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# Breastfeeding among Women Exposed to Antidepressants during Pregnancy

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## Abstract

This prospective cohort study compares the breastfeeding outcomes of women exposed to selective serotonin reuptake inhibitor (SSRI) antidepressants at the time of delivery, those who discontinued use prior to delivery, and those not exposed. Participants include 466 pregnant women who enrolled in the California Teratogen Information Service Clinical Research Program (CTIS) over 10 years. In bivariate analyses, breastfeeding rates were significantly different across SSRI exposure groups, with unexposed women having the highest rates. We used logistic regression to examine the relationship between SSRI exposure and breastfeeding outcomes. After adjustment for potential confounders, those exposed to an SSRI both prior to delivery (odds ratio [OR], 0.43; 95% confidence interval [CI], 0.20-0.94) and at the time of delivery (OR, 0.34; 95% CI, 0.16-0.72) were significantly less likely to initiate breastfeeding as compared to unexposed women. Women exposed to an SSRI during pregnancy appear to be at risk for poorer breastfeeding outcomes and may benefit from additional education and support.

## Keywords

breastfeeding, antidepressants, decision making, full breastfeeding, selective serotonin reuptake inhibitors, SSRI

## Background

The benefits to breastfeeding are well documented.<sup>1</sup> While most US mothers choose to initiate breastfeeding, the number continuing to breastfeed exclusively declines quickly, falling short of the recommended 6 months of exclusive breastfeeding and at least 12 months of continued breastfeeding.<sup>2,3</sup> Breastfeeding outcomes are influenced by a range of personal, social, and environmental factors.<sup>4</sup> One potential barrier to meeting breastfeeding recommendations is concern about combining breastfeeding with medication use.<sup>5</sup> Because of the frequency of prenatal and postpartum depression,<sup>6–8</sup> the role of antidepressants is of particular interest. Antidepressants, particularly selective serotonin reuptake inhibitors (SSRIs), are a consideration for many lactating women.<sup>9,10</sup>

About 6% of pregnant women are exposed to SSRIs.<sup>10,11</sup> There are some documented risks of prenatal exposure to SSRIs, including preterm birth, respiratory distress, and cardiac defects.<sup>12–17</sup> There are increased risks when taken during the third trimester,<sup>16,18</sup> although better outcomes have been reported for SSRIs than for other antidepressants.<sup>19</sup> Data are conflicting, but a recent study found no significant risk of birth defects after first-trimester SSRI exposure.<sup>20</sup> To date, prenatal exposure has not been associated with a long-term risk of developmental outcomes.<sup>21</sup>

Compared to other psychotropic drugs, SSRIs have relatively well-documented safety profiles for breastfeeding mothers and are currently the first-choice treatment for

postpartum depression.<sup>22,23</sup> Adverse effects of SSRI exposure during lactation have been reported in case studies, but large, controlled trials have not been conducted.<sup>9,23</sup> Therefore, research on side effects is somewhat limited, particularly for long-term effects. Published literature suggests that these medications pass into breast milk to varying degrees but that only a small amount is present in breast milk.<sup>21,23</sup> The drug's milk/plasma (M/P) ratio indicates the estimated concentration of a drug in breast milk. Sertraline, paroxetine, and fluoxetine fall within the M/P ratio of <1.0 identified as a low concentration, while citalopram, escitalopram, and fluvoxamine exceed this range.<sup>23</sup> However, this is not a measure of absolute amount, which is influenced by several factors including peak milk concentration, dosing schedule, body weight, and genetic variability in metabolism.<sup>23,24</sup> A pooled analysis also showed that while

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antidepressant drugs may be detectable in breast milk, they are not always found in the child's serum.<sup>21</sup> Because sertraline and paroxetine result in nearly undetectable infant serum levels,<sup>21</sup> these may be a preferred medication for breastfeeding mothers.<sup>25</sup> Fluoxetine and citalopram appear to result in higher infant levels.<sup>21</sup> Some side effects, including colic, prolonged crying, and vomiting, have been reported by breastfeeding mothers taking fluoxetine.<sup>26-28</sup> Fluoxetine may also be associated with reduced weight gain and reduced growth and development in older children.<sup>29,30</sup> There is no evidence that infant plasma levels are associated with child development or whether exposure is associated with risk.<sup>21</sup> While study results are reassuring and SSRIs are in the L2 (safer) risk category for breastfeeding mothers,<sup>31</sup> limitations in research methodology result in ongoing uncertainty about side effects and risks. Breastfeeding mothers who take antidepressants are typically advised to observe their infants for signs of adverse reaction including sedation, fussiness, or reduced suckling.<sup>21,25</sup>

While the risk appears low,<sup>23</sup> the choice to breastfeed while taking an SSRI may pose a dilemma for some women.<sup>32</sup> Women, together with their health care providers, are left to weigh potential adverse reactions of medication for their children, potential adverse reactions associated with maternal untreated depression, and health benefits associated with breastfeeding. Because depression commonly occurs among pregnant women<sup>7</sup> and SSRIs are some of the most commonly prescribed medications for this condition,<sup>10,11</sup> it is important to assess how their use may be associated with breastfeeding initiation and continuation. Research has only begun to explore women's decisions about combining breastfeeding with treatment for depression.<sup>32,33</sup> To this end, the focus of this analysis is to evaluate whether women exposed to SSRIs during pregnancy were less likely to breastfeed than unexposed women. Further, we will test the hypothesis that those women who continued taking an SSRI through the time of delivery were less likely to initiate breastfeeding than women who discontinued use earlier in pregnancy, possibly because of concerns about SSRI use during lactation.

## Methods

### *Study Population and Enrollment*

From January 1, 2000 to June 1, 2010, the California Teratogen Information Service Clinical Research Program (CTIS) received 3507 calls requesting information on the potential teratogenic effects of SSRIs. Of those, 2320 (66%) were from pregnant women who had been exposed to SSRIs at some point during their pregnancy. Women were considered eligible to enroll in this study if they were accessible by telephone and agreed to the study protocol involving follow-up of the pregnancy and the child to 7 years of age. The CTIS educational service did not record the number of refusals to participate in the research program. Reasons for refusal

included lack of time and lack of interest in committing to a long-term study involving multiple interviews, a physical examination of the child, and neurobehavioral testing over several years. However, in all cases, women were enrolled during pregnancy and, therefore, before any knowledge of birth or breastfeeding outcome could bias their participation.

This study sample included 284 women who contacted CTIS during this time period regarding concerns about self-reported exposure to SSRI (citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline) during pregnancy in addition to 182 controls who contacted CTIS during the same time period with questions about drugs and procedures not considered teratogenic, including acetaminophen use and dental x-rays. Only women who had a live birth by June 2010 were included in this sample. The vast majority of participants enrolled during the first trimester of pregnancy. The study was approved by the Institutional Review Board at the University of California, San Diego.

### *Data Collection and Measurement*

Data are from the CTIS, which enrolled women in a prospective study during their current pregnancies. Women in this study completed a telephone interview at the time of enrollment covering demographics, reproductive history, family medical history, and exposures during the current pregnancy. Exposures were also assessed during follow-up interviews throughout the pregnancy. Birth and breastfeeding outcomes were assessed during a telephone interview 2 to 4 weeks postpartum. Some women reported exposure to more than one SSRI, and some reported varying dosages throughout the pregnancy. For those participants, the SSRI exposure and dosage closest to the time of delivery were used for analyses. In cases where more than one SSRI was used, duration was calculated for all SSRIs combined. Maternal height and prepregnancy weight were also documented during this time and later verified by medical chart review when available. Exposure history included dosages, dates, and indications for medications in addition to occupational exposures and use of caffeine, vitamins, recreational drugs, alcohol, and tobacco. All participants kept a diary recording additional exposures during the delivery. For this study, exposure to alcohol, tobacco, and recreational drugs are defined as exposure reported at any time during pregnancy, including before pregnancy recognition. Study representatives also called participants throughout their pregnancies to obtain updated exposure information. Socioeconomic status (SES) was calculated at the time of study enrollment and was based on data from the Hollingshead 4-factor score.<sup>34,35</sup>

Breastfeeding outcomes were assessed by self-report during the postpartum telephone interview. Breastfeeding initiation is defined as ever breastfed or given breast milk. After determining whether participants had initiated breastfeeding, interviewers asked whether women had breastfed exclusively or almost exclusively for at least 2 weeks since birth.

Full breastfeeding includes those who exclusively breastfed with no supplementation as well as those with infrequent supplementation<sup>36</sup> (no more than 6 oz/wk) for the first 2 weeks after birth. Birth outcomes were also recorded during that time and were verified by medical records when available. The current study only included women with live birth outcomes.

### Statistical Analysis

The outcome measures in our analyses were (1) initiation of breastfeeding and (2) full breastfeeding for 2 weeks. We stratified the sample based on the timing of SSRI use during pregnancy to test our hypothesis that there would be a difference in breastfeeding rates between those taking SSRIs earlier in pregnancy and at the time of the delivery. We developed 3 groups: SSRI exposure at the time of delivery, SSRI exposure in pregnancy but discontinuation prior to delivery, and no SSRI exposure at any time during pregnancy.

We conducted  $\chi^2$  and ANOVA analyses to compare the 3 exposure groups across several demographic and reproductive characteristics. Where appropriate, Tukey-Kramer testing was used to evaluate pairwise mean differences. Because of small sample sizes in some categories, maternal race/ethnicity was categorized as white (non-Hispanic), Hispanic/Latina, Asian/Pacific Islander, and other. We also compared characteristics of SSRI use, including type and duration of use, between those who were exposed at the time of delivery and those who discontinued use prior to delivery. We then examined the bivariate relationship between breastfeeding initiation and all potential covariates listed in Table 1. Those that were associated with the outcome ( $\alpha < .25$ ) in bivariate analyses were entered as potential covariates in logistic regression models. We used forward selection stepwise logistic regression to develop the final model ( $\alpha < .10$  for inclusion). We retained the primary predictor variable (SSRI exposure status) and demographic variables known to be associated with breastfeeding outcomes (maternal age, SES category, and race/ethnicity) as covariates in all models. Potential covariates were added in the following order: maternal characteristics, reproductive history, and birth characteristics. Including only those women who initiated breastfeeding, we followed this same procedure to develop a logistic regression model for the second outcome, full breastfeeding for 2 weeks. All statistical tests were 2 tailed.

## Results

### Characteristics of the Study Population

Demographics, maternal characteristics, reproductive history, and birth characteristics of the sample appear in Table 1. Our study population included 167 women (36%) exposed to SSRIs at the time of delivery, 117 women (25%) exposed

to SSRIs earlier in pregnancy, and 182 women (39%) not exposed to SSRIs during pregnancy.

In a comparison across SSRI exposure groups, all 3 had similar SES but had significantly different maternal ages ( $P = .003$ ; significantly different for those exposed at delivery and unexposed women) and racial/ethnic backgrounds ( $P < .0001$ ). There were also significant differences across use of cigarettes ( $P = .0001$ ), illicit drugs ( $P = .02$ ), and vitamins before pregnancy recognition ( $P = .01$ ). Women not exposed to SSRIs during pregnancy were more likely to report that the current pregnancy was their first (37%) compared to the exposed groups (26% and 28%). About half of participants were multiparas. Birth characteristics, including gestational age at birth, birth weight, type of delivery, Apgar scores, and neonatal intensive care unit (NICU) admission, were similar across all 3 groups.

### SSRI Exposure

Table 2 outlines SSRI type and duration of use for both exposed groups. In both cases, the most frequently reported SSRI exposures were for paroxetine and sertraline. There were no significant differences in type of SSRI used between those who discontinued prior to delivery and those exposed at the time of delivery ( $P = .50$ ). Women in the early exposure group had a significantly shorter average duration of SSRI use (12 weeks) in comparison to those exposed at delivery (33 weeks) ( $P < .0001$ ). Those who discontinued exposure prior to delivery tended to have discontinued in the first half of pregnancy, on average at 14.9 weeks. Only 22% of women in this group discontinued exposure during the third trimester. In contrast, those exposed at delivery tended to remain exposed for the duration of pregnancy. With the exception of fluvoxamine, where there was only one case in each exposure group, the median daily dosages for each medication were similar across groups. The only significant difference was for paroxetine, where women exposed at delivery were more likely to report a higher dose ( $P < .01$ ; data not presented).

### Breastfeeding

In bivariate analyses, breastfeeding rates were significantly different across SSRI exposure groups for both initiation ( $P = .01$ ) and full breastfeeding for 2 weeks postpartum ( $P = .03$ ). Overall, most women in this study initiated breastfeeding, and the number continuing to exclusively or almost exclusively breastfeed for 2 weeks dropped by about 30% in each group. Among women exposed at delivery, 79% initiated breastfeeding, and 51% were fully breastfeeding for 2 weeks postpartum. The rates were similar among those who discontinued use prior to delivery; 81% initiated breastfeeding, and 52% were fully breastfeeding for 2 weeks. The breastfeeding rates were highest among women not exposed

**Table 1.** Descriptive Characteristics by Selective Serotonin Reuptake Inhibitor (SSRI) Use During Pregnancy (N = 466)

	SSRI Exposure Before Delivery (n = 117)		SSRI Exposure at Delivery (n = 167)		Unexposed (n = 182)		P Value <sup>a</sup>
	n (%)	Mean (SD)	n (%)	Mean (SD)	n (%)	Mean (SD)	
<b>Demographics</b>							
Maternal age, mean (SD)		32.4 (5.8)		33.3 (6.0)		31.2 (6.0)	.003
Socioeconomic status <sup>b</sup>							.58
Low	18 (17.0)		18 (11.3)		28 (15.5)		
Medium	17 (16.0)		31 (19.4)		27 (14.9)		
High	71 (67.0)		111 (69.4)		126 (69.6)		
Mother's race/ethnicity							<.0001
White (non-Hispanic)	73 (62.4)		138 (82.6)		97 (53.3)		
Hispanic/Latina	29 (24.8)		19 (11.4)		45 (24.7)		
Asian/Pacific Islander	9 (7.7)		7 (4.2)		26 (14.3)		
Other/unknown	6 (5.1)		3 (1.8)		14 (7.7)		
<b>Maternal characteristics</b>							
BMI, mean (SD)		24.4 (4.8)		25.3 (5.4)		23.9 (4.7)	.04
Cigarette use	20 (17.1)		38 (22.8)		12 (6.6)		.0001
Illicit drug use	11 (9.4)		18 (10.8)		6 (3.3)		.02
Alcohol use	66 (56.4)		98 (58.7)		84 (46.4)		.05
Prepregnancy vitamin	55 (47.0)		104 (63.0)		114 (62.6)		.01
Pregnancy weight gain, mean (SD)		36.8 (15.6)		33.5 (14.4)		34.6 (13.6)	.18
<b>Reproductive history</b>							
First pregnancy	30 (25.9)		47 (28.1)		67 (38.6)		.08
First live birth	51 (44.0)		82 (49.1)		95 (52.2)		.38
<b>Birth characteristics</b>							
Gestational age at baseline, mean (SD)		15.6 (10.5)		15.7 (9.0)		15.9 (9.2)	.98
Gestational age at birth, mean (SD)		38.9 (2.5)		38.8 (1.9)		39.1 (2.0)	.29
Preterm birth	18 (15.4)		22 (12.6)		17 (9.3)		.28
Female infant	54 (47.8)		82 (49.4)		79 (43.9)		.58
Cesarean delivery	32 (29.1)		46 (27.9)		49 (28.0)		.97
Low Apgar score (<7)	27 (23.1)		36 (21.6)		40 (22.0)		.95
Length, mean (SD), cm <sup>c</sup>		50.3 (2.5)		50.2 (2.6)		50.8 (2.5)	.07
Weight, mean (SD), g <sup>c</sup>		3436 (509)		3389 (485)		3471 (471)	.33
Head circumference, mean (SD), cm <sup>c</sup>		34.3 (1.6)		34.2 (1.6)		34.1 (3.2)	.91
<b>Birth weight</b>							
Low (1500-2500 g)	6 (5.1)		8 (4.8)		11 (6.0)		
Very low (<1500 g)	7 (6.0)		4 (2.4)		5 (2.7)		
Birth weight <10th percentile	3 (3.7)		12 (8.9)		8 (4.5)		.21
Length <10th percentile	5 (6.2)		14 (10.4)		6 (3.5)		.05
Head circumference <10th percentile	8 (12.3)		12 (11.0)		17 (13.3)		.88
Admitted to NICU	10 (8.6)		24 (14.4)		15 (8.2)		.13
NICU stay >1 d	6 (5.1)		15 (9.0)		8 (4.4)		.17
Major malformation	4 (3.4)		3 (1.8)		4 (2.2)		.69

SD, standard deviation; BMI, body mass index; NICU, neonatal intensive care unit.

<sup>a</sup>P value of  $\chi^2$ , Fisher exact, or ANOVA tests comparing cases and controls.

<sup>b</sup>Hollingshead 4-factor index.

<sup>c</sup>Hollingshead 4-factor index.

<sup>d</sup>Full-term pregnancies only.

to SSRIs during pregnancy, where 90% initiated breastfeeding and 65% were fully breastfeeding for 2 weeks.

After adjusting for maternal demographic characteristics and significant covariates (any alcohol use in pregnancy,

cesarean birth, and low 5-minute Apgar scores), women who were exposed to an SSRI at the time of delivery (odds ratio [OR], 0.34; 95% confidence interval [CI], 0.16-0.72) and earlier in pregnancy (OR, 0.43; 95% CI, 0.20-0.94)

**Table 2.** Selective Serotonin Reuptake Inhibitor (SSRI) Use Characteristics for Exposed Groups (n = 284)

	SSRI Exposure Before Delivery (n = 117)		SSRI Exposure at Delivery (n = 167)		P Value <sup>a</sup>	
	n (%)	Mean (SD)	Median Daily Dose	n (%)		Mean (SD)
Type of SSRI used, mg <sup>b</sup>					.50	
Citalopram	13 (11.1)		20	20 (12.2)		20
Escitalopram	10 (8.6)		10	8 (4.9)		15
Fluoxetine	22 (18.8)		20	41 (25.0)		20
Fluvoxamine	1 (0.9)		25	1 (0.6)		300
Paroxetine	30 (25.6)		20	48 (29.3)		22.5
Sertraline	41 (35.0)		50	46 (28.1)		75
Duration of SSRI use, wk <sup>c</sup>		12.1 (8.7)				33.1 (9.5)
Gestational age discontinued <sup>d</sup>		14.9 (10.1)				38.7 (1.9)
≤12 wk	59 (50.4)			—		
13-24 wk	32 (27.4)			—		
25 wk to delivery	26 (22.2)			167 (100.0)		

<sup>a</sup>P value of  $\chi^2$ , Fisher exact, or ANOVA tests comparing cases and controls.

<sup>b</sup>Last reported type if used multiple types.

<sup>c</sup>Combined for all reported SSRI types; calculation based on first day of last menstrual period.

<sup>d</sup>Last reported SSRI type if used multiple types; calculation based on first day of last menstrual period.

had significantly lower odds of initiating breastfeeding as compared to unexposed women (Table 3). Among those who initiated breastfeeding, the odds of full breastfeeding for 2 weeks were not significantly different by SSRI exposure group after adjusting for maternal demographic characteristics and significant covariates (prepregnancy body mass index [BMI]).

## Discussion

The results of this study indicate that women taking an SSRI at any time in pregnancy are significantly less likely to initiate breastfeeding than unexposed women. Use of antidepressant medication during pregnancy is rising, and because of their relative safety, SSRIs are most commonly prescribed.<sup>11</sup> As such, it is critical to understand how SSRI use during pregnancy may impact breastfeeding practices. There is evidence that women who are depressed, particularly during the early postpartum period, are at an increased risk for negative infant-feeding outcomes.<sup>37</sup> Research also suggests a negative association between SSRI use in pregnancy and intention to breastfeed.<sup>38</sup> However, previous studies have not explored potential differences in breastfeeding outcomes by timing or type of SSRI use.

While the present study did not evaluate reasons for differences in breastfeeding outcomes associated with SSRI use during pregnancy, we can offer several possibilities based on previous research. First, breastfeeding women may be concerned about using antidepressant medications during lactation.<sup>32,39,40</sup> Based on these concerns about safety, we hypothesized that those women who took an SSRI at the

time of delivery would be less likely to initiate breastfeeding than those who discontinued use prior to delivery. Our findings were not consistent with this hypothesis, as there was no significant difference in breastfeeding initiation between women exposed at the time of delivery and those who discontinued use prior to delivery. However, we did find that both SSRI-exposed groups were less likely to initiate breastfeeding than nonexposed women. It is also possible that women taking SSRIs during pregnancy were at greater risk for postpartum depression,<sup>41,42</sup> which some authors have identified as a risk factor for poorer feeding outcomes.<sup>37,43-45</sup> The findings of one recent study also suggest that SSRI use may result in delayed milk secretion,<sup>46</sup> which could contribute to difficulties both initiating and continuing to breastfeed for women exposed at delivery. Another possibility is that women taking SSRIs that are considered safer for breastfeeding mothers, such as sertraline and paroxetine, would be more likely to breastfeed. While small sample sizes limited our ability to detect statistically significant differences, we did not find a difference in SSRI type for either breastfeeding outcome, and this variable was not a significant predictor in multivariate models.

Our analyses were strengthened by our ability to control for important health behavior indicators and revealed significant differences between exposed and unexposed groups. Both exposed groups were more likely to report using illicit drugs and cigarettes at some point during their pregnancy. Because it is not the focus of the current analysis, we do not report on timing or duration of use, but tobacco and illicit drug use occurred at least once during pregnancy in 15% and 8% of the study population, respectively. In the

**Table 3.** Logistic Regression Model of Variables Related to Breastfeeding Initiation and Full Breastfeeding for 2 Weeks

Variable	Adjusted OR (95% CI)
Breastfeeding initiation (n = 430)	
SSRI use in pregnancy	
None	1.00
Before delivery	0.43 (0.20-0.94)
At time of delivery	0.34 (0.16-0.72)
Race/ethnicity	
White (non-Hispanic)	1.00
Hispanic/Latina	0.67 (0.34-1.34)
Asian/Pacific Islander	1.02 (0.32-3.26)
Other	2.67 (0.49-14.67)
Socioeconomic status	
High	1.00
Medium	0.46 (0.22-0.99)
Low	0.23 (0.11-0.48)
Maternal age (5-y units)	0.96 (0.75-1.24)
Any alcohol use in pregnancy	1.91 (1.07-3.44)
Cesarean birth	0.36 (0.20-0.66)
Low 5-min Apgar score (<7)	0.53 (0.27-1.04)
Full breastfeeding for 2 weeks postpartum (n = 363)	
SSRI use in pregnancy	
None	1.00
Before delivery	0.73 (0.41-1.32)
At time of delivery	0.67 (0.39-1.15)
Race/ethnicity	
White (non-Hispanic)	1.00
Hispanic/Latina	0.56 (0.30-1.07)
Asian/Pacific Islander	0.58 (0.27-1.23)
Other	0.93 (0.31-2.77)
Socioeconomic status	
High	1.00
Medium	1.15 (0.56-2.39)
Low	0.69 (0.31-1.51)
Maternal age (5-y units)	0.90 (0.92-1.01)
BMI (5-kg/m <sup>2</sup> units)	0.95 (0.91-1.00)

OR, odds ratio; CI, confidence interval; SSRI, selective serotonin reuptake inhibitor; BMI, body mass index.

multivariate model, women who reported any alcohol use during pregnancy (53% of the study population overall) were more likely to initiate breastfeeding. Most alcohol exposures were among light to moderate drinkers and occurred early in pregnancy. Among those initiating breastfeeding, higher prepregnancy BMI was also significantly associated with lower odds of full breastfeeding for 2 weeks postpartum. Other health behavior indicators were not significant in multivariate models.

Previous research has also identified an increased risk for perinatal complications and poorer neonatal outcomes among women taking SSRIs during pregnancy.<sup>15,16,18,47</sup> In this

sample, we did not find any statistically significant differences in birth outcomes. For example, gestational age at birth was approximately 39 weeks in all 3 groups, and cesarean delivery rates were just under 30%. However, evaluating these outcomes was not the primary focus of this study, and it is possible that we did not have a large enough sample size to detect significant differences. Our results do not rule out an adverse effect.

Our study was strengthened by prospective collection of exposure data throughout pregnancy and of breastfeeding outcomes within 2 to 4 weeks postpartum on average, thereby minimizing recall bias. We were also able to control for several important predictors of breastfeeding in our multivariate models, including SES, maternal age, and race/ethnicity. However, our study results are limited by a lack of data on some important predictors of breastfeeding behavior, including intention to breastfeed, social support, advice of health care providers, hospital practices, and previous breastfeeding experience.<sup>4,38,48-50</sup> This study also would have benefited from data regarding use of SSRI medication in the first 2 weeks postpartum. While it is likely that women taking an SSRI at the time of delivery would continue to take that medication for at least 2 weeks postpartum, we cannot verify this. Finally, women calling a teratogen information service and who also agree to enroll in a long-term study are likely to be more concerned about health behaviors and exposures during pregnancy than the general population, and their decisions regarding breastfeeding may not be representative. However, the overall breastfeeding initiation rate in this study (84%) is comparable to the rate of any breastfeeding in California overall in 2007 (87%).<sup>51</sup>

Study results confirmed our hypothesis that women taking an SSRI during pregnancy have lower odds of initiating breastfeeding than those unexposed, although we did not identify a significant difference across those exposed to SSRIs at different time points in pregnancy. Other research indicates that women have concerns about the safety of combining medication such as SSRIs with breastfeeding,<sup>5,32,33</sup> and each woman and her provider must weigh the risks and benefits for her individual case.<sup>52,53</sup> The results of this study indicate that women who are taking an SSRI during pregnancy, who also represent a group likely to have experienced symptoms of depression or anxiety, could benefit from additional prenatal and early postpartum education and support regarding breastfeeding. Further research to explore women's decisions and experiences regarding breastfeeding and SSRI use, including provider communication, perceived risks and benefits, and breastfeeding barriers, could provide valuable insight toward improving care and outcomes.

#### Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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