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Antipsychotic use during pregnancy and risk of poor academic performance in children: A multinational cohort study

Investigators: Bruno, Claudia[1,2], Cesta, Carolyn[3], Hjellvik, Vidar[2], Pilgaard Ulrichsen, Sinna[4], Bjørk, Marte-Helene[5,6], Öztürk Esen, Buket[4], Gillies, Malcolm[1], Gissler, Mika[7,8,9], Havard, Alys[1,10], Karlstad, Øystein[2], Leinonen, Maarit[7], Nørgaard, Mette[4], Pearson, Sallie-Anne[1], Reutfors, Johan[3], Furu, Kari[2,11], #Cohen, Jacqueline[2,11], #Zoega, Helga[1,12] #Co-senior authors

Author Affiliations:

[1]School of Population Health, Faculty of Medicine and Health, University of New South Wales, Sydney, Australia

[2]Department of Chronic Diseases, Norwegian Institute of Public Health, Oslo, Norway

[3]Centre for Pharmacoepidemiology, Department of Medicine Solna, Karolinska Institutet, Stockholm, Sweden

[4]Department of Clinical Epidemiology, Department of Clinical Medicine, Aarhus University and Aarhus University Hospital, Aarhus, Denmark

[5]Department of Clinical Medicine, University of Bergen, Bergen, Norway

[6]Department of Neurology, Haukeland University Hospital, Bergen, Norway

[7]Finnish Institute for Health and Welfare, Helsinki, Finland

[8]Department of Molecular Medicine and Surgery, Karolinska Institutet, Stockholm, Sweden

[9]Research Centre for Child Psychiatry, University of Turku, Turku, Finland

[10]National Drug and Alcohol Research Centre, Faculty of Medicine and Health, University of New South Wales, Sydney, Australia

[11]Centre for Fertility and Health, Norwegian Institute of Public Health, Oslo, Norway

[12]Centre of Public Health Sciences, Faculty of Medicine, University of Iceland, Reykjavik, Iceland

Presenter's Email Address: c.bruno@unsw.edu.au

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Abstract

Background and Aims: To evaluate whether children exposed to antipsychotic medicines prenatally are at increased risk of poor academic performance.

Design and Methods: Using harmonised datasets and analysis, our population-based cohort study used register data (2000 to 2011) on pregnant women and their live-born singletons from Denmark, Iceland, Norway, and Sweden. We defined prenatal exposure to antipsychotics as dispensings from the first day of last menstrual period to date of birth. To control for confounding, we restricted to children of mothers with a psychiatric disorder and applied propensity score (PS) overlap weights. We defined poor performance as scoring within the lowest quartile on national school tests in mathematics and language arts. We estimated PS-weighted risk ratios (aRRs) and 95% confidence intervals (CIs) using Poisson regression.

Results: Among 40,969 children who participated in nationwide school tests and born to mothers with a psychiatric disorder, 4.8% (1958) had prenatal antipsychotic exposure. Adjusted estimates did not suggest an increased risk of poor academic performance: aRR 1.04 (95% CI 0.91-1.18) in mathematics, and aRR 1.00 (95% CI 0.87-1.15) in language arts. Compared to those who participated, children who did not participate in school tests (n=4783, 10.5%) had higher scores in the paediatric comorbidity index and they were more likely to be born to mothers who smoked during early pregnancy, did not cohabit with a partner, had a low educational level and/or were of foreign origin. Results were generally consistent across trimesters of exposure, sibling- and sensitivity analyses.

Conclusions: Our findings suggest that use of antipsychotics during pregnancy, including quetiapine and olanzapine, do not increase the risk of poor academic performance in mathematics or language arts.

Impact: Academic performance can serve as a useful marker of cognitive functioning and subclinical developmental impairment. Our findings provide reassurance to clinicians and patients managing mental health during pregnancy.