

# Research In Brief

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## Substance Use in Young Adults: Associations with Personality and Gender

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**A** study examining personality characteristics (i.e., negative affectivity, conscientiousness) and use of legal (i.e., tobacco, alcohol) and illegal (e.g., marijuana, cocaine) substances in college-aged social drinkers found significant relationships between personality and substance use as well as gender differences. Many adolescents and young adults who experiment with alcohol and smoking do not progress to using illegal drugs. Researchers hypothesized that examining the role of specific personality characteristics would increase our understanding of the pathways to alcohol use, smoking, and use of illegal substances.

### Findings

- Conscientiousness (e.g., discipline, self-control, dependability, and orderliness) was negatively related to substance use, meaning that as conscientiousness increased, substance use tended to decrease.
- Negative affectivity (e.g., neuroticism, depression) was related to greater use of illegal substances, but was not related to alcohol use or smoking.
- Conscientiousness was related to less alcohol use and smoking, and this in turn helped to explain the relationships between conscientiousness and less use of marijuana and other illegal drugs.
- Gender appeared to be an important factor in the relationship between personality and substance use. For women, greater conscientiousness was associated with less alcohol use and smoking, compared to men.
- For men, alcohol use (e.g., typical weekly intake of beer, wine, or liquor) and smoking were more likely to lead to marijuana use, compared to women.

### The Study

- Participants in the study were young adult social drinkers between the ages of 18 and 20 years who drink a minimum of four drinks per week. They had no prior alcohol- or substance-related disorders, treatment, or alcohol-related legal consequences. The

## Subjective Reactions to Alcohol Cue Exposure: A Qualitative Analysis of Patients' Self-Reports

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**T**his study is unique in its use of qualitative research methods to capture the complexity of the craving response in people seeking treatment for alcohol problems. The results lend support to the motivational model of alcohol use proposed by Breiner et al., (1999) in which responses to alcohol-related cues are viewed as multifaceted and dynamic, incorporating inclinations to approach drinking, and inclinations to avoid drinking.

### Background

During an alcohol cue exposure session, participants seeking treatment were allowed to pick up a glass, can, or bottle containing their usual alcoholic beverage and consider the cues and aspects of the beverage that would strengthen their craving. They were then asked to verbally report their craving for alcohol at three-minute intervals. Cravings were rated on a scale of "0 = not at all" to "10 = the strongest craving I've ever had."

### Findings

- *Participant responses.* Of the 91 participants, 59 (64.8 percent) made comments during the session, and 32 (35.2 percent) made no comments other than to report their level of craving for alcohol.
- *Qualitative analysis.* Five categories of participants' responses to alcohol cues were identified: no comment, approach only, avoidance only, approach-avoidance (incorporating both approach and avoidance statements), and neutral only. (See *Table 1 for categories and examples of statements made within each category.*)
- *Approach / avoidance.* Of the 59 participants who made comments, 24 (26.4 percent) made approach and avoidance comments (i.e., approach-avoidance), 12 (13.2 percent) made only approach comments (i.e., approach-only), 15 (16.5 percent) made only avoidance comments (i.e., avoidance-only), and 8 (8.8 percent) made solely neutral comments.

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## Substance Use in Young Adults (cont'd)

sample included 421 individuals, 222 women (52.7 percent) and 199 men (47.3 percent). The average age of participants was 19 years and the majority were single, from a European American background (88 percent), and enrolled in college (93 percent).

- Participants completed measures of personality and substance use. Personality measures included negative affect (i.e., depression, neuroticism) and conscientiousness. Alcohol use was assessed as typical intake for each day of the week. Use of tobacco, marijuana, cocaine, tranquilizers, amphetamines, and opiates was assessed on the basis of a four-point scale (*never used; rarely used in the past month; occasionally used, with use during the past month, but not regularly; or, regularly used, at least once a week or daily*).
- Technically, tobacco was the only substance that was legally available to this sample of young adults. However, investigators treated alcohol as a licit substance because it is legally available to adults aged 21 years or older and is consumed by large proportions of 18- to 20-year-olds (Johnston et al., 2002). Furthermore, there are data to support treating an illegal drug, such as marijuana, as distinct from alcohol use in college-aged samples (Katz, Fromme, & D'Amico, 2000).

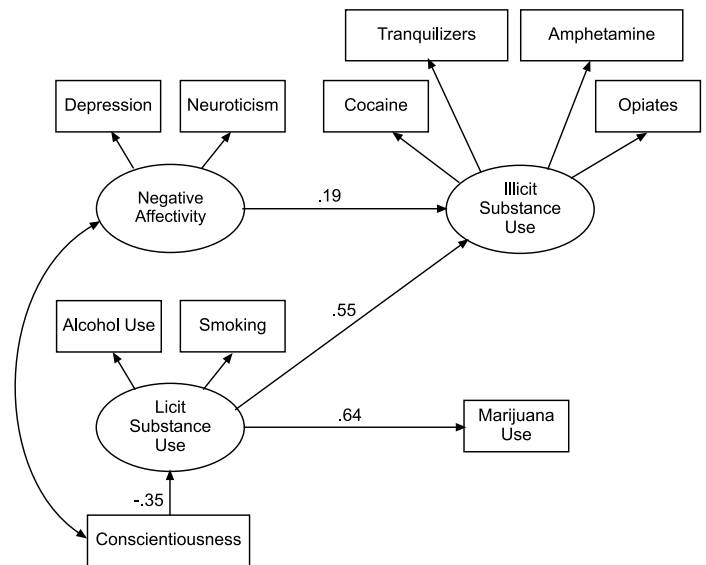
### Discussion

Researchers in this study examined the role of personality characteristics in substance use. Consistent with prior research (Duncan et al., 1998), alcohol use and smoking in younger adults were significant predictors of use of illegal substances and marijuana. As conscientiousness increased, there was less use of alcohol and tobacco, which in turn played a role in the relationship between conscientiousness and use of illegal drugs. Perhaps most interestingly here, negative affect was directly associated with greater illegal substance use. See Figure 1.

The interactive influence of gender and personality found in this study offers insight into the understanding of substance use behaviors of young adults. However, the findings of this study should be interpreted with caution. The use of cross-sectional self-report data limits the ability to comment on the causes of substance use. Even so, it seems logical to conclude that personality tendencies precede substance use. In addition, this sample of young adults may not be representative of the larger community because they were regular drinkers (minimum intake of four drinks/week). Better representation of the range of alcohol use, from abstainers through excessive drinkers might lead to more information about protective and risk factors for substance use.

More research is needed to examine the role of personality factors in the different pathways to the use of legal and illegal substances. In contrast to the majority of studies that examine personality factors independently, there appears to be merit in examining the unique and overlapping features of risk factors and protective factors in predicting substance use outcomes.

**Figure 1. Final Model of Relationships Among Predictor Variables and Substance Use Outcomes**



The curved double-headed arrow indicates covariance and the single-headed arrows indicate paths. Use of licit substances (e.g., alcohol, smoking) significantly predicted use of illicit substances, and marijuana. Negative affect predicted use of illicit substances and conscientiousness predicted less alcohol use and smoking.

Figure excerpted from Kashdan, T. B., Vetter, C. J., & Collins, R. L. (2005). Substance use in young adults: Associations with personality and gender. *Addictive Behaviors, 30*, p. 264. Copyright (2005) by Elsevier Ltd.

### Implications

These preliminary findings have implications for developmental models of substance use and for intervening to reduce substance use in young adult populations. They suggest that reducing negative emotional states, which have been shown to be malleable in young adults, may offer protection against substance use and abuse. Cultivating positive characteristics such as conscientiousness may help to reduce alcohol use and smoking, which in turn could slow the progression to use of marijuana and other illegal substances.

### References

- Duncan, S. C., Duncan, T. E., & Hops, H. (1998). Progressions of alcohol, cigarette, and marijuana use in adolescence. *Journal of Behavioral Medicine, 21*, 375-388.
- Johnson, L. D., O'Malley, P. M., & Bachman, J. H. G. (2002). *Monitoring the future: National survey results on drug use, 1975-2001: Volume II. College students and adults ages 19-40*. Washington, DC: U.S. Government Printing Office, NIH Publication No. 02-5107.
- Katz, E. C., Fromme, K., & D'Amico, E. J. (2000). Effects of outcome expectancies and personality on young adults' illicit drug use, heavy drinking, and risky sexual behavior. *Cognitive Therapy and Research, 24*, 1-22.

## Subjective Reactions to Alcohol Cue Exposure (cont'd)

- *Research categories.* A qualitative analysis of approach and avoidance statements revealed seven approach categories and six avoidance categories. The approach categories most frequently described by participants were “temptation or desire to drink” and “smells good,” whereas the avoidance categories most frequently described were “not tempted/disinterested” and “smells bad.”

**Table 1. Alcohol Approach and Avoidance Subcategories and Examples of Statements Included:**

Subcategory	Example
<b>Approach</b>	
Temptation/desire to drink	“I feel like it is calling my name.”
Smells good	“You can smell it a mile away.”
Sight	“The beautiful bottle looks like a Christmas present.”
Thoughts about drinking	“Summertime with the sun baking down on me, drinking, listening to music, awesome.”
Physical/bodily sensations	“I’m nervous, my palms are sweating.”
Tactile/touch	“As I am holding it, it feels like it should be getting lighter, like you are drinking it.”
Taste	“I just want to dip my finger in it and taste it.”
<b>Avoidance</b>	
Not tempted/disinterested	“I can sit here for hours and nothing.”
Physical avoidance	“If I don’t touch it maybe I’ll be alright.”
Smells bad	“It stinks!”
Thought about negative consequences of drinking	“It’s reminding me of bad stuff. . . dirty old cans and warm beer and stuff.”
Drinking prohibited	“I’m losing the craving with frustration about not drinking it.”
Resistance/distraction	“Um, my mind is thinking of other things, maybe subconsciously.”

Table excerpted from Hoerter, K., Stasiewicz, P. R., & Bradizza, C. M. (2004). Subjective reactions to alcohol cue exposure: A qualitative analysis. *Psychology of Addictive Behaviors*, 18, p. 403. Copyright (2004) by the Educational Publishing Foundation.

### The Study

- Participants in the study were 91 individuals (55 men and 36 women) receiving outpatient treatment for an alcohol problem in one of three publicly-funded clinics in Buffalo, New York. They were recruited within several weeks of admission to treatment.
- Individuals 18 years of age or older (average age was 39.6 years) and who met diagnostic criteria for either alcohol abuse (8 percent) or alcohol dependence (92 percent) as determined by the Diagnostic Interview Schedule for the DSM-IV (Robins, Coter, Bucholz, & Compton, 1995).
- Alcohol consumption was assessed for the 90-day period prior to study participation. On average, participants reported consuming 11.5 drinks per drinking day. The majority of participants (90

percent) reported having at least one heavy drinking day (i.e., men:  $\geq 6$  drinks; women:  $\geq 4$  drinks) within the last 30 days.

### Discussion

Two researchers read and rated transcripts of the participant comments made during the alcohol cue exposure session. Later, approach or avoidance categories were assigned to each participant’s response statement. Consistent with established qualitative data analysis methods, discrepancies and final subcategories were derived through a process of discussion and consensus. Levels of agreement between raters were generally high.

Exposure to alcohol cues can prompt ambivalence between inclinations to approach drinking and inclinations to avoid drinking. An example of the complexity of responses to alcohol-related cues follows:

*You can smell it from here. I want it, this is torture. If I could go past a ‘ten,’ I would I want to dip my finger in it and taste it. Maybe I’ll go by the store after I leave here and get some beer . . . I feel like it is going away. I’d say it is about a ‘three’ now. I don’t want to run to the store now . . . It comes and goes; it’s about an ‘eight’ or ‘nine’ . . . Now its kind of died down. I don’t feel the craving for it.*

*Note:* Cravings were rated on a scale of “0 = not at all” to “10 = the strongest craving I’ve ever had.”

This example provides a strong argument for integrating craving into a comprehensive model of alcohol abuse that captures alcoholics’ ambivalence or conflict regarding the decision to drink.

Comparisons between approach-only and avoidance-only groups revealed that the approach-only group reported significantly higher levels of craving immediately prior to cue exposure and achieved higher levels of peak craving during cue exposure. Those in the approach-avoidance group were similar to the approach-only group, reporting significantly higher levels of craving immediately prior to cue exposure, and achieving higher levels of peak craving during cue exposure, than did those in the avoidance-only group.

### Clinical Implications

- The results of this study would argue for measures of craving that capture both inclinations to approach alcohol and inclinations to avoid alcohol.
- Alcohol cue exposure might be a useful assessment tool for identifying an individual’s reaction to the sight and smell of alcohol, specific thoughts and images, or physical sensations that might be incorporated into treatment to help individuals manage or reduce their alcohol cravings.
- Treatment providers could conduct an alcohol cue exposure assessment to probe for and identify their clients’ existing coping strategies, either by using techniques similar to those used in this research, or by asking clients to use their imagination. Therapists

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## Subjective Reactions to Alcohol Cue Exposure (cont'd)

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could then take aim at strengthening existing coping methods or teaching alternative strategies for managing cravings.

### References

- Breiner, M. J., Stritzke, W. G. K., & Lang, A. R. (1999). Approaching avoidance – A step essential to the understanding of craving. *Alcohol Research and Health*, 23, 197-206.
- Robins, L., Cotter, L., Bucholz, K., & Compton, W. (1995). *Diagnostic Interview Schedule for DSM-IV*. St. Louis, MO: Washington University School of Medicine.

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