

**Highlighting New
Poverty Research****by Nancy K. Grote,
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R. Gavin, Jennifer L.
Melville, Satish Iyengar,
and Wayne J. Katon.**

“A Meta-analysis of Depression During Pregnancy and the Risk of Preterm Birth, Low Birth Weight, and Intrauterine Growth Restriction.” 2010. *Archives of General Psychiatry* 67(10): 1012-24.

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The West Coast Poverty Center's **POVERTY RESEARCH FLASH** highlights new research by Center faculty affiliates and others on causes, consequences, and effective policy responses to poverty, with an emphasis on changing labor markets, demographic shifts, family structure, and social and economic inequality. More information about the West Coast Poverty Center is available from our website: wpcp.washington.edu

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A Meta-Analysis of Depression During Pregnancy and the Risk of Preterm Birth, Low Birth Weight, and Intrauterine Growth Restriction

Background. While national estimates show that between 8 and 13 percent of all women in the United States (US) experience depression during pregnancy, community-based studies suggest that between 1 in 4 and 1 in 5 poor, urban women from minority backgrounds experience minor or major depression during pregnancy. Some research has linked depression during pregnancy with adverse birth outcomes, such as premature births and low birth weight babies, which contribute to infant mortality and various developmental disabilities among children as well as lower rates of reproduction later in life. However, other studies have found contradictory results.

Methods. To better estimate the risk of adverse birth outcomes, such as preterm birth (PTB), low birth weight (LBW), and intrauterine growth restriction (IUGR) associated with depression during pregnancy, WCPC Affiliates and University of Washington School of Social Work professors Nancy K. Grote and Amelia R. Gavin, along with their colleagues Jeffrey A. Bridge, Jennifer L. Melville, Satish Iyengar, and Wayne J. Katon, conducted a meta-analysis of existing research on the links between antenatal depression and PTB, LBW, and IUGR. The researchers identified 29 eligible studies (16 of which were conducted in the US) out of 862 articles published on these associations between antenatal depression and adverse birth outcomes between 1980 and 2009. The researchers collected information from each of the 29 studies, such as the type of antenatal depression measure used, the mean maternal age of women in the sample, and the socioeconomic status (SES) of the sample. They also coded the studies based on whether or not they controlled for other potential contributors to adverse birth outcomes, such as smoking, substance abuse, and anti-depressant medication use, and on study methodological quality. The researchers then analyzed the data, calculating pooled relative risks estimates by random-effects methods. Where there was significant heterogeneity in the effect sizes across studies, the researchers examined whether country location, the extent of income inequality in the country, sample SES, sample race (controlling for sample SES), study quality, or how depression was measured could explain these differences.

Findings. The meta-analysis showed that clinical depression during pregnancy was significantly associated with an increased risk of PTB and LBW, but not IUGR. These findings were robust to the effects of publication bias. The magnitudes of these effects of clinical depression during pregnancy on PTB and LBW were comparable to that of smoking 10 cigarettes a day, but lower than the impact of substance abuse. Based on a subset of 10 studies from the US that examined clinical depression during pregnancy, results showed that lower SES women in the US were at significantly higher risk of PTB than middle- and upper-income women in the US. In addition, the researchers found that the relative risk of delivering an infant with LBW or IUGR was higher among women from developing countries who experienced antenatal depression than their counterparts in the US or social democracies. Given the high costs of neonatal care and the developmental and health impacts associated with PTB and LBW, the researchers suggest that antenatal depression should be considered a serious public health issue and that screening women, particularly low-income women, for depression during pregnancy and providing them with prenatal and mental health services as needed could reduce future health care costs and improve other developmental outcomes.

Poverty Research Flash

The West Coast Poverty Center serves as a hub for research, education, and policy analysis leading to greater understanding of the causes and consequences of poverty and effective approaches to reducing it in the west coast states. The Center, located at the University of Washington, is one of three regional poverty centers funded by the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). More information about the West Coast Poverty Center is available from our website: wcpc.washington.edu

Poverty Research Flash 2010-05

A Meta-analysis of Depression During Pregnancy and the Risk of Preterm Birth, Low Birth Weight, and Intrauterine Growth Restriction

New research from Nancy K. Grote, Jeffrey A. Bridge, Amelia R. Gavin, Jennifer L. Melville, Satish Iyengar, and Wayne J. Katon

Key Findings

- Based on a meta-analysis of 29 eligible studies published between 1980 and 2009, the researchers found that clinical depression during pregnancy was significantly associated with a higher risk of preterm birth and low birth weight.
- The magnitude of these effects of clinical depression on the risk of preterm birth and low birth weight was found to be comparable to that of smoking 10 cigarettes a day.
- Lower-SES women in the US with clinical depression during pregnancy were at significantly higher risk of having a preterm birth than middle- and upper-income women in the US with clinical depression during pregnancy.
- The relative risk of delivering an infant with LBW or IUGR was higher among women from developing countries who experienced antenatal depression than their counterparts in the US or social democracies.