

International Journal of Population Data Science

Journal Website: www.ijpds.org



Severe Maternal Mental Disorders and Adverse Perinatal Outcomes: A Cross-Jurisdictional Population Data Linkage study in Australia

Amanuel Gebremedhin¹, Bereket Duko², Damien Foo³, Gizachew Tessema³, and Gavin Pereira³

¹Edith Cowan University, Perth, Australia; Curtin University, Perth, Australia

²Curtin University, Perth, Australia; Torrens University, Adelaide, Australia

³Curtin University, Perth, Australia

Objective

To examine the association between severe maternal mental disorders and adverse perinatal outcomes using population-based linked data from Western Australia (WA) and New South Wales (NSW), Australia.

Linked population data provide critical evidence to inform pre-conception and perinatal care strategies for women with severe mental illness.

Approach

We conducted a population-based retrospective cohort study using perinatal datasets from WA and NSW, including births ($n=1.76$ million) between 1995 and 2015. Maternal mental health disorders (exposure) were identified using ICD-10-AM diagnosis codes if a primary or additional diagnosis was recorded within one year preceding the index birth. Outcomes evaluated included preterm birth, small for gestational age (SGA), low birth weight (LBW), and perinatal death. A generalised linear model with log link (binomial or Poisson) was employed to examine the associations.

Results

The analysed included 3,817 births exposed to severe maternal mental disorders within one year before birth. After adjusting for a range of potential confounders, pregnancies exposed to severe maternal mental disorders in the one year before the birth were associated with increased risks of preterm birth with risk ratios and 95% CI of 1.82 (1.69, 1.97), low birth weight 1.74 (1.60, 1.89), small for gestational age 1.11 (1.03, 1.20) and perinatal death 1.53 (1.17, 2.02). Similar but elevated risk association patterns were observed across severe maternal mental disorder categories, including schizophrenia, bipolar disorder, and substance-induced psychotic disorders and adverse perinatal outcomes.

Conclusions and implication

Severe maternal mental disorders pre-pregnancy are associated with increased risk of multiple adverse perinatal outcomes.

