



Original Article

## Air Pollution a Major Factor in Asthma Predictability Index among Children Living In and Around Kolkata Metropolis

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**Abstract**

Asthma is the most common paediatric chronic disease. Hindrance in asthma diagnosis is widespread resulting in unsatisfactory management in asthma. About 80% of paediatric asthma patients have symptom onset before age six, most of them before age three. However, only about 1/3 of children with at least one episode of asthmatic symptoms by age three will have asthma at age six and over; Asthma are under-diagnosed in 18-75 % of asthmatic children. This city is categorized unhealthy for human beings. Deterioration in urban air quality in most megacities is quite profound and Kolkata Metropolitan City is no exception to this. An assessment of Kolkata air quality is done where the listed pollutants' (RPM, SPM, NO<sub>2</sub>, and SO<sub>2</sub>) annual average concentration are classified into four different categories; namely critical, high, moderate, and low pollution. There are 17 monitoring stations in Kolkata and out of which five fall under the critical category, and the remaining 12 locations fall under the high category of NO<sub>2</sub> concentration, regarding RPM, four stations are critical, and 13 stations record data which are under the high pollution category. Model questionnaires were run through 10% of the households to assess socio-economic conditions, critical environmental conditions, nature and types of health burdens as well as gauge the attitude in the direction of health care facilities were done. A comprehensive and up-to-date knowledge about the seasonal and spatial variation of asthma and studying air quality of the area. Mapping through GIS.

It is desirable to construct an accurate model (Asthma Prediction Index) to predict whether a child will develop asthma in the future due to the deteriorating air pollution in the city.

**Introduction**

Kolkata is one of the most prominent metropolises in Asia. The Kolkata Metropolitan Area (KMA) is a large urban-industrial corridor covering area of 1,350 sq. km (38 municipalities and 3 municipal corporations). Kolkata had been placed among the most polluted cities of the world with respect to SPM levels according to Global Pollution and Health, a report published

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