Adolescent Transitions through Stages of Recent, Concurrent Substance Use: A Focus on the Role of Inhalant Use

Erik C. Crankshaw, MPH • RTI International, Research Triangle Park, NC

Abstract

Objective: The transition stage-replicated development of recent (past 30 days) use of the inhalant "glue"–adhesive–cigarettes, and separation from the earliest stages of recent use was examined in predicting stages of substance use and the probability of transitioning from one stage to another.

Methods: A nested data representation of a subsample of African American and white adolescents was collected through a school-based survey conducted in three predominantly rural school districts in North Carolina school districts. Latent Transition Analysis (LTA), a longitudinal extension of latent class analysis, was used to model a binary timed event of transitions from one stage to another while controlling for age. Stage definitions were based on a recent report by Ennett et al. (2008), which defined recent use of alcohol, cigarettes, and marijuana and classified individuals as nonusers, initiators, and users. We also used measurement error correction in this model. For the purpose of this study, stage 1 and stage 2 were defined as nonusers of alcohol, cigarettes, and marijuana in the past month; stage 3 was defined as users of alcohol, cigarettes, and marijuana in the past month; stage 4 was defined as users of alcohol and cigarettes in the past month; stage 5 was defined as users of alcohol, cigarettes, and marijuana in the past month; stage 6 was defined as users of alcohol, cigarettes, and marijuana in the past month; stage 7 was defined as users of alcohol, cigarettes, and marijuana in the past month; and stage 8 was defined as users of alcohol, cigarettes, and marijuana in the past month.

Results: Inhalant use was associated with transitions from stage 1 to stage 2, stage 2 to stage 3, and stage 3 to stage 4. Inhalant users were significantly more likely than nonusers to transition from no use to the cigarette stage or from no use to the marijuana stage. Inhalant users were also significantly more likely to be in a substance use stage that includes marijuana use. Inhalant users were also significantly more likely to be in a substance use stage that includes marijuana use.

Conclusions: Inhalant use was associated with transitions from stage 1 to stage 2, stage 2 to stage 3, and stage 3 to stage 4. Inhalant users were significantly more likely than nonusers to transition from no use to the cigarette stage or from no use to the marijuana stage. Inhalant users were also significantly more likely to be in a substance use stage that includes marijuana use. Inhalant users were also significantly more likely to be in a substance use stage that includes marijuana use.

1. Background/Rationale

Several studies (mostly cross-sectional) have suggested that inhalant use occurs as a precursor for other serious drug problems (e.g., cocaine, heroin, and PCP use) (Robins et al., 1988; Shiffman et al., 1994; Martin & Shiffman, 1995; Johnson, et al., 1995; Ennett et al., 1998; Novins & Baron, 2004). As such, inhalant use is often considered an early indicator of serious drug use. Inhalant use is also associated with increases in rates of serious drug use (e.g., cocaine and heroin) (Johnston, et al., 1995; Ennett et al., 1998; Martin & Shiffman, 1995; Johnson, et al., 1995; Ennett et al., 1998; Novins & Baron, 2004). Inhalant use is also associated with increases in rates of serious drug use (e.g., cocaine and heroin) (Johnston, et al., 1995; Ennett et al., 1998; Martin & Shiffman, 1995; Johnson, et al., 1995; Ennett et al., 1998; Novins & Baron, 2004). Inhalant use is also associated with increases in rates of serious drug use (e.g., cocaine and heroin) (Johnston, et al., 1995; Ennett et al., 1998; Martin & Shiffman, 1995; Johnson, et al., 1995; Ennett et al., 1998; Novins & Baron, 2004).

2. Methods

2.1. School-based survey conducted in three predominantly rural school districts in North Carolina

2.2. Data analyses

3. Results

3.1. Transition Probabilities

3.2. Table 1. Means of past 30-days drug use

3.3. Table 2. Means of past 30-days drug use

4. Conclusions

References