Exposure to secondhand aerosol of electronic cigarettes in indoor settings in 12 European countries: data from the TackSHS survey

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Abstract

Introduction Exposure to secondhand aerosol from e-cigarette (SHA) may pose harmful effects to bystanders. This study aims to investigate the prevalence, duration and determinants of SHA exposure in various indoor settings in 12 European countries.

Methods In 2017–2018, we conducted a cross-sectional study, the TackSHS survey, on a representative sample of the population aged ≥15 years in 12 European countries (Bulgaria, England, France, Germany, Greece, Ireland, Italy, Latvia, Poland, Portugal, Romania and Spain). We described the prevalence and duration of exposure to SHA in several indoor settings among 11 604 e-cigarette non-users. Individual-level and country-level characteristics associated with SHA exposure were also explored using multilevel logistic regression analyses.

Results Overall, 16.0% of e-cigarette non-users were exposed to SHA in any indoor setting at least weekly, ranging from 4.3% in Spain to 29.6% in England. The median duration of SHA exposure among those who were exposed was 43 min/day. 'Other indoor settings' (eg, bar and restaurant) was reported as the place where most of e-cigarette non-users were exposed (8.3%), followed by workplace/educational venues (6.4%), home (5.8%), public transportation (3.5%) and private transportation (2.7%). SHA exposure was more likely to occur in certain groups of non-users: men, younger age groups, those with higher level of education, e-cigarette past users, current smokers, those perceiving SHA harmless and living in countries with a higher e-cigarette use prevalence.

Conclusions We found inequalities of SHA exposure across and within European countries. Governments should consider extending their tobacco smoke-free legislation to e-cigarettes to protect bystanders, particularly vulnerable populations such as young people.

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Footnotes

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- Contributors BA, EF and SG had the original idea for the study; SG, XL and AL contributed to the finalisation of the survey questionnaire; BA and XL carried out the statistical analysis with the supervision of AL; BA wrote the first draft of the article in collaboration with XL, AL, MF, EF and SG; AO, SS, LC, JBS and PAvdB made substantial contributions to conception, design and interpretation of data; all the authors contributed to manuscript preparation and approved its final version prior to submission. SG and EF are the guarantors.

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- Competing interests None declared.
- Patient consent for publication Not required.
- Ethics approval We obtained the approval from a local ethics committee in each of the 12 countries. The study protocol has been registered in ClinicalTrials.gov (ID: NCT02928536). All respondents received detailed information about the survey before they provided their consent to participate.
- Provenance and peer review Not commissioned; externally peer reviewed.
- Data availability statement Data are available upon reasonable request. Please see at www.TackSHS.eu the conditions of use and how to request the data.

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