ABSTRACT

Introduction

Pregnancy is a time of tremendous change and adjustment for women, their partners and families. This adjustment is made more difficult when pregnancies are higher risk, unplanned, unsupported or are marred by negative life experiences. Globally, approximately one in three pregnant women experience mental health problems at some point during their pregnancies, with depression and anxiety being most common, and problems more likely to persist into the postnatal period and beyond if not addressed. Despite being relatively common, very few health care systems, especially those in lower resourced settings such as South Africa, include routine screening for and access to care for mental health problems in pregnancy.

Unidentified and untreated antenatal depression and anxiety can have a myriad of negative consequences for the affected woman, her partner, their fetus and family. This includes lower uptake and compliance with antenatal care and health behaviours, negative pregnancy outcomes and even thoughts of self-harm (TSH) that can potentially escalate to antenatal self-harming behaviours or suicide. Given growing evidence of a high burden of mental health problems amongst South African women, there is a need to address the gaps in South African literature around our understanding of how and when antenatal depression and anxiety present in pregnancy, what best predicts its onset and persistence and what health care systems can do to prevent some of the worse outcomes of antenatal mental health problems, specifically the risk of self-harm.

Aims

The overall aim of this study is to determine rates of antenatal depression and anxiety in an urban population in Soweto, South Africa, and to determine the factors associated with them using a longitudinal pregnancy cohort. It aims to better understand, in a context of high adversity, the stress and protective factors which interact with psychological vulnerability during pregnancy, in order to make recommendations for screening in clinical settings and potential intervention targets.

Methods

Women were enrolled in a prospective pregnancy cohort Soweto First 1000 Days Cohort (S1000) in Soweto, South Africa (2014–2016) and assessed using validated measures including Edinburgh Postnatal Depression Scale (EPDS) with a score of ≥13 indicating probable depression; and the State-Trait Anxiety Index (STAI) with a score ≥12 indicating probable anxiety. Data was collected in early (T1) and later pregnancy (T2) from a cohort of 1063 women (2014-2016) however longitudinal analysis in this thesis is restricted to n=649 women with mental health data at both time points. Sensitivity analysis indicated little to no difference to those included in terms of mental health and other important socio-demographic variables although those included in the n=649 had slightly higher asset ownership scores.

Logistic regression was used to determine factors associated with depression and anxiety at each timepoint, while multinominal regression modelling was used to determine factors associated with transient versus persistent depression, anxiety and TSH across pregnancy. Cross-lagged panel modelling explored direction of effect between depression, anxiety, and stressors. Lastly, bifactor confirmatory factor analysis was used to investigate the existence of a general latent factor for depression and anxiety, and what the association of this general factor was to TSH.

Results

Prevalence of antenatal depression in the first trimester was 27% (95% CI 24.2-29.8) and anxiety 15.2% (95% CI 12.9-17.5). Factors associated with antenatal depression and anxiety were predominantly relationship- and family-centred. Women who perceived that their partner made life harder for them had threefold increased odds for depression (OR 3.33 [2.28-4.85] p<0.001 while those with family stressors had almost double the odds for depression (OR 1.78 [1.22-2.59] p=0.003) and anxiety (OR 1.75 [1.44-2.69] p=0.001)

The longitudinal analysis found high rates of depression (T1: 27%; T2: 25%) and anxiety (T1: 15%; T2: 17%) across pregnancy. Pregnant women reporting ‘my partner made my life harder’ had higher risk ratios for persistent depression (RR 5.92 95% CI [3.0-11.8] p<0.001); family stress increased risk for persistent anxiety (RR 1.71 95% CI [1.1-2.7] p=0.027). We found evidence of a direct effect of early

depressive symptoms (T1) on later family stress (T2); and early family stress (T1) on later anxious symptoms (T2).

In the longitudinal analysis, 18% reported TSH at some stage during their pregnancy. Prevalence of TSH was slightly higher in early pregnancy (12.5%) than later pregnancy (11.6%). In multivariate logistic regression, TSH was associated with a history of mental illness (aOR 4.17 95% CI [1.3-13.7] p=0.020); concurrent depression (aOR 4.81 95%CI [2.7-8.6] p<0.001); marital stress (aOR 1.74 95%CI [1.0 - 3.0] p=0.040), and practical support (aOR 0.43 95%CI [0.2-1.0] p=0.040). Bifactor analysis examining depression and anxiety scales showed that the TSH item contributed the highest variance to a shared depression and anxiety factor in early pregnancy. Logistic regressions showed that early depression was a strong predictor of later reports of TSH.

Limitations

This research is limited in that it used screening measures of depression and anxiety rather than clinical interviews and the absence of a third timepoint in pregnancy prevented trajectory analysis. Limitations included that partner mental health data was not collected and although TSH was measured, no data was collected on plans, means or intent or history of suicidal behaviour.

Conclusion

This research illustrates that antenatal depression and anxiety are common in pregnancy – being reported by approximately a third of women – and that partner and family relationships are central risk and resilience factors. Concerningly, this research also finds that the risk of TSH during pregnancy is relatively common and also starts early in the pregnancy. Since practical support and a good marital relationship reduce the risk of depression, anxiety and TSH, these may be important avenues of focus for intervention design.