

Neighborhood may affect a couple's odds of conceiving

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Where you live may affect your [fertility](#), a new study suggests.

People who live in economically deprived [neighborhoods](#) are about 20% less likely to conceive, compared to people from areas with more resources, researchers said.

Investments in deprived neighborhoods that address economic disparities may improve fertility in those areas, according to the authors, who researched "fecundability," or the probability of becoming pregnant each month.

"There are dozens of studies looking at how your [neighborhood environment](#) is associated with adverse birth outcomes, but the pre-conception period is heavily under-studied from a structural standpoint," explained study author Mary Willis, a postdoctoral scholar in Oregon State University's College of Public Health and Human Sciences.

"Turns out, before you're even conceived, there may be things affecting your health," she said in a university news release.

The study used data from an ongoing research project from Boston University known as the Pregnancy Study Online ([PRESTO](#)).

The Oregon researchers analyzed 6,356 U.S. individuals in data collected from 2013 through 2019. The participants ranged in age from 21 to 45 and were attempting to conceive without the help of fertility treatment.

Participants answered questions about menstrual cycle characteristics and pregnancy status in online surveys every eight weeks for up to a year. The study documented 3,725 pregnancies during that time period.

The researchers then compared participants based on their "area-deprivation index" score, which measured socioeconomic resources in a neighborhood. The team measured this score at both national and within-state levels.

Based on national rankings, those in the most-deprived neighborhoods had a 19% to 21% lower chance of becoming pregnant compared with those in the least-deprived neighborhoods. Based on the within-state rankings, the reduction was 23% to 25%.

"The fact that we're seeing the same results on the national and state level really shows that neighborhood deprivation can influence [reproductive health](#), including fertility," Willis said. However, the study only found an association between neighborhood income and fertility levels, rather than a cause-and-effect link.

The majority of study participants were white, had completed a four-year college education and earned more than \$50,000 a year.

Public health research has highlighted the importance of social determinants of [health](#) and the idea that ZIP code is the greatest predictor for overall life expectancy.

"But the concept that your neighborhood affects your fertility hasn't been studied in depth," Willis noted. "In addition, the world of infertility research is largely focused on individual factors, so when I came into this study as an environmental epidemiologist, I was thinking we should look at it as a structural problem."

Approaching fertility research from a structural standpoint might help reduce or prevent infertility overall, Willis said, noting the high cost of fertility treatments make them accessible only to families with significant resources.

The findings were published June 30 in the journal *JAMA Network Open*.

More information: The U.S. Department of Health and Human

Services has more on the [social determinants of health](#).

Mary D. Willis et al, Association Between Neighborhood Disadvantage and Fertility Among Pregnancy Planners in the US, *JAMA Network Open* (2022). [DOI: 10.1001/jamanetworkopen.2022.18738](https://doi.org/10.1001/jamanetworkopen.2022.18738)

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