

## Babies are born earlier and smaller when males are scarce

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(Medical Xpress)—In communities where Dad is more likely to be missing from the picture, more babies are born prematurely and of lower weight, according to a researcher from the University of Michigan School of Public Health and the Institute for Social Research Population Studies Center.

In a study reported in the [American Journal of Human Biology](#), Daniel Kruger, research assistant professor in [health behavior](#) and health education, found that when males are scarce it often negatively impacts [birth outcomes](#)—possibly from subconscious regulation of maternal investment in the pregnancy, Kruger said.

"I don't think any woman is consciously thinking, 'I should have a [premature baby](#).' It is likely a non-conscious system regulated by hormones, etc., that is influenced by both conscious and non-conscious processes." Kruger said the outcome is related to investment trade-offs with deep histories. "This system evolved over many, many generations before modern times when infant and [child mortality rates](#) were much higher. There was a very real risk that when conditions were poor, their infant or child would die. It would make sense for the mothers to conserve their resources so that they would have more chance of having another child when times were better. Again, this is not a conscious decision, but a system that was effective in the very long run."

Kruger, and students Jillian Clark and Sarah Vanas from the College of Literature, Sciences and the Arts, combined year 2000 birth records

aggregated by county from the U.S. [Centers for Disease Control and Prevention](#) with 2000 U.S. Decennial Census data. Across the 450 counties, they calculated the proportions that were premature, defined as less than 37 weeks gestation, and those with birth weight under 5.5 pounds. They developed a path model that took into account the ratio of men to women ages 18-64, single mother households as a proportion of families with children, socio-economic status, the degree of male scarcity, and other factors.

Kruger said the public health community has worked to support single mothers in their pregnancies with interventions that follow a standard medical model but now should also work to "assess the level of support that women expect to have from their partners, as well as family members and others in their social networks."

"If possible, we should increase men's involvement and support during pregnancy and reinforce the expectation that he will be around to help raise the child. This does not just have to be financial support; it can be spending time with the child, taking care of him/her, teaching him/her skills, etc."

Provided by University of Michigan Health System

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