

# Low-income home strife drives earlier teen sex

March 4 2014, by Susan S. Lang

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(Medical Xpress)—The age at which people become sexually active is genetically influenced – but not when they grow up in stressful, low-income household environments, reports a new study.

"Our study shows that [environmental influences](#) – rather than genetic propensities – are more important in predicting age at first sex (AFS) for adolescents from stressful backgrounds, who have few societal and economic resources," says Jane Mendle, assistant professor of human development in the College of Human Ecology, pointing out that genes determine when teens begin puberty, which is a strong predictor of AFS.

"In fact, genes contribute only negligibly to AFS for these teens. It can almost be thought of as the environment 'taking over' the natural developmental trajectory that might occur in a less stressful background," she adds.

For teens from financially advantaged backgrounds, on the other hand, the environment is much less influential and genes play a more important role in predicting AFS, Mendle notes.

The study, co-authored with University of Texas at Austin researchers, was published online in January in the journal *Developmental Psychology*.

While many studies have examined either genetic influences or environmental influences on AFS, "ours was one of the very first to

consider gene-environment interactions in AFS, or how genetic expression may vary according to environmental circumstances," Mendle says.

Using a sample of 1,244 pairs of identical twins (who share 100 percent of their genes) and non-twin full siblings (who share 50 percent of their genes) from the National Longitudinal Study of Adolescent Health, the researchers found that genetic influences on AFS were suppressed among low-socioeconomic-status and ethnic-minority teens compared with higher socioeconomic status and ethnic-majority youth. Father absence did not uniquely moderate genetic influences on AFS.

"And because we looked at [identical twins](#) and siblings, we could account for the importance of big family differences – and that enabled us to focus solely on understanding the environmental influences in AFS," she says.

In addition to genetic influences, the use of twins and siblings in the study design accounted for shared environmental influences, such as religion or certain aspects of parenting, for siblings in the same family and for environmental influences that were unique to each youth.

Their findings "are broadly consistent with previous findings that genetic influences are minimized among individuals whose environments are characterized by elevated risk," the researchers wrote.

"There has been a lot of dialogue and controversy in America on how to handle adolescent sexuality, and what programs may be most effective in reducing some of the outcomes associated with high-risk sexual behavior in teens," Mendle says. "Many factors predict whether a teen is sexually active and when he or she transitions to sexual maturity. Our results help us understand in what contexts these factors will be malleable."

**More information:** Carlson, M. D.; Mendle, J.; & Harden, K. P. (2014). "Early Adverse Environments and Genetic Influences on Age at First Sex: Evidence for Gene x Environment Interaction." *Dev Psychol.* [www.ncbi.nlm.nih.gov/pubmed/24417626](http://www.ncbi.nlm.nih.gov/pubmed/24417626)

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