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The effects of employment among adolescents at-risk for future substance use

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Abstract

Objective—This paper explores the association between work intensity, alcohol and/or other drug (AOD) use, and related risk factors and consequences among an at-risk youth sample that has received a first-time AOD offense. This study extends previous research focused primarily on school-based samples.

Method—We examined the association between work intensity, AOD use, AOD-related consequences, and social environment among adolescents referred to a diversion program called Teen Court (N=193). Participants were surveyed prior to the start of the Teen Court program. Mean age was 17 (SD=1.1), 67% of the sample was male; and 45% Hispanic or Latino/a, 45.1% white; 10% other.

Results—Greater work intensity among these youth was related to greater alcohol-related negative consequences and greater contact with co-workers who engaged in risky behaviors, but it was not significantly associated with past month AOD use.

Conclusions—Understanding the relationship between work intensity and AOD use among youth who are at-risk is critical to informing clinicians and public officials about the potential effects of employment in this population. Findings suggest that work intensity may be associated with negative consequences from alcohol use and increased contact with risky co-workers, all of which could contribute to the development of problems in the future.

INTRODUCTION

Alcohol and marijuana use among adolescents is a large public health problem. Adolescents who drink at earlier ages have been found to be four times more likely to develop alcohol dependence in their life than those who delay initiation (D'Amico, Ellickson, Collins, Martino, & Klein, 2005; Hingson, Heeren, & Winter, 2006). Adolescents who use marijuana at earlier ages are at higher risk of experiencing school problems (e.g., not graduating from high school), delinquency, and problems with cigarettes, alcohol, and marijuana in later adolescence than teens that do not use (Brook, Balka, & Whiteman, 1999). Thus, it is essential to identify characteristics that can curb progression from at-risk alcohol and marijuana use to more chronic use among youth.

Work intensity, or the number of work hours, may be an important characteristic to monitor among adolescents. Studies evaluating work intensity have shown both positive and negative associations with behavior (Mortimer, 2010). Employment may help adolescents sharpen their responsibility, time management skills, and resilience to stress (Mortimer & Staff, 2004; Steinberg & Cauffman, 1995). Increased work intensity (working 20+hours/ week during the school year) has also been associated with heavy alcohol use, tobacco, and

drug use (McMorris & Uggen, 2000; Ramchand, Ialongo, & Chilcoat, 2007; Safron, Schulenberg, & Bachman, 2001; Wu, Hoven, & Fuller, 2003). Researchers have speculated that teens who work more hours may also receive less parental monitoring, have more income to spend on alcohol and other drugs (AOD), work in riskier environments, have greater opportunities to use AOD, and have greater exposure to older teens and adults who use AOD (Godley, Passetti, & White, 2006; Mortimer & Staff, 2004; Staff & Uggen, 2003; Wu, et al., 2003).

Existing studies evaluating work intensity and AOD use have focused primarily on school-based samples (Mortimer, Finch, Ryu, Shanahan, & Call, 1996; Paschall, Flewelling, & Russell, 2004; Ramchand, et al., 2007; Staff & Uggen, 2003; Steinberg, 1991) and may not be applicable to an at-risk sample that is just beginning to experience AOD-related problems. Teens that have a first offense for AOD use may be different from a school-based sample because teens who have an offense have an increased risk of poorer health, social and economic outcomes than non-offending teens (Lipsey & Derzon, 1998). Understanding the relationship between work intensity and AOD among youth who have already experienced some consequences is critical because providers, administrators, and officials may actively encourage employment among this population, in the hope that employment will foster enhanced responsibility (Mortimer, 2010).

We examine the association between work intensity, AOD use and consequences, and exposure to teens and coworkers who use AOD while controlling for characteristics that have been shown to be associated with work intensity and AOD use.

METHOD

Setting

The study was conducted in collaboration with the Santa Barbara Teen Court, a diversion program operated by the Council on Alcoholism and Drug Abuse. The program is offered to adolescents who commit a first-time AOD offense and are not deemed in need of more serious intervention by the local probation department. Study protocols were approved by the institution's review board.

Participants

Youth referred to Teen Court between 2008 and 2011 that met inclusion criteria (i.e., referral for a first-time AOD offense; 14 - 18 years old; and English proficient) and did not meet exclusion criteria (i.e., referral to another program; possession of a medical marijuana card; or multiple offender status) were invited to the study. Of those eligible (n=216), 23 (10%) were either not interested or unable to participate, leaving a sample of 193.

Procedures

Data Collection—Youth completed a survey administered by trained staff before they started their Teen Court program, which consisted of a court hearing in front of a peer jury and sanctions including payment of a fee, psychoeduction group sessions, and jury service.

Measures

Individual characteristics—Demographic information included age, gender, and race/ethnicity (Hispanic/Latino/a, White, Other). Participants were asked about number of hours worked per week (work intensity) and occupation. Work intensity was a nine category variable (0='None' to 8='More than 30 hours per week'). Occupation was defined as one of three - categories (independent, restaurant industry, office/retail). Independent jobs included lawn work, childcare, housecleaning or, painting. Restaurant jobs included work in fast food

or as a waiter/waitress. Office and retail positions included jobs as a store clerk or salesperson. Employed teens were asked about their weekly income using a 1 to 9 scale where a score of 1 referred to $1-$5 per week and a score of 9 referred to $126 or more per week.

Outcomes—Offense (alcohol or marijuana/other) information was collected from court records. Past 30 day drinking, including heavy drinking (5+ drinks within a few hours), and marijuana use were assessed using an eight point scale to indicate the number of days used (1='0 days' to 8='21 to 30 days'). Past 30 day stimulant and prescription drug use were dichotomized due to their highly skewed distributions (0=no use, 1=any use). Participants reported their drug of choice. Six items assessed negative consequences of alcohol use (e.g., 'felt really sick because of drinking alcohol', α=0.81) and five items assessed similar consequences of marijuana use (α=0.77) in the past 30 days (Tucker, Orlando, & Ellickson, 2003). Both scales were rated on a 4-point scale (1='Never' to 4='3 or more times'). Items were averaged with a higher score indicating more severe consequences. Three questions asked about time spent around teens that use alcohol, marijuana and other drugs to assess the respondent's risk environment (Tucker, et al., 2003). Each item was rated on a 4-point scale (1='Never' to 4='Often').

Teens who worked in the past year completed work environment risk scale that comprised of four items asking how many of the co-workers they regularly worked with were involved in illegal activity, got drunk weekly or had 5 or more drinks in a day, used any drugs during the past 90 days and shouted, argued or fought most weeks (Dennis, Ives, & Funk, 2006; Dennis et al., 1995). Each item was rated on a 5-point scale (1='None' to 5='All', α=0.74) and were summed for a total score where higher scores indicated a more risky work environment.

Statistical analyses

We examined the entire sample to understand whether work intensity was associated with any demographic characteristic or outcome. We included teens that did not work and classified their work intensity as 0 hours. Mean and modal imputation was used to account for the minimal amount of missing data (for most variables this was <1%). For each outcome, we estimated a regression model that included work intensity (treated as continuous), gender, ethnicity, and age as predictors. Continuous outcomes were modeled using linear regression models. Dichotomous outcomes were modeled using logistic regression models. The categorical outcomes were modeled using a cumulative logit model. Seven (3.6%) teens reported no use and were excluded from the AOD analyses.

RESULTS

Descriptive Analyses

Overall Sample—The mean participant age was 16.6 years (SD=1.1). Sixty-seven percent of teens were male, 44.6% identified as Hispanic or Latino/a, 45.1% white and 10.4% reported another race. Sixty-eight percent reported not working.

Employed Adolescents—Of those teens who worked (n=62), 77.4% (n=48) teens worked 1 to 20 hours per week and 22.6% (n=14) worked more than 20 hours per week. The mean weekly income was 6.9 (SD=1.9) on the scale from 1 ($1-5/week) to 8 ($126 or more/week). Employed teens reported working independent (39%), office/retail (34%) and restaurant industry jobs (27%). Table 1 shows participant characteristics by employment status.

Work intensity—Age was a significant predictor of work intensity, with older respondents working more hours (p<.001). Work intensity did not differ significantly by gender (p=.626) or race/ethnicity (p=.509). For teens that worked, work intensity did not differ by job type (p=.151).

Regression Analyses

Alcohol and Other Drugs—Greater work intensity was associated with an increased probability of reporting alcohol as the most used drug compared to marijuana and other drugs. Work intensity was not significantly associated with past month drinking, marijuana, or prescription drug use. However, as work intensity increased so did negative consequences from drinking. Work intensity was not associated with marijuana-related consequences or a type of AOD offense.

Social Environment—Work intensity was not associated with time spent around other teens that use alcohol or marijuana, but was marginally associated with time spent around teens who use other drugs. For teens who worked, intensity was associated with a riskier work environment (e.g., working with people involved in illegal activities).

Work intensity versus employment status—To examine if findings were an effect of being employed versus work intensity, we also ran our models using a categorical variable (employed versus unemployed). We found no significant effects for any of the outcomes when using this predictor, suggesting that work intensity, not employment status, is related to outcomes.

DISCUSSION

This study extends our understanding of the effects of work intensity on AOD use by studying this association among a diverse sample of adolescents who had a first-time AOD offense. Findings highlight how greater work intensity among these at-risk youth was related to greater alcohol-related consequences and contact with co-workers who engaged in risky behaviors. Although not statistically significant, there was a trend for work intensity to be associated with marijuana use and time spent around teens who use other drugs.

Employed teens were more likely to report that alcohol instead of marijuana was their drug of choice compared to non-employed teens. As data are cross-sectional, we cannot say whether teens who use marijuana are less likely to be employed or whether employment is protective in preventing future marijuana use. For example, teens may believe that workplaces commonly drug test employees, which may affect a teen's decision to work and/or to use marijuana if already working.

In contrast to previous literature (Mortimer, et al., 1996; Paschall, et al., 2004; Ramchand, et al., 2007; Staff & Uggen, 2003; Steinberg, 1991), we did not find an association between work intensity and past month alcohol use or marijuana use. There are several possibilities for our findings. First, previous studies have predominantly examined the association of work intensity and AOD use in general adolescent samples. Thus, it is unclear whether work intensity has an additive risk for an already at-risk population. Second, at-risk youth who work longer hours may have to balance more responsibilities with school. Thus, they may be more likely to experience negative consequences, such as not doing well in school when they drink because they have less time to recover. Since this sample is already at-risk, it is important to understand factors that may help rehabilitate and prevent this population from experiencing future and more serious problems. Longer work hours may increase risk for consequences and this may be related to youth's exposure to other coworkers who use.

Study Limitations

This study used cross-sectional data so we cannot infer causation. Research could examine the longitudinal risk of work intensity over time to understand if risk continues to escalate with continued employment. Also, our sample was recruited from one program and may not be representative of youth nationally. Third, only 32% of the sample was employed and the distribution on work intensity was not equal, which may have limited power to detect effects. Finally, more research is needed to consider whether job characteristics (e.g., occupation, coworker behavior, training, supervisor mentorship) and individual characteristics (e.g., grade point average, career aspirations, socioeconomic background) may moderate risky behaviors among this at-risk sample.

Policy Implications

This study addresses an important policy question as to whether adolescents who work and are beginning to experience negative consequences from their use are at a greater risk for engaging in other risky behaviors. Findings suggest that work intensity may be associated with consequences from alcohol use and increased contact with risky co-workers, both of which could contribute to greater problems in the future. Although youth with a first-time AOD offense are oftentimes not formally processed in the criminal justice system (Puzzanchera, Adams, & Sickmund, 2011), treatment providers, parents and policymakers should pay attention as to whether work serves a rehabilitative option for this at-risk population.

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Table 1

Sample characteristics by employment status

	Unemployed (n=131)	Employed (n=62)
DEMOGRAPHICS	***M (SD)*/%**	***M (SD)*/%**
Age in Years (*M/SD*) *	16.4 (1.0)	17.2 (0.9)
Male %	64.1	74.2
Race %		
Hispanic or Latino/a	48.1	38.7
White	42.8	48.4
Other	9.2	12.9
Alcohol offense %	53.4	62.9
Alcohol used most %	38.3	56.9
Any alcohol in the past 30 days (M/SD)	2.4 (1.6)	2.7 (1.7)
Heavy drinking in past 30 days (M/SD)	1.9 (1.5)	2.0 (1.5)
Alcohol-related consequences (M/SD)	1.2 (0.4)	1.3 (0.5)
Any marijuana in the past 30 days (M/SD)	3.2 (2.3)	2.7 (2.3)
Any prescription drug use in the past 30 days %	7.6	4.8
Marijuana-related consequences (M/SD)	1.2 (0.5)	1.2 (0.4)
Time spent around teens that use alcohol %		
Never	13.0	11.3
Hardly Ever	29.8	25.8
Sometimes	37.4	41.9
Often	19.9	21.0
Time spent around teens who use marijuana %		
Never	9.9	6.5
Hardly Ever	22.1	24.2
Sometimes	43.5	35.5
Often	24.4	33.9
Time spent around teens who use other illegal drugs %		
Never	62.6	53.2
Hardly Ever	25.2	24.2
Sometimes	7.6	9.7
Often	4.6	12.9
Vocational Risk Index (subscale of ERS)[a] M/SD	N/A	6.1 (2.5)

* p<.001

[a] = for those who worked

M = Mean; *SD* = Standard Deviation; AOD = Alcohol and/or Other Drug; ERS = Environmental Risk Scale.

Table 2

Parameter estimates for work intensity by outcome[a]

ALCOHOL AND OTHER DRUGS	Beta	SE	P-Value
Offense – Alcohol vs. Marijuana/Other	0.10	0.08	0.245
Drug Most Used – Alcohol vs. Marijuana/Other	0.19	0.08	0.018
Past 30-day use – At least 1 drink of Alcohol	0.03	0.06	0.587
Past 30-day use – 5 or more drinks of alcohol in a row	−0.01	0.05	0.852
Consequences of AOD use – Alcohol	0.03	0.02	0.050
Past 30-day use – Marijuana	−0.13	0.08	0.106
Past 30-day use – Rx Drug Use	−0.13	0.16	0.408
Consequences of AOD use – Marijuana	−0.01	0.02	0.726
RISK ENVIRONMENT			
Time spent around teens who use Alcohol	0.05	0.07	0.462
Time spent around teens who use Marijuana	0.01	0.07	0.928
Time spent around teens who use Other illegal drugs	0.12	0.07	0.072
Vocational Risk Index (subscale of ERS) [b]	0.44	0.18	0.017

AOD = Alcohol and/or Other Drug; ERS = Environmental Risk Scale

[a] All models control for race, gender, and age

[b] For those who worked only