Exposure to pollution and infant health: The case of public kindergartens in Bogotá

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Abstract

This study analyzes the relation between levels of pollution (CO, O3 and Pm10) and infant health for children in public kindergarten in Bogotá, Colombia. The study exploits an ample set of characteristics from *Centinela-Vigila Survey (Secretaria Distrital de Salud)*, combined with pollution levels from *Secretaria Distrital de Ambiente* and geographical information from *Catastro Distrital de Bogotá* to geographically identify mothers in different areas (locality) around Bogotá. By using a panel with mother/family fixed effects, levels of pollution are assigned to mothers during the three trimesters of pregnancy, as well as to children during the year previous to the interview to see the effects on low birth weight and kindergarten absenteeism. Results show evidence that being exposed to higher levels of pollution during second trimester of pregnancy (in-utero) increases the probability of low birth weight, being exposed to higher levels of pollution during the last year increases the probability of being absent from kindergarten, and exposure to higher levels of pollution during the third trimester and first year of life is positively associated with suffering a lung related disease. These results imply that levels of pollution affects infant's health and kindergarten absenteeism, which may have an impact on future outcomes and human capital formation.

JEL Classification: C33, J13, Q53

Keywords: Air pollution, infant health, kindergarten absenteeism, mother/family fixed effects, panel data