Could asking one question help us better understand women and infants' health?

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Holding baby's hand. Credit: Aditya Romansa on Unsplash

"Have you ever been sexually active for a year or more without using

contraception and becoming pregnant?" A study by George Mason University's Dean of the College of Health and Human Services, Dr. Germaine M. Buck Louis, and colleagues from the University at Albany and *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) suggests that asking this question could help clinicians better understand women and infants' health.

With professional medical societies now considering infertility a disease, Buck Louis and colleagues conducted a study to assess parental health status including infertility and infant outcomes, such as gestation and birth size (weight, length, and head circumference). "Parental health status and infant outcomes: Upstate KIDS Study" was published in January in *Fertility and Sterility*. They found that infertility was significantly associated with a shorter gestation and diminished birth size, although the magnitude of reductions varied by definition of infertility.

Infertility was the most consistently observed medical condition associated with smaller birth size even when adjusting for infertility treatment. When infertility was defined most broadly as ever being sexually active without using contraception and becoming pregnant, infants born to infertile women weighed less (62 grams), were slightly shorter (0.33 cm) and had smaller (0.35 cm) head circumferences in comparison to women without infertility. Also, women with a history of hypertension or asthma had shorter pregnancies and lighter infants than women without these chronic diseases. Their findings suggest that maternal health status inclusive of infertility is important for fetal growth, as measured by infants' size at birth.

"We undertook this study to improve our understanding of parental health status, infertility treatment, and the health status of future generations," says Buck Louis. "To our knowledge, this is the first study to include infertility in the context of other chronic diseases. Our

findings suggest that infertility and chronic diseases may have long-lasting implications for infant health outcomes."

Buck Louis and colleagues used data from the Upstate KIDS Study that was specifically designed to assess couples' reproductive health and infant outcomes. Supported by the NICHD, the Study utilized the New York State's Perinatal Data System to develop the study cohort that is now in its 5th year of following the children.

Given the move to consider infertility as a disease, the researchers measured infertility three ways: (1) ever being sexually active for a year or more without the use of contraception and without becoming pregnant; (2) ever requiring 12+ months to become pregnant; and (3) requiring 12+ months to become pregnant with the pregnancy being assessed in this study. The most consistent findings were for definition #1.

While uncovering the underlying causal relations between infertility and birth size will require further research, the findings support the inclusion of infertility as a part of clinical health histories. A simple question seems to be a good indicator of its association with offspring's birth size.

More information: Germaine M. Buck Louis et al, Parental health status and infant outcomes: Upstate KIDS Study, *Fertility and Sterility* (2018). DOI: 10.1016/j.fertnstert.2017.10.009

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