Survey on the Symptoms of Illness possibly related to Chemical Substances in Living Environments

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Abstract
We surveyed information on symptoms of illness resulting from the presence of chemical substances in living environments. We also investigated the relationship between prevalence of symptom perception and the following environment-related factors: the construction and structure of dwellings; interior finishing materials; ventilation conditions and other building configuration factors and periods of actual occupancy; use of air conditioning and related ventilation conditions. The questionnaire focused on housing developed from 1990 onward, and forms were either posted or distributed directly. Response rates were as follows: house calls = 342 out of 437 (78.5%); by mail = 253 out of 305 (83%); total = 596 out of 742 (80.3%).

Of all the households (N=596), 12.6% had at least one resident with perceived symptoms possibly associated with their indoor air quality, and 4.6% of the individual respondents (N=2247) had symptoms. The prevalence of individuals with perceived symptoms was highest in the age group of 30–50 years, and the prevalence was similar between females and males. The most commonly reported symptom was nose and eye irritation; which most of the affected individuals perceived immediately following occupancy.

By cross-tabulating prevalence of symptomatologic perception by characteristic of their living environments, we found that the prevalence of symptoms perception was clearly highest among individuals living in poorly ventilated dwellings built 1990 or after. Greater symptoms perception was reported by individuals with extended use of air-conditioning. Also, there was a distinct difference in the prevalence of symptom perception between males and females when stratified by hours spent at home. Since those with allergies showed higher tendency to report symptoms, we suspect that the physical condition of the individuals may also affect the symptomatologic perception possibly associated with...