

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

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| Objective  |
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| <ul style="list-style-type: none"><li>To evaluate the risk of adverse birth outcomes among Black women with post-traumatic stress disorder (PTSD).</li></ul> |

| Study Design  |
|---|
| <ul style="list-style-type: none"><li>The sample was selected from liveborn singleton deliveries to Black women in California between 22 and 42 weeks gestation in 2007-2012.</li></ul> |

- 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   |
|---|
| <ul style="list-style-type: none"><li>The sample included:<ul style="list-style-type: none"><li>206,805 Black women</li><li>245 (0.1%) had a PTSD diagnosis</li></ul></li></ul> |

- 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   |
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| <ul style="list-style-type: none"><li>Findings sensitive to adjusted models, show that Black women with PTSD are at an elevated risk for adverse birth outcomes.</li></ul> |

- 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.



UC San Diego

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

|                                      | No mental illness | PTSD       |                           |
|--------------------------------------|-------------------|------------|---------------------------|
|                                      | diagnosis         | n (%)      | cRR (95% CI)              |
| Sample                               | n (%)             | n (%)      |                           |
| 206,560                              | 245               |            |                           |
| <b>Demographic Factors</b>           |                   |            |                           |
| <b>Age at delivery (years)</b>       |                   |            |                           |
| 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)            |
| <b>Parity</b>                        |                   |            |                           |
| Nulliparous                          | 84,703 (31.0)     | 103 (32.0) | 1.0 (0.8, 1.3)            |
| Multiparous                          | 121,736 (58.9)    | 143 (58.0) | Reference                 |
| <b>Pre-pregnancy body mass index</b> |                   |            |                           |
| Less than 18.5 m/kg <sup>2</sup>     | 6,892 (3.3)       | 13 (5.3)   | 1.5 (0.9, 2.8)            |
| 18.5 to 24.9 m/kg <sup>2</sup>       | 58,816 (28.5)     | 72 (29.4)  | Reference                 |
| 25.0 to 29.9 m/kg <sup>2</sup>       | 37,641 (18.2)     | 47 (19.2)  | 1.0 (0.7, 1.5)            |
| 30.0 m/kg <sup>2</sup> or more       | 40,197 (19.5)     | 63 (25.7)  | 1.3 (0.9, 1.8)            |
| Missing <sup>a</sup>                 |                   |            |                           |
| <b>Clinical Factors</b>              |                   |            |                           |
| Any diabetes                         | 13,944 (6.8)      | 40 (16.3)  | <b>2.7 (1.9, 3.8)</b>     |
| Any hypertension                     | 25,220 (12.2)     | 52 (21.2)  | <b>1.9 (1.4, 2.6)</b>     |
| Smoked <sup>a</sup>                  | 15,304 (7.4)      | 50 (20.4)  | <b>2.8 (2.1, 3.9)</b>     |
| Drug/alcohol use                     | 10,888 (5.3)      | 95 (38.8)  | <b>11.3 (8.7, 14.6)</b>   |
| Anemia                               | 33,640 (16.3)     | 65 (26.5)  | <b>1.9 (1.4, 2.5)</b>     |
| Non-PTSD mental illness              | 14,579 (7.1)      | 210 (85.7) | <b>77.9 (54.5, 111.4)</b> |
| Previous preterm birth               | 2,741 (1.3)       | 7 (2.9)    | <b>2.2 (1.0, 4.6)</b>     |
| <b>Social Factors</b>                |                   |            |                           |
| <b>Payment for delivery</b>          |                   |            |                           |
| Private insurance                    | 115,292 (55.8)    | 51 (20.8)  | Reference                 |
| Medi-Cal                             | 75,243 (36.4)     | 179 (73.1) | <b>2.3 (1.7, 3.1)</b>     |
| Other                                | 16,025 (7.8)      | 15 (6.1)   | 1.4 (0.8, 2.5)            |
| WIC participation <sup>a</sup>       | 105,129 (50.9)    | 157 (64.1) | <b>1.4 (1.0, 1.9)</b>     |
| <b>Maternal education (years)</b>    |                   |            |                           |
| 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)  | <b>0.7 (0.5, 1.0)</b>     |
| <b>Adequacy of prenatal care</b>     |                   |            |                           |
| 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)  | <b>1.5 (1.1, 2.1)</b>     |

Bold when p < 0.05; <sup>a</sup> not available 2005 and 2006

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

