

# Grieving before conception may be a risk factor for infant mortality

September 17 2015

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An elevated infant death rate may be linked to mourning experienced by women in the months before they become pregnant, reports a study in *Psychosomatic Medicine: Journal of Biobehavioral Medicine*, the official journal of the American Psychosomatic Society.

"Our findings suggest that the six-month period prior to pregnancy may be a sensitive developmental period with implications for early offspring mortality," according to the new research, led by Quetzal A. Class, PhD. In contrast, maternal bereavement during pregnancy doesn't affect the infant mortality rate. The study was performed when Dr. Class was a doctoral student at Indiana University; she is now a postdoctoral researcher at the University of Chicago.

## New Evidence Linking Bereavement around Conception to Infant Mortality

Using a Danish nationwide birth registry, the researchers analyzed data from all women who gave birth in Denmark between 1979 and 2009. Infant and [child mortality rates](#) were compared for women with and without "maternal bereavement"—defined as the death of a parent, sibling, or previously born child—in the months before [conception](#) or during pregnancy.

The analysis included data on nearly 1.9 million singleton births. Overall mortality rates were 0.004 percent during the first month of life, 0.002

percent between one month and one year, and 0.001 percent between one and five years.

The results showed increased mortality for infants born to mothers who experienced the death of a family member in the months before conception. After adjustment for other factors, risk of [infant death](#) during the newborn period (before one month) was more than 80 percent higher for women with preconception bereavement.

For infant death between one month and one year, risk was about 50 percent higher for women with bereavement before conception. The associations were weakened—but still significant—after further adjustment for gestational age and birth weight.

The increases in infant mortality were significant only between zero and six months before conception. Preconception bereavement had no effect on the risk of child death between age one and five years. Bereavement during pregnancy was unrelated to infant or child mortality.

While rates of early child mortality are improving, information on the causes of these tragic events is needed to develop effective global prevention programs. One previous study has suggested that grieving around the time of conception might be a risk factor for infant mortality. Other studies suggest that general stressors experienced before conception may impact offspring health.

Adding to that evidence, the new study finds that maternal bereavement within six months before conception is linked to an increased [infant mortality rate](#). While the absolute risks are very low—a small fraction of a percentage point—the relative increases in infant mortality risk may be substantial.

"Bereavement is a major life stressor from both a psychological and

physiological perspective," Dr. Class and coauthors write. Grieving may lead to changes in the maternal stress system affecting offspring development—particularly during the vulnerable period of early organ development—or alter the mother's biological preparedness for pregnancy.

The researchers note some important limitations of their study—highlighting the need for replication, examination of the specificity and severity of preconception stressors associated with mortality, and exploration of the biological mechanisms functioning in the preconception period.

Meanwhile, the results add new evidence that maternal bereavement immediately before pregnancy may increase the risk for newborn and [infant mortality](#). Dr. Class comments, "Overall, this study emphasizes that the preconception period should not be overlooked when it comes to promoting infant health."

**More information:** "Preconception Maternal Bereavement and Infant and Childhood Mortality: A Danish Population-Based Study." [DOI: 10.1097/PSY.0000000000000229](#)

Provided by Wolters Kluwer Health

Citation: Grieving before conception may be a risk factor for infant mortality (2015, September 17) retrieved 2 May 2024 from <https://medicalxpress.com/news/2015-09-grieving-conception-factor-infant-mortality.html>

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