Person-Environment Interactions and Substance Use

Mark B. Reed
School of Social Work
Center for Alcohol & Drug Studies
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• Multiple Levels of Influence
  • Individual (micro)
    • Personality traits
    • Mental illness
    • Affect regulation
    • Attitudes
    • Genetics
  • Social (mezzo)
    • Peer influence
    • Family
  • Environmental (macro)
    • Policy
    • Access
    • Bar/Party Characteristics

• Single focus
New (renewed) interest in Social Ecological Models of Behavior

- **Kurt Levin**
  - Social Psychology
  
  \[ B = f(P, E) \]

- **Uri Bronfenbrenner**
  - Developmental Psychology

- **Daniel Stokels**
  - Environmental Psychology
Recent ATOD research (Center for Alcohol & Drug Studies)

• Interpersonal (group)/Environmental (bar)
  • Sidewalk Survey Field Study
    • Reed, Clapp, Lange, & McCabe (2010)
  • Bar/Party Field Studies
    • Reed, Clapp, Martell, Hidalgo-Sotelo (2013)

• Policy/Community
  • National Longitudinal Study of Adolescent Health
  • Secondary Analyses
    • Vesco, Reed, Clapp, & Roesch (2013)
    • Cota, Reed, Woodruff & Clapp (2013)
    • Reed (2013)
Gene-Environment Interaction and Adolescent Smoking Behaviors

• Do policies moderate the influence of genetics?
• CHRNA6 Genetic Polymorphism
  • Regulates dopamine release
  • Low-risk, medium risk, high risk
• State-level tobacco control policy
  • Excise tax, vending machine restrictions, state FTE, tobacco control funding
• Smoking Frequency (non-daily vs. daily)
• Multilevel modeling
Results

• **Cross-level interactions (Genetic Risk Status X Tobacco Control Policy)**
  • Excise Tax—increased tax reduced influence of gene
  • Vending Machine Restrictions—presence of restrictions reduced influence of gene
  • State FTE—higher funding increased influence of gene
  • State funding—NS
Alcohol Outlet Density Studies

• Does alcohol outlet density moderate the relationship between Intrapersonal factors (i.e., genetics, impulsivity) and drinking behaviors?
  • Higher density environment potentiate the effects of intrapersonal factors on drinking
Future Directions

• Cross-sectional study designs (problems)
• Longitudinal (better)
• Dynamic Measurement (best?)
  • Systems Perspective—Feedback Loops
  • Geospatial technology
  • Cellphone technology (SMS, apps, GPS)
  • Bi-directional influence
  • Influence of social networks
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