Risk of adverse birth outcome among Black women with post-traumatic stress disorder

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Objective

To evaluate the risk of adverse birth outcomes among Black women with post-traumatic stress disorder (PTSD).

Study Design

- The sample was selected from liveborn singleton deliveries to Black women in California between 22 and 42 weeks gestation in 2007-2012.
- ICD-9 codes from hospital discharge records were used to identify Black women with PTSD diagnoses during pregnancy and delivery.
- Adverse birth outcomes included preterm birth (PTB, < 37 weeks), early term birth (37-38 weeks), small for gestational age (SGA), large for gestational age (LGA), very low birthweight (VLBW, <1500 grams), low birthweight (LBW, <2500 grams), and major structural birth defects.
- Models were adjusted for demographics (e.g., age), clinical factors (e.g., diabetes), and social factors (e.g., insurance status). Logistic regression was used to calculate odds of adverse birth outcomes.

Results

- The sample included:
 - 206,805 Black women
 - 245 (0.1%) had a PTSD diagnosis
- Women with PTSD were more likely to be publicly insured and have inadequate prenatal care, a previous preterm birth, and a comorbidity (e.g., diabetes, hypertension, anemia, or additional mental illness).
- In models adjusting for social factors, women with PTSD were at elevated risk of PTB, LBW, or VLBW infant.

Conclusion

- Findings sensitive to adjusted models, show that Black women with PTSD are at an elevated risk for adverse birth outcomes.
- Screening for PTSD before and earlier in pregnancy is recommended to identify and refer women to effective treatment options.

Funding

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Black women with PTSD were at an

elevated risk of a preterm birth and giving

birth to infants of very low- and low birth

weight compared to Black women without

PTSD.





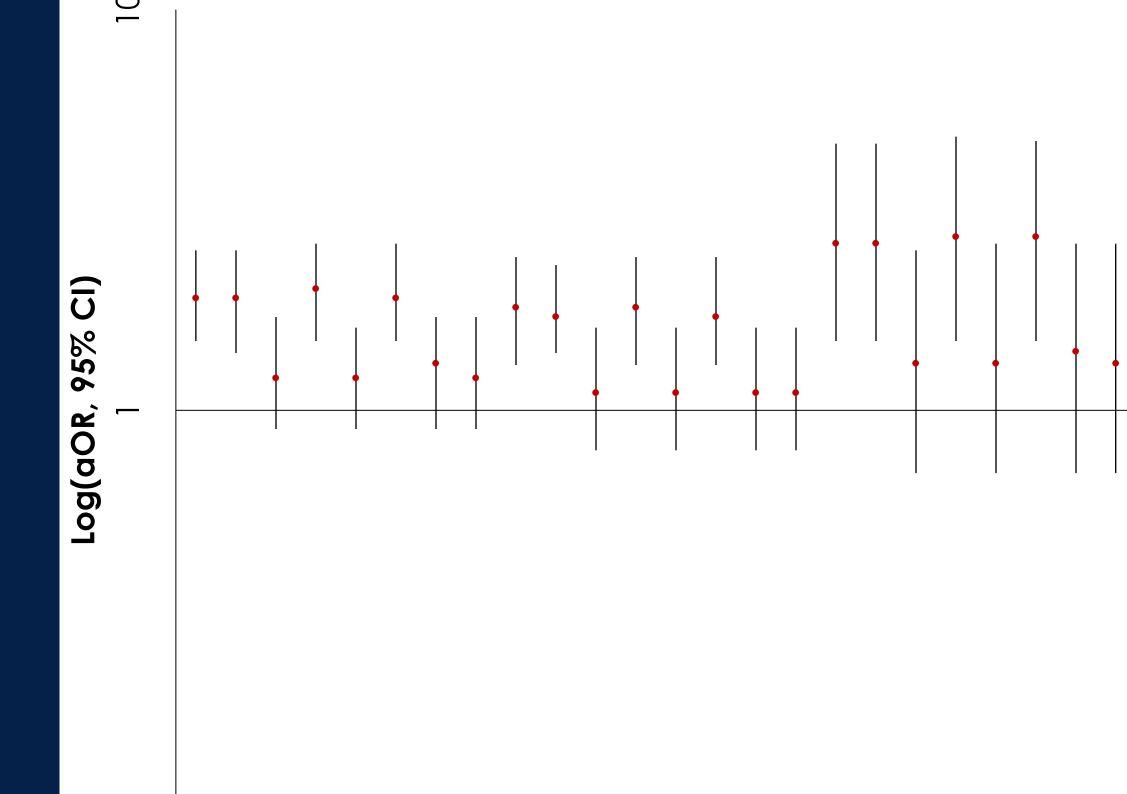


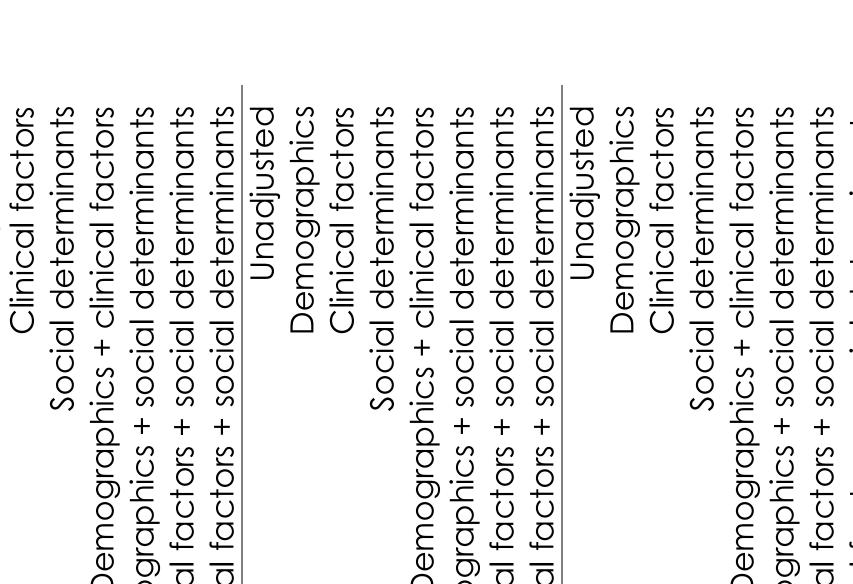
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Table 1. Characteristics of Demographic, Clinical, and Social Factors

	No mental illness diagnosis	PTSD	
	n (%)	n (%)	cRR (95% CI)
Sample	206,560	245	
Demographic Factors			
Age at delivery (years)			
Less than 18	8,388 (4.1)	12 (4.9)	1.2 (0.7, 2.2)
18 to 34	170,614 (82.6)	198 (80.8)	Reference
More than 34	27,547 (13.3)	35 (14.3)	1.1 (0.8, 1.6)
Parity			
Nulliparous	84,703 (31.0)	103 (32.0)	1.0 (0.8, 1.3)
Multiparous	121,736 (58.9)	143 (58.0)	Reference
Pre-pregnancy body mass index	(
Less than 18.5 m/kg ²	6,892 (3.3)	13 (5.3)	1.5 (0.9, 2.8)
18.5 to 24.9 m/kg ²	58,816 (28.5)	72 (29.4)	Reference
25.0 to 29.9 m/kg ²	37,641 (18.2)	47 (19.2)	1.0 (0.7, 1.5)
30.0 m/kg ² or more	40,197 (19.5)	63 (25.7)	1.3 (0.9, 1.8)
Missinga	, , ,	` ,	, , ,
Clinical Factors			
Any diabetes	13,944 (6.8)	40 (16.3)	2.7 (1.9, 3.8)
Any hypertension	25,220 (12.2)	52 (21.2)	1.9 (1.4, 2.6)
Smokeda	15,304 (7.4)	50 (20.4)	2.8 (2.1, 3.9)
Drug/alcohol use	10,888 (5.3)	95 (38.8)	11.3 (8.7, 14.6
Anemia	33,640 (16.3)	65 (26.5)	1.9 (1.4, 2.5)
Non-PTSD mental illness	14,579 (7.1)	210 (85.7)	77.9 (54.5, 111.
Previous preterm birth	2,741 (1.3)	7 (2.9)	2.2 (1.0, 4.6)
Social Factors	2)7 12 (2.0)	, (2.5)	(,,
Payment for delivery			
Private insurance	115,292 (55.8)	51 (20.8)	Reference
Medi-Cal	75,243 (36.4)	179 (73.1)	2.3 (1.7, 3.1)
Other	16,025 (7.8)	15 (6.1)	1.4 (0.8, 2.5)
WIC participation ^a	105,129 (50.9)	157 (64.1)	1.4 (1.0, 1.9)
Maternal education (years)	200,220 (00.0)	207 (02)	(,,
Less than 12	36,833 (17.8)	64 (26.1)	1.4 (1.0, 1.9)
12	68,329 (33.1)	86 (35.1)	Reference
More than 12	97,089 (47.0)	87 (35.5)	0.7 (0.5, 1.0)
Adequacy of prenatal care	37,003 (47.0)	<i>57 (55.5)</i>	0.7 (0.3, 1.0)
Adequate plus/adequate	141,233 (68.4)	149 (60.8)	Reference
Intermediate	27,962 (13.5)	41 (16.7)	1.4 (1.0, 2.0)
Inadequate	29,071 (14.1)	46 (18.8)	1.4 (1.0, 2.0) 1.5 (1.1, 2.1)

Figure 1. Risk of adverse birth outcome among Black women with PTSD





LBW

Preterm birth

VLBW