CHANGES IN SUBSTANCE USE BEHAVIORS AND SEVERITY OVER TIME

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Introduction

Given the high rate of substance abuse among adolescents with serious emotional disturbances (SED; Boyle et al., 1993; Hill, Shen, Lowers, & Locke, 2000; SED; Kilpatrick et al., 2000; Kilpatrick et al., 2003; Lederman, Dakof, Larrea, & Li, 2004; Mason, 2004), it is important to assess the impact of a system of care on the rate of substance use over time. The purpose of this brief report is to describe the extent of self-reported substance abuse and changes in substance abuse behaviors that occur over time for children and youth in Dawn.

Methods

The data reported in the following analyses come from interviews conducted with youth and their caregivers enrolled in the Dawn Project. Interviews were conducted at the time of enrollment and at 6-month intervals up to 36 months. This report presents findings for the first 24 months on five outcome measures: an overall assessment of a young person's substance use behavior, and four behavioral measures of substance abuse within three major drug categories. Data were obtained from the following measures.

Child and Adolescent Functional Assessment Scale (CAFAS). The CAFAS (Hodges, 1994) assesses the degree to which emotional, behavioral, or substance problems are disruptive to functioning. The CAFAS, which is completed as part of each 6-month evaluation interview and scored by the interviewer, provides detailed behavioral descriptions for multiple psychosocial domains. The most severe level of impairment for each domain in the previous 180-day period is scored with higher scores indicating greater impairment: 30 indicates severe disruption or incapacitation; 20 indicates moderate or persistent disruption; 10 indicates mild disruption; 0 indicates no disruption of functioning. For the purposes of this report, only the substance abuse subscale of the CAFAS will be used.

Behavioral Measures of Substance Use. Youth age 11 or older who were enrolled in the Dawn Project were asked to report how frequently they had used alcohol or other drugs in the past 30 days at each 6-month interview. Respondents were asked about their use of a number of different illicit drugs, as well as alcohol and cigarette use. For drug and alcohol use, youth were asked to report the number of days they had used each in the past 30 days. Youth indicated the frequency of their cigarette use by responding to a 7-point scale ranging from "none at all" to "more than 1 pack per day."

Results

      The clinical profiles presented in this report are based on a sample of 366 young people enrolled in the longitudinal evaluation who had data available from the baseline, 6-month, 12-month, and 24-month interviews.

      <u>Longitudinal Change in Substance Use for the Entire Sample</u>. Table 1 displays the mean scores for the substance abuse measures used in this study. Overall, very few youth reported any substance use during the study period. For the previous one-month period, alcohol and marijuana use were reported in only 2.0% ($N = 15$) of the interviews, and cigarette use in 16.5% ($N = 125$) of the interviews. Independent samples t-tests indicated that females reported more frequent alcohol use than males ($t = 2.52$, $p < .05$). Additionally, non-white youth reported more frequent alcohol use ($t = 2.16$, $p < .05$) and cigarette smoking than white youth ($t = 3.77$, $p < .001$). Finally, a series of bivariate correlations indicated that the days of marijuana use in the past month was positively correlated with the days of heavy alcohol use ($r = 0.41$, $p < .001$).

Table 1. Reported substance use at each follow-up interview.

	Enrollment	6 months	12 months	18 months	24 months
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Substance use severity (CAFAS)	2.38 (7.14)	1.59 (6.24)	1.26 (5.04)	0.88 (4.63)	1.35 (5.81)
Days of alcohol use	0.05 (0.54)	0.06 (0.74)	0.04 (0.35)	0.22 (1.35)	0.04 (0.33)
Days of heavy alcohol use	0.03 (0.45)	0.06 (0.75)	0.01 (0.17)	0.24 (1.42)	0.00 (0.00)
Days of marijuana use	0.02 (0.21)	0.02 (0.13)	0.05 (0.39)	0.31 (3.00)	0.26 (1.70)
Frequency of cigarette use	1.42 (1.10)	1.45 (1.21)	1.45 (1.06)	1.42 (1.08)	1.62 (1.40)

      In order to account for the longitudinal nature of the substance abuse measures and to include data for all available subjects, hierarchical linear modeling was used to examine longitudinal change in each of the five outcome measures: CAFAS Substance Abuse Subscale, days of alcohol use, days of heavy alcohol use, days of marijuana use, and frequency of cigarette smoking (see Table 2). Due to the significantly skewed distribution of substance use behavior, the natural log of each variable was used as the dependent variable in all analyses.

      A series of level-1 hierarchical linear models indicated no significant longitudinal change on any of the substance use variables. However, a series of Level-2 hierarchical linear models indicated several significant differences in smoking behavior between demographic groups. Older youth and youth referred from the Child Welfare, Juvenile Justice, and Education systems smoked significantly more upon admission to the program, while non-white youth were significantly less likely to have smoked prior to admission to the program. Youth who were referred to the Dawn Project from the Child Welfare system displayed a slight but statistically significant decrease in cigarette use over time while females significantly increased their cigarette use over time.

Conclusions

The findings presented here indicate that very few youth report using alcohol, drugs, or cigarettes at any given follow-up interview and that demographic and referral characteristics are most likely to predict changes in smoking behavior during enrollment in the Dawn Project. The low reports of substance use in this sample may be an indication of attempts to hide or disguise a level of use that is actually much higher. An alternate explanation is that this finding reflects the relatively young age of the youth in this sample. It is possible that the majority of youth in the Dawn Project are enrolled prior to the age at which most youth begin using drugs and alcohol.

Overall, no change in substance use behavior was observed over time. Mental illness and infrequent contact with peers may interfere with the normal social processes involved in youth substance abuse, resulting in the low base rate of substance abuse observed in this sample. These results may also indicate that improvements in clinical, social, school, and family functioning may place youth in a position to make better decisions, improve their social network, and set appropriate goals, suggesting that the Dawn Project may play a role in reducing the likelihood that youth will be exposed or resort to substance abuse and other risk behaviors.

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