Role of Attitude toward Seat Belts as a Predictor of Seat Belt Use, by Seating Position

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  - Marcie-jo Kresnow, CDC/Injury Center
  - Geeta Bhat, PCORI (formerly CDC/Injury Center)

Seat Belt Use in the United States

- Overall rates of seat belt use relatively high
  - Observed front row use, 2014 = 87%

- BUT millions are still unrestrained
  - Half of all occupants killed are unrestrained
  - Certain groups less likely to buckle up than others

Study Purpose

- To investigate the association between attitudes toward seat belts and use of seat belts

Study Methods: Data Sources

- HealthStyles, 2012
  - Self-report survey, health-related attitudes & behaviors
  - Nationally representative
  - Adults (18+ years)
  - Sample size n=4170

- Insurance Institute for Highway Safety (IIHS)
  - Identify types of state seat belt laws in 2012

Study Methods: HealthStyles 2012

- How often do you wear seat belts when you ride in the driver seat/ front passenger seat/ back seat of a car, truck, van, or SUV (sport utility vehicle)?
  - Always
  - Nearly always
  - Sometimes
  - Seldom
  - Never
How important is it to wear seat belts in the driver seat/ front passenger seat/ back seat of a car, truck, van, or SUV?

- Not at all important
- A little important
- Somewhat important
- Important
- Very important

Demographic and geographic variables
- Gender
- Age group
- Race/ethnicity
- Marital status
- Employment status
- Household income
- Census region
- Metropolitan status

Type of FRONT SEAT Enforcement, Adults, 2012

Type of REAR SEAT Enforcement, Adults, 2012

Front and rear seat passengers modelled separately using backward stepwise multivariable regression

- Outcome: Seat belt use (always)
- Primary predictor: Attitude (very important)
- Other variables included: potential confounders and interaction terms (significant at \( p < 0.01 \))

Results: Front seat passengers, seat belt use and behavior among adults, 2012

- Use, Prevalence (%)
  - Always Wears: 15%
  - Not Always Wears: 85%

- Attitude, Prevalence (%)
  - Very Important: 16%
  - Not Very Important: 84%
Final model: Seat belt use among adult front seat passengers, 2012

<table>
<thead>
<tr>
<th>Attitude x Front Seat Law (ref: not very important)</th>
<th>Adjusted prevalence ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Important, Primary Law</td>
<td>1.67 (1.53, 1.81)</td>
</tr>
<tr>
<td>Very Important, Non-Primary Law</td>
<td>2.79 (2.27, 3.38)</td>
</tr>
</tbody>
</table>

Controlling for gender, race/ethnicity, income, MSA, region

Results: Rear seat passengers, seat belt use and behavior among adults, 2012

Use, Prevalence (%)

- Always Wears: 38%
- Not Always Wears: 62%

Attitude, Prevalence (%)

- Very Important: 30%
- Not Very Important: 70%

Final model: Seat belt use among female adult rear seat passengers, 2012

<table>
<thead>
<tr>
<th>Attitude x Gender</th>
<th>Attitude x Rear Seat Law (ref: not very important)</th>
<th>Adjusted prevalence ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>Very Important, Primary Law</td>
<td>3.54 (2.85, 4.41)</td>
</tr>
<tr>
<td></td>
<td>Very Important, Secondary Law</td>
<td>6.55 (4.36, 9.83)</td>
</tr>
<tr>
<td></td>
<td>Very Important, No Law</td>
<td>5.39 (4.26, 6.81)</td>
</tr>
</tbody>
</table>

Controlling for age group, income, region

Final model: Seat belt use among male adult rear seat passengers, 2012

<table>
<thead>
<tr>
<th>Attitude x Gender</th>
<th>Attitude x Rear Seat Law (ref: not very important)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Very Important, Primary Law</td>
<td>2.38 (1.99, 2.84)</td>
</tr>
<tr>
<td></td>
<td>Very Important, Secondary Law</td>
<td>4.39 (2.98, 6.48)</td>
</tr>
<tr>
<td></td>
<td>Very Important, No Law</td>
<td>3.62 (2.98, 4.39)</td>
</tr>
</tbody>
</table>

Controlling for age group, income, region

Implications

- Improving attitudes toward seat belts may increase seat belt use

- Potential strategies
  - Theory-driven approaches (e.g., social norming)
  - Targeted messaging to high-risk populations
  - May need different messages for rear vs. front seats

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.