

**Effect of outdoor air pollution on respiratory health of children in an urban and a rural area in the district of Kandy.**

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This study was carried out to determine the effect of outdoor air pollution on respiratory health of children living in an urban and a rural area in Kandy district. The study was done in two phases. For the first phase, Basic information regarding children and their household were also assessed using an interviewer administered questionnaire. For the second phase, two components were included. First component determined the levels of outdoor concentrations of three pollutants (NO<sub>2</sub>, SO<sub>2</sub> and Ozone) using passive sampling method in all thirty two GN divisions every month throughout the year. For the second component ventilatory functions were assessed in December 2004 using 173 Sinhalese children (82 from KMC area and 91 from Yatinuwara area) between 10 - 12 years of age from the same study group used for the phase one, The results showed that the monthly concentration of the three pollutants studied were significantly higher in urban (KMC) area compared to rural (Yatinuwara) area Two measurements of ventilatory functions, mean FVC and FEV<sub>1</sub> were higher in KMC area compared to Yatinuwara and the difference was statistically significant. The air pollution was more evident in the urban areas and most of the episodes of respiratory symptoms also occurred in urban areas. High concentrations of these pollutants in the air predict the occurrence of respiratory symptoms. Programmes to promote respiratory health should aim at reducing levels of air pollutants.