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Underdetection of Psychiatric Disorders During Prenatal Care: A Survey of Adolescents in Sao Paulo, Brazil

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ABSTRACT

Purpose: This study estimates the prevalence of common mental disorders and the proportion and potential determinants of detection among adolescents attending prenatal care.

Methods: We recruited 930 consecutive adolescents admitted for obstetric care, of which 457 participants had attended the hospital's prenatal care unit. Common mental disorders were assessed using the Composite International Diagnostic Interview (version 2.1). A detailed review of prenatal care records was used to identify detection of psychiatric disorders by prenatal healthcare professionals.

Results: A total of 103 adolescents (22.5%) had some mental disorder but only one-fifth of them had had their psychiatric disorder detected during prenatal care. The most frequent diagnosis using the Composite International Diagnostic Interview (version 2.1) was depression (13.5% or 62), but only 21% had been detected. Alcohol and drug dependence were the least common mental disorders (2.4%), but they were the most commonly detected (45.5%). Physical chronic condition increased the likelihood of detecting psychiatric disorder.

Conclusion: Mental health is not yet recognized as an integral component of practice in prenatal care. Given the potential effect of antenatal psychiatric morbidity on maternal and child outcomes, especially among adolescents, practice needs to be changed and prenatal care professionals trained in the recognition and basic treatment of common mental disorders.

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Women are more likely to develop a psychiatric disorder at some point in their lives as compared with men, and depression is the best example of this disproportion, with gender differences first emerging at adolescence [1]. Occurrence of depression during pregnancy exposes women and infants to important risks as it has been linked to obstetric complications, such as low birth

weight and prematurity [2,3]. These risks are further increased during adolescence as adolescent pregnancies are themselves associated with poorer perinatal outcomes including low birth weight [4]. Furthermore, adolescence is an important period for the detection of mental disorders as it paves the way for adult functioning and predicts mental disorders in adulthood [5]. Therefore, the detection and treatment of psychiatric disorders during pregnancy, especially among adolescents, is essential in achieving better outcomes for the mother and her offspring. This study describes the prevalence of psychiatric disorders during pregnancy among adolescents attending a prenatal care unit in

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Sao Paulo city. It describes the proportion of psychiatric disorders detected during prenatal care and explores potential correlates of increased detection.

Methods

Sample and setting

This study was based on a sample of 457 participants which was part of a larger sample of 930 adolescents from a previous study [2,6] who were admitted to a maternity hospital for obstetric care between 2001 and 2002. These 457 participants were selected as they had also attended prenatal care sessions at the hospital; thus, we were able to compare previously detected conditions and those identified by the Composite International Diagnostic Interview (CIDI version 2.1). This prenatal care service uses a routine standardized interview and differs from the prenatal care offered at the National primary care system mainly by having a multidisciplinary team, which includes specialists, such as psychiatrists and cardiologists, facilitating referral when needed.

Measurements

Participant's age, education, and socio-economic circumstances were determined. Obstetric history included number of pregnancies, planned pregnancy, and preexisting chronic physical conditions (hypertension, diabetes, and any "lung, heart or kidney" diseases).

Psychiatric disorders during pregnancy were assessed using the CIDI 2.1, which has been validated in Brazil [7]. It provides diagnosis over the previous 12 months according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Psychiatric disorders included depression, anxiety, posttraumatic stress disorder, alcohol and drug dependence occurring at any time in the previous 12 months. All interviewers (three psychologists) attended the accredited CIDI training center in Sao Paulo. Data were collected using face-to-face interviews after the adolescents had fully recovered from labor and the effects of anesthesia, which varied between 4 and 48 hours.

Gestational age at first prenatal visit and number of prenatal care visits were taken from the prenatal care records. An adequate number of prenatal care visits was defined as six or more for a full-term pregnancy [8]. Detection of psychiatric disorders was determined by identifying any psychiatric disorders and/or related referrals recorded at any time during the prenatal care related to the current pregnancy and comparing with the CIDI diagnosis (actual diagnosis).

Statistical analysis

We used a logistic regression model in those with a psychiatric disorder ($n = 103$) to identify factors which might have increased the likelihood of its detection by prenatal care professionals. These factors included age, education, social class, living or not living with a partner, first parity, planned pregnancy, adequate number of prenatal visits, preexisting chronic physical conditions, and number of psychiatric disorders.

Ethics

The study was approved by the ethical committees of the hospital and of the Federal University of Sao Paulo.

Results

Participants' age ranged from 12 to 19 years, 61.0% were living with a partner, and only 20.0% had planned their pregnancy (Table 1).

In all, 103 (22.5%) participants had at least one mental disorder and 28 (27.2%) of them had more than one diagnosis. Only 20.4% (21) of those with at least one psychiatric disorder had it detected during the prenatal care period (Fig. 1). The most frequent diagnosis was depression (13.5% or 62), and only one-fifth of them (21%) had been detected. The proportion of detection was similar for posttraumatic stress disorder (12 of 48 cases). A total of 20 participants had anxiety disorder and only three (14.3%) had been detected. Alcohol and drug dependence were the least common mental disorders (2.4%) but they were most commonly detected (45.5%).

Only preexisting chronic physical conditions were associated with detection of psychiatric disorders during prenatal care (OR = 6.76; 95% CI: 1.43–31.92) (Table 1). Living with a partner and higher number of psychiatric disorders increased the likelihood of detection, but associations did not achieve statistical significance ($p = .065$ and $p = .058$, respectively).

Discussion

We found that mental disorders were common among adolescent mothers attending a prenatal care service in Sao Paulo, Brazil, and rates of detection by health professionals during prenatal care were very low. We also identified that those with preexisting physical conditions were more likely to have their psychiatric disorder detected. Current practice in prenatal care prioritizes physical conditions which are clearly established to have an important effect on fetal development, and those with preexisting chronic physical conditions are, in general, monitored closely by health professionals, increasing the likelihood of detecting other conditions. The high rates of detection of substance misuse disorders might also reflect the already established evidence of an important effect of some substances on fetal development [9], whereas detection of other important psychiatric disorders, such as depression, is not yet in the clinical routine of prenatal care. We cannot generalize our findings to other services in the country; however, it is expected that rates of detection would be even lower in the primary care system as they have fewer resources and referrals are not as easy.

The rapid hormonal and physical changes experienced by adolescents are partially responsible for the high vulnerability to mental disorders during this stage of development. Pregnancy during this period of life adds to this vulnerability. Most pregnancies in our study were unplanned and mothers did not have the necessary support (40% did not have a partner). Nearly one in four participants in our study had some psychiatric disorder, yet a large proportion of them were not diagnosed; therefore, they did not receive any kind of treatment or support, placing them and their child into an increased risk of adverse outcomes.

The measurement of mental health shortly after childbirth may be confounded by emotional experiences common after childbirth and recall bias is a possibility. This is an important limitation of our study. However, we used a structured mental health interview delivered by trained interviewers who ensured that they were carried out only after the mother had fully recovered from childbirth. In addition, there is good evidence that antenatal depression strongly predicts postnatal depression

Table 1

Socio-demographic profile, obstetric history, and health status during pregnancy and their association with detection of psychiatric disorders during prenatal care, Sao Paulo, Brazil

Maternal characteristics	Total sample n = 457	Any psychiatric disorders n = 103	Any psychiatric disorder detected n = 21	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
	Mean (SD)	Mean (SD)	Mean (SD)		
Age (years)	16.5 (1.4)	16.5 (1.3)	16.2 (.4)	.80 (.56–1.16)	.77 (.48–1.23)
Schooling (years)	7.8 (2.0)	7.4 (2.1)	7.1 (.4)	.92 (.74–1.16)	.96 (.68–1.35)
Social class	n (%)	n (%)	n (%)		
Low	228 (50.1)	54 (52.4)	8 (38.1)	1.00	1.00
Others	227 (49.9)	49 (47.6)	13 (61.9)	2.07 (.78–5.55)	2.33 (.73–7.51)
Living with a partner					
No	177 (39.0)	44 (42.7)	13 (61.9)	1.00	1.00
Yes	277 (61.0)	59 (57.3)	8 (38.1)	.37 (.14–1.00)	.33 (.10–1.07)
Parity					
First	403 (88.6)	93 (90.3)	18 (85.7)	1.00	1.00
Previous	51 (11.4)	10 (9.7)	3 (14.3)	1.79 (.42–7.59)	2.62 (.48–14.5)
Planned pregnancy					
No	363 (80.0)	81 (78.6)	18 (85.7)	1.00	1.00
Yes	91 (20.0)	22 (21.4)	3 (14.3)	.55 (.15–2.08)	.42 (.07–2.56)
Preexisting chronic physical conditions					
No	412 (90.4)	86 (83.5)	15 (71.4)	1.00	1.00
Yes	44 (9.6)	17 (16.5)	6 (28.6)	2.58 (.83–8.07)	6.76 (1.43–31.92)
Adequate number of prenatal care visits					
No	205 (44.7)	45 (43.7)	12 (57.1)	1.00	1.00
Yes	252 (55.2)	58 (56.3)	9 (42.9)	.51 (.19–1.33)	.63 (.21–1.91)
Number of psychiatric disorders ^a					
None	354 (77.5)	–	–		
One	75 (16.4)	75 (72.8)	14 (66.7)	1.00	1.00
Two or more	28 (6.1)	28 (27.2)	7 (33.3)	1.29 (.77–2.16)	1.77 (.98–3.21)

^a This was included in the multivariate analysis as a continuous variable.

[10]. Despite this important limitation, our study had a large sample size and used standardized and validated measures of mental disorders and shows that mental health is not yet recognized as an integral component of practice in prenatal care. Given the potential impact of antenatal psychiatric morbidity on maternal and child outcomes, especially among adolescents, practice needs to be changed and prenatal care professionals trained in the recognition and basic treatment of common mental disorders.

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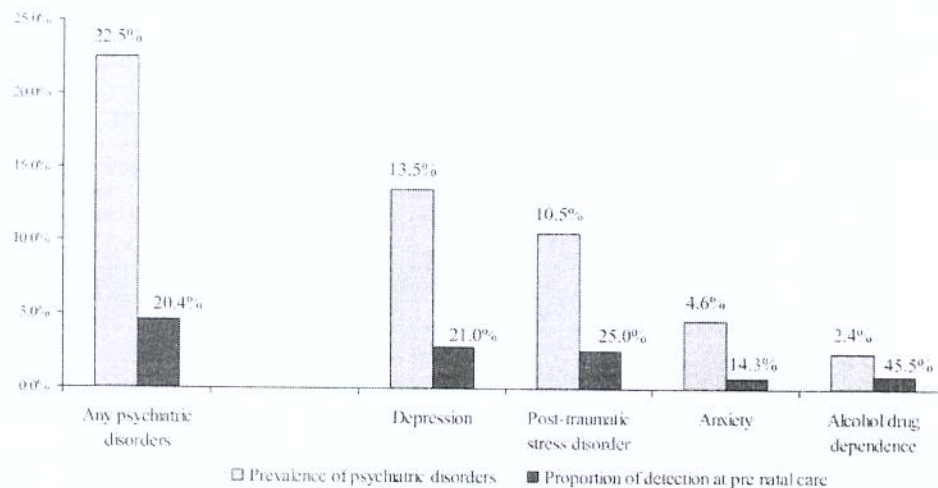


Figure 1. Prevalence of psychiatric disorders among pregnant adolescents and proportion of their detection at prenatal care, Sao Paulo, Brazil.

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