The Dynamic Association between Healthy Leisure and Substance Use in South African Adolescents

Elizabeth H. Weybright\textsuperscript{1}, Linda L. Caldwell\textsuperscript{2}, Nilam Ram\textsuperscript{2}, Edward A. Smith\textsuperscript{2}, & Lisa Wegner\textsuperscript{3}

\textsuperscript{1} Indiana University
\textsuperscript{2} Pennsylvania State University
\textsuperscript{3} The University of the Western Cape

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Overview

• Background
  • Healthy Leisure, Substance Use, Parental Over-Control

• Research Questions
  1. Negative association at both state and trait level
  2. Moderated by perceived parental over-control

• Methods
  • Poisson multi-level model
  • Controlling for treatment, gender, school, and cohort

• Results
  • Partially supported

• Discussion
Background

Healthy Leisure

• Theoretical Foundation
  • Leisure as a protective factor (NIDA, 2003)
  • Problem Behavior Theory – health behavior extension (Jessor, 2008)

• Context of leisure
  • Opportunities for development and risk

• What is healthy leisure?
  • Need for explicit characterizations (Godbey, Crawford, Shen, 2010)

• Association with substance use (Sharp et al., 2011)
  • Need for constructive free time use (Jainchill, 2000)

Photo Credit: http://www.southafrica.net/uploads/legacy/1/6021/lomasi0004.jpg
Background

Substance Use & Parental Over-Control

- **South Africa** (South Africa Youth Risk Behavior Survey; Reddy et al., 2010)
  - Alcohol
  - Tobacco
  - Dagga (marijuana)
  - Tik (methamphetamines)
  - Inhalants

- **Perceived Parental Over-Control**
  - Negative cyclical process of over-control (Kloep & Hendry, 2007)
  - May stifle healthy leisure development
  - State and trait influences
Research Questions

1. Lower trait healthy leisure associated with higher level of substance use
2. Lower state healthy leisure associated with higher level of substance use
3. Perceived parental over-control moderate associations at state and trait level

• Control for treatment, gender, cohort, and school

Method: Poisson multi-level model, SAS 9.3
Sample

• Mitchells Plain
  • $M_{\text{age}} = 13.8$ years old, $SD_{\text{age}} = 0.73$
  • 53% Female
  • 91% Coloured (mixed race)

• 4 Intervention and 5 Control schools
  • Restricted to lifetime users with $\geq 4$ waves
  • Total participants $N=3,383$
  • Bi-annual measurement occasions with 8, 6, and 5 waves respectively ($N_{\text{occasions}} = 19,564$)

Photo Credit: Tim Giddings
Measures

Substance Use

- Median_{subuse} = 2.5, M_{subuse} = 3.2, SD_{subuse} = 2.6, Range 1-20

Healthy Leisure

- Healthy Leisure (Factor 1; α=0.77)
  - M_{hlthy} = 2.8, SD_{hlthy} = 0.6, Range 0-4
- Leisure Planning Efficacy (Factor 2; α=0.76)
  - M_{plan} = 2.8, SD_{plan} = 0.6, Range 0-4

Perceived Parental Over-Control

- M_{PPOC} = 2.0, SD_{PPOC} = 1.3, Range 0-4, α=0.73
  - Ex: I think my parents interfere too much in my free time.

Photo Source: Lisa Wegner
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\log(\text{subuse}_{it}) = \beta_0 + \beta_{21}(\text{wave}_{it}) + \beta_{31}(\text{StateHL}_{it}) + \beta_{41}(\text{StatePlan}_{it}) + \beta_{51}(\text{PPOC}_{it}) \\
\beta_{ki} = \gamma_{k0} + \gamma_{k1}(\text{TraitHL}_{i}) + \gamma_{k2}(\text{TraitPlan}_{i}) + \gamma_{k3}(\text{PPOC}_{i}) + \gamma_{k4}(\text{Gender}_{i}) + \gamma_{k5}(\text{Treatment}_{i}) + \gamma_{k6}(\text{School}_{i}) + \gamma_{k2}(\text{Cohort}_{i})
\]
Results

- Healthy leisure factor

ID=6050

- Substance Use
- Trait Healthy Leisure
Discussion

• Healthy leisure factor supported
• Leisure planning efficacy factor not supported
  • What was it really measuring?
• Perceived parental over-control did not moderate relationships
  • Who is monitoring adolescents?
Discussion

• Implications for recreation providers
  • Small and large scale in SA
  • Application in US setting

• Limitations
  • Substance use composite

• Future directions
  • Separate out substances
  • Collect more intensive longitudinal data

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Participants

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