

# “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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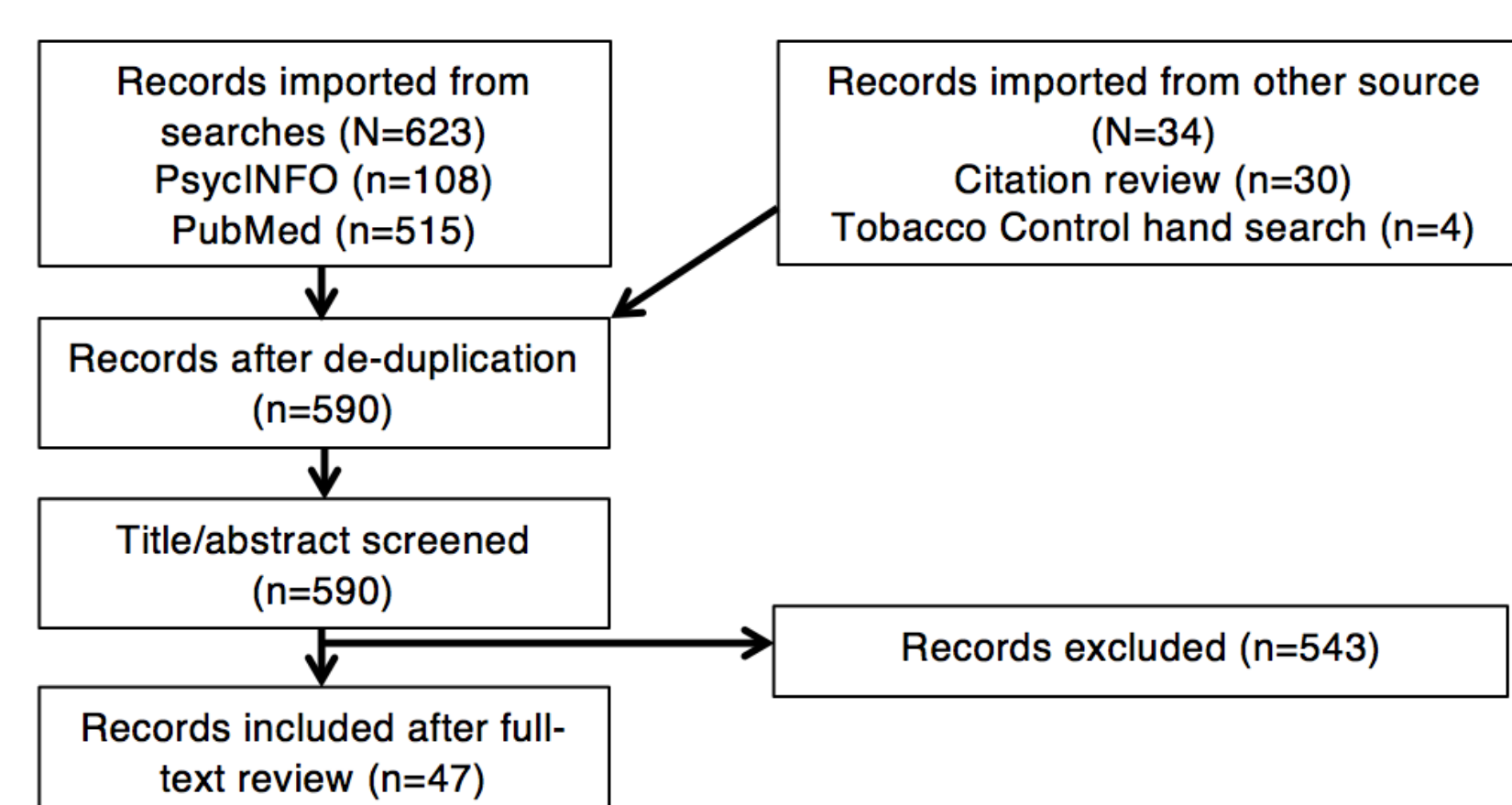
## Background

- 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 loosies 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

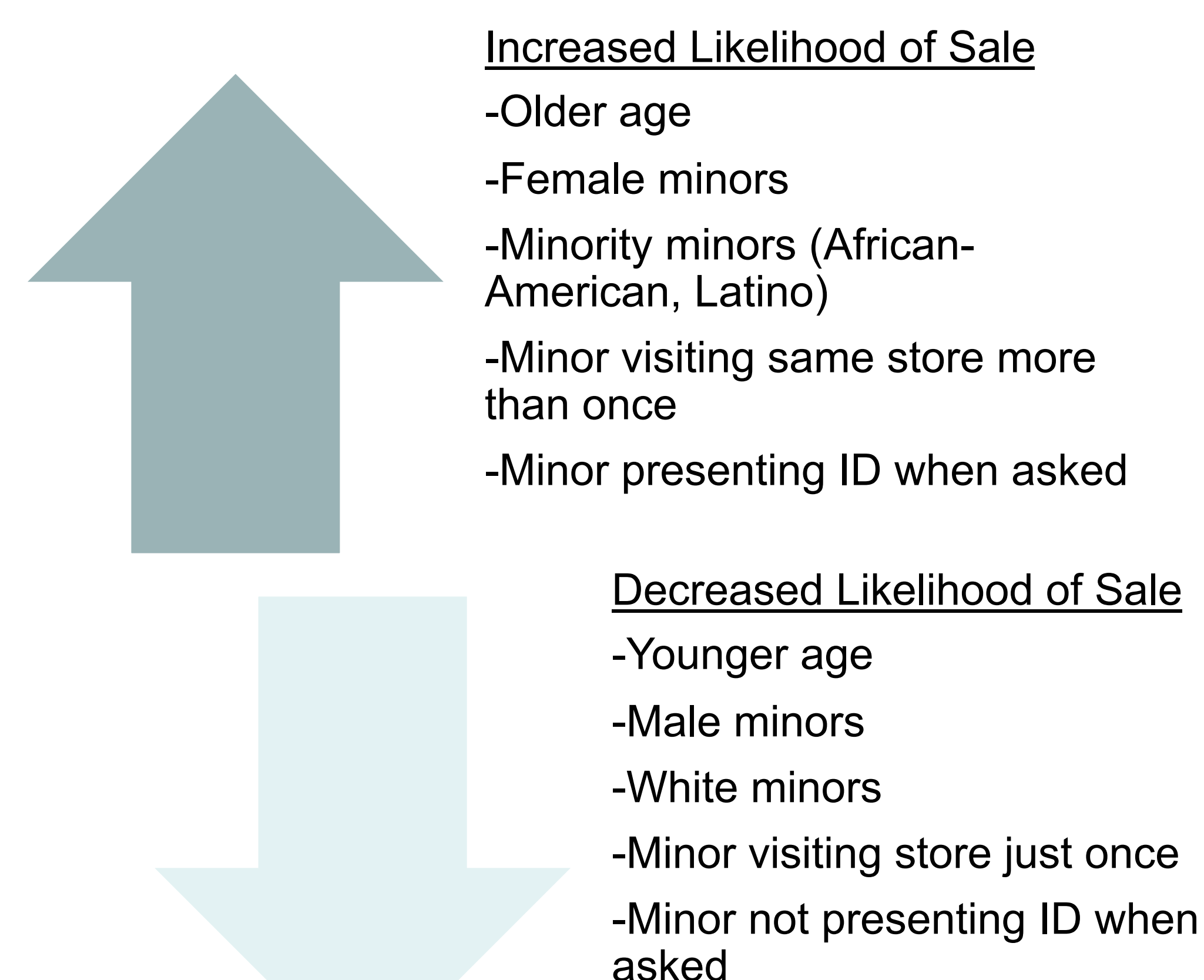
Figure 1. PRISMA flow diagram



## 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=, 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

Figure 2. Variables affecting rate of sale, experimental and observational



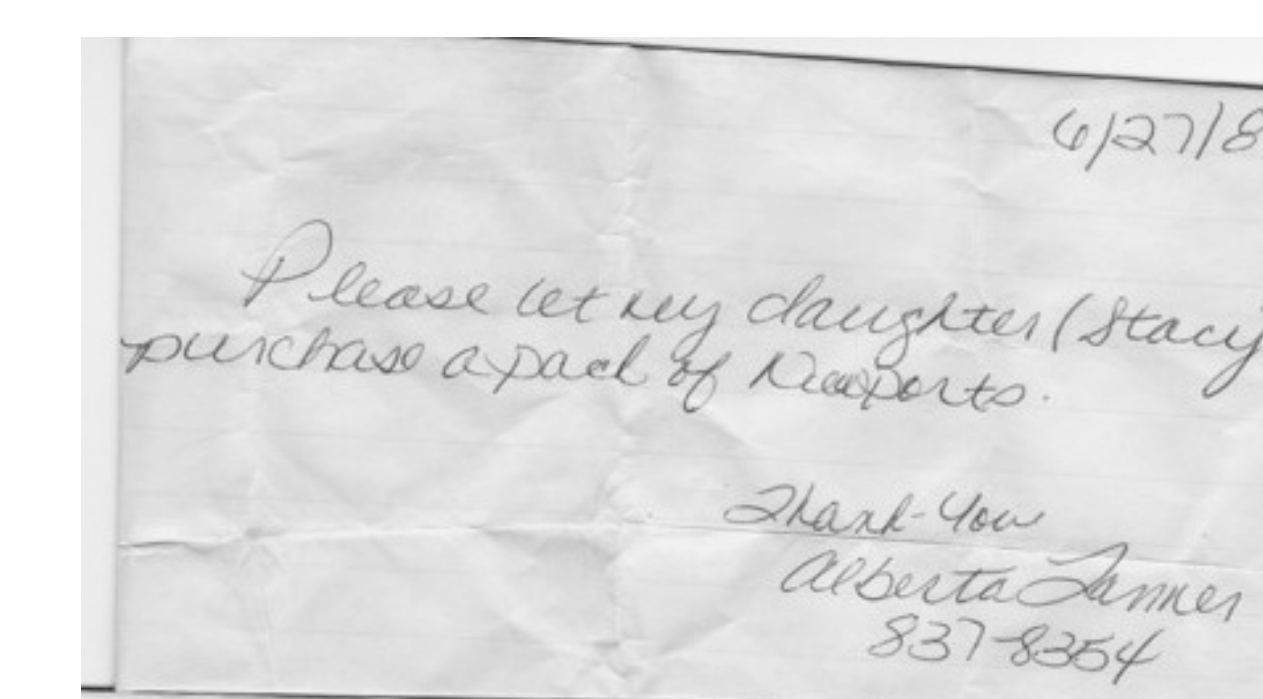
## Recommendations

Table 1. Recommendations

Recommendations for Youth Recruitment, Age, and Appearance	Rationale
<ul style="list-style-type: none"> <li>Use older minors</li> <li>Use minors who represent real-world youth smokers</li> <li>States should not artificially make minors look younger by requiring them to dress in a particular way (business casual dress codes, no makeup, no facial hair, etc.)</li> <li>Use experienced minors including those who smoke</li> </ul>	<ul style="list-style-type: none"> <li>Younger minors often get cigarettes from older acquaintances</li> <li>Illegal to sell to a 17 year old regardless of appearance</li> <li>Youthful appearance can bias inspection results.</li> <li>Able to project confidence during a purchase attempt.</li> <li>Improve validity</li> <li>Ethical obligation to provide meaningful resources to quit</li> <li>Reflect real-world behavior</li> </ul>
<ul style="list-style-type: none"> <li>Match requested product to minor and neighborhood</li> <li>Carry identification cards and show them <i>if asked</i>.</li> </ul>	<ul style="list-style-type: none"> <li>Presentation of ID does not necessarily preclude sale of tobacco products, and presentation of ID cards more closely reflects real-world experience of underage purchase attempts, as some underage youth may assume that the clerk would not actually check the date of birth.</li> <li>Reflecting real-world behaviors of neighborhood youth</li> <li>More frequent visits improve the reliability and compliance</li> <li>Consider for targeted enforcement in non-compliant "hot spots"</li> </ul>
<ul style="list-style-type: none"> <li>Avoiding answering questions</li> <li>No evidence that lying about age improves validity</li> </ul>	<ul style="list-style-type: none"> <li>Lying about age does not change the outcome</li> <li>If retailers use answering this question as a way to identify a compliance check in progress, it may not be legally problematic to allow minors to lie</li> </ul>
<ul style="list-style-type: none"> <li>Consider sending the same minor to conduct purchase attempts more than once at the same store</li> </ul>	<ul style="list-style-type: none"> <li>Reflects real-world behaviors of neighborhood youth</li> <li>More frequent visits improve the reliability and compliance</li> <li>Consider for targeted enforcement in non-compliant "hot spots"</li> </ul>

## 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



<http://www.infinitegarage.net/2010/09/other-peoples-collections-please-let-my.html>



<http://www.wecard.org/>



<https://www.dshs.state.tx.us/tobacco/laws.shtm>

## Social Media

- Please feel free to post and talk about our research on social media
- Follow @ECUHP and @UNC\_health\_care for more research from our teams

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## References

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