

Residential location affects pregnant women's likelihood of smoking

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Women are more likely to smoke during pregnancy when they live in areas where socio-economic resources are lower but also where smoking is more socially accepted, according to new study from Rice University's Kinder Institute for Urban Research.

"Where There's Smoke: Cigarette Use, Social Acceptability and Spatial Approaches to Multilevel Modeling" will appear in the September edition of *Social Science and Medicine*. The study examines how local factors impact health behavior.

Heather O'Connell, a postdoctoral research fellow at Rice's Kinder Institute, finds contextual factors - such as socio-economic status and the prevalence of [smoking](#) in neighboring areas - are clearly related to women's individual-level odds of smoking during pregnancy, suggesting a role of place in shaping health outcomes.

"Social acceptability and local resources matter quite a bit when it comes to individual smoking habits, including those of pregnant women," she said.

The study finds that counties with higher values on the socio-economic status scale have lower average odds of women smoking during pregnancy. For example, a county that ranks as a one is associated with a 0.67 odds ratio, which is 23 percent lower than in an otherwise similar county with a [socio-economic status](#) value of zero.

In addition, a woman's odds of [smoking during pregnancy](#) are much higher for every increase in the average percentage of [pregnant women](#) smoking in neighboring counties, on the order of 2.5 times higher. Previous research has discussed how social acceptability affects smoking behavior, but this study provides clarifying evidence using new methods that combine ideas about place as well as the relative position of those places.

"This indicates that living in and around counties where fewer people are already smoking is beneficial for reducing [maternal smoking](#)," O'Connell said.

The study included analysis of data from the 2005-2009 American Community Survey as well as from a data set of all women giving birth during that time period. O'Connell said the data was ideal for this project because they have been used in recent research to demonstrate contextual associations with maternal smoking.

O'Connell hopes the study will encourage further research of how living in certain types of places can impact health behaviors.

"This should be a wake-up call for individuals to begin thinking about how their neighborhoods and resources impact other areas of their life - specifically, those relating to health," she said.

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