

Antidepressants during pregnancy associated with childhood language disorders

October 12 2016



Pills. Credit: Public Domain

Mothers who purchased antidepressants at least twice during pregnancy had a 37-percent increased risk of speech and/or language disorders among their offspring compared to mothers with depression and other psychiatric disorders who were not treated with antidepressants, according to new research. Results by scientists at Columbia University's Mailman School of Public Health and Columbia University Medical Center will be published online in *JAMA Psychiatry*.

"To our knowledge, this is the first study to examine the relationship between maternal antidepressant use and speech/language, scholastic, and motor disorders in offspring. The study benefited from large sample population and followed the children beyond age 3," said Alan Brown, MD, MPH, Mailman School of Public Health professor of Epidemiology and Columbia professor of Psychiatry. The speech/language disorders included expressive and receptive language disorders and those involving articulation of sounds.

Selective serotonin reuptake inhibitors (SSRIs) such as fluoxetine, citalopram, paroxetine, sertraline, fluvoxamine, and escitalopram cross the placenta and enter the fetal circulation. There are also increasingly used during pregnancy.

Based on a sample of 845,345 single, live births between 1996 and 2010 taken from national registries in Finland, the exposure groups were classified as mothers who purchased SSRIs once or more before or during pregnancy (15,596); those diagnosed with a psychiatric disorder one year before or during pregnancy but did not purchase antidepressants (9,537); and mothers who neither purchased

antidepressants nor were given depression-related diagnoses (31,207).

Since the extent of SSRI exposure was greater for mothers with more than one SSRI purchase during the pregnancy, Dr. Brown and colleagues also examined exposure by number of purchases (one, two, or more), and conducted two supplemental analyses to determine whether associations between maternal purchases of two or more SSRIs and the risk of speech/language disorders in offspring were further affected by the severity of depression. The results did not change appreciably and remained statistically significant.

"We believe that our finding about children of mothers who purchased at least two SSRI prescriptions during pregnancy is particularly meaningful because these women are more likely to have taken these medications, and more likely to have been exposed for a longer period and to larger amounts of the SSRI in pregnancy, compared to women who filled only one prescription," noted Dr. Brown. However, in the whole sample, irrespective of number of purchases, the risk of speech/language disorders was increased among offspring of mothers who used SSRI during pregnancy as well as the offspring of mothers with depression and other [psychiatric disorders](#) who did not take an SSRI. There also was no evidence that maternal SSRI exposure was related to academic performance and motor disorders in offspring.

"The strengths of our study include the large, population based birth cohort, prospective data on SSRI purchases during pregnancy, a comparison group of mothers with depression who were not taking antidepressants, and an extensive national register database that included other known confounders," noted Dr. Brown. "However the severity of maternal depression cannot be ruled out as an explanation for the increased childhood speech and language disorders among mothers who filled more than one SSRI prescription, and further study is warranted."

Although Dr. Brown and colleagues were not able to confirm that the purchased medications were taken, the association between maternal SSRI and clinical speech and language disorders was present only among [mothers](#) with more than one SSRI purchase during pregnancy. In addition, earlier studies have also shown correlations between data from prescription registries and self-reported use of antidepressants.

More information: *JAMA Psychiatry*. Published online October 12, 2016. doi:10.1001/ jamapsychiatry.2016.2594

Provided by Columbia University's Mailman School of Public Health

Citation: Antidepressants during pregnancy associated with childhood language disorders (2016, October 12) retrieved 31 December 2022 from <https://medicalxpress.com/news/2016-10-antidepressants-pregnancy-childhood-language-disorders.html>

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