## Supplementary material

### Table S1. Variable definition and assignment.

<table>
<thead>
<tr>
<th>Observed Variable</th>
<th>Definition</th>
<th>Measurement</th>
<th>Latent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community tobacco regulations</td>
<td>Whether the participant's community has explicit tobacco regulations.</td>
<td>0=no regulation, 1=explicit regulation</td>
<td>Environment</td>
</tr>
<tr>
<td>Home tobacco regulations</td>
<td>Whether the participant's home has explicit tobacco regulations.</td>
<td>0=no regulations, 1= inexplicit regulations, 2= not allowed anywhere in the house</td>
<td></td>
</tr>
<tr>
<td>Workplace tobacco regulations</td>
<td>Whether the participant's workplace has explicit tobacco regulations.</td>
<td>0=no regulations or don't know, 1= allowed in smoking areas, 2= not allowed at all</td>
<td></td>
</tr>
<tr>
<td>Anti-tobacco messaging</td>
<td>In the past 30 days, how many ways have participant seen anti-tobacco messaging in his or her community.</td>
<td>0=0 ways, 1=1 ways, 2=2 ways, 3=3 ways, 4=4 ways, 5=5 ways</td>
<td></td>
</tr>
<tr>
<td>Indoor tobacco exposure</td>
<td>In the past week, have smokers witnessed residents smoking indoors.</td>
<td>0=no tobacco exposure, 1= tobacco exposure</td>
<td>Community</td>
</tr>
<tr>
<td>Outdoor tobacco exposure</td>
<td>In the past week, have smokers witnessed residents smoking outdoors.</td>
<td>0=no tobacco exposure, 1=tobacco exposure</td>
<td>tobacco</td>
</tr>
<tr>
<td>Frequency of smoking events at home</td>
<td>How often does someone smoke in the home, including the participant and his or her family.</td>
<td>1=less than 1 month, 2= don't know/can't remember, 3= more than 1 month</td>
<td>Social support</td>
</tr>
<tr>
<td>Number of smokers in the family</td>
<td>How many members of the family smoke in total.</td>
<td>1= one person, 2= two people, 3= three people, 4= four or more people</td>
<td></td>
</tr>
<tr>
<td>Family support for smoking cessation</td>
<td>Support for smoking cessation from people around participant.</td>
<td>1= unsupportive, 2= fair, 3= supportive</td>
<td></td>
</tr>
</tbody>
</table>
### Smoking cessation outcome

<table>
<thead>
<tr>
<th>Smoking cessation outcome</th>
<th>The 7-day point smoking quit success rate of participants at the time of the survey was used as the main reference indicator to determine whether he or she has quit smoking.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0=not quit, 1=quit</td>
</tr>
<tr>
<td></td>
<td>1=increase in smoking, 2=no change in smoking,</td>
</tr>
</tbody>
</table>

### 6-month smoking reduction

Changes in smoking among participants in the follow-up survey compared with the baseline survey.

<table>
<thead>
<tr>
<th>1=increase in smoking, 2=no change in smoking, 3=reduction of 1-10 cigarettes, 4=reduction of 11-20 cigarettes, 5=reduction of 21-30 cigarettes, 6=reduction of 31 cigarettes and above</th>
</tr>
</thead>
</table>

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**Note.** Manifest Variable or Observed Variable is a variable that can be directly observed.

Latent Variable is usually a variable that cannot be directly observed and needs to be estimated with the help of an exogenous measure.

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Table S2. Results of structural equation model fitness tests for smoking cessation outcome, 2019 (N=375)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference value</td>
<td>≤0.080</td>
<td>≥0.900</td>
<td>≥0.900</td>
<td>≤0.080</td>
</tr>
<tr>
<td>Test value</td>
<td>0.025</td>
<td>0.972</td>
<td>0.960</td>
<td>0.054</td>
</tr>
</tbody>
</table>

Note. RMSEA: root mean square error of approximation; CFI: comparative fit index; TLI: Tucker-Lewis index; SRMR: standardized residual root mean square.

Figure S1. Study object data processing flow chart, 2019 (N=683)

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