Utility of measuring allergen content in house dust samples in a cross-sectional study of respiratory health and atopy in a cohort of immigrant families in poor-quality housing in Malmö, Sweden

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Utility of measuring allergen content in house dust samples in a cross-sectional study of respiratory health and atopy in a cohort of immigrant families in poor-quality housing in Malmö, Sweden

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Aims: To study the prevalence of house dust mites (D. pteronyssinus, D. farinae, D. totalis, and D. depthoarei) and cockroaches (Bla g 1, Bla g 2) in Malmö and estimate their concentrations in relation to selected sociodemographic factors.

Methods: Dust samples were collected from 130 apartments with different socio-economic status in Malmö. Dust samples were collected with a vacuum cleaner attachment with a 3.5-liter bag. The samples were collected in the main bedrooms of the apartments. Dust samples were analyzed for D. pteronyssinus, D. farinae, D. totalis, and D. depthoarei using sandwich ELISA, Bla g 1 and Bla g 2 using sandwich ELISA.

Results: The prevalence of house dust mites and cockroaches was higher in apartments with lower socio-economic status. The concentrations of D. pteronyssinus and Bla g 1 were higher in apartments with higher levels of dampness.

Conclusions: The prevalence and concentrations of house dust mites and cockroaches in Malmö are higher in apartments with lower socio-economic status. This may be due to a combination of factors including poor housing conditions and lack of access to effective pest control.

Keywords: Dust mites, Cockroaches, Socioeconomic status, Malmö

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