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Dwelling visible mould exposure increased asthma symptom score in the CONSTANCES cohort

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ABSTRACT

Associations between dwelling mould contamination and asthma outcomes have been scarcely studied in adult population-based studies. We studied these associations in adults from the French population-based CONSTANCES cohort.

Presence of visible mould (yes/no) and mouldy area size in the bathroom, kitchen, living room or/and bedroom was collected from the 2019 self-questionnaire. Self-reported respiratory outcomes were assessed in participants attending the 2019-2021 follow-up. Current asthma was defined among ever-asthmatics by the report of asthma attacks, treatment or symptoms in the last 12 months. Asthma symptom score (range:0-5, Sunyer ERJ 2007) was the sum of five respiratory symptoms in the last 12 months. Logistic and negative binomial models adjusted for age, sex, smoking, education and occupant-surface ratio were used.

Visible moulds were reported by 21.2% of the 21,003 participants (mean age: 48 years, 51% women, 8% current asthma, 33% living in flats). The report of visible mould was associated with current asthma (adjusted(a)OR=1.27[95%CI 1.12-1.43]) and higher asthma symptom score (mean score ratio (MSR)=1.37[95%CI 1.28-1.47]). The association with the symptom score was stronger for occupants living in flats than in houses (MSR=1.54[1.37-1.72] vs. 1.28[1.17-1.40]), similar in both sexes, and significant even among never-asthmatics (MSR=1.36[1.26-1.47]). Positive and significant associations were also found for each asthma symptom (aOR ranging from 1.34 to 1.49), with highest aORs observed also for flats.

Visible mould exposure was associated with increased asthma symptom score in adults, highlighting the need of preventive measures to reduce the burden of this disease.

KEYWORDS: -

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