ABSTRACT

The current study used Latent Transition Analysis (LTA) to compare transitions among Stages of Smoking and Alcohol Acquisition from a computer delivered, Transtheoretical Model-tailored adolescent substance use prevention intervention. Primary outcomes from the intervention revealed that students in an Energy Balance treatment group had lower rates of movement into High Risk groups than a Substance Prevention treatment group.

INTRODUCTION

• Over 90% of adolescents who do not smoke classify themselves as being in Acquisition Precontemplation (aPC; i.e., do not plan to start smoking/drinking) • Latent Transition Analysis (LTA) determines the probability of movement among subgroups in a population across time. • Cluster analyses revealed four subgroups of adolescents not planning to start smoking/drinking (based on Pros, Cons, Temptations scores): 1. Most Protected (MP) 2. Ambivalent (AM) 3. Risk Denial (RD) 4. Highest Risk (HR) • The current study aims to examine what happens over time to adolescents who are not planning to start smoking or drinking

Primary Questions

1. Do adolescents tend to remain in the same risk subtypes over time?
2. Do differences in movement patterns between intervention groups exist?
3. Is the pattern of movement similar for smoking and alcohol use?

METHODS

Sample
• Students (N=4158) from 20 middle schools
• 47.8% female, 65.0% white, 15.6% Hispanic
• 99.1% in aPC for smoking at baseline
• 4 time points: Baseline, 12 mo, 24 mo, 36 mo
• Two intervention groups:
  – Substance Use Prevention (SP; target smoking and alcohol)
  – Energy Balance (EB; target physical activity, fruit and vegetable consumption, and limited TV viewing)

Measures
• Stages of change for smoking acquisition
• Pros of smoking acquisition
• Cons of smoking acquisition
• Temptations of smoking acquisition

Statistical Analyses:
Step 1: Cluster based on Pros, Cons, Temptations
Step 2: Multiple Group Latent Transition Analysis

CONCLUSION

1. Do adolescents tend to remain in the same risk subtypes over time?
   • Transition Probabilities reveal considerable movement over time:
     – Individuals tend to stay in MP or HR
     – Probability of staying in HR increases over time (few transition out)
     – Probability of staying in MP fairly stable

2. Do differences in movement patterns between intervention groups exist?
   • Transition Probabilities reveal considerable differences:
     – Higher transition probability into HR for SP intervention (opposite of desired direction)
     – Higher transition probability in MP for SP intervention (more protected individuals)

3. Is the pattern of movement similar for smoking and alcohol use?
   • Overall, pattern is noticeably similar across behaviors
   • Probability for HR tend to be higher for alcohol than for smoking, lower for MP

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