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Maternal depression around pregnancy and risk of mental disorder among offspring: a population-based cohort study with sibling comparison

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Introduction: Previous studies have indicated a potential increase in risks of mental disorders among the offspring of mothers with depressive disorders. However, the association between maternal exposure at different developmental periods, including the period around pregnancy, and the offspring's risk for adverse mental health outcomes remain unclear. Additionally, there is a lack of studies controlling for potential confounding by familial factors.
Objectives: To determine the association between the timing of maternal depression around pregnancy and the risk of mental disorders among the offspring.
Methods: Population-based cohort study using linkage from Swedish national registers including 4,051,192 live singleton births in 1973-2010. Individuals were followed from age 3 until the first date of mental disorders diagnosis, emigration, death or 31 December 2013. We included the following diagnoses: depression, postpartum depression, neurotic disorders, stress-related disorders, alcohol use disorders, drug use disorders, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), intellectual disability, behavioural disorders (child-/adolescent-onset), schizophrenia, other psychotic disorders, bipolar disorders, eating disorders, personality disorders, and others. Timing of maternal depression was defined as the earliest date of diagnosis or antidepressant dispensation around pregnancy, categorised into '1 year before conception', 'during pregnancy', and '1 year after childbirth.' Hazard ratios (HR) were estimated using Cox regression, adjusting for potential confounders. We also stratified the associations by age at follow up and birth year. To account for familial confounding, comparison was also made within full siblings.
Results: In the population-based analysis, maternal depression was associated with a higher risk of overall mental disorder diagnosis in offspring in all three time periods, although the association tends to be stronger during the first year before conception (HR 1.90, 95% CI 1.78-2.03) and somewhat attenuated afterwards (HR during pregnancy 1.77, 95% CI 1.69-1.84; HR 1 year after childbirth 1.68, 95% CI 1.57-1.79; Figure 1). However, the associations were attenuated to null in the sibling analysis (HR overall mental disorders 1 year before conception 0.94, 95% CI 0.83-1.07; during pregnancy 1.08, 95% CI 0.98-1.17; 1 year after childbirth 1.00, 95% CI 0.88-1.13). Similar patterns were observed in most mental disorder diagnoses (Figure 1), across age at diagnosis (Figure 2), and birth year (Figure 3).

Image 1:

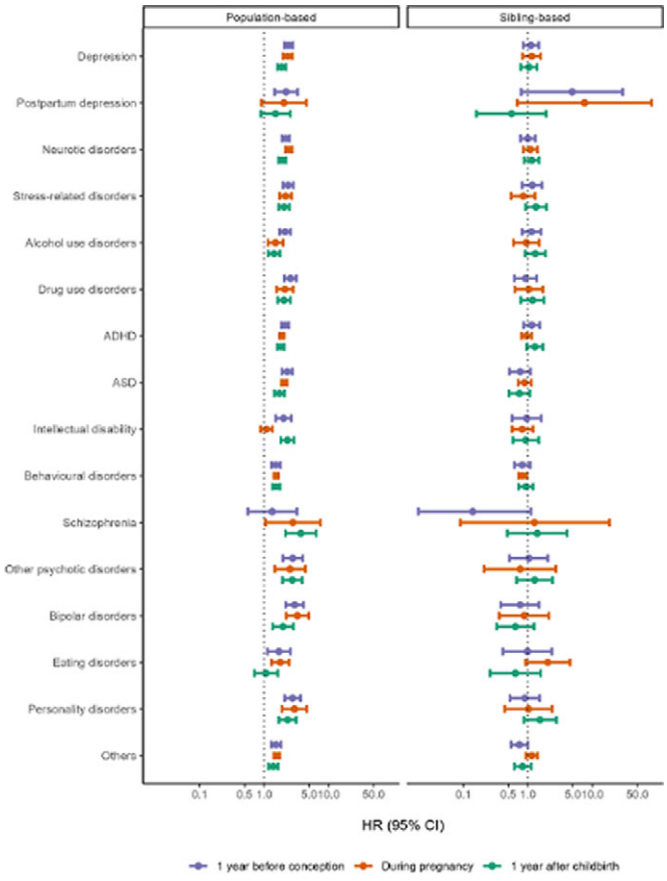

Figure 1 Association between maternal depression around pregnancy and risk of mental disorders among offspring. Adjusted for maternal age, parity, smoking, body mass index, offspring sex. For population-based analysis, estimates were further adjusted for maternal country of birth, education, cohabitation status, offspring birth year.

Image 2:

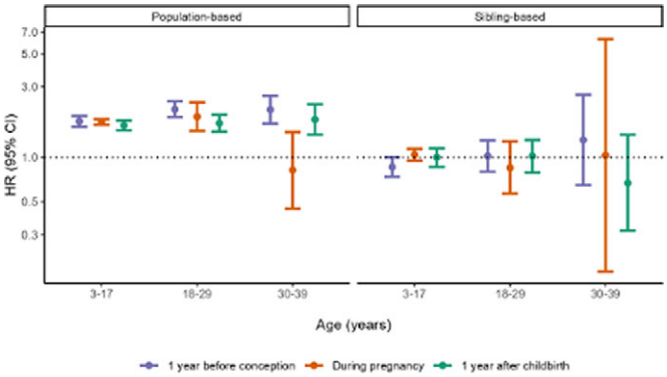

Figure 2 Association between maternal depression around pregnancy and risk of any mental disorders among offspring, stratified by age at follow up. Adjusted for maternal age, parity, smoking, body mass index, offspring sex. For population-based analysis, estimates were further adjusted for maternal country of birth, education, cohabitation status, offspring birth year.

Image 3:

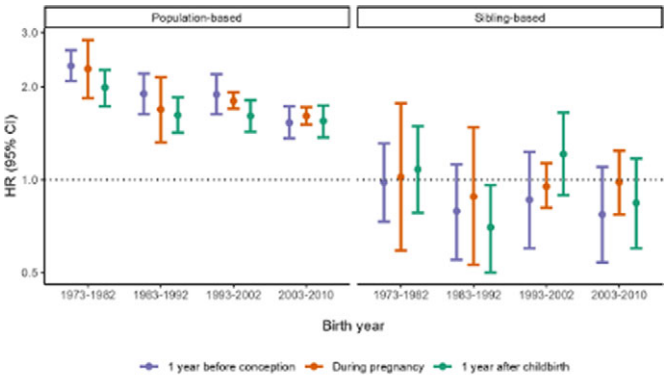

Figure 3 Association between maternal depression around pregnancy and risk of any mental disorders among offspring, stratified by birth year. Adjusted for maternal age, parity, smoking, body mass index, offspring sex. For population-based analysis, estimates were further adjusted for maternal country of birth, education, cohabitation status, offspring birth year.

Conclusions: While maternal depression before, during, and after pregnancy is predictive for the offspring's mental health development, the link is likely driven by shared familial genetic and environmental factors.

Disclosure of Interest: None Declared

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Four Major Psychiatric Disorders in Childhood and Early Adulthood and Siblings' Subsequent Socioeconomic Status: A Nationwide Familial Coaggregation Cohort Study

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Introduction: Previous studies show the aggregation of major psychiatric disorders (MPDs; a combined category of schizophrenia, bipolar disorder, depression, and anxiety) among siblings. However, few studies have examined whether MPDs in childhood and early adulthood are associated with siblings' future socioeconomic status (SES).
Objectives: To assess subsequent SES outcomes among siblings of individuals with an MPD diagnosed at age 5–25.
Methods: This cohort study included 54,742 full siblings, 4,490 paternal, and 4,858 maternal half siblings of individuals born in Finland between 1975–1985 with MPDs diagnosed at ages 5–25 (affected probands). We defined the reference groups as identical types of siblings of individuals without any MPD diagnosis (matched unaffected probands). The siblings of both the affected and the unaffected probands were followed from the diagnosis date of affected probands until December 31, 2020. MPD diagnoses were obtained from the Finnish Care Register. SES was measured through employment status, annual disposable income (measured in EUR), and educational achievement derived from the FOLK module of Statistic Finland. Conditional logistic regression, median regression, and Generalized Estimating Equations (GEE) models were applied to estimate the adjusted associations.
Results: The median age (interquartile range, IQR) at baseline was 20 years (16–24) for full siblings, 17 years (12–26) for maternal half-siblings, and 18 years (12–26) for paternal half-siblings of the affected and unaffected probands. Compared to siblings of the unaffected probands, the odds of unemployment were 50% higher (95% CI: 1.46-1.55) in full siblings of affected probands with any MPD; this association was particularly pronounced in full siblings of an affected proband diagnosed before age 15 (aOR: 1.68, 95% CI 1.49-1.90). Full siblings of the affected probands were more likely not to attain a university degree (aOR: 1.37, 95% CI 1.33-1.41). The median annual disposable income was 1,518.3 EUR lower (95% CI: -1647.4, -1389.3) in full siblings of affected probands. Similar but weaker associations were observed in maternal and paternal half-siblings. For example, compared with the half siblings of the unaffected probands, the odds of unemployment were 29% (95% CI 1.16-1.44) and 23% (95%CI 1.10-1.38) higher in maternal and paternal half-siblings of affected probands with any MPD, respectively.
Conclusions: Our findings suggest that the unfavorable socioeconomic consequences of MPDs might extend to siblings.

Disclosure of Interest: None Declared

Women, Gender and Mental Health

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Risk factors for treatment resistance among women with postpartum depression

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Introduction: Postpartum depression (PPD) impacts millions of new mothers worldwide, and the challenge of treatment resistance (TR) further hampers recovery prospects. The occurrence of TR in women with PPD and the risk factors for TR remain less studied. Identifying these factors is critical for the precise prediction of treatment responses, enabling tailored interventions and effective management of PPD.
Objectives: This study aimed to determine the prevalence of TR and assess risk factors associated with TR in women with PPD in a nationwide population-based setting.
Methods: We conducted a nationwide register-based cohort study of all women who gave birth during 2006-2021 in Sweden and were diagnosed with PPD up to 12 months postpartum. TR is defined as having ≥3 distinct antidepressant drugs, add-on medications, electroconvulsive therapy, or repetitive transcranial magnetic stimulation in one year after PPD diagnosis. Information on demographics, pregnancy characteristics and outcomes, comorbidities, and treatments were obtained from national registers. Potential risk factors in relation to TR were assessed using multivariable Poisson regression.