“May I buy a pack of Marlboros, please?” A systematic review of evidence to improve the validity and impact of youth undercover buy inspections

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Background

- Limits on youth access part of comprehensive tobacco control
- Large investment in youth access inspections, especially by FDA
  - $495,000 retail inspections by FDA since 2010
  - $178 million allocated by FDA for retail inspections since 2010
- Past compliance programs (Synar) have shown differences in implementation by states

Methods

- Iterative development of search terminology in four domains:
  - Tobacco (e.g., cigarette OR looses OR cigars)
  - Access (e.g., sale OR retailer OR sell OR merchant)
  - Youth (e.g., adolescence OR minors OR underage OR juveniles)
  - Validity/Characteristics (e.g., validity OR protocol OR disparity)
- Systematic search: May 22, 2015, in PubMed/MEDLINE and PsycINFO
- Hand search of Tobacco Control
- Independent coding by two of title and abstract for inclusion if
  - US-based
  - 1980 to present
  - Empirically assess association between characteristics of youth, neighborhood, or purchase attempt protocol on likelihood or validity of underage sale
- Data abstraction
- Stratification by experimental, observational
- Assessed observational for confounding

Results

- Experimental studies, N=10, examined
- Retailer familiarity with youth
- Truthfulness
- Use of minors who smoke
- Purchase of non-tobacco product at same time
- Use of identification card
- Frequency of inspection
- Non-completion of purchase

- Ecologically valid approaches yield substantial differences in violation rates compared to tightly controlled protocols

- Observational studies, N=14, show
  - As age increases, likelihood of a sale increases
  - Greater likelihood of sale to African-American, Latino youth
  - Greater likelihood of sale to female youth
  - Unclear evidence of differences by neighborhood characteristics

Recommendations

Table 1. Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Rationale</th>
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</thead>
<tbody>
<tr>
<td>Use older minors</td>
<td>Younger minors often get cigarettes from older acquaintances</td>
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<tr>
<td>Use minors who represent real-world youth smokers</td>
<td>Relate to sell to a 17 year old regardless of appearance</td>
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<tr>
<td>States should not artificially make minors look younger</td>
<td>Youthful appearance can bias inspection results</td>
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<tr>
<td>Ecologically valid approaches yield substantial differences in violation rates</td>
<td>Able to project confidence during a purchase attempt</td>
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<td>compared to tightly controlled protocols</td>
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<td>Observation studies, N=14, show</td>
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<td>Unclear evidence of differences by neighborhood characteristics</td>
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</tbody>
</table>

Conclusions

- Older research reveals gaps in our knowledge
- Troubling problems with validity and reliability in underage buy protocols
- Clear differences in violation rate by age of youth
- Unclear disparities by neighborhood characteristics

Acknowledgements

- Please feel free to post and talk about our research on social media
- Follow @ECUHHP and @UNC_health_case for more research from our teams

References

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