



TRAJECTORIES AND PREDICTORS OF PERINATAL ANXIETY SYMPTOMS IN LOW-INCOME RURAL AREA MOTHERS AT RISK OF ANXIETY

Obstetrics & Gynaecology

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ABSTRACT

AIM: The goal of the study was to determine the trajectories of perinatal anxiety symptoms and their determinants among women who report with risk anxiety during pregnancy and live in a low-resource context in Sriperumbuthur, Chennai.

Study Design: A Cross sectional study design

METHADODOLOGY: This cross-sectional study included 192 women from Sriperumbuthur, a low-income neighborhood in Chennai, who were selected at their first prenatal visit if they scored 13 or higher on the Edinburgh Postnatal Anxiety Scale, were at least 18 years old, and were fewer than 29 weeks pregnant. Participants were followed up on at eight months gestation, three months postpartum, and twelve months postpartum. Growth mixture modelling was used to find latent trajectories of anxiety symptoms based on the Hamilton Anxiety Scale (HAS). Because HAS scores did not differ between the control and intervention groups, all individuals were evaluated jointly. Using health, social, and economic variables of trajectories were studied to identify high-risk groups with more or more chronic rage symptoms.

RESULTS: There were two trajectories identified: prenatal alone (88%) with moderate to severe symptoms at baseline that subsequently diminish; and antenatal and postnatal (12%) with severe anxiety symptoms during pregnancy and later in the postpartum period that subside to moderate levels at 3 months postpartum. Severe food hardship, intimate partner violence, reduced social support, more functional impairment, problematic drinking, and suicide risk are all predictors for the prenatal and postnatal trajectory.

CONCLUSION: A small percentage of women who are at risk for anxiety prenatally remain at risk during pregnancy and can be distinguished from those who experience a spontaneous remission. These findings should be included into identification and referral efforts, especially considering the scarcity of mental health services in low-income areas.

KEYWORDS

Antenatal, Postnatal, Anxiety, LOW INCOME and Hamilton Depression Scale.

INTRODUCTION

A small fraction of women who are prenatally at risk for anxiety continues to be at risk during pregnancy, which may be separated from those who have spontaneous remission. These findings should be included in identification and referral efforts, particularly in low-income communities where mental health resources are scarce. [1]

The worldwide evidence base on prenatal anxiety risk factors is expanding. A history of anxiety, social conflict, and a lack of social support from family or spouse have all been recorded in low- and middle-income countries (LMICs) and high-income countries (HICs). Younger age, poorer educational status, and being single are among the few demographic risk variables for both prenatal and postnatal anxiety that have received some, but mixed evidence. In Tamilnadu, the evidence on socioeconomic risk factors is equivocal. [2,3]

Food insecurity, defined as the inability to get a sufficient quantity of nutritious food on a daily basis and reported by 38 percent of households in Sriperumbuthur, Chennai, has long been linked to prenatal and postnatal distress. In Sriperumbuthur, where intimate partner violence is frequent and reported by more than 40% of pregnant women, IPV has also been identified as a risk factor for perinatal anxiety. [4]

Fewer research looked at health-related determinants of perinatal anxiety, despite the fact that they are especially important in LMICs. There appears to be a link between socioeconomic position during pregnancy and postpartum anxiety, but the evidence isn't conclusive. [5]

The wide range of risk factors found for prenatal or postnatal anxiety

demonstrates the disorder's etiology and progression. Our understanding of the variables related to the development, intensity, and chronicity of aggressive symptoms during the perinatal period is further limited by the fact that the majority of the information is based on cross-sectional research. [6,7] The variability of anxiety, both in terms of symptom profiles and trajectories, has recently been investigated using latent modeling approaches. In the domain of prenatal anxiety symptoms, two systematic reviews summarised the data utilizing such modeling methodologies. A persistently severe and a chronically low symptom level trajectory were found as the most often reported trajectories in both reviews. Despite similar severe levels of anxiety symptoms antenatally compared to those suffering from persistent severe symptoms throughout the postpartum period, transient trajectories were also documented, some of which showed a spontaneous remission among certain women.

METHODOLOGY

Study Design And Setting

This is cross-sectional research that looks at the cost-effectiveness of a short psychosocial intervention for perinatal anxiety among 200 pregnant women at risk of anxiety who live in Sriperumbuthur, a peri-urban informal community on the outskirts of Cape Town, Chennai. Sriperumbuthur is similar to other informal colonies in Chennai in terms of poor living conditions, high industrial rates, and population density. Because the psychological intervention had no effect on the women's violent symptoms, this sample could be used for the current investigation. The procedures for recruiting and data collecting were previously outlined and are briefly revisited here.

Participants

In Sriperumbuthur, recruitment was done in two community rural

health facilities. The Edinburgh Postnatal Anxiety Scale was used to examine pregnant women for anxiety symptoms following their first prenatal clinic appointment (EPAS). The EPAS is a ten-item Likert-scale questionnaire that evaluates a variety of anxiety symptoms, including somatic symptoms and suicidal thoughts.

Procedure

Participants were randomly assigned to either a psychosocial intervention or improved usual care after enrollment. The psychosocial intervention, which comprised aspects of psycho-education on depression and pregnancy, problem resolution, behavioural activation, and healthy thinking, was delivered by qualified community health professionals and consisted of six counselling sessions. Participants were asked a range of questions on their health, suicide risk, and recent life events during the enhanced usual care, which lasted three months. All of the participants got the same prenatal care as was offered at the clinics, which included medical treatment of the pregnancy, HIV testing, and care for preventing mother-to-child transmission. At the time of recruiting, an evaluation was completed, as well as at eight months of pregnancy, three months after giving birth, and twelve months after giving birth. This was carried out by two fieldworkers who were not aware of the participant's arm assignment.

Measurements

All of the evaluations took into account a variety of mental health, health, social, and economic factors. Questions on socio-demographics were also included in the baseline assessment. Because these factors are frequently obtained during the initial prenatal visits in Sriperumbuthur, only age, education, and marital status were considered possible demographic predictors and included in the analysis.

Characteristics of Health

The Hamilton Anxiety Rating Scale was used to examine anxiety symptoms (HARS). Scores vary from 0 to 54, with a higher number indicating more severe symptoms. It has been argued that a cut-off of 17 indicates clinically severe anxiety symptoms. For the RCT, a more structured Tamil/Hindi version of the HARS was created for non-clinicians to use: this adapted version was validated and showed good construct validity and internal consistency, as well as excellent inter-rater (0.97 to 0.98) and test-retest reliability (0.90).

The Major Anxiety Episode and Suicidality modules of the Mini-International Neuropsychiatric Interview (MINI) 6.0 were used to measure present anxiety and suicidality risk, respectively. The Major Anxiety Episode module was also used to determine a lifetime diagnosis of anxiety. The MINI 6.0 is a short diagnostic interview that has long been considered the gold standard in the field. A score of 17 or above indicated a high risk of suicide. Participants who indicated a high risk of suicide were referred to a psychiatric nurse at the same community health facility right away.

Behavioral traits

The MSPSS, a 12-item 7-point Likert Scale questionnaire, was used to measure perceived emotional support from family and friend.

Features of the economy

The HFIAS (Household Food Insecurity Access Scale) is a nine-item questionnaire that assesses three aspects of food insecurity. The HFIAS score was binarized, allowing individuals to be classified as either extremely food insecure or not, as in prior studies in low-income settings. Multiple correspondence analysis was also used to establish a proxy for socioeconomic class, in which economic-related factors were analysed to create an asset-based score. Education, work status, major source of income, if the household income is fixed, home qualities, and access to amenities were among the variables.

Each demographic, health, social, and economic data gathered at baseline was input as a single predictor in an uncorrected logistic regression, with class membership as the outcome, in the second stage of the study.

RESULTS

OVERVIEW OF SAMPLE

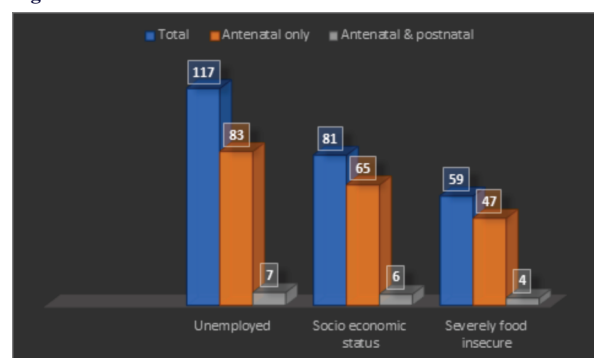
Table 1 summarises the baseline characteristics of the sample. Participants were on average 26 years old (standard deviation (SD) = 5.21). The majority of participants (63 percent) said they did not finish high school and did not live with a spouse (92 percent). Over a fifth of

respondents said they were seriously food insecure (30 percent). [figure:1] On the MINI, more than 41% were labelled with present anxiety, 16% were deemed suicidal, [Table:3] and 31.8 percent had a history of anxiety.

Table: 1 Sociodemographic profile

Demographic characteristics	Total [n=200]		Antenatal only [n=192]		Antenatal & postnatal [n=12]	
	n	Mean/SD	n	Mean/SD	n	Mean/SD
Age		26.3(5.21)		27.3(6.11)		28.3(6.12)
Gestation		16.8(5.82)		17.18(5.64)		17.9(5.44)
Didn't complete high school	125		116		5	
Not living with partner	184		162		11	

Figure: 1 Economic measures



Women were more likely to belong to the antenatal and postnatal class when they reported being severely food insecure, experienced lower support from family or significant other and reported problematic issues during pregnancy. Overall social support mean/SD = 59.21/13.22 for total women in the study. [Table:2]

Table: 2 Social characteristics

Social characteristics	Total [n=200]		Antenatal only [n=192]		Antenatal & postnatal [n=12]	
	Mean	SD	Mean	SD	Mean	SD
Overall social support	59.21	13.22	58.6	13.14	53.41	14.78
Social support from family	19.87	4.98	19.85	5.23	17.32	7.27
Social support from friends	15.77	6.21	15.87	5.88	14.67	5.74

Table: 3 Health characteristics

Health characteristics	Total	Antenatal only	Antenatal & postnatal
	n [%]	n [%]	n [%]
Current diagnosis of anxiety [MINI]	82 [41%]	72 [38%]	8 [63%]
Lifetime diagnosis of anxiety [MINI]	64 [32%]	58 [30%]	6 [55%]
High suicide risk	32 [16%]	31 [16%]	4 [33%]

DISCUSSION

The goal of this study was to find out how distinct trajectories of perinatal anxiety symptoms and their determinants differed among low-income rural women who were at risk of anxiety during pregnancy. Previous longitudinal investigations that reported a natural remission group agree with the prenatal-only trajectory. [8,9] This suggests that, despite having mild to moderate anxiety symptoms during the first or second trimester, the majority of women improved their symptoms throughout the rest of the postpartum period without intervention.

The prenatal and postnatal trajectory, on the other hand, reveals that a small percentage of women did not see their symptoms go away on their own and were anxious throughout the majority of the perinatal period. This shows that screening for postnatal anxiety in the first few weeks after birth may not be beneficial in detecting at-risk women later

in the postpartum period. [10]

Other than their initial anxiety symptom intensity, the findings imply that women at risk of persistent anxiety symptoms can be distinguished from those who experience a natural remission during pregnancy based on a variety of psychological and health-related variables.

When women reported being extremely food insecure, experiencing physical or sexual IPV, and having less family support, they were more likely to fall into the prenatal and postnatal categories. They were also more likely to have a current or lifetime diagnosis of anxiety, as well as a higher risk of suicide. These findings back with prior research [11,12] linking prenatal anxiety symptoms in South Indian women to a higher risk of suicide and food insecurity. As a result, the introduction of the suicide item in the HARS had no effect on the link established between suicidal risk and trajectories.

Women who were more likely to have anxiety symptoms during pregnancy appeared to have a greater risk profile in terms of social, economic, physical, and mental health features. This has significant consequences for referral and treatment procedures in places where mental health resources are limited. [13] First, our data show how successful a diagnosis would be in recognizing women at increased risk for chronic symptoms, given the higher chance of women diagnosed with anxiety being assigned to the 'antenatal and postnatal' trajectory. Food insecurity and social support, on the other hand, are factors that are relatively easy to assess during pregnancy; limiting referrals to women who have severe symptoms but also present with greater functional impairment, or who report alcohol use or low support during pregnancy, would limit referrals and allow the limited mental health services to focus on the women who are most at risk.

The current findings [14,15] are difficult to compare to those published the only other study that used growth curve mixture models (GCMM) to measure prenatal anxiety symptoms among women residing in two LMICs. Instead, three pathways were identified: a permanently low-symptom trajectory and two transitory trajectories, which were marked by severe symptoms early or late in the postpartum period before recovering to low levels. This is consistent with prior research, which has found that anxiety symptoms start off mild early in pregnancy and then rise later in the postpartum period. To ensure that all potential trajectories and related variables are recognized, future studies must include women with a variety of symptom levels at recruitment.

CONCLUSION

This is one of the first studies to investigate the intensity and progression of anxiety symptoms in the perinatal period in a low-income country. The data suggest that perinatal women at risk of anxiety throughout pregnancy are not a homogeneous population. The findings emphasize the significance of shifting away from symptom-based mental disease diagnosis and toward a screening approach that considers the role of psychosocial variables in the onset and progression of prenatal anxiety symptoms. Given the limited mental health resources in low-income rural locations next to Chennai, referral mechanisms, as well as scheduling and target groups for therapies treating prenatal anxiety symptoms, can be constructed in a more efficient manner.

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