

Lower tract respiratory infection in children younger than 5 years of age and adverse pregnancy outcomes related to household air pollution in Bariloche (Argentina) and Temuco (Chile)

Abstract

The main objective of this study was to evaluate the association between household air pollution with lower tract respiratory infection (LRTI) in children younger than 5 years old and adverse pregnancy outcomes. This retrospective cohort study took place in two cities in Patagonia. Using systemic random sampling, we selected households in which at least one child <5 years had lived and/or a child had been born alive or stillborn. Trained interviewers administered the questionnaire. We included 926 households with 695 pregnancies and 1074 children. Household cooking was conducted indoors in ventilated rooms and the use of wood as the principal fuel for cooking was lower in Temuco (13% vs. 17%). In exposed to biomass fuel use, the adjusted OR for LRTI was 1.87 (95% CI 0.98–3.55; $P = 0.056$) in Temuco and 1.12 (95% CI 0.61–2.05; $P = 0.716$) in Bariloche. For perinatal morbidity, the OR was 3.11 (95% CI 0.86–11.32; $P = 0.084$) and 1.41 (95% CI 0.50–3.97; $P = 0.518$), respectively. However, none of the effects were statistically significant ($P > 0.05$). The use of biomass fuel to cook in traditional cookstoves in ventilated dwellings may increase the risk of perinatal morbidity and LRTI.