Abstract

This study examines the effects of PM2.5 exposure before conception on infant mortality, using upper air condition as instrumental variables. Using satellite data on air pollution and individual vital statistics records in the Philippines from 2006 to 2018, monthly PM2.5 exposures and infant mortality rates were constructed using the birth-century-month code and location. The effects were estimated and compared using Ordinary Least Squares (OLS) and Two-stage least squares (2SLS) regressions. Findings show that increased exposure to PM2.5 before conception is associated with a large and statistically significant increase in infant mortality under full specification. The 2SLS coefficient is also substantially larger than the corresponding OLS estimate. Further, the results reveal that maternal exposure to air pollution before conception is also statistically significant for infant mortality among male infants.