

Study shows connection between birth weights and armed conflict

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A new study shows pregnant women exposed to armed conflict have a higher risk of giving birth to underweight babies, a result that could change the way aid is delivered to developing countries.

"From a development side we need to ask, 'Who is the population we should be focusing on?'" said Hani Mansour, Ph.D., assistant professor of economics at the University of Colorado Denver who conducted the study with Daniel Rees, Ph.D., a CU Denver professor of economics. "Our results provide another reason why pregnant women deserve special attention when armed conflict breaks out."

The study, the first to examine the relationship between [prenatal exposure](#) to armed conflict and [birth weight](#), will be published in an upcoming edition of the *Journal of Development Economics*.

The research focused on a major uprising in the Israeli-occupied territories.

The Second Intifada, which began in September 2000, had claimed the lives of more than 4,000 Palestinians by 2005. Mansour and Rees drew on data from the Palestinian Demographic and Health Survey, which was collected by the Palestinian Central Bureau of Statistics approximately four years after the start of the uprising. These data were matched with data on Palestinian fatalities in the West Bank collected by B'Tselem, an Israeli human rights organization.

"We find that an additional conflict-related fatality nine to six months before birth is associated with an increase in the probability of having a low-birth weight child," Mansour said. "[Psychological stress](#) is a plausible explanation for this relationship, although we cannot rule out malnutrition."

The professors examined a sample of 1,224 births to women living in the West Bank. Conflict exposure in utero was measured by the number of Palestinians killed by Israeli security forces in the district where the mother lived.

The authors controlled for a variety of potentially confounding variables including education of the mother and father, mother's age when she gave birth, father's occupation, birth order, gender of the baby, number of prenatal care visits, whether a curfew was in place, and self-reported anemia.

Because they control for anemia, the professors believe that psychological stress, as opposed to malnutrition, is the likely mechanism behind low birth weight. In addition, they note that previous studies have shown that exposure to earthquakes and terrorist attacks in the early stages of pregnancy can lead to low birth weight.

Rees and Mansour said they had no political agenda going into their research. They chose to study the impact of the Second Intifada "because of the quality of the data and the fact that mobility was very low in the West Bank during this period."

The authors noted that, "armed conflict is often associated with migration, which would complicate this type of analysis." According to Mansour, who was born in Haifa, Israel, "fully 94 percent of the mothers in our sample had not moved to a new community since the start of the Intifada."

Rees and Mansour plan to follow up by examining whether intrauterine exposure to armed conflict affects longer-term outcomes in educational attainment and test scores.

The authors said their findings had implications well beyond the West Bank and should be considered by policymakers around the world.

"At a minimum our results are consistent with those of medical studies showing a positive association between self-reported stress and [low birth weight](#), and suggest a heretofore unexplored rationale for intervention when [armed conflict](#) occurs," they said.

More information: The manuscript is available at <http://www.sciencedirect.com/science/article/pii/S0304387811001209?v=s5>.

Provided by University of Colorado Denver

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