ARTICLE

Selective Serotonin Reuptake Inhibitor Exposure In Utero and Pregnancy Outcomes

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Objective: To investigate the effect of intrauterine selective serotonin reuptake inhibitor (SSRI) exposure on pregnancy outcomes.

Design: Prospective cohort study.

Setting: Department of Obstetrics, Aarhus University Hospital, Aarhus, Denmark.

Participants: Pregnant women receiving prenatal care in our hospital from 1989 to 2006.

Main Exposure: Maternal SSRI use during pregnancy.

Outcome Measures: Gestational age, birth weight, head circumference, 5-minute Apgar score, and admission to the neonatal intensive care unit.

Results: Three hundred twenty-nine pregnant women reported treatment with SSRIs, 4902 were not treated with SSRIs but had a history of psychiatric illness, and 51 770 reported no history of psychiatric illness. Gestational age was 5 days (95% confidence interval [CI], –6 to –3) shorter and the odds ratio (OR) for preterm birth was 2.0 (95% CI, 1.3-3.2) in the women exposed to SSRIs compared with women with no history of psychiatric illness. In utero–exposed newborns had increased risk of admission to the neonatal intensive care unit (OR, 2.4; 95% CI, 1.7-3.4) and of 5-minute Apgar scores of less than 8 (OR, 4.4; 95% CI, 2.6-7.6) compared with those not exposed. Head circumference and birth weight did not differ between infants in the exposed and unexposed groups. The results were similar when compared with infants of women with a psychiatric history.

Conclusions: Exposure to SSRIs during pregnancy was associated with an increased risk of preterm delivery, a low 5-minute Apgar score, and neonatal intensive care unit admission, which was not explained by lower Apgar scores or gestational age. The study justifies increased awareness to the possible effects of intrauterine exposure to antidepressants.

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DEPRESSION HAS BEEN ESTIMATED to occur in more than 10% of pregnant women, which is comparable in frequency and severity with postpartum depression.[1,2] Depression, antidepressants, and lifestyle factors associated with depression may influence pregnancy outcomes and newborn health.[3] The safety profile of antidepressant medication in pregnancy is undetermined, but depression during pregnancy can be serious and has been associated with an increased maternal mortality.[4] Selective serotonin reuptake inhibitors (SSRIs) have been used during pregnancy since the early 1990s and are now recommended as first-choice antidepressants during pregnancy in Denmark[5] and many other countries.

Several studies have investigated the association between SSRI exposure during pregnancy and pregnancy outcomes. The studies vary with respect to exposure assessment, confounder control, and outcome measures. The results on the potential effect on birth weight and gestational age have been inconclusive,[6-13] but no studies have found a significant effect on head circumference.[13-15] Previous studies have shown increased risks of low Apgar scores.[9,12,13,16] Most studies are from North America, where use of the health care system and of antidepressants may differ from that in European countries. The European studies have been based mainly on large registries.[8-10] Comparisons between studies in different populations may facilitate overall interpretations of the potential association, and studies of different populations with adjustment for potential confounding factors may be helpful in teasing out a potential effect on the fetus and newborn. Additionally, a recent study[12] suggesting a potential gene-medication interaction may underline the need for studies from different populations and adjustment for, eg, psychiatric

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history. The aim of this study was to investigate the association between SSRI intake, a history of psychiatric disease, and pregnancy outcomes in a large European cohort.

METHODS

THE AARHUS BIRTH COHORT

Since 1989, all pregnant women receiving prenatal care with the intention of giving birth at the Department of Obstetrics, Aarhus University Hospital, have been invited to participate in the Aarhus Birth Cohort. The cohort is described in detail elsewhere.[17] During the early second trimester, women are asked to complete a self-administered questionnaire, which is sent out when their general practitioner notifies the department of their pregnancy. In this way, information is collected on maternal illnesses (eg, depression, diabetes, kidney diseases, and epilepsy), medical treatment during pregnancy, lifestyle factors (eg, smoking and alcohol intake), obstetric history, prepregnancy weight, height, and age. More than 90% of all women completed the questionnaire. At birth, the attending midwife completes a structured coding sheet with information about the course of delivery, pregnancy complications, and newborn characteristics (weight, length, gestational age, head circumference, Apgar score, and immediate admission to the neonatal intensive care unit [NICU]). The coding sheet is completed immediately after delivery and is validated by a research midwife by use of a coding manual and the woman's medical record in our research unit. Data on pregnancy outcomes are also sent to the National Medical Birth Registry, which is mandatory. The information in the birth registry has been validated and found to have a very good validity with respect to birth weight and gestational age. Women who returned the questionnaire and gave birth in our maternity unit were eligible for the study. Women who reported having a chronic disease other than psychiatric disorders were excluded from the study. Further restriction was made to singleton pregnancies with live births of infants without any malformations.

The use of SSRIs during pregnancy was reported in the questionnaire as well as in the coding sheet filled in by the midwife at delivery. Owing to the self-reported information on disease and medication, we unfortunately had limited information on duration and severity of the illness as well as timing and dosing of the SSRI. Pregnancies were categorized into 3 exposure groups: women treated with SSRIs during pregnancy, women who had experienced depression or received treatment for psychiatric illness but who were not taking SSRIs during the actual pregnancy, and women who reported never having had a psychiatric illness.

Gestational age was primarily estimated by ultrasonography before 21 completed gestational weeks (83%). Otherwise, gestational age was estimated from the date of the last menstrual period (17%).

Potential confounders that were considered were parity, maternal age, prepregnancy body mass index, smoking, coffee and alcohol intake, marital status, a previous pregnancy with a preterm and/or low-birth-weight infant, and education. The study was approved by the Danish Data Protection Agency.

STATISTICAL ANALYSIS

Potential confounders were categorized as shown in **Table 1**. Adjustment for confounding factors was performed by multivariate linear and logistic regression analyses. All potential confounding variables were coded as a number of dummy variables equal to the number of categories minus 1. Confounders considered a priori were prepregnancy body mass index, smoking, age, and parity. Other potential confounders, listed in Table 1, remained in the final model if they changed the estimated odds ratio (OR) or risk difference by more than 10%. Interactions were investigated by stratified analyses and multivariate analyses with interaction terms. Primary outcome was gestational age. Analyses of birth weight, head circumference, Apgar score at 5 minutes, and immediate admission to the NICU were carried out for newborns with a gestational age of 27 to 41 completed weeks and adjusted for gestational age in whole weeks. Birth weight, gestational age, and head circumference were analyzed as continuous measures. Dichotomous outcome measures were preterm delivery (<37 completed weeks), low birth weight (<2500 g) at full term (37-41 completed weeks), low Apgar score at 5 minutes (≤7), and immediate admission of the neonate to the NICU. Our primary exposure category was women treated with SSRIs, and our primary comparison group was women without a history of psychiatric illness. To try to disentangle whether a possible effect on birth outcome was caused by the treatment or by the mere presence of a psychiatric history, we also compared the outcomes of women with SSRI treatment with those of women with a psychiatric history. Statistical significance was defined as 2-sided $P < .05$. Adjusted ORs and risk differences are presented with 95% confidence intervals (CIs). Stata, version 8.0, software was used for all statistical analyses.

RESULTS

During the study period, 64 072 women returned the questionnaire and gave birth in our department. Women carrying more than 1 child (n=2755); women with chronic diseases, such as diabetes and kidney or cardiovascular disease (n=3571); women with stillbirths (n=235); and women who gave birth to an infant with malformations (n=510) were excluded. A total of 57 001 pregnancies and deliveries from August 1989 through November 2006 were included in our analyses. We identified 329 pregnancies that were exposed to SSRI treatment, 4902 pregnant women with a psychiatric history but no SSRI use during pregnancy, and 51 770 pregnant women with no use of SSRIs during pregnancy and no psychiatric history.

Three hundred four of the women with SSRI intake used only 1 type of SSRI (sertraline [n=98], citalopram [n=97], fluoxetine [n=57], paroxetine [n=49], or escitalopram [n=3]) and 25 used more than 1 type of SSRI (fluoxetine and sertraline [n=8], citalopram and fluoxetine [n=4], citalopram and sertraline [n=4], fluoxetine and paroxetine [n=3], citalopram and paroxetine [n=2], or fluoxetine and escitalopram [n=1]). Among the women with SSRI intake, 38 also used another psychotropic drug during pregnancy (benzodiazepines [n=8], antipsychotic drugs [n=13], tricyclic antidepressants [n=10], mirtazapine [n=5], venlafaxine [n=7], sleeping pills [n=2], and lithium [n=1]).

The first report of SSRI use during pregnancy in the cohort was found in 1993 (citalopram), and in 1995 sertraline, fluoxetine, and paroxetine were also used. The first pregnancy with escitalopram exposure was recorded in 2004. In this cohort, the use of SSRIs during pregnancy increased during the 1990s and was stable from 2002.

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Table 1. Characteristics of Pregnant Women Exposed to SSRIs, With a Psychiatric History, and Without a Psychiatric History

Characteristic	No. (%)[a] SSRI Use (n=329)	Positive Psychiatric History/ No SSRI Use (n=4902)	No Psychiatric History (n=51 770)
Parity			
0	189 (57.4)	2557 (52.2)	25 699 (49.6)
≥1	140 (42.6)	2345 (47.8)	26 071 (50.4)
Maternal age, y			
<20	3 (0.9)	70 (1.4)	762 (1.5)
20-24	44 (13.4)	490 (10.0)	6377 (12.3)
25-29	107 (32.5)	1590 (32.4)	20 168 (40.0)
30-34	114 (34.6)	1825 (37.2)	17 320 (33.5)
≥35	61 (18.5)	927 (18.9)	7143 (13.8)
Body mass index[b]			
<20	56 (17.4)	1066 (22.3)	11 169 (22.4)
20-24.9	175 (54.5)	2757 (57.6)	29 019 (58.2)
25-29.9	59 (18.4)	706 (14.7)	7139 (14.3)
≥30	31 (9.7)	259 (5.4)	2507 (5.0)
Missing	8	114	1936
Smoking habit			
Nonsmoker	226 (70.8)	3760 (79.0)	40 696 (81.2)
Cigarettes/d			
1-4	16 (5.0)	193 (4.1)	1746 (3.5)
5-9	35 (11.0)	275 (5.8)	3062 (6.1)
10-14	22 (6.9)	316 (6.6)	3004 (6.0)
≥15	20 (6.3)	215 (4.5)	1596 (3.2)
Missing	10	143	1666
Alcohol intake, drinks/wk			
<1	283 (87.3)	3851 (80.1)	37 710 (76.6)
1-4	33 (10.2)	843 (17.5)	10 346 (21.0)
5-9	3 (0.9)	50 (1.0)	516 (1.0)
≥10	5 (1.5)	64 (1.3)	644 (1.3)
Missing	5	94	2554
Coffee intake, cups/d			
0	136 (51.5)	1776 (46.8)	15 071 (42.5)
1-3	91 (34.5)	1525 (40.2)	14 698 (41.5)
>3	37 (14.0)	495 (13.0)	5664 (16.0)
Missing	65	1106	16 337
Marital status			
Married/cohabiting	273 (87.5)	4454 (95.4)	46 509 (97.0)
Living alone	39 (12.5)	217 (4.6)	1419 (3.0)
Missing	17	231	3842
Education, y			
<9	91 (31.7)	1058 (24.9)	7891 (19.4)
9-12	75 (26.1)	1114 (26.2)	13 576 (33.4)
>12	121 (42.2)	2082 (48.9)	19 192 (47.2)
Missing	42	648	11 111

Abbreviation: SSRI, selective serotonin reuptake inhibitor.
[a] Percentages are calculated from nonmissing data.
[b] Calculated as weight in kilograms divided by height in meters squared.

Most women with a history of a psychiatric disorder but without SSRI use during pregnancy had no specific psychiatric diagnosis recorded (n=4622). However, all had been treated by a general practitioner, a psychiatrist, or a psychologist. Only 192 reported a medical diagnosis (depression [n=86], schizophrenia [n=8], eating disorders [n=54], obsessive-compulsive disorder [n=2], bipolar disorder [n=10], stress [n=10], and anxiety disorder [n=22]), and 88 reported to have had an unspecified psychiatric disease. A total of 169 women reported to being hospitalized for their psychiatric disease at some point.

In women with a psychiatric history, 1020 reported use of medication more than once weekly during part of the pregnancy. These medications were mostly antibiotics, painkillers, antiemetics, and those related to allergies. Very few reported use of psychotropic medication (n=26), antipsychotic drugs (n=20), anxiolytics (n=13), or antidepressants other than SSRIs (n=34). Women treated with SSRIs and women who reported that they had had a psychiatric disorder but who were currently untreated were older, of lower parity, and more often smokers than women who reported no psychiatric illness at any time. However, women without a

Table 2. Association Between SSRI Exposure During Pregnancy and Dichotomous Outcomes

Characteristic	No. (%) SSRI Use (n=329)	No. (%) Psychiatric History/ No SSRI Use (n=4902)	No. (%) No Psychiatric History (n=51 770)	SSRI Use vs No Psychiatric History OR	SSRI Use vs No Psychiatric History AOR (95% CI)
Preterm delivery	29 (8.8)	247 (5.0)	2520 (4.9)	1.89	2.02 (1.29-3.16)[a]
Birth weight <2500 g	11 (3.3)	154 (3.1)	1522 (2.9)	1.14	0.63 (0.15-2.67)[b]
NICU admission	54 (16.4)	439 (9.0)	3845 (7.4)	2.45	2.39 (1.69-3.39)[c]
Apgar score of 5 to < 8	16 (4.9)	51 (1.0)	635 (1.2)	4.12	4.44 (2.58-7.63)[c]

Abbreviations: AOR, adjusted odds ratio; CI, confidence interval; NICU, neonatal intensive care unit; OR, odds ratio; SSRI, selective serotonin reuptake inhibitor.
[a] Adjusted OR for maternal age, body mass index, smoking, a previous pregnancy with prematurity, and parity.
[b] Full-term infants (37-41 completed weeks). Adjusted for maternal age, body mass index, smoking, parity, gestational age, previous birth of a low-birth-weight infant, and marital status.
[c] Adjusted for maternal age, body mass index, smoking, gestational age, and parity.

Table 3. Mean Outcomes and Adjusted Difference in Birth Weight, Gestational Age, and Head Circumference

Characteristic	SSRI Use (n=329) Mean (SD)	SSRI Use (n=329) Difference (95% CI)	Psychiatric History/ No SSRI Use (n=4902) Mean (SD)	Psychiatric History/ No SSRI Use (n=4902) Difference (95% CI)	No Psychiatric History (n=51 770) Mean (SD)	No Psychiatric History (n=51 770) Difference (95% CI)
Gestational age, d[a]	276 (13)	−4.5 (−6.2 to −2.8)	279 (13)	−0.5 (−0.9 to −0.1)	280 (13)	0 [Reference]
Birth weight, g[b]	3470 (575)	21 (−51 to 94)	3561 (553)	18 (1 to 36)	3549 (542)	0 [Reference]
Head circumference, cm[c]	34.9 (1.7)	−0.0 (−0.2 to 0.2)	35.2 (1.6)	0.1 (0.0 to 0.1)	35.1 (1.6)	0 [Reference]

Abbreviations: CI, confidence interval; SSRI, selective serotonin reuptake inhibitor.
[a] Adjusted for maternal age, body mass index, smoking, a previous pregnancy with prematurity, and parity.
[b] Newborns with a gestational age of 27 to 41 completed weeks. Adjusted for maternal age, body mass index, smoking, gestational age, previous birth of a low-birth-weight infant, parity, and coffee and alcohol intake.
[c] Newborns with a gestational age of 27 to 41 completed weeks. Adjusted for maternal age, body mass index, smoking, gestational age, parity, marital status, and coffee and alcohol intake.

psychiatric history consumed more alcohol. Pregnancy outcome by exposure is shown in **Table 2** and **Table 3**.

GESTATIONAL AGE

Mean gestational age was 4.5 days (95% CI, −6.2 to −2.8) shorter in women treated with SSRIs during pregnancy than in women with no psychiatric history. Compared with women with a psychiatric history, gestational age was 3.8 days shorter in women with SSRI exposure during pregnancy (95% CI, −5.6 to −2.0). In women treated with SSRIs, the risk of preterm delivery was twice that of women with no history of psychiatric illness (adjusted OR, 2.02; 95% CI, 1.29-3.16; vs women with a history of psychiatric illness: OR, 2.05 [95% CI, 1. 28-3.31]).

BIRTH WEIGHT

No association between SSRI exposure and birth weight was found after adjustment for gestational age and potential confounders. Infants with in utero exposure to SSRIs had a birth weight similar to those of women with and without psychiatric histories (Table 3). The risk of low birth weight at term was not statistically higher in newborns exposed in utero to SSRIs compared with those without a maternal psychiatric history or those with mothers with a psychiatric history but no SSRI exposure (adjusted OR, 0.63; 95% CI, 0.15-2.67; and adjusted OR, 0.82; 95% CI, 0.19-3.62, respectively) (Table 2). Eighty-two percent of the low-birth-weight infants in the SSRI group were also preterm and were thus not included in the main logistic regression analysis. Sixty-six percent and 68% of low-birth-weight infants in the groups with and without a psychiatric history, respectively, were also preterm.

HEAD CIRCUMFERENCE

Head circumference adjusted for confounders, including gestational age, was not statistically different in newborns of women treated with SSRIs during pregnancy compared with newborns from women with no psychiatric history (0.0 cm; 95% CI, −0.2 to 0.2) or compared with newborns of women with a psychiatric history (−0.1 cm; 95% CI, −0.3 to 0.1).

FIVE-MINUTE APGAR SCORE

The risk of giving birth to an infant with a 5-minute Apgar score of 7 or below was significantly increased in women who were treated with SSRIs during pregnancy compared with infants of women with no psychiatric history (adjusted OR, 4.44; 95% CI, 2.58-7.63) or compared with infants of women with a history of psychiatric illness (adjusted OR, 6.58; 95% CI, 3.39-12.74).

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ADMISSION TO THE NICU

The rate of admissions to the NICU was higher in newborns with in utero exposure to SSRIs during pregnancy than in those with no psychiatric history (adjusted OR, 2.39; 95% CI, 1.69-3.39). This was also true after adjusting for Apgar score. Comparing NICU admission in newborns exposed to SSRIs with newborns of mothers with a psychiatric history, the OR was 2.04 (95% CI, 1.42-2.94).

COMMENT

We found a slight reduction in gestational age and an increased risk of preterm birth, but no effect on birth weight or head circumference after in utero exposure to SSRI. We also found an increased risk of low Apgar scores and admission to the NICU that could not be explained by low Apgar scores or gestational age in our analyses.

Gestational age and birth weight are strongly correlated, but stratified or adjusted analyses have not been reported in all previous studies. We restricted our study of birth weight to full-term newborns to avoid the confusion of intrauterine growth with gestational age. Furthermore, our analyses of head circumference and Apgar scores were also adjusted for gestational age. Analyses were adjusted for a number of potential confounding factors, which only changed the unadjusted results slightly. However, women exposed to SSRIs may have underreported factors closely associated with pregnancy outcome, such as smoking, more often than other women; the associations found for SSRI exposure would thus actually be due to that factor, in this case smoking. As the reported tobacco consumption was actually higher among women treated with SSRIs, this seems somewhat unlikely, but it is impossible to completely rule out confounding in a nonrandomized design.

The women were unaware of their pregnancy outcomes at the time of reporting medication during pregnancy, which minimizes the risk of recall bias. Few women failed to complete the questionnaire. If nonparticipants were more likely treated with SSRIs and had more favorable pregnancy outcomes than participating women exposed to SSRIs, we would have overestimated the association between SSRI exposure and adverse pregnancy outcomes. We find this explanation unlikely but are unable to elucidate it further. Newborns exposed to SSRIs in utero had twice the risk of being referred to the NICU than unexposed newborns. Only clinical symptoms and not SSRI exposure justify referral to the NICU in our department, and usually information about such medical treatment of the mother during pregnancy only reaches the neonatologist on duty after the admission of the newborn. Thus, bias from hospitalizing babies owing to the mere knowledge of exposure to SSRIs cannot explain our finding.

The study compared the outcomes of pregnancy in women treated with SSRIs with those in women with a psychiatric history to study whether differences in birth outcomes could be due to confounding by indication. This has been done in only a few previous studies.[13,16,18,19] This way we explored the association between treatment and adverse pregnancy outcomes, taking into account unknown factors associated with actual or previous psychiatric disorders not accounted for in the multivariate analyses. The results indicate that certain aspects of depression such as genetic or social aspects were less likely to explain our overall findings. However, we had no information about symptoms of depression during pregnancy, which could have added to our understanding of the association.

Selective serotonin reuptake inhibitors have been shown to readily cross the placenta and to be present in umbilical cord blood of exposed neonates.[20,21] Several case reports and case series have described a neonatal withdrawal symptom after in utero exposure to SSRIs.[22-26] The exposed neonates in this study were admitted to the NICU with various *International Statistical Classification of Diseases, 10th Revision*, diagnoses (eg, jitteriness, seizures, respiratory problems, infections, jaundice, hypoglycemia, and asphyxia), several of which could be due to either adverse effects or withdrawal symptoms from the SSRI.

An animal study by Vorhees et al[27] suggests that fluoxetine exposure leads to smaller litter sizes in pregnant rats and increased neonatal mortality. The underlying mechanism is not clear; however, Morrison et al[28] showed that fluoxetine exposure leads to a transient decrease in uterine artery blood flow in sheep. Both animal studies could indicate that treatment with SSRIs may result in intrauterine growth retardation in humans. Furthermore, head circumference (fronto-occipital circumference) is a well-established measure of total brain volume in neonates,[29] and because SSRIs work on the central nervous system, an influence on the growth of the fetal brain seems plausible. However, we found no statistically significant effect on birth weight or head circumference in full-term neonates with in utero exposure to SSRIs. The discrepancy with the animal studies could be due to differences in dosage, as the above-mentioned studies used quite high doses of fluoxetine. The effects in both the sheep in the study by Morrison et al and the rats in Vorhees and colleagues' study were seen at much higher doses than would occur in humans. Adverse effects in pregnant women may, however, still occur at lower doses.

Pregnancy exposure to SSRIs may be associated with a reduction in gestational age and an increased risk of low Apgar score and NICU admission, even when compared with pregnancies of women with previous psychiatric disease. The results corroborate earlier studies with less control for the potential effects of the underlying disease. However, treatment of depression during pregnancy may be warranted and future studies need to distinguish between individual SSRIs to find the safest medication.

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Author Contributions: Dr Lund had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. *Study concept and design*: Lund, Pedersen, and Henrik-

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sen. *Acquisition of data*: Henriksen. *Analysis and interpretation of data*: Lund, Pedersen, and Henriksen. *Drafting of the manuscript*: Lund. *Critical revision of the manuscript for important intellectual content*: Lund, Pedersen, and Henriksen. *Statistical analysis*: Lund, Pedersen, and Henriksen. *Obtained funding*: Lund and Henriksen. *Study supervision*: Pedersen and Henriksen.

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Announcement

Submissions. The Editors welcome contributions to Picture of the Month. Submissions should describe common problems presenting uncommonly, rather than total zebras. Cases should be of interest to practicing pediatricians, highlighting problems that they are likely to at least occasionally encounter in the office or hospital setting. High-quality clinical images (in either 35-mm slide or electronic format) along with parent or patient permission to use these images must accompany the submission. The entire discussion should comprise no more than 750 words. Articles and photographs accepted for publication will bear the contributor's name. There is no charge for reproduction and printing of color illustrations. For details regarding electronic submission, please see: http://archpedi.ama-assn.org.

(REPRINTED WITH CORRECTIONS)

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Correction

Error in Table. In the article "Selective Serotonin Reuptake Inhibitor Exposure In Utero and Pregnancy Outcomes" published in the October issue of *Archives* (2009;163[10]:949-954), there are errors in the headings and body of **Table 3**. Instead of "OR (95% CI)" in the 3 subheadings, it should read "Difference (95% CI)." In the last column, the cells that read "1 [Reference]" should be "0 [Reference]." In the abbreviations beneath the table, "OR, odds ratio" should not appear. A corrected table is reproduced here.

Table 3. Mean Outcomes and Adjusted Difference in Birth Weight, Gestational Age, and Head Circumference

	SSRI Use (n = 329)		Psychiatric History/No SSRI Use (n = 4902)		No Psychiatric History (n = 51 770)	
Characteristic	Mean (SD)	Difference (95% CI)	Mean (SD)	Difference (95% CI)	Mean (SD)	Difference (95% CI)
Gestational age, d[a]	276 (13)	−4.5 (−6.2 to −2.8)	279 (13)	−0.5 (−0.9 to −0.1)	280 (13)	0 [Reference]
Birth weight, g[b]	3470 (575)	21 (−51 to 94)	3561 (553)	18 (1 to 36)	3549 (542)	0 [Reference]
Head circumference, cm[c]	34.9 (1.7)	−0.0 (−0.2 to 0.2)	35.2 (1.6)	0.1 (0.0 to 0.1)	35.1 (1.6)	0 [Reference]

Abbreviations: CI, confidence interval; SSRI, selective serotonin reuptake inhibitor.
[a] Adjusted for maternal age, body mass index, smoking, a previous pregnancy with prematurity, and parity.
[b] Newborns with a gestational age of 27 to 41 completed weeks. Adjusted for maternal age, body mass index, smoking, gestational age, previous birth of a low-birth-weight infant, parity, and coffee and alcohol intake.
[c] Newborns with a gestational age of 27 to 41 completed weeks. Adjusted for maternal age, body mass index, smoking, gestational age, parity, marital status, and coffee and alcohol intake.