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Exploring the Relationship Between Experiential Avoidance, Alcohol Use Disorders and Alcohol-Related Problems Among First-Year College Students

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Abstract

Objective—This study explored the relationship of experiential avoidance (e.g., the tendency to avoid, suppress, or otherwise control internal experiences even when doing so causes behavioral harm) to alcohol use disorders and alcohol-related problems.

Participants—Cross-sectional data was collected from 240 undergraduate college students in their first year in college between December 2009 and April 2010.

Methods—Participants completed a diagnostic interview and online self-report survey.

Results—Students with a history of alcohol abuse or dependence had significantly higher levels of experiential avoidance relative to students with no alcohol use disorder diagnosis. A hierarchical linear regression analysis found that experiential avoidance significantly predicted alcohol-related problems, even after controlling for gender and psychological distress. Furthermore, experiential avoidance mediated the relationship of psychological distress to alcohol-related problems.

Conclusions—These findings suggest experiential avoidance may play a role in problematic alcohol use among college students.

Keywords

Experiential Avoidance; Alcohol; College Students; Mental Health

Problematic alcohol use is prevalent among college students. It has been linked to a variety of problems among college students including academic difficulties, interpersonal problems, illegal behavior, sexual assault, physical injury, and accidental death.^{1–3} Almost half of all students between ages 18 and 24 report having five or more drinks on at least one occasion in the past 30 days.¹ A large epidemiological study found that approximately 20% of college students met criteria for an alcohol use disorder in the past year, which was significantly higher than age-matched peers who were not in college.⁴

Given the costs and prevalence of alcohol-related problems and disorders, it has become a standard practice for colleges to implement some form of alcohol intervention

programming.⁵ A number of evidence-based alcohol programs have been developed for college students (e.g., motivational interventions, normative re-education, cognitive behavioral skills training), which have generally been found to be helpful in reducing alcohol consumption and alcohol-related problems.⁶ Yet, despite widespread efforts by colleges and the development of evidence-based programs, problematic alcohol use is still highly prevalent and may even be increasing.¹

A potential limitation with alcohol use interventions is that they tend to narrowly focus on the reduction of alcohol consumption and related problems, independent of other mental health issues with which students may be struggling. Alcohol use disorders tend to co-occur with other mental health problems among college students, such as mood, anxiety, and personality disorders.⁷ This relationship may be more than merely correlational given that mental health problems are strong predictors of later alcohol use disorders.⁸ This relationship presents a problem for successful reduction of problematic drinking because almost half of all students have a diagnosable psychological disorder in a given year⁴ and students with co-occurring heavy alcohol use and mental health problems may be particularly difficult to engage in services.⁹

One approach to meeting this challenge is to identify core common psychological processes that contribute both to alcohol use and other mental health problems, which could then be targeted through prevention and intervention programs. One such process may be experiential avoidance: the tendency to avoid, suppress, or otherwise control the frequency or intensity of internal experiences such as thoughts and feelings even when doing so causes behavioral harm.¹⁰ There is a significant body of literature indicating that experiential avoidance contributes to the development, maintenance and exacerbation of mental health problems including those that are commonly comorbid with alcohol use disorders among college students such as depression, anxiety disorders, and borderline personality disorder.^{11–13} Furthermore, common forms of contextual cognitive behavior therapy such as Acceptance and Commitment Therapy (ACT),¹⁴ Dialectical Behavior Therapy (DBT)¹⁵ and Mindfulness-Based Relapse Prevention (MBRP)¹⁶ are known to produce improvements in psychological health in part by decreasing experiential avoidance.^{13,17,18} Although there is only limited research examining the impact of these therapies on alcohol use disorders specifically,^{19,20} studies have found evidence for their efficacy in related problem areas such as substance use disorders in general,²¹ polysubstance abuse,²² comorbid opioid dependence and borderline personality disorder,²³ and cigarette smoking.^{24,25}

Research has shown that coping motives for drinking, that is using alcohol in order to reduce the experiencing of unpleasant emotions, is significantly related to greater alcohol-related problems among college students.^{26,27} This finding is important because it is known with college student drinkers that experiential avoidance significantly predicts coping motives, even after controlling for similar psychological predictors such as anxiety sensitivity and alexithymia.²⁸

Research has also found that coping motives for drinking are related to psychological distress and neuroticism.²⁹ Thus, it may be the case that the commonly observed relationship between psychological distress and problem drinking,^{8,30,31} could be accounted for by coping motives and experiential avoidance.

A possible advantage of further examining the relationship of experiential avoidance to alcohol-related problems among college students over the more established construct of motives to drink is that, as documented above, experiential avoidance is a common core process that is both changeable and applies to a variety of co-occurring mental health problems. The current study sought to explore the relationship between experiential

avoidance, alcohol use disorders and alcohol-related problems with a sample of first year college students by examining a) differences in experiential avoidance between individuals with a history of alcohol use disorders and those with no history of alcohol use disorders, b) whether experiential avoidance predicts alcohol-related problems over and above psychological distress, and c) whether experiential avoidance mediates the relationship between psychological distress and alcohol-related problems. Including psychological distress not only tests the role of experiential avoidance over and above known robust predictors, but also specifically differentiates the role of distress versus how one responds to distress. If a positive relationship is found it would strengthen the possible importance of experiential avoidance as a transdiagnostic process that might be targeted to meet the diverse behavioral health needs of college students.

Methods

Participants and Procedures

A convenience sample of 241 first-time, full-time freshmen, between 18 and 20 years of age, at a mid-size University in the western U.S. participated in the study. The current study examined baseline data from a larger longitudinal assessment study underway with this sample, exploring the natural course of mental health through the first few years of college.

Participants were recruited through mass emails and postcards sent to eligible students (first-time, full-time freshmen between 18 and 20 years of age), who were identified through a list provided by the University. Recruitment materials described the study as examining “how students’ lives, in terms of psychological, physical, and social adjustment, evolve during the first two years of college.” Students who were interested in participating were subsequently scheduled for an in-person appointment at the University. Assessments were conducted between December 2009 and April 2010 of the students’ first year. Due to the length of the procedures, the assessment process was completed in two parts. The first session obtained informed consent after a review of the details of the study; consenting participants were then asked about their mental health functioning currently and in their life time through a semi-structured diagnostic interview. During a second appointment, participants completed an online battery of self-report questionnaires. These online assessments were completed during a scheduled in-person appointment with the study staff available to answer any questions participants might have. Participants were compensated for their time after completing both assessment sessions with a \$75 gift card. One participant consented to participate, but decided to dropout during the first assessment session and was excluded from all reported analyses, making the final sample 240. Ethical approval for the study was provided by the local Institutional Review Board.

Measures

Structured Clinical Interview for the DSM-IV-TR, Non Patient Edition (SCID).³²

The SCID is a widely used semi-structured clinical interview designed to make DSM-IV-TR diagnoses. In addition to the general screening section, the sections for mood, psychotic, anxiety, substance use, and eating disorders were included in each interview. For the current study, variables were examined related to alcohol abuse and alcohol dependence diagnoses within an individual’s lifetime. Clinical interviews were conducted by graduate students and post-doctoral fellows who had completed approximately 20-hours of training as well as continuing supervision and booster sessions. Interviewers were trained to maintain reliability at the level of identified symptoms as defined by a Kappa of .80 or higher.

Rutgers Alcohol Problem Index (RAPI).³³—The RAPI is a 23-item self-report questionnaire that assesses alcohol-related problems. Respondents are asked to rate the

frequency with which they experienced each alcohol-related problem on a scale from 1 (“none”) to 4 (“more than 5 times”). The measure can be used to assess frequency of problems over a variety of time frames and the current study assessed problems over the past 10 weeks. The RAPI has been found to be a reliable and valid measure of alcohol-related problems in previous studies;³³ the Cronbach’s alpha for the current sample was .92.

Acceptance and Action Questionnaire-II (AAQ-II).³⁴—The AAQ-II is a 7-item self-report scale assessing experiential avoidance. Each item is rated on a 7-point scale ranging from 1 (“never true”) to 7 (“always true”), with higher scores indicating greater experiential avoidance. The AAQ-II has been found to have adequate reliability and validity;³⁴ the Cronbach’s alpha for the current sample was .87.

General Health Questionnaire (GHQ).³⁵—The GHQ is a self-report measure of general psychological distress and mental health. The current study used a 12-item version of the GHQ. For each item, participants indicate the degree to which they have experienced symptoms (e.g., loss of sleep, feeling unhappy) in the past few weeks on a 4-point scale, with higher scores indicating less distress. The 12-item GHQ has been found to have adequate reliability and validity in past studies;³⁶ the Cronbach’s alpha for the current sample was .86.

Data Analysis Plan

Differences in experiential avoidance between participants with and without a history of alcohol abuse/dependence were examined using independent *t*-tests. A hierarchical linear regression analysis was subsequently conducted to test the relationship of experiential avoidance to alcohol-related problems relative to psychological distress. Gender was included as a demographic control in the regression analysis given that males have been repeatedly found to have more alcohol-related problems.²⁶

Mediation analyses were then run to examine whether experiential avoidance mediates the relationship of psychological distress and alcohol-related problems. This mediation effect was tested using a non-parametric product of coefficients test.³⁷ As with the better-known Sobel test,³⁸ this analytic approach directly tests the statistical significance of the difference between the direct and indirect paths (that is, the relationship between psychological distress and alcohol-related problems with and without accounting for the mediator) by examining the significance of the cross product between the unstandardized *a* and *b* path coefficients (which assesses the difference between the direct and indirect paths). It does this non parametrically, however, which is important given the cross product is generally not normally distributed.³⁷ The present method instead used bootstrapping (in the present analysis results were based on 5,000 samples). Gender was entered as a covariate in these analyses. The editational analysis was adequately powered with 240 students to detect a moderately small (*a* path) to moderately small (*b* path) mediation effect using the bias-corrected bootstrapping method.³⁹

Results

Sample Characteristics

The mean age of participants was 18.45 (SD = .55) and the sample was 37.9% male. The racial distribution of the sample consisted of 73.8% White or Caucasian, 7.4% Asian, 5.2% Black or African American, 1.3% American Indian/Alaska Native, 1.3% Native Hawaiian or other Pacific Islander, and 10.9% multiracial. In addition, 13.8% of the sample described their ethnic background as Hispanic or Latino. Approximately 55.8% reported living in on-campus dormitories, 42.5% were currently dating, and 41.3% were currently working.

In the current sample, 14.6% of participants met criteria for alcohol abuse or dependence within their lifetime and 47.1% of participants met criteria for an Axis I disorder in their lifetime (30.8% for mood disorders, 18.8% for anxiety disorders, 2.5% for eating disorders, and 12.5% for drug use disorders). The 12 month prevalence of alcohol use disorders was 5%, with 18.8% of students reporting an Axis I disorder in the past 12 months (3.3% for mood disorders, 10.4% for anxiety disorders, 1.3% for eating disorders, and 2.9% for drug use disorders).

Examining Differences in Experiential Avoidance between Students with and without a History of Alcohol Use Disorders

Group differences in experiential avoidance were examined between participants with a diagnosis of alcohol abuse or dependence in their lifetime ($M = 19.09$, $SD = 7.07$, $N = 35$) and those with no history of alcohol use disorders ($M = 15.90$, $SD = 6.95$, $N = 205$). There was a significant difference between these groups, $t(238) = -2.50$, $p < .05$, Cohen's $d = .46$, such that students with a history of alcohol abuse or dependence reported higher levels of experiential avoidance.

Examining the Relationship of Psychological Distress and Experiential Avoidance to Alcohol-Related Problems

The RAPI was substantially positively skewed, based on visual inspection of a histogram and estimates of skewness and kurtosis. An exponential transformation was used to approximate a normal distribution for the RAPI.

Table 1 presents the results of the hierarchical regression analysis. Gender was a significant predictor of alcohol-related problems at each step; males were more likely to have greater alcohol-related problems. Psychological distress was a significant predictor in the second step, after controlling for gender, such that greater psychological distress was associated with greater alcohol-related problems. However, psychological distress was no longer a significant predictor after including experiential avoidance in the model, suggesting that the relationship of psychological distress to alcohol-related problems is accounted for by experiential avoidance. Finally, experiential avoidance was a significant predictor of alcohol-related problems, even after controlling for gender and psychological distress, such that greater experiential avoidance was related to more alcohol-related problems.

Examining the Mediating Role of Experiential Avoidance

The observed findings suggest that experiential avoidance may mediate the relationship of psychological distress to alcohol-related problems, which was further tested using a non-parametric product of coefficients test.³⁷ A significant mediational effect was found using this approach, bootstrapped point estimate = .012, $SE = .003$, 95% CI = .005, .019, such that experiential avoidance mediated the relationship between psychological distress and alcohol-related problems after controlling for gender.

To further explore the directionality of the relationship between these variables, the mediational analysis was re-run to test whether psychological distress also mediates the relationship of experiential avoidance to alcohol-related problems. Psychological distress was not a significant mediator in this analysis, bootstrapped point estimate = -.002, $SE = .003$, 95% CI = -.007, .003.

Comment

The current study sought to explore the relationship between experiential avoidance and alcohol use disorders and alcohol-related problems using a mixture of self report and clinical

interviews in a sample of first time, full time college freshmen. Results found that individuals with a history of alcohol use disorders are higher in experiential avoidance relative to students with no alcohol use disorder diagnosis. Experiential avoidance was also found to predict alcohol-related problems, even after controlling for gender and psychological distress, as well as to mediate the relationship of psychological distress to alcohol-related problems. Overall this pattern of results suggests that higher levels of experiential avoidance may play a role in problematic drinking and alcohol use disorders among college students.

The finding that experiential avoidance predicts over and above gender and psychological distress further highlights the relevance of this process to problematic alcohol use. A number of studies have found that psychological distress is a predictor of alcohol-related problems.^{8,30,31} One potential explanation for this relationship is that some students who are distressed drink alcohol as an experiential avoidance strategy, which increases the likelihood of negative consequences related to drinking. The observation that experiential avoidance mediated the relationship between psychological distress and alcohol-related problems provides some preliminary support for this account.

Theoretically, using alcohol as a means of avoiding, suppressing or otherwise controlling difficult thoughts and feelings can have negative consequences because drinking behavior can become more rigid and intense as well as decrease sensitivity to other important factors in the environment. For example, one may engage in increasingly heavier drinking in an attempt to “numb out” from distressing thoughts and feelings.⁴⁰ Similarly, one may drink as part of a pattern of risky and problematic behaviors all of which have experientially avoidant functions.⁴¹ It is known that college students who have implicit urges to use alcohol tend to develop problematic drinking, but only if they are also avoidant and non-accepting of their own feelings,⁴² suggesting that patterns of experiential avoidance may make it difficult to be aware of and to deal with unconscious motivations to drink. In addition, patterns of experiential avoidance may make it difficult to respond to indications that drinking is becoming a problem. For example, problematic drinking leads to increased levels of shame⁴³ but it is known that experiential avoidance mediates the impact of shame on self-destructive behaviors⁴⁴ presumably because it is not possible to be open to and to use this emotion to guide healthy behavior change if it must be avoided. All of these patterns of alcohol use may put the student at increased risk for alcohol-related problems and disorders.

Experiential avoidance is relevant to a broad range of psychological problems students encounter,^{11–13} and interventions that target experiential avoidance such as ACT have been found to produce positive improvements for a number of these problems¹³ including other substance use disorders.^{22,24,25} There are low rates of treatment seeking among college students in need⁴⁵ suggesting that greater efforts at prevention may be needed. Experiential avoidance is a readily measurable diagnostic construct that could be used as a screening tool or in college counseling centers to help indicate areas where prevention or early intervention efforts could be targeted. The results from this study provide preliminary evidence suggesting interventions that target experiential avoidance could also have a beneficial impact on problematic alcohol use. If this was found to be the case, it could further inform the development of a unified intervention to target both alcohol use and other mental health problems among college students.

Limitations

There are some limitations in the current study. The use of a cross sectional design limits the capacity to determine the temporal relationship between variables. Thus, future studies would benefit from examining the longitudinal relationship between experiential avoidance, psychological distress, and problematic drinking as well as exploring the role of experiential

avoidance as students progress through college (e.g., is experiential avoidance more or less predictive of problems over time, and does experiential avoidance interact with factors such as stressful events?). A longitudinal design could also test whether experiential avoidance is a risk factor for developing later onset or continued alcohol abuse and dependence, particularly considering the high rates of “developmental maturational effect” among high risk college freshmen, in which students tend to significantly reduce their problem drinking as they get older.⁴⁶ The sample yielded a small number of students meeting criteria for alcohol abuse and dependence, and therefore insufficient power to detect differences between diagnostic groups in levels of experiential avoidance. Future studies could re-test these relationships with a larger sample of alcohol abusing and dependent college students in order to explore possible differences between students who meet criteria for abuse and those who do not. Lastly, as the study consisted of a convenience sample of first year college students at a single university, it is unclear how generalizable the results are to college students more generally. Thus, future studies replicating and extending this research will be important.

Conclusions

The current study suggests that experiential avoidance could play a role in the development and maintenance of alcohol use disorders and problems related to alcohol use, warranting further study of these variables. If experiential avoidance does play a key role in problematic alcohol use, interventions that can successfully target experiential avoidance may be helpful in reducing problematic drinking and other co-occurring mental health problems due to the overlap in common core processes.

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Hierarchical linear regression analysis of gender, psychological distress and experiential avoidance on alcohol-related problems

Table 1

Step	Gender <i>b</i>	GHQ <i>b</i>	AAQ-II <i>b</i>	ΔR^2	ΔF
1. Bivariate model	.18**			.03**	7.72
2. Adjusted model	.17**	.23***		.05***	13.39
3. Fully adjusted model	.17**	.06	-.27***	.04***	11.54

[†] $p < .10$,
* $p < .05$;
** $p < .01$;
*** $p < .001$. AAQ-II = Experiential avoidance; GHQ = Psychological distress.