Contact to cat or dog, allergies and parental education.

Abstract:
Whether or not associations between animal contact and allergy/atopy are homogeneous across social strata has not yet been investigated. The aim of this study was to estimate the association between animal contact (cat, dog) and allergy/atopy in 6-yr-old school beginners, stratified by parental educational level. A total of 30794, 6-yr old children participated in cross-sectional studies between 1991 and 2000 in Germany. Allergic sensitization to common aeroallergens and symptoms and diagnoses of atopic diseases (asthma, eczema, hay fever) were the dependent variables. Contact with dog/cat were the independent variables. Logistic regression was used to adjust for confounding. Analyses were stratified for parental education. Prevalences of hay fever, eczema, specific sensitization to pollen and house dust mite increased, while the prevalence of contact to cat and dog decreased with parental educational level. Globally significant positive associations between cat contact and sensitization to cat (interaction significant) and between dog contact and wheezing remained significant in the highest and medium/highest educational strata respectively. A globally significant inverse association between cat contact and hay fever remained significant in the highest educational stratum only. The inverse association of contact to dog with eczema was globally significant, but not in the strata. When estimating the associations between animal contact and allergy/atopy in children, effect
modification by social status should be considered. Cat contact seems to increase the odds of sensitization to cat only in children whose parents have a high level of education.