



PRESS RELEASE

Poverty and wheezing illness in British pre-school children

While earlier UK studies have not shown any consistent relationship between poverty and wheezing illness, recent research in adults suggests that wheezing and asthma might be more common and more severe in the poor. As poor families often belong to ethnic minorities, it is unclear if poverty itself or a different genetic and socio-cultural background causes the increased morbidity. Nothing is known on potential effects of poverty on very young children. We therefore investigated the relationship between poverty and wheezing illness in British toddlers of Caucasian and of South Asian ethnicity.

In 1998, we sent a respiratory questionnaire to the parents of a random sample of 3410 children aged 1 to 5 years in Leicestershire, UK (2522 Caucasians, 1753 South Asians). Eighty percent (3410/4277) were returned completed. Poverty was measured independently, using the Townsend deprivation score (based on census data) and children were classified into five socio-economic groups.

In Caucasians, current wheeze was reported with increasing frequency in more deprived children (21% in the highest socio-economic group, 23%, 25%, 31% respectively in intermediate and 40% in the lowest socio-economic group). This was statistically highly significant ($p < 0.0001$). Similar results were found for chronic night cough (23%, 28%, 31%, 33%, and 42%, $p < 0.0001$). All levels of severity of wheeze were increased in deprived children. The results were only partly explained by a different exposure of the socio-economic groups to classical risk factors for wheeze, such as allergic disease in parents, low birth weight, lack of breastfeeding, passive smoking, gas cooking, gas stoves, pets, road traffic, birth order, crowded homes, single parents, and parents' education. Treatment of asthma did not differ between socio-economic groups. In South Asian children, in contrast, there was no relationship between deprivation and respiratory illness.

This is the first study to show a higher frequency and severity of wheezing illness with increasing socio-economic deprivation in Caucasian pre-school children in the UK. As the results were not fully explained by classical risk factors for asthma, future research should investigate novel risk factors which vary by social class in British Caucasians but not in Asians. As income inequalities in Britain have increased during the past 20 years, our findings might ultimately help to explain the rising frequency of wheeze and asthma in the UK.

Original abstract title and authors

Poverty and pre-school wheeze

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