

Acute Respiratory Infections Associated with Exposure to Biomass Cooking Fuels and Cigarette Smoke among Children Under Five Years of Age in Developing Countries

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ABSTRACT Exposure to household air pollution is an environmental risk factor associated with respiratory disease, especially in children in developing countries. The primary sources of indoor air pollution in households are cooking fuels and cigarette smoke. The purpose of this study was to systematically review scientific articles related to the risk factors of biomass cooking fuel and smoking family members on the incidence of Acute Respiratory Infections in children under five years in developing countries. This systematic search was carried out following the Prisma protocol by collecting research data found in the Pubmed, Scielo, Lilacs and Google Scholar databases. The data are categorised by country name, the number of children under five years studied, data design, analytical method, and odds ratio (95% CI) of biomass cooking fuel and family smoking. As a result, 17 articles were selected for review, and all studies applied logistic regression to estimate the risk, except for one study that used the Poisson regression model. The range of risk factors for cooking fuel biomass Odds Ratio (95% CI) was 1.10 (1.01–1.20) to 4.348 (1.632, 11.580), the risk factor for family members smoking was 1.06 (1.00–1.12) to 3.58 (1.45–8.84). Research conclusions were that risk factors for biomass fuel for cooking and family members smoking tobacco are determinants of Acute Respiratory Infections or ARI in children under five years in developing countries. The risk factor for biomass fuel has a higher probability of causing ARI than family members who smoke tobacco. Suggestions for parents included, to pay special attention to children by keeping children away from cooking fuel fumes and not smoking indoors. Governments in developing countries should pursue effective strategies to increase access to clean fuels to reduce exposure to indoor air pollution.