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Tobacco-Related Disparities:

SES, Context, and Smoking Cessation

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Thank you to the National Cancer Institute, National Institute on Drug Abuse, National Institute on Minority Health and Health Disparities, Centers for Disease Control, Cancer Prevention Research Institute of Texas

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Agenda

- **Socioeconomic status (SES) and tobacco-related disparities**
- **Influence of Context (Macro and Micro)**
  - Neighborhoods/community
  - Moments
- **Summary**

Why focus on socioeconomic status and tobacco-related disparities?

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Tobacco-Related Health Disparities: Socioeconomic Status (SES)

- "Poverty is a carcinogen."
  - Samuel Broder, M.D., Former Director of the National Cancer Institute
- There is a profound SES gradient in health and mortality
  - Lower levels of education, income, and occupational status are associated with greater mortality
- Lower SES associated with higher smoking prevalence and lower cessation rates
- 58% of the SES gradient in mortality among U.S. males is attributable to tobacco use
- Over the last several decades, SES disparities in tobacco use have more than doubled

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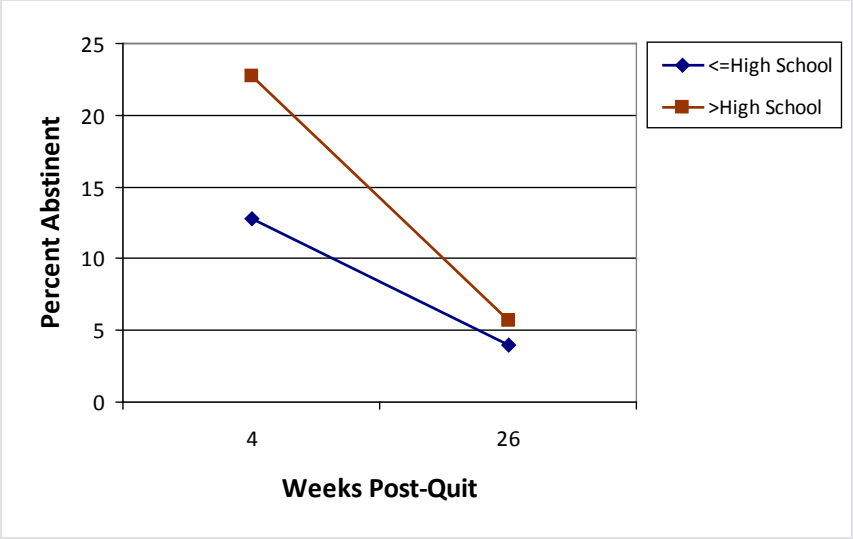
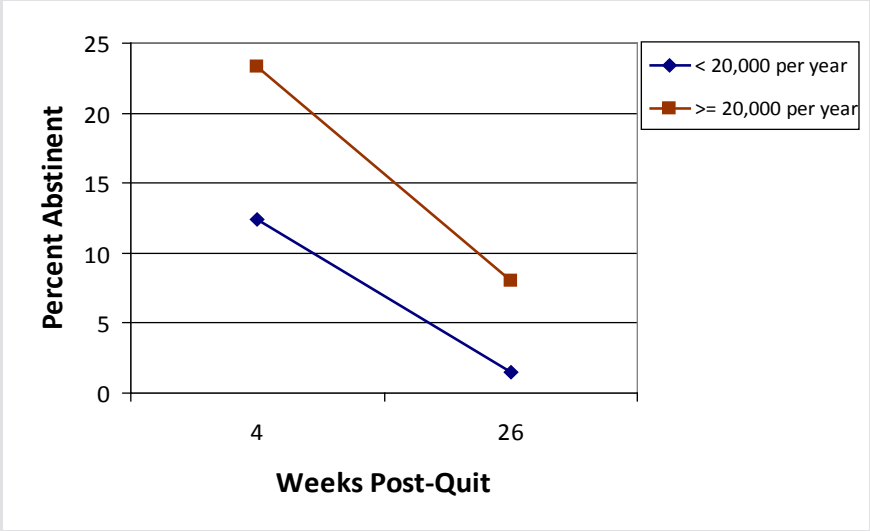
SES Indicators and Smoking Abstinence

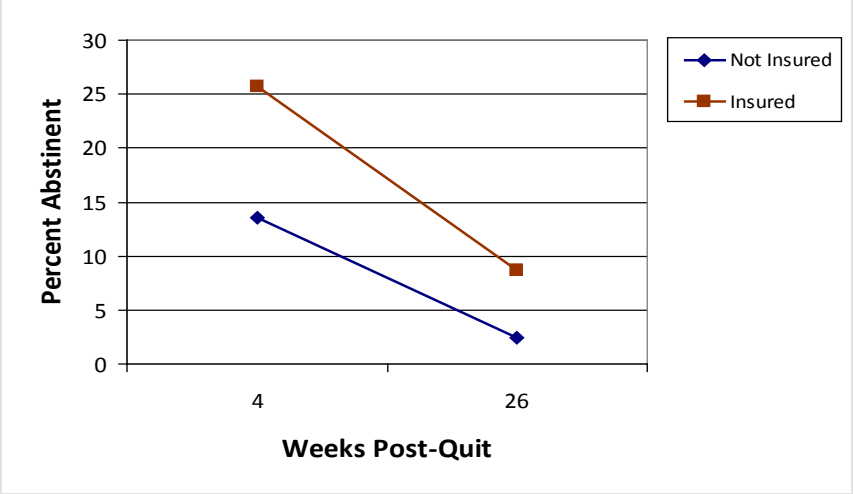
Education



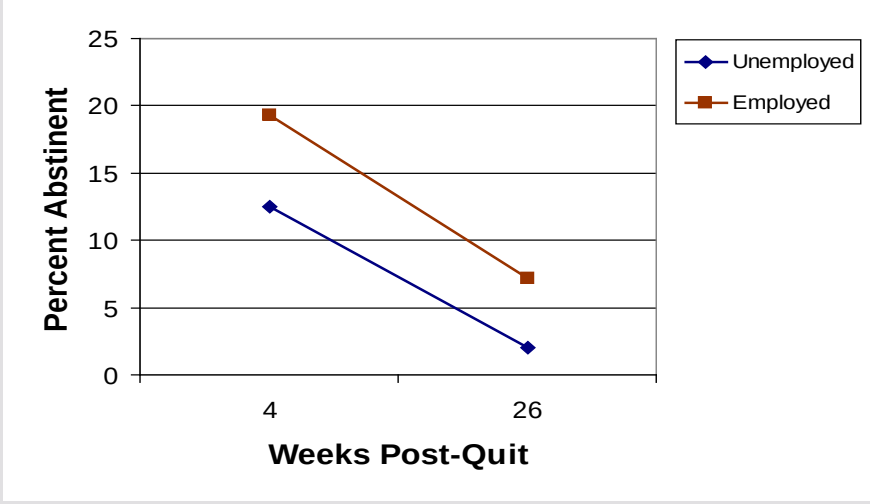
Income



Insurance



Employment



Considering Alternative Indicators of Socioeconomics?

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Subjective Social Status (SSS)

- SSS is an individual's belief regarding where s/he stands in one's society/community

- Individuals mark their position on the ladder with the top representing the people who are the best off …most money, most education, best jobs…

- Determinants of SSS include:
  - Income, education, and occupation
  - Financial satisfaction
  - Perceived future security
  - Social trust
  - Perceived opportunities
  - Acculturation
  - Neighborhood factors

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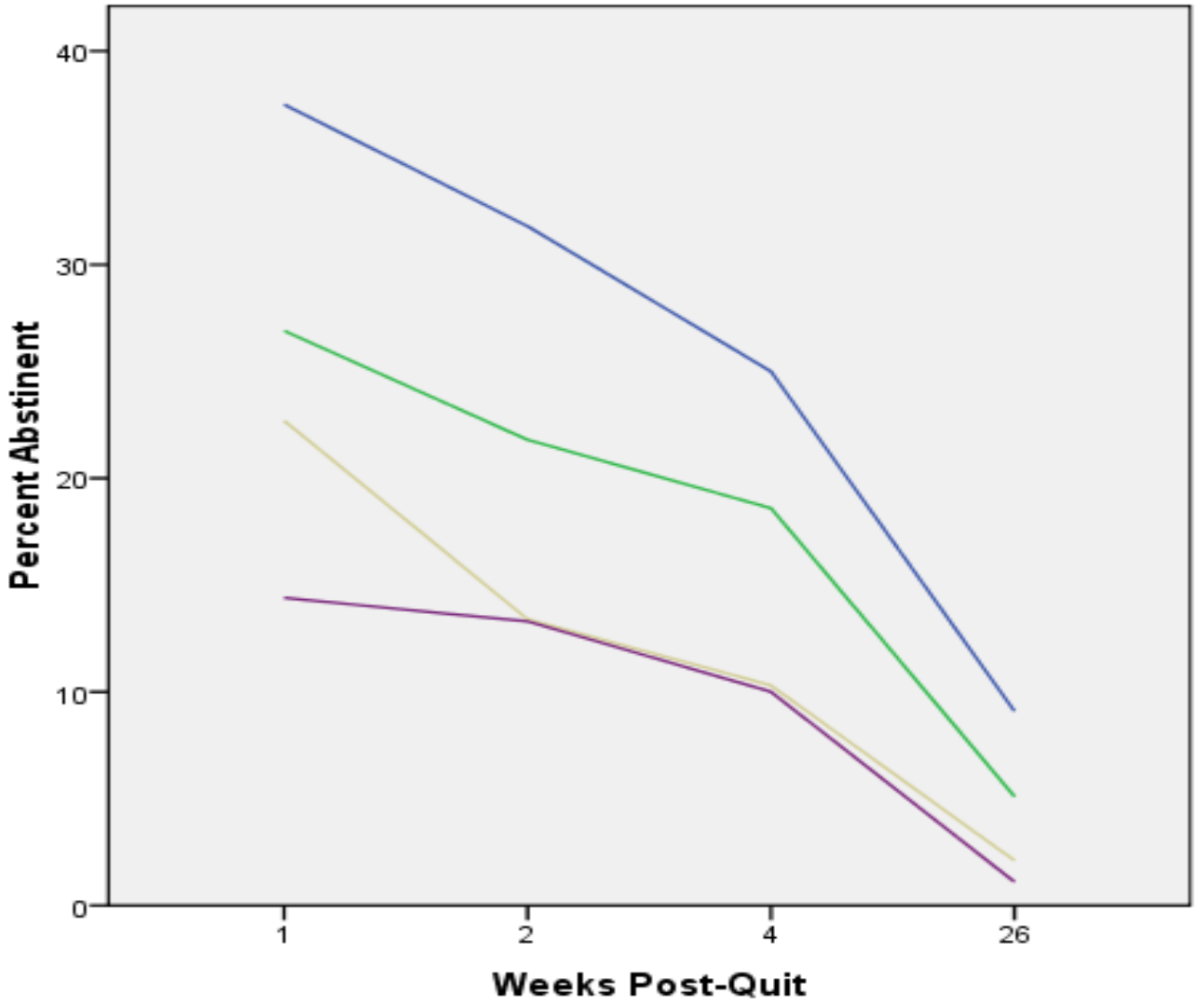
SSS Predicts Abstinence

Reitzel et al., Addiction, 2010



Predicts After Controlling for Demographics, Smoking, and Multiple Objective Indicators of SES (p=.01)

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Financial Strain

- Financial strain might help capture aspects of SES for populations with varied demographic/cultural backgrounds that are not easily quantified with traditional indicators (e.g., immigrants)
- Might better capture income to needs
- Financial strain is associated with smoking in cross-sectional and observational studies

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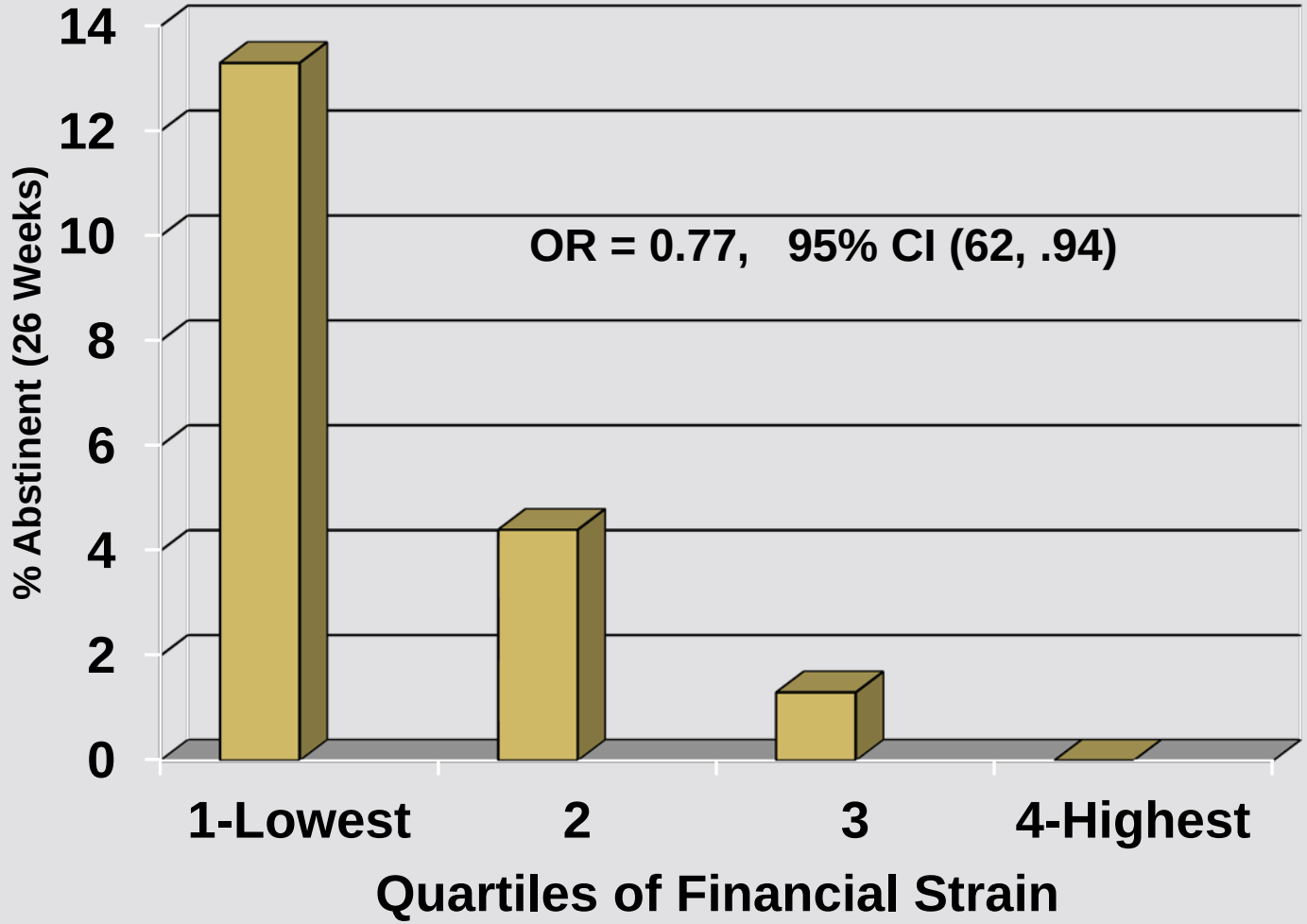
Financial Strain Predicts Abstinence

Kendzor et al., Am J of Pub Health, 2010



Predicts After Controlling for Demographics, Smoking, and Multiple Objective Indicators of SES

Mapping the Pathways Linking Socioeconomics with Cessation

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Key Hypothesized Mechanisms Underlying the SES-Health Relationship

Adler & Ostrove, 1999; Gallo & Matthews, 2003

- **Negative experiences/environments/exposure to threat or harm**
  - discrimination, chronic stressors, violence
- **Inter/Intrapersonal resources**
  - social support, collective efficacy/social capital
- **Affect/cognition**
  - stress, human agency
- **Health behaviors**
  - smoking, alcohol, diet, physical activity

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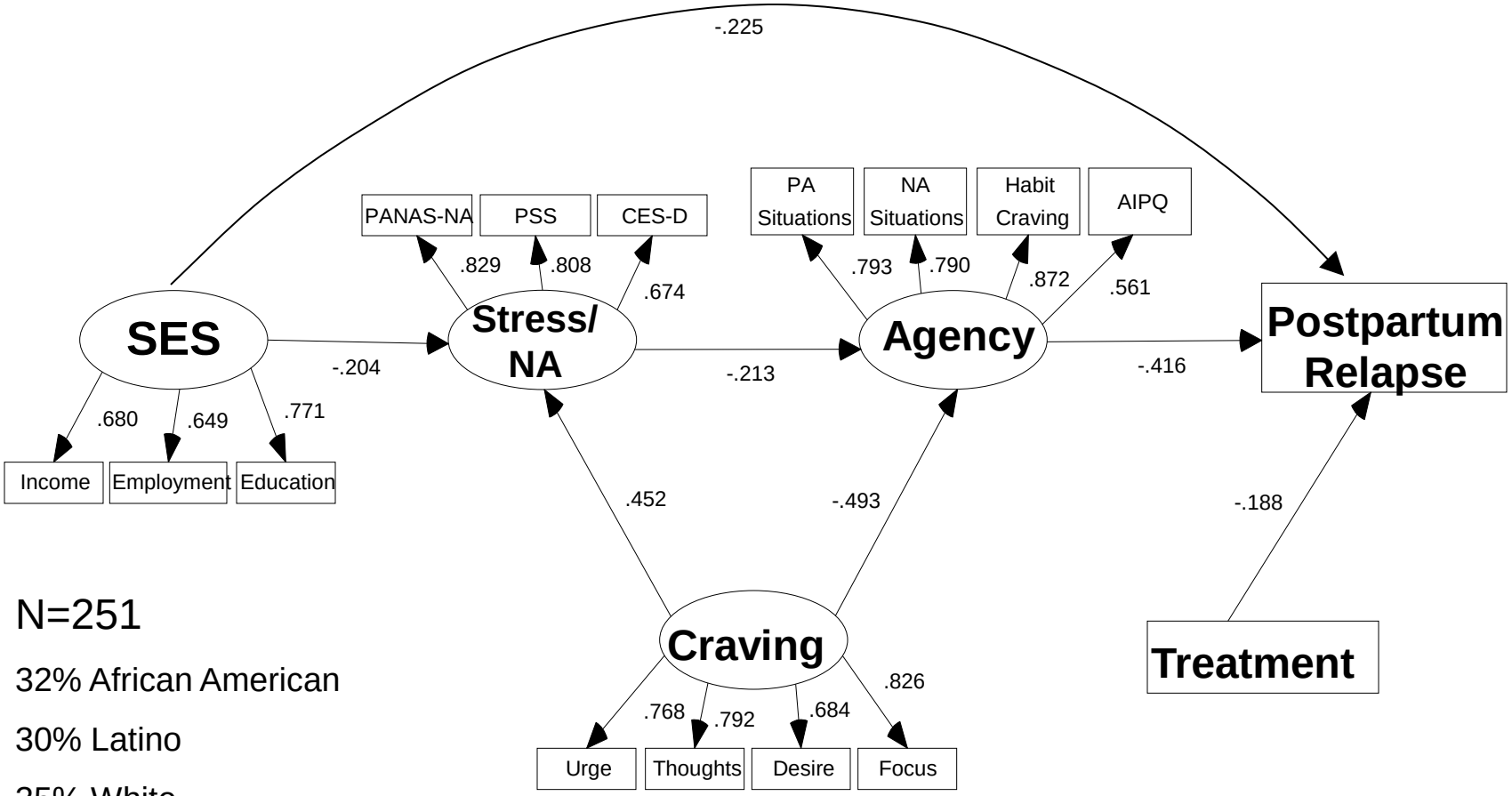
SES and Postpartum Smoking Relapse (n=251)

Businelle et al., Annals of Behavioral Medicine, 2012



N=251

32% African American

30% Latino

35% White

All paths significant at the $p \leq .05$ level.

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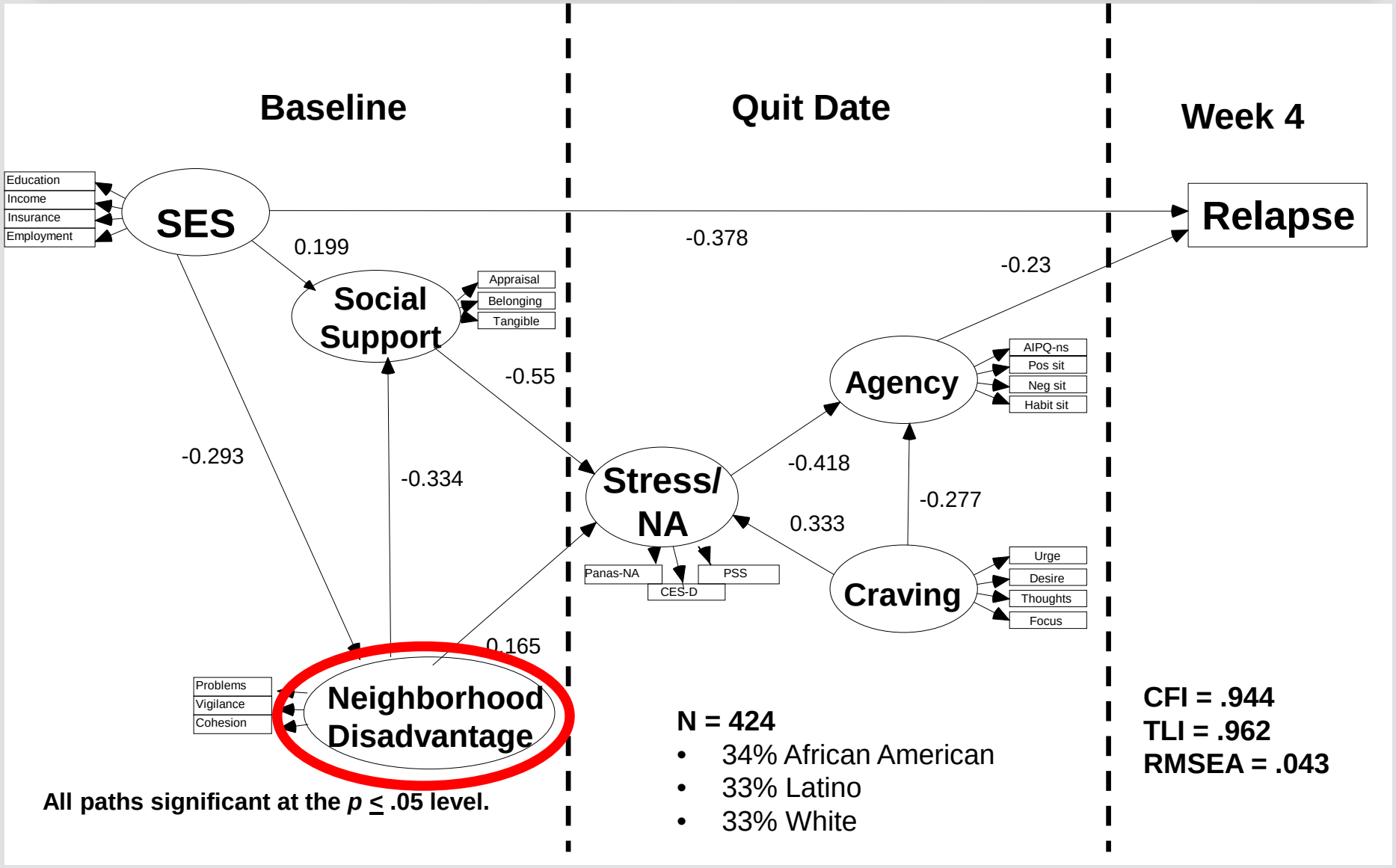
Pathways Linking SES and Smoking Relapse

Businelle et al., Health Psychology, 2010



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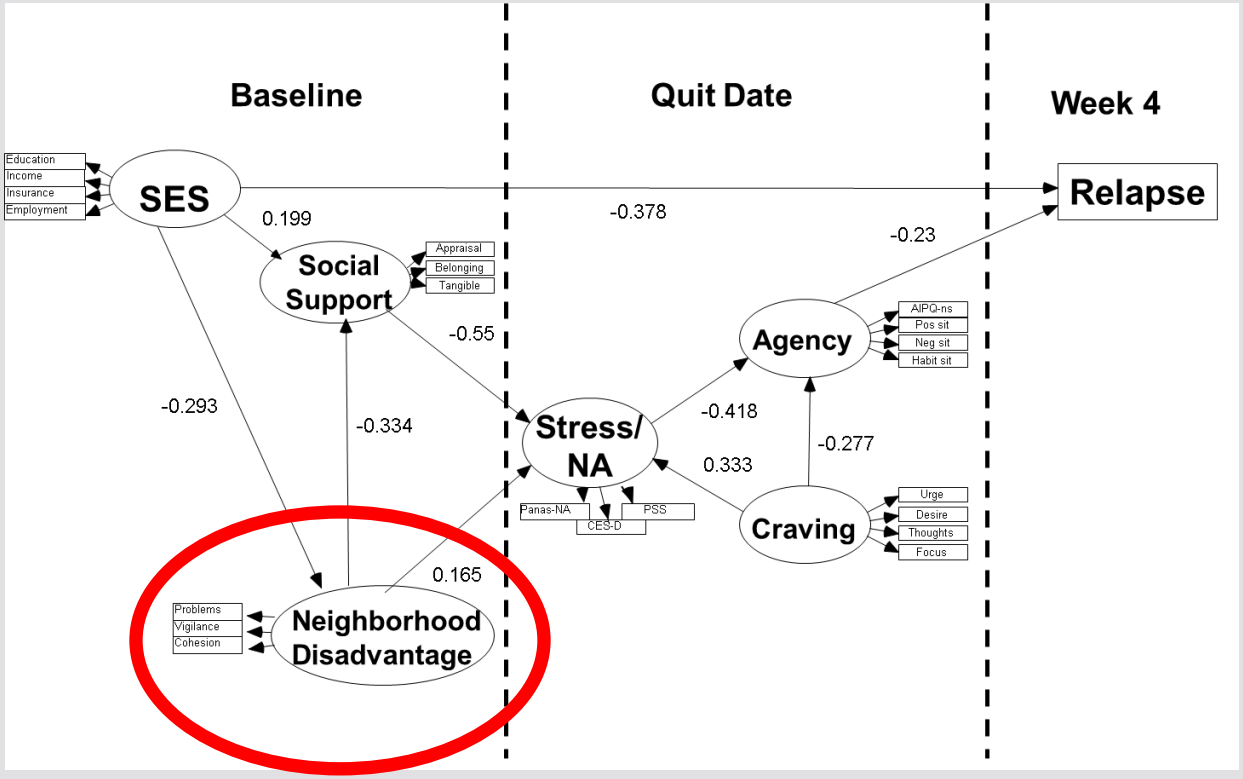
What is the role of "macro" context?



- **Socioeconomics**
  - Unemployment
  - Poverty
  - Racial/ethnic makeup
  - Home ownership
- **Social Factors**
  - Social cohesion
  - Social control
  - Vigilance/Problems
  - Crime
- **Built Environment**
  - Tobacco outlets
  - Fast food outlets
  - Sidewalks
  - Lighting
  - Greenspace

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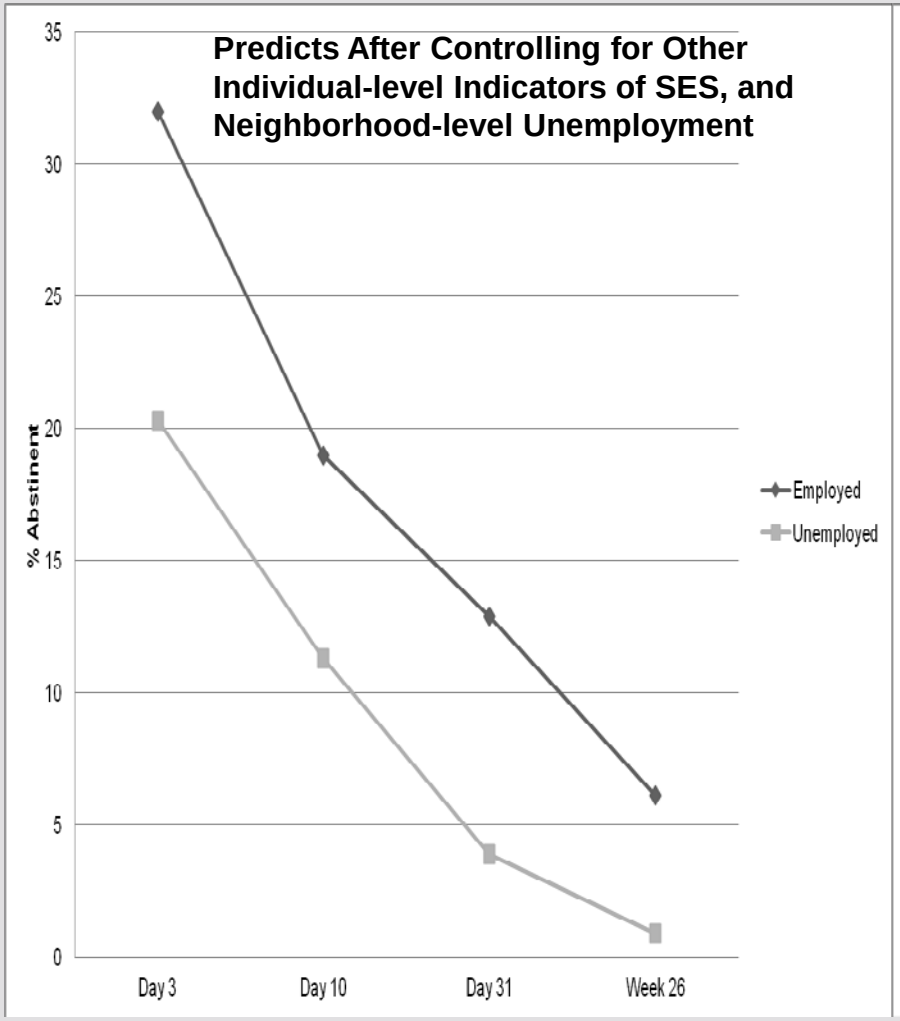
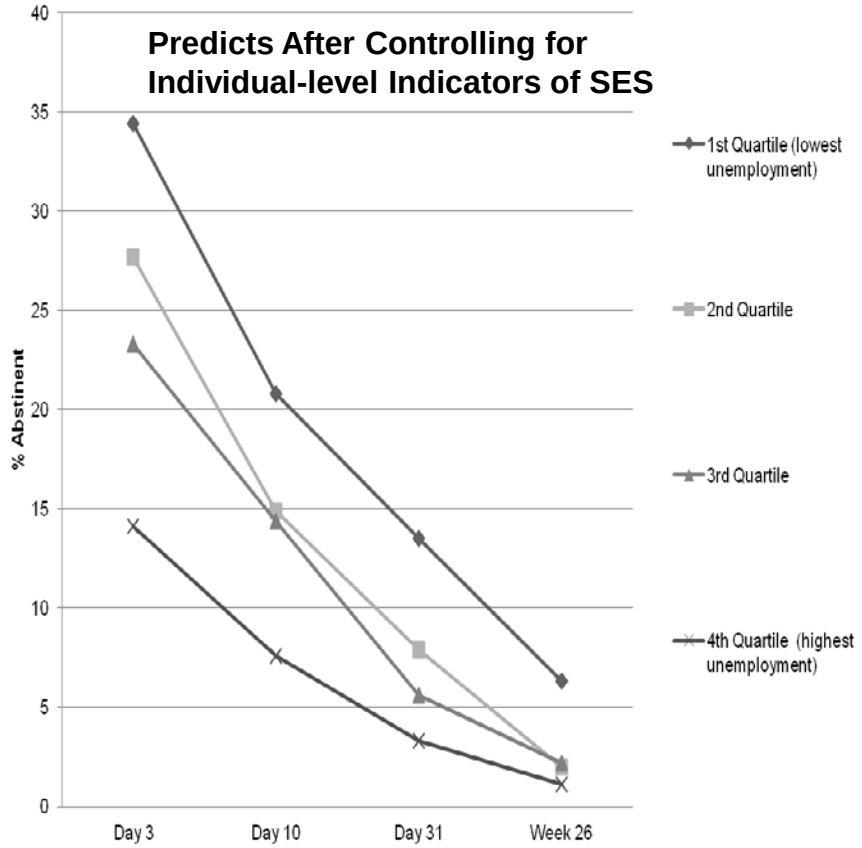
Neighborhood Demographics: Unemployment Among African Americans

Kendzor et al., Soc Sci & Med, 2012

Individual-level Unemployment



Neighborhood-Level Unemployment



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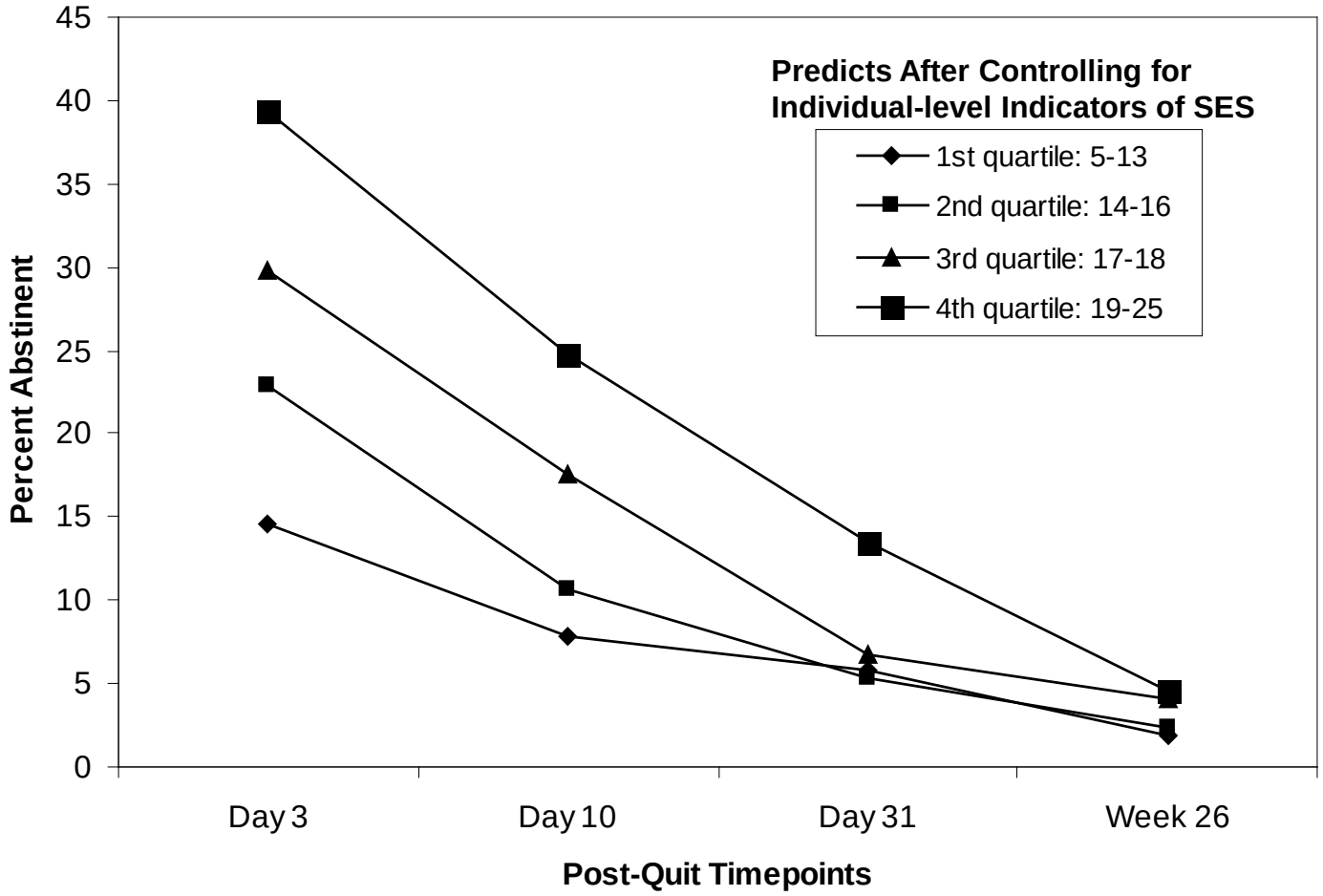
Neighborhood Social Factors: Social Cohesion Among African Americans

Reitzel al., Annals of Behavioral Medicine, 2013



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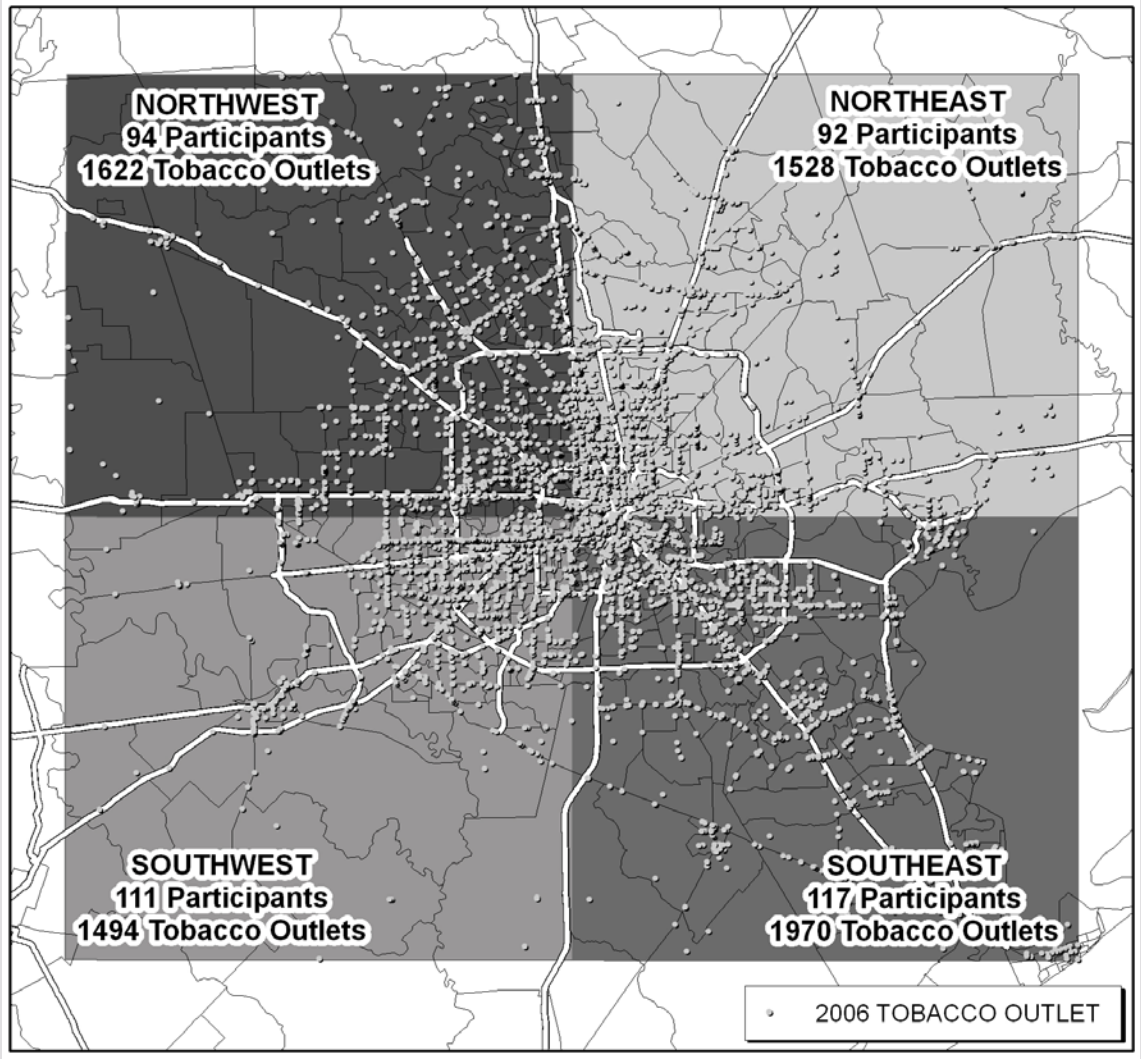
Neighborhood Built Environment: Tobacco Outlet Proximity in a Tri-Ethnic Sample

Reitzel et al., Am J of Public Health, 2011

- Economically disadvantaged neighborhoods have a higher density of tobacco retail outlets
- The impact of tobacco retail outlets on smoking cessation and relapse has implications for tobacco control and land use policies
- Residential proximity to the closest tobacco outlet predicts long-term abstinence (OR=0.54; *p* = .01)



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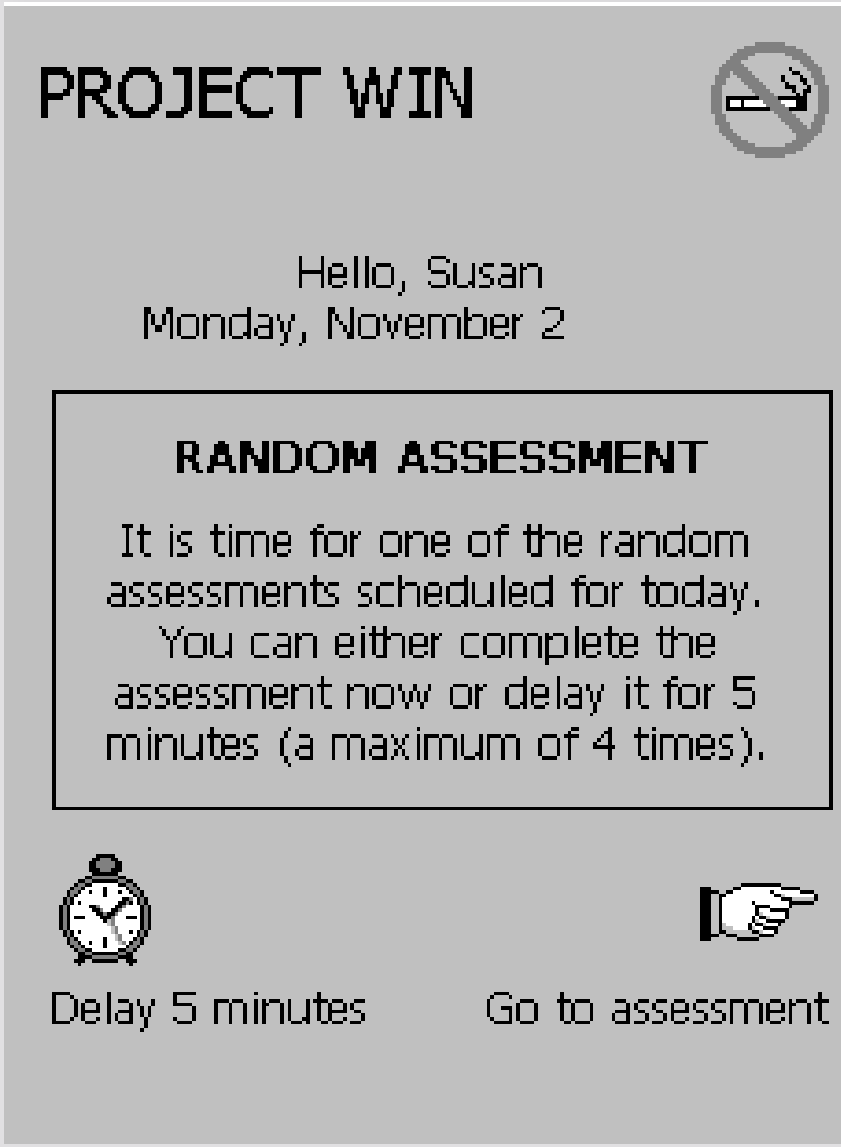
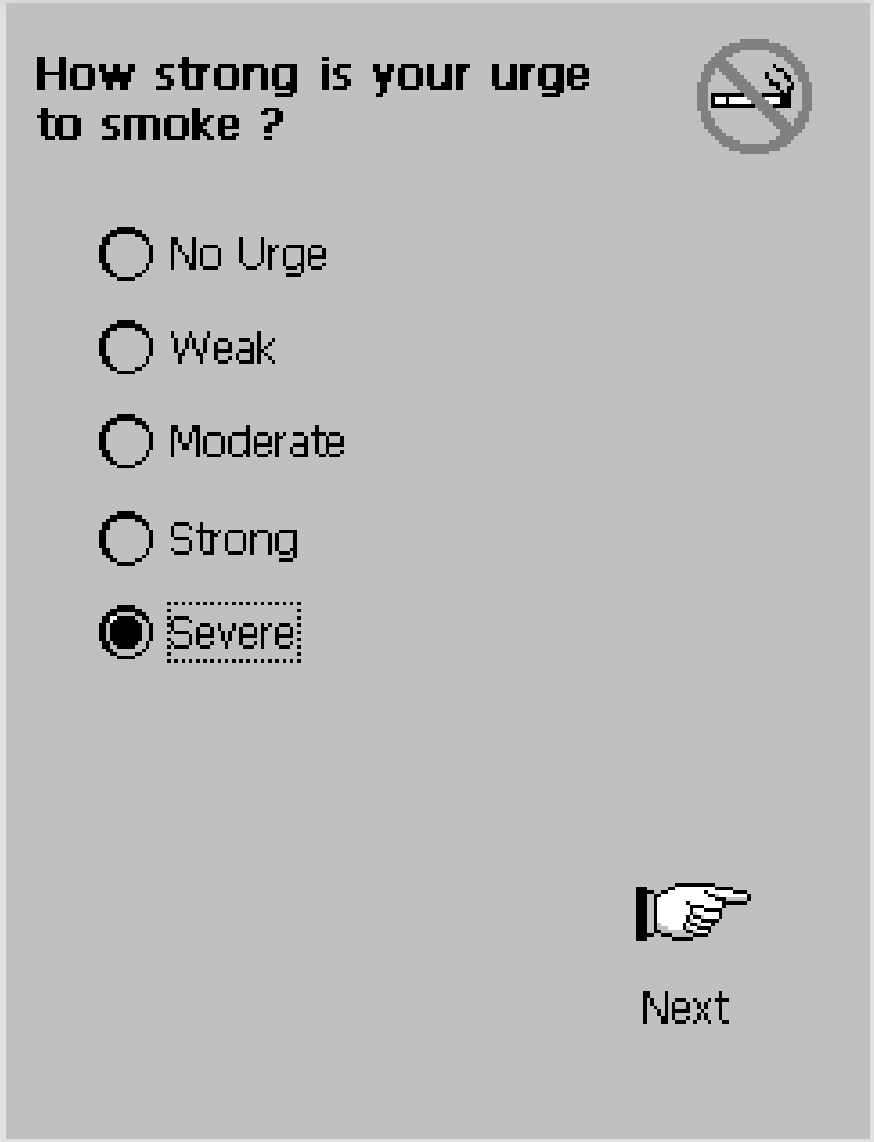
Assessing the "micro" context using ecological momentary assessment





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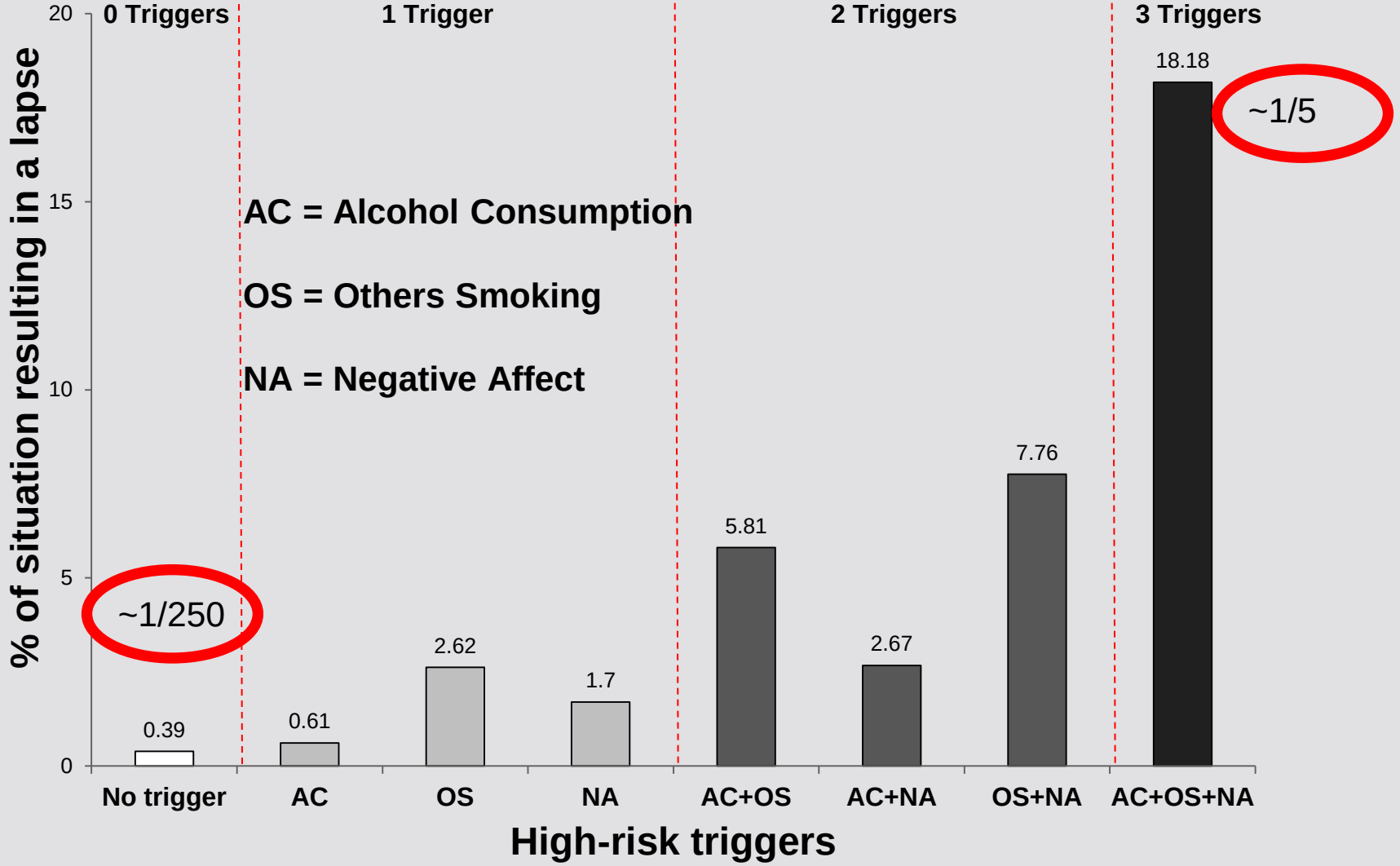
Contextual Triggers to Smoke Measured in Real Time in the Real World

Lam et al., Nic Tob Res, 2013



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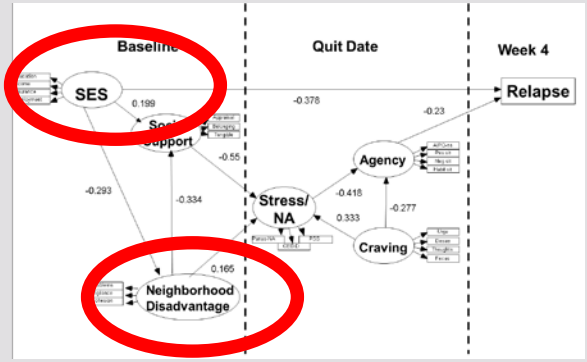
Overall Discovery Discussion

- Tobacco-related SES disparities impose a huge public health burden
- CONTEXT is huge (let's not forget that in the genetics/genomics era):
  - Individual
  - Community/neighborhood-level (SES, social factors, built environment)
- Comprehensive models can yield implications for interventions at various levels:
  - individual
  - community
  - policy



Community/Policy Implications

- **Socioeconomics**
  - Jobs programs
  - Minimum wage
  - Early education
  - Safety net programs
- **Social Factors**
  - Community empowerment
  - Anti crime programs
  - Smoke free
- **Built Environment**
  - Zoning
  - Point of sale
  - Taxation
  - Community improvement

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Team Science

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