

Abstract #: 460**Social inequalities in second-hand smoking among Japanese adults: A repeated cross-sectional study**

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Background: We aimed to examine the association between educational history and second-hand smoke (SHS) exposure in Japanese adults.

Methods: We conducted a repeated cross-sectional study using data from the 2007-2011 baseline and the 2013-2016 follow-up survey in a Japanese suburban area. Overall, 5,562 male and 5,381 female non-smokers participated in the study, which evaluated the SHS exposure and educational history of the participants through self-reported questionnaires. We performed a multilevel ordered logistic regression analysis with survey year as the first level and the individual as the second level, SHS exposure as the dependent variable, educational history as the explanatory variable, and age, smoking history, marital status as covariates, stratified by gender and working status.

Results: The prevalence of SHS exposure was 45.4% in males and 41.9% in females in the 2007-2011 survey, and 31.6% in males and 28.7% in females in the 2013-2016 survey. Multilevel analysis indicated that less educational history was associated with higher SHS exposure in both genders (among males, the odds ratio compared with ≥ 13 years was 1.75 for 10-12 years and 1.64 for ≤ 9 years; among females, it was 1.79 for 10-12 years and 2.43 for ≤ 9 years). Stratified analysis by working status showed that for females, education-based inequalities in SHS exposure more strongly impacted for workers than non-workers (p for interaction < 0.001).

Conclusions: Education-based inequalities in SHS exposure exist in Japan and might be severe among female workers.

Key messages: Measures against SHS in Japan should be promoted to reduce social and gender inequalities.