

Impact of the COVID-19 pandemic on perinatal mental health screening, illness and pregnancy outcomes: A cohort study



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BACKGROUND
The COVID-19 pandemic has brought with it a myriad of stressors, from socially isolating public health measures, to financial difficulties and barriers in accessing healthcare. With the perinatal period being a physically and emotionally challenging time, pregnant and postpartum individuals are especially vulnerable to the psychosocial effects of the pandemic.

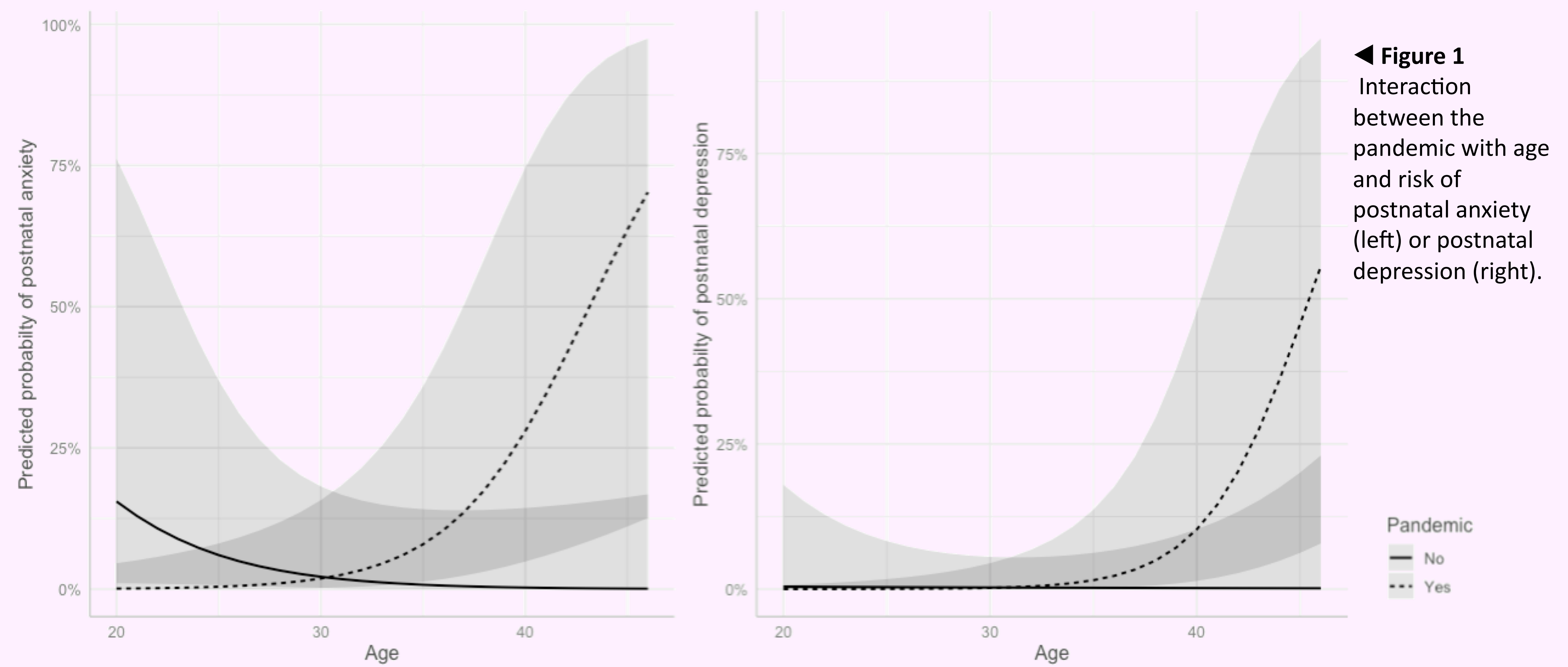
AIM
To assess the impact of the COVID-19 pandemic on perinatal mental health screening and illness as well as their relation to pregnancy complications and outcomes.

METHODS
A retrospective cohort study of all mothers giving birth from 23 to 29 November in 2019 (pre-pandemic) or 2020 (pandemic) under the care of a UK tertiary hospital. Student's t-tests (or Mann-Whitney U tests for non-normal data) and chi-squared tests (or Fisher's exact tests if counts ≤ 5) were computed for continuous and binary data respectively. Psychiatric disorders were examined via crude risk ratios and multivariate logistic regressions.

RESULTS
191 mothers, 92 delivering before and 99 delivering during the pandemic, were included in this study.

Baseline characteristics of age and ethnicity were not significantly different between the pre-pandemic and pandemic populations. However, mothers delivering during the pandemic lived in less deprived postcodes based on the 2019 Index of Multiple Deprivation ($p=0.008$), were more likely to have a psychiatric history ($p=0.047$) and were more likely to have a higher gravidity ($p=0.030$) and parity ($p=0.047$).

Perinatal psychiatric disorder crude incidence was not significantly elevated during the pandemic (20.20% vs 16.30%, risk ratio=1.39, 95%CI:0.82-2.35). However, in multivariate analyses there was increased risk of postpartum mental illness (within four weeks delivery) during the pandemic for older mothers (Figure 1).



RESULTS (CONTINUED)
Psychiatric screening rates did not decrease (97.30% vs 88.52%, $p=0.099$). However, screening exhibited a lower sensitivity in predicting antenatal mental illness during the pandemic compared to before (25.00%, 95%CI:8.89-53.23%, $p=0.035$).

Pregnancy outcomes including gestational diabetes, hypertensive diseases of pregnancy, gestational age at birth, and birth weight were largely similar in both groups, but 1-minute Apgar scores were lowered during the pandemic ($p=0.030$).

CONCLUSION
The sensitivity of mental health screening in predicting antenatal illness was lowered during the pandemic, which could potentially be attributed to screening by telephone or unforeseen mental health deterioration as the pandemic progressed. Consequently, mental illness may have been poorly anticipated and underdetected during the pandemic, leading to the lack of incidence increase observed. The pandemic also altered the risk patterns for postpartum mental illness.