Married	1.00				
Others	2.66	1.37:5.14	3.43	1.68:7.00	
Anxiety state					
Education (years)					0.02
<8	1.00				
9–11	0.73	0.61:1.54	0.74	0.45:1.20	
>11	0.38	0.90:0.75	0.44	0.21:0.92	
Mother's income (US$)					0.02
0	1.00				
0–335	0.74	0.49:1.13	0.75	0.49:1.15	
336–2000	0.35	0.18:0.68	0.47	0.23:0.96	
Marital status					0.02
Married	1.00				
Others	2.00	0.99:4.00	2.22	1.09:4.53	
Depression					
Couple's income (US$)					0.001
Up to 335	1.00				
336–3750	0.35	0.20:0.60	0.41	0.23:0.71	
Education (years)					0.002
<8	1.00				
9–11	0.58	0.34:0.99	0.59	0.34:1.02	
>11	0.17	0.05:0.56	0.18	0.05:0.60	
Marital status					0.007
Married	1.00				
Others	2.26	1.15:4.45	2.82	1.35:5.97	
Number of previous abortions					0.009
0	1.00				
1/3	2.00	1.14:3.48	2.21	1.23:3.97	

a single private antenatal care clinic, with no previous medical condition or history of depression and with no previous clinical or obstetric problems, which limits generalization of results. If women with a history of depression or other medical conditions had been included, possibly the prevalence of AA and AD would have been even higher. It is possible that the present sample was constituted of women who had a high vulnerability for anxiety and depression even prior to their current pregnancy, but there is no reason to suppose that women attending antenatal care in the study clinic would be different from women seen in other similar clinics in Brazil, regarding such vulnerability. Assessing AA and AD by means of self-report instruments may have overestimated the prevalence of both conditions. Despite its good psychometric properties (Beck et al, 1988), the use of BDI for pregnant women has been criticized (Salamero et al, 1994), based on the inclusions of somatic items, which may not reflect actual psychological problems, but rather physiological changes during pregnancy. As a matter of fact, the use of non specific instruments for the assessment of anxiety and depression in pregnant women has been critically reviewed and criticized (Ross et al, 2003; Johnson & Slade, 2003; Riecher-Rössler & Rohde, 2005). A psychiatric classification based, for example, on DSM-IV criteria would give a more restricted

estimate of prevalence of AA and AD. Some authors have used a different approach to investigate anxiety during pregnancy, comparing women with high and low scores, instead of using a cut-off to define cases and non-cases (Dayan et al, 2002; Heron et al, 2004). On the other hand, to have an estimate of the prevalence of possible cases is useful when one considers practical interventions that might be targeted to those women with high scores on anxiety and depression. The cross-sectional design limits the establishment of possible causal relationships between AA and AD and socio-economic and obstetric characteristics. One strength of the present study is the large sample size and the low rate of non-participation.

In our sample, the prevalence of AA state and trait were very high. Using different criteria and instruments, other authors found lower levels of anxiety during pregnancy (Heron et al, 2004; Najman et al, 1991; Eberhard-Gran et al, 2003). When considering the means for AA trait and state scores, results from the present study were higher than previously reported (Dayan et al, 2002; Tilden, 1983; Hickey et al, 1995). The prevalence of depression (19.6%) was also higher than expected. It is possible that adverse socio-economic scenario in the country, with high rates of unemployment and low wages, may contribute to this situation. In our sample, the mean monthly family income was 500 U.S. dollars, which is not enough to fulfil the regular needs of a family, particularly when a newborn is about to come. In fact, women with lower levels of education, with lower family income, and not living with a partner were at higher risk of AA and AD. Research carried out in developed and developing countries have found low socio-economic status to be one of main risk factors for depression and anxiety in the general population and for postnatal depression (O'Hara & Swain, 1996; Cooper et al, 1996; Patel et al, 2002; Patel & Kleinman, 2003).

One finding that has not been extensively confirmed in other studies was the association of AD with number of previous abortions. However, a study carried out in Nigeria (Fatove et al, 2004) found that age, level of education, socio-economic status and parity were not related to anxiety and depression during pregnancy, while previous abortion, previous cesarean section or instrumentally-assisted delivery were. It is possible that cultural and psychosocial aspects, such as religiosity (Brazil is a predominantly Catholic country) and other moral values, may play a role as stressors that are specific to each society or population investigated. Considering pregnancy as a period of increased vulnerability, one may hypothesize that socio-economic related variables are general

stressors, while certain obstetric related factors, such as history of previous abortion, act as a specific stressor depending on the socio-cultural setting.

The question of whether anxiety and depressive disorders are clearly separate entities continues to be controversial. Himmelhoch et al (2001) considered anxiety and depression as two different forms of final psychopathology sharing common pathways. The tripartite model of anxiety and depression assumes that each entity has distinct features (physiological hyper arousal and anhedonia, respectively), and also share a common dimension, called distress or negative affect (Clark & Watson, 1991). Even differentiating anxiety as a symptom from anxiety as a syndrome is a diagnostic challenge, considering that anxiety conditions include generalized anxiety disorder, panic disorder, phobias, hypochondriac disorder, post-traumatic stress disorder and obsessive-compulsive disorder (Peh, 2004). In fact, it is well recognized that anxiety and depression, both as affective states and clinical disorders, frequently overlap (Matthey et al, 2003). Alternatively, it has been argued that this high correlation might be due to psychometric weaknesses of scales used to measure such symptoms and disorders, rather than to an actual comorbidity or lack of validity of the anxiety or depression constructs (Endler et al, 1992). Considering the high prevalence of both AA and AD, and their consistent association with socio-economic conditions, we believe that it may be worth considering using a broader concept of "common mental disorders" (Goldberg & Huxley, 1992), which includes depressive and anxiety disorders classified in ICD-10 (1992), as well as mixed states that have an impact on the functioning of those presenting with such symptoms, in future research with pregnant and postpartum women. The present investigation also points out to the role obstetricians have in dealing with AD or AA during pregnancy. Adequate training of obstetricians and nurses in the detection and management of anxiety and depression among women attending antenatal care should help to decrease the burden represented by such states for the pregnant woman.

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