

# Researching how residential environment impacts preterm delivery in African-Americans

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High levels of racial disparities in preterm delivery exist, with African Americans having higher rates than non-Hispanic whites. Since traditional risk factors do not fully account for this disparity, other explanations are needed and researchers at Wayne State University are teaming up to find answers.

Residential environment may be an important risk factor for adverse birth outcomes, given the strikingly different neighborhoods in which African American and white women reside and the resulting racial disparity in exposures to social determinants of health. Some aspects of residential environment have been linked to adverse birth outcomes, including [preterm delivery](#), however the majority of existing studies have only defined neighborhood exposures using aggregate data from the U.S. Census, which is unable to identify aspects of residential environment that may be detrimental. Recent evidence suggests that subjective assessments of neighborhoods from residents may be able to provide unique contextual information not available in Census data, including social environment.

To further examine the links between objective and perceived physical and social residential environment and preterm delivery among African American women, a Wayne State University School of Medicine researcher has secured a three-year, \$173,556 Ruth L. Kirschstein National Research Service Award from the Eunice Kennedy Shriver

National Institute of Child Health & Human Development of the National Institutes of Health. The research project "Residential Environment and Preterm Delivery among African American Women" will use data collected from 1,411 metropolitan Detroit-area women, enrolled in a study shortly after they gave birth to a single infant at Providence Hospital in Southfield, Mich. from 2009 to 2012.

Shawnita Sealy-Jefferson, Ph.D., M.P.H, postdoctoral fellow in the Department of Family Medicine and Public Health Sciences, will use the grant to examine measurement of subjective neighborhood constructs, including the methodological properties of subjective assessments. In addition, she will determine the associations between perceived social and physical residential environment and prevalence of preterm delivery as well as examine the associations between objective physical environment and PTD, using multilevel modeling.

For this research, Sealy-Jefferson will work with her mentor, Dawn Misra, Ph.D., professor of family medicine and public health sciences in Wayne State's School of Medicine, as well as Theresa Osypuk, Sc.D., associate professor at University of Minnesota, George Galster, Ph.D., Clarence Hilberry Professor of Urban Affairs at Wayne State, and Jason Booza, Ph.D., assistant professor of family medicine and public health sciences at Wayne State.

"Our research will extend the current knowledge of neighborhood effects on preterm delivery in several critical ways," said Sealy-Jefferson. "We will compare objective and subjective measures of residential environment, determine how objective neighborhood measures influence perceptions of neighborhoods, and conduct research in a cohort comprised entirely of African American women, a group known to suffer disproportionately from preterm delivery."

Sealy-Jefferson added that if subjective measures of residential

environment are found to be better predictors of preterm delivery than objectively defined measures, this information can inform future intervention studies as well as policy efforts focused on eliminating adverse features of neighborhoods.

"If we are to eliminate the persistent racial disparity in this birth outcome, it is imperative that upstream social risk factors that are amenable to effective intervention be identified, especially since known individual-level factors do not completely account for the increased risk among African American women," added Sealy-Jefferson.

Provided by Wayne State University

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