Indoor environment and pupils' health in primary schools

Dutch children are legally bound to spend 15% of their time in a school setting. The indoor environment in Dutch primary schools is known to be substandard. However, it is unclear to what extent the health of pupils is affected by the indoor school environment. The paper aims to assess the associations between indoor environmental quality in Dutch schools and pupils' health, also taking into account the children's home environment and personal factors. A cross-sectional study was performed in 11 classrooms in 11 different schools in the Netherlands. The study included exposure measurements, building inspections, and a questionnaire survey on pupils' health and domestic exposure. Principal Component Analysis (PCA) and non-parametric tests were performed to assess relationships. None of the schools complied with all indoor environmental quality standards. The importance of both the school and the domestic environment to pupils' health is shown in a multivariate analysis. If both the school and the home environment are highly polluted, improving conditions at school alone may not result in improved health of the children.