Who lives in the same households as smokers? Evidence from a full household survey in Ningbo, China

Wei Xiong, MPH Candidate
Hubert Department of Global Health, Rollins School of Public Health, Emory University

Background

Partnership
- Emory Global Health Institute - China Tobacco Partnership
- Think Tank in Beijing
- Central and local CDC in China
- Shanghai Mental Health Center

SHS at home
- Median air nicotine concentration was 17 times higher in households with smokers
- Hair nicotine concentrations in women and children increased with the number of smokers
- Children, especially pre-school aged, are at higher risk of various health problems

SHS in China
- World largest tobacco production and consumption country
- The majority of smokers are men, so women and children are mostly victims of SHS at home
- Only 6.3% of the families forbid smoking at home

Objective
Conduct a survey to describe the characteristics of all household members of a random sample of households to estimate the prevalence of SHS at home and identify the specific characteristics of households with smokers.

Methods

- 2 inner city districts, 5 suburbs, and 4 rural districts in total
- 7 urban streets and 10 rural townships were selected proportional to the population
- 1408 households were randomly selected from 17 neighborhoods
- 1120 households with full household information completed
- 1077 individuals with KAP survey completed

Materials & Methods

- All who live with you in the recent 3 months, from oldest to youngest
- Traditionally used Individual survey
- Full Household Survey

Variables: number of residents, number of adult males, number of adult females, number of children under 7 years of age, number of children under 18 years of age, number of migrant residents, and number of smokers; mean age and mean years of schooling of all adults; monthly family income and number of major possessions.

Analysis: descriptive analysis; t-tests, chi-squared tests, and Mann-Whitney U tests; logistic regression

Results

<table>
<thead>
<tr>
<th>Characteristics of the 638 households with smokers</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have smokers that smoked every day in the past month</td>
<td>541 (84.8%)</td>
</tr>
<tr>
<td>Have female smokers</td>
<td>13 (2.0%)</td>
</tr>
<tr>
<td>Have children (under 18 years of age) smokers</td>
<td>1 (0.2%)</td>
</tr>
<tr>
<td>Have 1 smoker</td>
<td>586 (88.7%)</td>
</tr>
<tr>
<td>Have 2 smokers</td>
<td>67 (10.5%)</td>
</tr>
<tr>
<td>Have 3+ smokers</td>
<td>5 (0.8%)</td>
</tr>
<tr>
<td>Have non-smokers</td>
<td>585 (91.7%)</td>
</tr>
<tr>
<td>Have non-smoking females</td>
<td>569 (80.2%)</td>
</tr>
<tr>
<td>Have non-smoking children under 18 years of age</td>
<td>246 (38.6%)</td>
</tr>
<tr>
<td>Have non-smoking children under 7 years of age</td>
<td>98 (15.4%)</td>
</tr>
</tbody>
</table>

Associated Characteristics of the Smoking Status of households

Households with more adult male members are more likely to have someone who smokes (OR=2.34); when the number of adult males in each household is being adjusted, only the mean years of schooling of adult household members became significant, in which the households without smokers had longer average years of education compared to households with smokers.

Conclusions

- SHS exposure in the homes of women and children in urban China is a major public health problem that exists in almost all types of households.
- A comprehensive tobacco control program targeted on household exposure to SHS is urgently needed.
- The method used in this study – based on a five-minute interview with an adult member of a random selection of households – is an easy way to estimate the prevalence of SHS exposure in the home and, thus, to assess the effectiveness of different interventions.

Reference


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Contact
Wei Xiong
wei.xiong@emory.edu; mauve.xiong@gmail.com