

The Relationship Between Coping and Substance Use During Adolescence: An Analysis of Bi-Directional Effects

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Abstract

The objective of this study was to examine the relationship between various coping mechanisms and substance use behavior in adolescents. Self-report surveys were given to 905 10th and 11th grade high school students over a year (2007-2008). Results indicated that religious coping and planning negatively predicted substance use. Conversely, mental disengagement as a form of coping positively predicted substance use. There was no bi-directional effect present; substance use did not significantly predict coping.

Sample

- 905 10th and 11th grade high school students (54% girls)
- 63% Caucasian; 24% African-American; 13% Hispanic; remaining were Asian or “other”
- Mean age = 16.10 (SD=.67); age range 15-17
- All participants attended a public high school in Delaware, Pennsylvania, or Maryland
- Most of the adolescents (56%) lived with both biological parents; 89% lived with their biological mother and 61% lived with their biological father

Measures

Adolescent Coping. Participants completed the 60-item *COPE Inventory* (Carver, Scheier & Weintraub, 1989) to assess coping strategies. The adolescents were asked to respond in relation to what they generally do and feel when experiencing stressful events. The response scale ranges from 1= *don't do this at all* to 4 = *do this a lot*. The following scales were used in this study: Mental Disengagement (“I don't want anything to do with this situation,” Religiosity (“I put my trust in a higher power; everything will be okay,” Humor (using jokes to divert attention or make light of the situation), and Planning (“If I do x, y, and z, my problem can be managed”). The COPE has been shown to be a reliable and valid measure of coping (Carver, Scheier & Weintraub, 1989; Phelps & Jarvis, 1994). Cronbach's alpha coefficients for the COPE scales ranged from .75 - .90 in our sample.

Measures

Total Substance Use

Adolescents were asked how frequently they had used marijuana, sedatives, stimulants, inhalants, hallucinogens, cocaine or crack, and opiates (non-medical use only) in the last 6 *months*. The response scale ranged from 0 = never, and 7 = every day.

Total Alcohol Use

Adolescents reported how often they had consumed a particular drink (beer, wine, liquor) in the last 6 *months*. The same scale was used in this measure as total drug use.

Binge Drinking

Adolescents reported how many times they had 6 or more drinks (beer, wine, liquor) in the last 6 *months*. The same scale was used in this measure as total drug use.

Procedure

In the context of a comprehensive, longitudinal study, students from high schools in the mid-Atlantic United States volunteered to participate in the study in the Spring of 2007. Students who provided both parental consent and assent completed a 40 minute self-report survey in school. Students were compensated with a movie pass, and were invited to take part in the same data collection process one year later (2008).



Table 1

Regression Analysis: Predicting Substance Use from Coping

Coping Strategy (at Time 2)	Drug Use Behavior Assessed at Time 3		
	Total Drug Use	Total Alcohol Use	Binge Drinking
Religious	-0.15**	-0.13**	-0.07
Humor	0.03	0.07	0.10*
Mental Disengagement	0.14**	0.14**	0.13**
Planning	-0.12*	-0.15**	-0.16*

* p < .05, ** p < .01, *** p < .001

Results

Series of regression models were conducted to examine whether coping predicted later substance use and/or substance abuse predicted later coping. Age was entered as a covariate in the models.

As shown in table 1, when substance use was predicted from coping, religious coping negatively predicted total alcohol use ($\beta = -.13, p < .01$) and total drug use ($\beta = -.14, p < .01$). In addition, planning negatively predicted alcohol use ($\beta = -.146, p < .01$), total drug use ($\beta = -.115, p < .01$), and binge drinking ($\beta = -.16, p < .01$). In contrast, mental disengagement positively predicted alcohol use ($\beta = .14, p < .01$), total drug use ($\beta = .14, p < .01$), and binge drinking ($\beta = .13, p < .01$). Humor was not found to predict any of the substance use variables. In addition, none of the substance use variables predicted any of the coping mechanisms.

Conclusion

Consistent with current theories of human development (e.g., developmental systems theory), a primary goal of the study was to examine the direction of effects between coping and substance use during adolescence. Coping consistently predicted substance use. More specifically, religious coping predicted a decline in substance use and alcohol use, planning predicted a decline in all three drug measures (substance use, total alcohol use, and binge drinking), and mental disengagement positively predicted the same three measures of drug/alcohol use.

Substance use did not predict coping strategy. Religious coping and Planning may not have *that* strong of a statistical significance, but the small-moderate negative correlation may suggest that there is an initial ‘push’ away from drugs. The opposite is true for Mental Disengagement; avoiding a problem completely may foster drug-taking behavior. Lack of initiative to solve a problem through reasonable, healthy means may encourage the individual to resort to drugs to escape or avoid their problems. This could be dangerous, because the individual uses substances to avoid the problem, but the problem remains unresolved. This could create a vicious cycle of drug-using behavior. More research is needed to explain the non-existence of a bi-directional effect (substance use predicting coping mechanism).

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