

# **A**nnnotated **Bibliography**

**of Alcohol, Other Drug, and  
Violence Prevention Resources  
2006–2008**

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**Annotated Bibliography of Alcohol,  
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Prevention Resources 2006–2008**

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## **INTRODUCTION**

The U.S. Department of Education's Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention has developed this annotated bibliography to provide those interested in prevention at colleges and universities—and in surrounding communities—with a ready reference of current, important, and available information resources. While alcohol and other drug abuse and violence (AODV) have been a focus at institutions of higher education for over two decades, relatively little research on what works to prevent these problems has been conducted in a systematic manner. However, as this bibliography reflects, much has been published to inform a greater understanding of how AODV problems develop, and to describe promising theories and practices for preventing and reducing those problems.

This bibliography is not intended to be exhaustive, but represents some important journal articles for advancing prevention at colleges and universities. The core of the Center's approach to prevention is the concept of environmental management, which focuses attention on those strategies that will change the campus and community environment in which students are making decisions about alcohol and other drug use and violence. Therefore, many materials included in this bibliography reflect research findings, programs, and promising practices aimed at shaping the campus culture.

Three major criteria were used in selecting references for this bibliography: (1) the reference reflected information relevant to AODV prevention or intervention at institutions of higher education, (2) the reference fit into identified topic areas listed in the Contents, and (3) the reference was published between 2006 and 2008. Note: The format and wording for the abstracts shown in this publication are excerpted directly from the journals in which they appear.

There is a significant amount of literature in the field of college AODV prevention. This document attempts to compile these articles by topic area. Citations and abstracts are given only once, in their primary category; however, citations frequently will relate to other categories. In these instances they have been included in the "See also" section that follows each main section. The Center recognizes that many books, manuscripts, and other materials exist that discuss the topic of AODV prevention and intervention. For examples, refer to the Center's Publications Web page for other important literature on these topics. However, because of the vast amount of relevant information this publication includes only peer-reviewed journal articles.

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## I. ALCOHOL ABUSE PREVENTION

### Scope of the Problem

(Includes articles on incidence and consequences)

**Abbey, A., Parkhill, M. R., Buck, P. O., & Saenz, C. (2007). Condom use with a casual partner: What distinguishes college students' use when intoxicated? *Psychology of Addictive Behaviors*, 21(1), 76–83.**

Determining alcohol's precise role in sexual risk taking has proven to be an elusive goal. Past research has produced mixed results, depending on characteristics of individuals, their partners, and the situation, as well as how the link between alcohol consumption and sexual behavior was assessed. In this study, cross-sectional predictors of the frequency of condom use were examined for 298 heterosexual college students at a large urban university. In hierarchical multiple regression analyses that controlled for frequency of condom use when sober, alcohol expectancies regarding sexual risk taking and self-efficacy regarding condom use when intoxicated were significant predictors of frequency of condom use when intoxicated. These findings highlight the importance of targeting beliefs about alcohol's disinhibiting effects in STD- and HIV-prevention programs.

**Beck, K. H., Arria, A. M., Caldeira, K. M., Vincent, K. B., O'Grady, K. E., & Wish, E. D. (2008). Social context of drinking and alcohol problems among college students. *American Journal of Health Behavior*, 32(4), 420–430.**

**OBJECTIVE:** To examine how social contexts of drinking are related to alcohol use disorders, other alcohol-related problems, and depression among college students. **METHODS:** Logistic regression models controlling for drinking frequency measured the association between social context and problems, among 728 current drinkers. **RESULTS:** Drinking for social facilitation was associated with drinking and driving and housing violations. Drinking in the context of motor vehicles was associated with alcohol abuse/ dependence. Drinking in a context of emotional pain was associated with clinical depression. **CONCLUSIONS:** Alcohol-free programming that fulfills needs for conviviality and addresses early signs of depression might reduce alcohol problems among college students.

**Benton, S. L., Benton, S. A., & Downey, R. G. (2006). College student drinking, attitudes toward risks, and drinking consequences. *Journal of Studies on Alcohol*, 67(4), 543–551.**

**OBJECTIVE:** This study examined whether college students' attitudes toward risks explain significant variance in drinking consequences beyond gender, alcohol use, and self-protective strategies. **METHOD:** A derivation sample (N=276; 52% women) and a replication sample (N=216; 52% women) of undergraduate students completed the Campus Alcohol Survey (CAS) and the Attitudes Toward Risks Scale (ATRS). **RESULTS:** Scores on the ATRS correlated positively with students' self-reported typical number of drinks and negative drinking consequences ( $p < .001$ ). Hierarchical regression analyses indicated that ATRS scores explained significant variance in negative drinking consequences beyond college students' gender, typical number of drinks, and use of protective strategies ( $p < .001$ ). Furthermore, a significant Drinks x ATRS interaction revealed that heavy-drinking students who scored high on the ATRS experienced the most harm from drinking

( $p < .01$ ). Students with high-risk attitudes showed a stronger link between typical number of drinks and negative drinking consequences. **CONCLUSIONS:** Even when controlling for students' gender, alcohol use, and protective strategies, college students' attitudes toward risks explain significant variance in drinking consequences.

**Brower, A. M., & Carroll, L. (2007). Spatial and temporal aspects of alcohol-related crime in a college town. *Journal of American College Health, 55*(5), 267–275.**

**OBJECTIVE:** The authors aimed to clarify crime “movement” through the city of Madison to focus efforts to address consequences of student drinking. The authors examined all crime reported by police during the 2003 year. **METHODS:** Using geographical information system (GIS) mapping and 2003 crime data from the University of Wisconsin-Madison and the city of Madison, the authors investigated the relationships among high-density alcohol outlets and various city neighborhoods. **RESULTS:** Different categories of crime showed different temporal and spatial patterns: Serious crimes peaked between 2 and 3AM, coinciding with bar closing time. Less serious crimes peaked between 11PM and midnight. Reports of vandalism peaked in the morning and afternoon. “Hotspots” for different crimes moved throughout the downtown. Results were consistent with problems associated with high-risk student drinking in college communities. **CONCLUSION:** These results and maps generated by GIS led directly to changes made by city and university officials to address high-risk drinking.

**Brown, J. L., & Venable, P. A. (2007). Alcohol use, partner type, and risky sexual behavior among college students: Findings from an event-level study. *Addictive Behaviors, 32*(12), 2940–2952.**

**Abstract:** Alcohol use is prevalent among college students and may contribute to elevated rates of sexual risk taking. Using event-level data, the hypothesis that partner type would moderate the effect of alcohol consumption on condom use was tested. Sexually active college students ( $N = 330$ ; 67% female) reported on characteristics of their most recent sexual encounter, including partner type, alcohol use, and condom use, along with measures of sex-related alcohol expectancies, sensation seeking, and typical alcohol use. Unprotected vaginal sex (UVS) was reported by 39% of the sample and 32% reported alcohol use prior to sex. For the complete sample, UVS was just as likely for non-drinking events as for events involving alcohol use. However, for sexual encounters involving a non-steady partner, alcohol consumption was associated with an increase in UVS, whereas rates of UVS did not vary by drinking status for encounters involving a steady partner. These effects remained in analyses that controlled for sex-related alcohol expectancies, sensation seeking, and typical alcohol use. Findings confirm that the effects of alcohol vary according to the context in which it is used.

**Corbin, W. R., Gearhardt, A., & Fromme, K. (2008). Stimulant alcohol effects prime within session drinking behavior. *Psychopharmacology, 197*(2), 327–337.**

Individual differences in subjective alcohol effects have been shown to differ by risk status (e.g., family history of alcoholism) and to predict future risk for alcohol-related problems. Presumably, individual differences in both stimulant and sedative responses affect the rewarding value of drinking which, in turn, impacts future drinking behavior. Although plausible, this theoretical model is largely untested. The current study attempted to provide experimental evidence for the impact of subjective alcohol responses on within session drinking behavior. Using a placebo-controlled between-subjects alcohol administration paradigm, experiences and evaluations of stimulant and

sedative alcohol effects (after a target dose of 0.06 g<sup>0</sup>%) were assessed as predictors of ad-libitum consumption in the context of anticipatory stress. Analyses indicated that an initial dose of alcohol increased experiences of both stimulation and sedation although stimulant effects were evaluated much more positively. In addition, stimulant effects after a priming dose predicted further consumption, whereas sedative effects did not. At least among moderate to heavy drinking college students, stimulant alcohol effects are more reinforcing and predict within session drinking behavior under social stress. Increased attention should be given to stimulant alcohol effects as a risk factor for excessive consumption in this population. Incorporating information about stimulant alcohol effects in prevention and intervention programs may also be important if additional research supports the current results.

**Dams-O'Connor, K., Martens, M. P., & Anderson, D. A. (2006). Alcohol-related consequences among women who want to lose weight. *Eating Behaviors*, 7(3), 188–195.**

Previous research has identified a positive relationship between disordered eating behaviors and heavy alcohol use, demonstrating that alcohol use is heavier among individuals with eating disorders or who demonstrate significant symptoms of disordered eating. The purpose of this study was to examine whether this relationship also exists among women displaying milder disordered eating attitudes, defined by a stated desire to lose weight despite maintaining a healthy body weight. Participants in this study were 255 female college students at a large public university in the northeast region of the United States who were either under- or of normal body weight. Results indicated that women who reported a desire to lose weight were significantly more likely to experience several negative alcohol-related consequences, including doing something later regretted and having forced intercourse than those without a desire to lose weight. Results also indicated that the use of protective behavioral strategies was associated with fewer alcohol-related problems among this group. Implications for interventions and future research studies are discussed.

**Derby, D. C., & Smith, T. J. (2008). Exploring the factorial structure for behavioral consequences of college student drinking. *Measurement and Evaluation in Counseling and Development*, 41(1), 32–41.**

A paramount concern on college campuses is drinking. Although research concerning student alcohol use on college campuses is not new; the number of studies within the context of community colleges is scant. This study investigates the factor structure of behavioral consequences data. Results suggested that 2 factors best described the data.

**Devos-Comby, L., & Lange, J. E. (2008). Standardized measures of alcohol-related problems: A review of their use among college students. *Psychology of Addictive Behaviors*, 22(3), 349–361.**

College students' alcohol consumption has received considerable attention in the scientific literature and the media for its impact on students and the college community. Misuse of alcohol can lead to a wide range of consequences, the most severe being alcohol abuse, dependence, and death. Researchers have struggled to develop effective methods to assess problems related to alcohol, and the literature on college drinking lacks a strong theoretical framework for such assessment. The authors contend that measures of alcohol-related problems for college students should assess specific dimensions pertaining to 3 main domains: alcohol abuse, alcohol dependence, and what the authors define as risky drinking. The authors examined how existing measures fit into this model. In

a comprehensive review of the college literature, the authors identified 9 measures (and their revised versions) assessing alcohol-related problems. Their analysis revealed that most measures do not assess comprehensively the domains outlined, and instead provide only partial assessments of the potential consequences of drinking for college students. The authors include directions for future research so that measurement of drinking consequences for college students can be refined.

**Do Amaral, M. B., Lourenço, L. M., & Ronzani, T. M. (2006). Beliefs about alcohol use among university students. *Journal of Substance Abuse Treatment, 31*(2), 181–185.**

The aim of this study was to analyze and compare standards of consumption and beliefs about alcohol among university students. There were 255 students who participated in this study. Of all the students, 61 were taking up psychology, 106 were taking up medicine, and 88 were taking up business administration. We used a sociodemographic questionnaire, the Inventory of Personal Expectations and Beliefs About Alcohol, and the Alcohol Use Disorders Identification Test (AUDIT) as study instruments. Of the total sample, 83.9% consumed alcohol. There was good correlation between the marks in the inventory and the total score in the AUDIT-R (0.519;  $p < .01$ ); the more positive the beliefs about alcohol and its effects were, the higher the scores in the AUDIT were. Many beliefs are associated with risk behaviors, and identifying them can contribute to prevention strategies and health promotion. Alcohol abuse and its consequences, especially for young people, are important aspects of public health and justify studies such as this one. Action strategies must be wide-reaching and directed toward cultural change. They must serve to foster discussions and take into account the real implications that alcohol use has for public health.

**Duranceaux, N. C. E., Schuckit, M. A., Luczak, S. E., Eng, M. Y., Carr, L. G., & Wall, T. L. (2008). Ethnic differences in level of response to alcohol between Chinese Americans and Korean Americans. *Journal of Studies on Alcohol and Drugs, 69*(2), 227–234.**

**OBJECTIVE:** Koreans have higher rates of alcohol-use disorders and family history of alcoholism, compared with Chinese. These differences likely reflect both environmental and genetic influences. One genetically influenced characteristic that may contribute to these ethnic differences is level of response to alcohol. Variant alleles of aldehyde dehydrogenase (ALDH2) and alcohol dehydrogenase (ADH1B) genes are prevalent in individuals of Asian heritage and have been associated with an increased level of response to alcohol and a decreased risk for alcohol dependence. Additionally, a low level of response to alcohol is more common in individuals with a first-degree family history of alcoholism and is predictive of increased risk for this disorder. It also is possible that sociocultural factors have an impact on an individual's response to alcohol. The current study examined self-report level of response to alcohol, ALDH2 and ADH1B, country of origin, and family history of alcoholism in 154 Chinese- and 181 Korean-American college students. **METHOD:** Participants were evaluated via in-person interviews and genotyped at the ALDH2 and ADH1B loci. **RESULTS:** Ethnicity was significantly related to level of response to alcohol, with Koreans having a lower self-reported level of response than Chinese. This relationship remained significant after considering the effects of gender, height, weight, quantity and frequency of alcohol consumption (over the previous 90 days), ALDH2 genotype, ADH1B genotype, country of origin, and first-degree family history of alcohol dependence. **CONCLUSIONS:** The results suggest that a low level of response to alcohol may contribute to the increased risk for alcohol abuse and dependence found in Koreans, relative to Chinese. More research is needed to determine additional factors that may be contributing to the low alcohol response and high rates of alcoholism in Koreans.

**Fischer, S., & Smith, G. T. (2008). Binge eating, problem drinking, and pathological gambling: Linking behavior to shared traits and social learning. *Personality and Individual Differences, 44*(4), 789–800.**

Varied definitions of the construct impulsivity may account for inconsistencies in studies that examine its relationship to bulimic symptoms, pathological gambling, and alcohol abuse. We examined the influence of urgency, sensation seeking, lack of planning, and lack of persistence on these three addictive behavior patterns in 246 college students. In structural equation modeling analyses that included all four constructs, only urgency, defined as the tendency to act rashly when distressed, explained significant variance in symptom level for each of the three addictive behaviors. Sensation seeking related to frequency of gambling and drinking, but not to symptoms of abuse. Additionally, behavior specific expectancies moderated the effect of urgency on gambling for men and binge eating for women. Urgency may influence vulnerability to many types of addictive behaviors. However, whether or not individuals engage in drinking, gambling, or binge eating may be influenced by behavior specific expectancies.

**Frings, D., Hopthrow, T., Abrams, D., Hulbert, L., & Gutierrez, R. (2008). Groupdrink: The effects of alcohol and group process on vigilance errors. *Group Dynamics: Theory, Research, and Practice, 12*(3), 179–190.**

This research examined how group processes alter the impact of alcohol on a judgment task requiring vigilance. The authors compared two competing explanations, deindividuation and group monitoring, for the possible effects of alcohol. Two hundred and eighty-six undergraduates with normal drinking habits undertook a vigilance task alone or in four-person groups having consumed either alcohol (calculated to achieve up to .08 blood alcohol content) or a placebo. The vigilance task required them to count occurrences of the word “the” in a spoken passage. Alcohol significantly impaired the performance of individuals but not groups. Group members performed at a similar level in both conditions, making fewer errors than individuals in the alcohol condition. The fit of different decision-making models were tested. In both the alcohol and placebo conditions, group consensus was predicted by processes consistent with the group monitoring hypothesis. The evidence highlights that under certain conditions, group process can compensate for the cognitively impairing effects of alcohol on individuals.

**Goldstein, A. L., Barnett, N. P., Pedlow, C. T., & Murphy, J. G. (2007). Drinking in conjunction with sexual experiences among at-risk college student drinkers. *Journal of Studies on Alcohol and Drugs, 68*(5), 697–705.**

**OBJECTIVE:** The primary aim of this article was to examine event-level associations between alcohol use and sexual risk taking across first and repeat oral and vaginal sex encounters among at-risk college student drinkers. **METHOD:** Participants (n = 221; 51.1% women) provided information on alcohol consumption, sexual activity, and event-level data on their most recent (repeat and first) experiences with oral and vaginal sex. **RESULTS:** Of the total sample, 80.5% reported ever engaging in oral or vaginal sex. Alcohol use was more likely in new, compared with, repeat sexual partnerships. In addition, for recent vaginal sex experiences with a repeat partner, alcohol use was more likely among those who were less committed to the relationship. For new sexual partnerships, regardless of the type of sex experience, knowing the partner for less time was associated with an increased likelihood of drinking. Alcohol use was also associated with fewer discussions of topics pertinent to safe sexual practices. Finally, there was a tendency for drinking in

conjunction with a new vaginal sex experience to be associated with a lower likelihood of contraceptive use. **CONCLUSIONS:** These findings highlight the need for integrated interventions targeting alcohol use and risky sexual practices among high-risk college students, with a particular focus on alcohol use during new sexual partnerships and the often-overlooked connection between drinking and oral sex experiences.

**Goudriaan, A. E., Grekin, E. R., & Sher, K. J. (2007). Decision making and binge drinking: A longitudinal study. *Alcoholism: Clinical and Experimental Research, 31(6)*, 928–938.**

**BACKGROUND:** Behavioral decision making, as measured by the Iowa Gambling Task (IGT) is found to be diminished in individuals with substance dependence and other types of disinhibitory psychopathology. However, little is known regarding the relation between heavy alcohol use and decision-making skills in young adults. This study therefore investigated whether binge drinking is related to disadvantageous decision making, as measured by the IGT. We also examined the relation between decision making and impulsivity. **METHODS:** Latent class growth analysis was used to classify college students into 4 groups (each group n=50, 50% male), based on their binge drinking trajectories over a 2-year time period (precollege through second year of college). Participants were 200 college students, divided in 4 subgroups: (1) low binge drinkers, (2) stable moderate binge drinkers, (3) increasing binge drinkers, and (4) stable high binge drinkers. A measure of decision making, the IGT, impulsivity questionnaires, and multiple indicators of heavy alcohol use were included. **RESULTS:** The stable high binge-drinking group made less advantageous choices on the IGT than the low binge-drinking group. Impulsivity was not related to decision-making performance. Decision-making performance did not differ by gender, but deck preferences and decision time patterns did differ; women preferred low frequency, high amount punishments to a greater extent than men. **CONCLUSIONS:** Although disadvantageous decision making is related to binge-drinking patterns in emerging adulthood, this relation is independent of impulsivity. Additionally, the association appears attributable to those who engage in heavy (binge) drinking at an early age, but not to age of onset of drinking in general.

**Hatzenbuehler, M. L., Corbin, W. R., & Fromme, K. (2008). Trajectories and determinants of alcohol use among LGB young adults and their heterosexual peers: Results from a prospective study. *Developmental Psychology, 44(1)*, 81–90.**

Lesbians, gays, and bisexuals (LGBs) are at increased risk for alcohol use during young adulthood, but the mechanisms remain inadequately understood. The aim of the present study was to examine the trajectories and determinants of alcohol use among LGB young adults who were sampled prospectively. The sample included 111 LGB individuals (47 women and 64 men) and 2,109 heterosexuals (1,279 women and 830 men), who were assessed at three time points: during the summer after their senior year of high school and during the fall and spring of their freshman year of college. Hierarchical linear modeling analyses indicated that lesbians consumed more alcohol than their heterosexual peers during high school, whereas gay men increased their alcohol use at greater rates than heterosexual men during the initial transition to college. Positive alcohol expectancies and social norms mediated this relation for both men and women. The results extend the generalizability of these processes and highlight the importance of considering normative social-cognitive influences in the development of alcohol use among LGB young adults.

**Jorgensen, R. S., & Maisto, S. A. (2008). Alcohol consumption and prehypertension: An investigation of university youth. *Behavioral Medicine (Washington, D.C.), 34(1)*, 21–28.**

Prehypertension and heavy alcohol consumption increase the risk for primary hypertension (PH), a major predictor of cardiovascular-related morbidity and mortality. Although undergraduate college students have exhibited prehypertensive blood pressure (BP) levels and more than 40% of undergraduates drink heavily, few researchers have examined both risk factors in the university context. In this study, the authors collected BP and self-reported quantity and frequency of alcohol consumption data from 211 undergraduates (95 women). Logistic regression analyses showed that prehypertensive undergraduates (ie, those with systolic BP  $\geq$  120 mm Hg or diastolic BP  $\geq$  85 mm Hg) were nearly 4 times more likely to consume alcohol levels associated with increased risk for developing PH. Additional research on alcohol and PH among adolescents and undergraduates is needed, with particular reference to mechanisms and reducing the risk for morbidity and mortality emanating from cardiovascular disease.

**Kramer, D. A., & Schmidt, S. R. (2007). Alcohol beverage cues impair memory in high social drinkers. *Cognition & Emotion*, 21(7), 1535–1545.**

This study examined the influence of an alcohol beverage cue on memory processes in social drinkers. High and low drinking college students viewed a series of 15 pictures of common objects with the eighth picture either of an alcohol beverage or a soda. For high drinkers, free recall of the alcohol picture was enhanced, and memory for the pictures immediately following the cue was suppressed, relative to the series containing the soda picture. No such effects were observed for light drinkers. Apparently, alcohol cues affect attention and memory in heavy social drinkers. These results have important implications for theories of memory and attention, for explanations of addictive behaviour, and for effective prevention and treatment of alcoholism.

**LaBrie, J. W., Hummer, J. F., & Pedersen, E. R. (2007). Reasons for drinking in the college student context: The differential role and risk of the social motivator. *Journal of Studies on Alcohol and Drugs*, 68(3), 393–398.**

**OBJECTIVE:** The present study examines the relationships among reasons for drinking, alcohol consumption, and alcohol-related consequences in two college-aged samples. Personal motivators such as mood enhancement and coping (tension reduction) have consistently been shown to predict problematic alcohol use, but because of the salient nature of social drinking in college, we hypothesized that social reasons for drinking would be most frequently endorsed and, in turn, predict negative consequences. **METHOD:** Two distinct samples—119 co-ed adjudicated students sanctioned by the university for violating campus alcohol policy and 106 co-ed volunteer students—completed measures assessing alcohol consumption, reasons for drinking, and consequences. Differential effects between genders were examined. **RESULTS:** Social camaraderie (SC) was the most frequently endorsed reason for drinking. Regression analyses controlling for previous drinking revealed that social reasons for drinking predicted alcohol-related problems among female students in both samples. Additionally, SC was significantly correlated with every drinking measure and problem measure at 1 month for females in both the adjudicated and the volunteer groups. Total drinks, drinking days, and heavy episodic drinking events correlated with SC for males in the adjudicated sample. **CONCLUSIONS:** For females, these results suggest a relationship between social reasons for drinking and alcohol-related consequences, which previous research has not identified. More research is needed to explore females' reasons for drinking, accompanying problems, and the underlying psychosocial traits associated with these reasons.

**LaBrie, J., Pedersen, E. R., Neighbors, C., & Hummer, J. F. (2008). The role of self-consciousness in the experience of alcohol-related consequences among college students. *Addictive Behaviors, 33*(6), 812–820.**

Heavy drinking among college students is a well-established national concern. An in-depth look at the characteristics and traits of heavy drinking students is an essential precursor to the development of successful targeted interventions with at-risk students. The current study examines the role self-consciousness (private, public, social anxiety) plays in the experience of alcohol-related consequences among a sample of 1,168 student members of campus organizations. Male gender predicted drinking in the sample, while both private self-consciousness and social anxiety predicted less drinking. Public self-consciousness predicted alcohol-related consequences over and above the variance explained by drinking for both males and females. Additionally, both gender and social anxiety moderated the effect of drinking on problems. Heavier drinking female students and heavier drinking students high in social anxiety appear more susceptible to the experience of negative consequences. These results highlight the direct and indirect impact that self-consciousness and gender have on college students' experience of alcohol-related negative consequences.

**Leigh, B. C., Morrison, D. M., Hoppe, M. J., Beadnell, B., & Gillmore, M. R. (2008). Retrospective assessment of the association between drinking and condom use. *Journal of Studies on Alcohol and Drugs, 69*(5), 773–776.**

**OBJECTIVE:** Retrospective reports of the association between drinking and high-risk sexual behavior can be biased by implicit theories of the effects of drinking or may represent post hoc justifications instead of accurate reports of behavior. Using data from a daily diary study, we compared daily reports of condom use when drinking and not drinking with the same participants' reports of these behaviors from a retrospective questionnaire administered after diary collection was complete. **METHOD:** Participants included adolescents (n=145), adult sexually transmitted disease clinic clients (n=167), college students (n=145), and men who have sex with men (n=147). All participants reported their alcohol consumption and sexual activity daily for 8 weeks and then completed a retrospective questionnaire about their behavior over the diary period. **RESULTS:** Participants' retrospective judgments about whether they used condoms more or less when drinking were not significantly related to their behavior as reported in the diary. Fewer than two thirds of the participants were accurate in their recollection of the association of condom use and drinking. Teenagers and men who have sex with men were more likely to retrospectively overestimate the negative effect of alcohol on condom use. **CONCLUSIONS:** Retrospective questions about the association between drinking and condom use were consistent with actual behavior only among people who consistently either never or always used condoms. These individuals correctly reported that drinking had no effect on their condom use. For people whose condom use varies, questions about associations between drinking and sex may be difficult to answer, owing to their conditional nature, and may lead to error.

**Leigh, B. C., Vanslyke, J. G., Hoppe, M. J., Rainey, D. T., Morrison, D. M., & Gillmore, M. R. (2008). Drinking and condom use: Results from an event-based daily diary. *AIDS and Behavior, 12*(1), 104–112.**

Although it is often assumed that drinking alcohol interferes with condom use, most studies on this topic do not meet the conditions required for causal interpretation. We examined the association of drinking to condom use using data from diaries of alcohol use and sexual encounters, collected over

8 weeks from college students and clients of a sexually transmitted disease clinic. This method establishes the temporal relationships between drinking and condom use and controls for individual differences by using a within-subjects analysis. Multilevel models that predicted condom use from alcohol use before the sexual encounter, partner type, and the use of other contraception showed that drinking before sex was unrelated to condom use. These results do not support the persistent notion that alcohol causes people to engage in sexual risk that they would avoid when sober; instead, people tend to follow their usual pattern of condom use, regardless of alcohol use.

**Mallett, K. A., Bachrach, R. L., & Turrisi, R. (2008). Are all negative consequences truly negative? Assessing variations among college students' perceptions of alcohol related consequences. *Addictive Behaviors, 33*(10), 1375–1381.**

Brief feedback sessions have been shown to reduce alcohol consumption in college student samples. However, these feedback sessions show mixed results in reducing negative consequences of alcohol consumption. Because the discussion of alcohol consequences is a component of feedback sessions, it was seen as important to evaluate the degree to which college students perceive these consequences as negative. The present study assessed college students' perceptions of positivity-negativity of alcohol related consequences they experienced during the past year. The findings revealed college students' perceptions of positivity-negativity varied depending on the consequence that was assessed. Most consequences were considered negative by greater than 50% of the sample. There were six consequences that were not considered negative by the majority of the sample and of these, all were considered positive or neutral by greater than at least 50% of the sample. Finally, perceived positivity of the consequences were associated with higher weekly drinking patterns for vomiting, blackouts, regretted sex, late to work/class, skipping an evening meal, and being hungover. Results are discussed in reference to improving brief alcohol interventions for college students.

**Mallett, K. A., Lee, C. M., Neighbors, C., Larimer, M. E., & Turrisi, R. (2006). Do we learn from our mistakes? An examination of the impact of negative alcohol-related consequences on college students' drinking patterns and perceptions. *Journal of Studies on Alcohol, 67*(2), 269–276.**

**OBJECTIVE:** Little research has examined antecedents of specific drinking consequences (vomiting, regretted sex, hangover, blackouts) among college students. This research examined how students' experiences of past consequences relate to their beliefs of experiencing similar consequences in the future and how these beliefs relate to current drinking patterns. **METHOD:** Self-reported past drinking behavior and resulting consequences associated with specific occasions were assessed among 303 (66% women) college students. Students also estimated number of drinks associated with risk of experiencing future similar consequences. **RESULTS:** Paired-samples t tests indicated that students significantly overestimated the number of drinks it would take to vomit, have unwanted sexual experiences, experience hangovers, and black out in comparison with the actual self-reported number of drinks consumed the last time identical consequences were experienced. In addition, a series of multiple-regression analyses revealed that greater misperceptions between the perceived and actual number of drinks associated with each type of consequence were consistently associated with heavier drinking. **CONCLUSIONS:** Results suggest that heavier-drinking students do not learn from their mistakes but instead overestimate the amount of alcohol they can consume without experiencing negative consequences. Clinical implications of these findings are discussed in terms of augmenting brief interventions aimed at heavy-drinking college students.

**Marczinski, C. A., Combs, S. W., & Fillmore, M. T. (2007). Increased sensitivity to the disinhibiting effects of alcohol in binge drinkers. *Psychology of Addictive Behaviors, 21*(3), 346–354.**

Heavy episodic alcohol use, or binge drinking, is a serious public health problem. Binge drinking is endemic in college students and has resulted in numerous alcohol-related tragedies, including acute alcohol poisonings, falls, and automobile collisions. Such negative outcomes might occur because binge drinkers are generally more impulsive, and this impulsivity might be exacerbated under alcohol. The purpose of this study was to examine this hypothesis by comparing the acute effects of alcohol on a cognitive measure of behavioral control in binge and nonbinge drinkers. The results indicated that binge drinkers act more impulsively and report feeling more stimulated under an acute 0.65 g/kg dose of alcohol compared to nonbinge drinkers. The present finding of a heightened disinhibitory reaction to alcohol in binge drinkers may help explain the link between impulsivity and problem drinking at a more fundamental level of behavioral control.

**Marczinski, C. A., Harrison, E. L. R., & Fillmore, M. T. (2008). Effects of alcohol on simulated driving and perceived driving impairment in binge drinkers. *Alcoholism: Clinical and Experimental Research, 32*(7), 1329–1337.**

**BACKGROUND:** Binge drinking (heavy episodic alcohol use) is associated with high rates of impaired driving and myriad alcohol-related accidents. However, the underlying reasons for the heightened accident risk in this demographic group are not known. This research examined acute alcohol effects on simulated driving performance and subjective ratings of intoxication and driving ability in binge and nonbinge drinkers. **METHODS:** Young social drinking college students (24 binge drinkers and 16 nonbinge drinkers) participated in this study. Participants attended a session during which they received a moderate dose of alcohol (0.65 g/kg) and a session during which they received a placebo. A simulated driving task measured participants' driving performance in response to each dose. Subjective responses to each dose were also assessed, including ratings of sedation, stimulation, and driving ability. **RESULTS:** The acute dose of alcohol impaired multiple aspects of driving performance in both binge and nonbinge drinkers. Under alcohol, all participants had greater difficulty in maintaining their lane position, maintaining the appropriate speed and made multiple driving errors compared to placebo performance. By contrast, compared with nonbinge drinkers, binge drinkers reported feeling less sedated by the alcohol and reported having a greater ability to drive following the acute dose of alcohol. **CONCLUSIONS:** Reduced subjective intoxication and perceived driving impairment in binge drinkers may account for the greater accident risk in this demographic group. Binge drinkers may lack the internal sedation cue that helps them accurately assess that they are not able to effectively drive a vehicle after drinking.

**Miller, K., Danner, F., & Staten, R. (2008). Relationship of work hours with selected health behaviors and academic progress among a college student cohort. *Journal of American College Health, 56*(6), 675–679.**

Approximately 57% of college students work while attending school. Health risks related to working while in college have not been widely studied. **Objective:** The authors' purpose in this study was to determine associations between hours worked, binge drinking, sleep habits, and academic performance among a college student cohort. **Participants and Methods:** The authors randomly selected a sample of 1,700 undergraduates from a southeastern US university and mailed to them a

survey requesting a variety of self-reported health behaviors and hours worked. A total of 903 completed questionnaires were received, indicating a response rate of 57.3%. Results: Binge drinking, less sleep, and lower academic performance were significantly associated with working 20 or more hours per week. Those variables were not associated with working fewer than 20 hours per week. Conclusions: Although administrators and others in higher education are aware of the impact of economics on a school's ability to operate, they may not be aware of the impact on students' health.

**Mohr, C. D., Brannan, D., Mohr, J., Armeli, S., & Tennen, H. (2008). Evidence for positive mood buffering among college student drinkers. *Personality and Social Psychology Bulletin*, 34(9), 1249–1259.**

Positive experiences play an important role in buffering the effects of negative experiences. Although this process can play out in a myriad of contexts, the college context is one of particular importance because of significant concerns about student stress levels and alcohol abuse. Building on evidence that at least some students drink in response to negative experiences, we considered the possibility that positive moods would moderate college student negative mood-drinking relationships. Using a Web-based daily process study of 118 (57% women) undergraduate student drinkers, the authors reveal that positive moods indeed buffer the effects of negative moods on student drinking, depending on the mood and drinking context. Furthermore, the buffering of ashamed mood appears to explain the buffering of other negative moods. Implications of these findings are considered in terms of the relationship between negative self-awareness and drinking to cope.

**O'Brien, M. C., McCoy, T. P., Rhodes, S. D., Wagoner, A., & Wolfson, M. (2008). Caffeinated cocktails: Energy drink consumption, high-risk drinking, and alcohol-related consequences among college students. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 15(5), 453–460.**

**OBJECTIVES:** The consumption of alcohol mixed with energy drinks (AmED) is popular on college campuses in the United States. Limited research suggests that energy drink consumption lessens subjective intoxication in persons who also have consumed alcohol. This study examines the relationship between energy drink use, high-risk drinking behavior, and alcohol-related consequences. **METHODS:** In Fall 2006, a Web-based survey was conducted in a stratified random sample of 4,271 college students from 10 universities in North Carolina. **RESULTS:** A total of 697 students (24% of past 30-day drinkers) reported consuming AmED in the past 30 days. Students who were male, white, intramural athletes, fraternity or sorority members or pledges, and younger were significantly more likely to consume AmED. In multivariable analyses, consumption of AmED was associated with increased heavy episodic drinking (6.4 days vs. 3.4 days on average;  $p < 0.001$ ) and twice as many episodes of weekly drunkenness (1.4 days/week vs. 0.73 days/week;  $p < 0.001$ ). Students who reported consuming AmED had significantly higher prevalence of alcohol-related consequences, including being taken advantage of sexually, taking advantage of another sexually, riding with an intoxicated driver, being physically hurt or injured, and requiring medical treatment ( $p < 0.05$ ). The effect of consuming AmED on driving while intoxicated depended on a student's reported typical alcohol consumption (interaction  $p = 0.027$ ). **CONCLUSIONS:** Almost one-quarter of college student current drinkers reported mixing alcohol with energy drinks. These students are at increased risk for alcohol-related consequences, even after adjusting for the amount of alcohol consumed. Further research is necessary to understand this association and to develop targeted

interventions to reduce risk.

**Porter, S. R., & Pryor, J. (2007). The effects of heavy episodic alcohol use on student engagement, academic performance, and time use. *Journal of College Student Development, 48*(4), 455–467.**

Alcohol use literature has linked heavy episodic alcohol use and academic consequences, but has not examined the influence of such use on student engagement. This study uses survey data from over 40,000 students at 28 selective private colleges and universities to examine the connection between heavy episodic alcohol use and engagement. The strongest negative effects of heavy episodic drinking are on student–faculty interaction, with these effects most common at research universities and less common at coed colleges and women’s colleges.

**Read, J. P., Beattie, M., Chamberlain, R., & Merrill, J. E. (2008). Beyond the “Binge” threshold: Heavy drinking patterns and their association with alcohol involvement indices in college students. *Addictive Behaviors, 33*(2), 225–234.**

Despite its ubiquity, the term “Binge” drinking has been controversial. Among other things, the grouping of drinkers into a single risk category based on a relatively low threshold may not capture adequately the nature of problem drinking behaviors. The present study is an initial examination of the utility of delineating heavy drinkers into three groups; those who typically drink below the traditional “Binge” cutoff (less than 4+/5+ drinks per occasion for women/men), those who met traditional “Binge” drinking criteria, and a higher “Binge” cutoff of 6+/7+ (women, men). We examined differences in drunkenness, drinking frequency, and unique types of alcohol problems. Participants (N=356; 184 women) were regularly drinking college students at a mid-sized U.S. university who completed a battery of self-report measures including a calendar of daily alcohol consumption, and the 8-domain Young Adult Alcohol Consequences Questionnaire (YAACQ). Estimated Blood Alcohol Levels (eBALs) were calculated. We found that the standard 4+/5+ drink “Binge” cutoff distinguishes drinkers across some but not all indices of alcohol involvement. “Binge” drinkers differed from their “Non-Binge” counterparts on eBAL, but for other indicators (drinking frequency, total alcohol consequences), only “Heavy Binge” drinkers differed significantly from “Non-Binge” drinkers. Importantly, “Heavy Binge” drinkers experienced higher levels of those specific consequences associated with more problematic alcohol involvement. Findings suggest that not all “Binge” drinkers drink alike, are equally drunk, or experience similar consequences. As such, there may be utility in distinguishing among heavy drinkers, in order to focus appropriately on those at greatest risk for different types of consequences.

**Reis, J. (2007). Bad luck or bad decisions: College students’ perceptions of the reasons for and consequences of their alcohol overdose. *Journal of Drug Education, 37*(1), 71–81.**

Reasons for and immediate consequences of an alcohol overdose were explored for 217 undergraduate students requiring a medical emergency transport because of excessive alcohol consumption. The sample was categorized into 26 students attributing their overdose solely to bad luck and 191 students citing bad decision making as an explanation. A discriminant analysis portrayed the bad luck students as more likely to change the type of alcohol consumed, worrying more about problems with friends, less likely to change how much they drink and less likely to feel that they learned something about themselves. Friends were not named as being involved, but lapses in knowing how to pace consumption were frequently cited. Design of preventive educational

programs for underage drinkers with the aim of avoiding an overdose is discussed.

**Simons, J. S., & Carey, K. B. (2006). An affective and cognitive model of marijuana and alcohol problems. *Addictive Behaviors, 31*(9), 1578–1592.**

This study examined a six-month prospective model of marijuana and alcohol problems among college students. Among marijuana users, there was an indirect positive association between use utility and Time 1 (T1) marijuana-related problems through T1 marijuana use, whereas there was a direct positive association between affect lability and T1 marijuana-related problems. A multi-group analysis of alcohol problems compared models for users of alcohol and marijuana and users of alcohol only. For both groups, there was a direct positive association between T1 use utility and T2 alcohol consumption and an indirect association with T2 alcohol problems via alcohol consumption. Impulsivity was directly and positively associated with T1 alcohol problems among the alcohol-only group. For the alcohol-only group, impulsivity moderated the association between T2 consumption and problems, making it stronger. Associations between affect lability and alcohol problems as well as alcohol consumption and problems were stronger in the alcohol and marijuana group. Results support differential pathways to substance-related problems, an indirect pathway, in which problems are an unintended consequence of goal-directed use activity, as well as direct and interactive pathways in which problems may be viewed as consequences of broader regulatory problems.

**Singleton, R. A., Jr. (2007). Collegiate alcohol consumption and academic performance. *Journal of Studies on Alcohol and Drugs, 68*(4), 548–555.**

**OBJECTIVE:** Although studies consistently have found a negative bivariate association between alcohol use and academic performance among college students, some research suggests that this association largely results from student differences at matriculation. The present study examines this relationship while controlling for key background factors. **METHOD:** Personal interview surveys were conducted for four consecutive semesters with random samples of students at a small, liberal arts college, resulting in a combined sample of 754 (392 women). The interviews measured alcohol consumption, gender, race, athletic status, academic class, parents' education and income, and frequency of attending off-campus parties; and 94% of the sample granted permission to obtain grade point average (GPA), high school class rank, and Scholastic Aptitude Test (SAT) scores from official college records. **RESULTS:** The amount of alcohol consumed correlated significantly with GPA ( $r = -.26$ ). Ordinary least squares regressions showed that gender and partying accounted for 43% of variation in alcohol consumption, and that academic class and parents' income had positive indirect effects on consumption. SAT score and class rank were the strongest predictors of GPA, but alcohol consumption remained significant when these and other variables were controlled (beta =  $-.24$  when controlling for SAT, and beta =  $-.14$  when controlling for both SAT and class rank in a smaller, biased subsample). **CONCLUSIONS:** The disparity in findings between this and previous research was explained in terms of differences in type of institution studied, which suggests the need to consider the college context and the interaction of college and individual factors in studies of college drinking.

**Ståhlbrandt, H., Andersson, C., Johnsson, K. O., Tollison, S. J., Berglund, M., & Larimer, M. E. (2008). Cross-cultural patterns in college student drinking and its consequences—A comparison between the USA and Sweden. *Alcohol and Alcoholism (Oxford, Oxfordshire), 43*(6), 698–705.**

AIMS: The aim of the study was to compare alcohol use, consequences and common risk factors between American and Swedish college students. METHODS: A secondary comparative analysis from one American and two Swedish studies in college settings. RESULTS: Swedish freshmen report higher alcohol use than US freshmen students. Swedish residence hall students report higher alcohol use than US residence hall students, but lower than American fraternity/sorority members. US students were less likely to be drinkers. Controlling for age, country moderated the relationship between family history and harmful drinking scores for women (stronger in the USA), and between expectancies and harmful drinking scores for men (stronger in Sweden), though in both cases this represented a small effect and patterns were similar overall. CONCLUSIONS: Swedish students are at higher risk for alcohol use than US students, but similar patterns between aetiological predictors and outcomes in both countries suggest that research from the USA is generalizable to Swedish students and vice versa. More research is needed to better understand unique relationships associated with age and family history.

**Thompson, K. M. (2007). Alcohol-related legal infractions and student retention. *Journal of Studies on Alcohol and Drugs*, 68(5), 689–696.**

OBJECTIVE: The present study employed municipal alcohol-related arrest reports to determine if being arrested/cited reduced the probability of academic retention. METHOD: Alcohol-related legal infraction data implicating 1,310 college students was gathered during a 4-year period. First- through third-year students were identified in the database by cross-checking names in the campus directory. A random sample of nonarrested students functioned as the comparison group (n = 856). Students not appearing in the directory the following year were defined as nonretained students. RESULTS: Retention was not affected by the experience of one alcohol-related legal infraction. Retention odds were 31% lower for students experiencing multiple arrests, however, than for nonarrested or single-arrested students. Gender moderated the association between arrest and retention, with women who had been arrested more likely to return to school than those who had not been arrested. Retention odds were higher for arrested/cited students if they were in their second or third year of college, a fraternity/sorority member, or charged with an offense other than driving under the influence. CONCLUSIONS: Multi-arrested college students are at risk for attrition. Immersion in college life may reduce the odds of attrition among arrested college students.

See also:

Benton, S. L., Downey, R. G., Glider, P. S., Benton, S. A., Shin, K., Newton, D. W., Arck, W., & Price, A. (2006). Predicting negative drinking consequences: Examining descriptive norm perception. *Journal of Studies on Alcohol*, 67(3), 399–405.

Kaysen, D., Neighbors, C., Martell, J., Fossos, N., & Larimer, M. E. (2006). Incapacitated rape and alcohol use: A prospective analysis. *Addictive Behaviors*, 31(10), 1820–1832.

Neal, D. J., Corbin, W. R., & Fromme, K. (2006). Measurement of alcohol-related consequences among high school and college students: Application of item response models to the Rutgers Alcohol Problem Index. *Psychological Assessment*, 18(4), 402–414.

**ALCOHOL ABUSE PREVENTION**

**Risk and Protective Factors**

*(Includes articles on drinking contexts and correlates of use)*

**Anderson, D. A., Simmons, A. M., Martens, M. P., Ferrier, A. G., & Sheehy, M. J. (2006). The relationship between disordered eating behavior and drinking motives in college-age women. *Eating Behaviors*, 7(4), 419–422.**

Previous research has documented that alcohol use disorders and eating disorders often co-occur. One possible reason for these high rates of co-occurrence is that problematic eating and alcohol use serve similar functions for the persons engaging in them. In particular, both have been hypothesized to serve an avoidant coping function. This study was designed to examine the relationships between drinking motives and disordered eating in a sample of college-age women. A total of 257 women completed the Eating Attitudes Test-26 (EAT-26), Rutgers Alcohol Problems Index (RAPI), and Drinking Motives Measure (DMM). As hypothesized, problematic eating and problematic drinking were positively correlated. Also, regression analyses indicated a strong relationship between problematic eating and the coping scale of the DMM, which measures avoidant coping. This study extends previous research and provides support for the idea that problematic eating and problematic drinking serve similar avoidant coping functions. This line of research may hold important implications for treatment interventions targeting comorbid alcohol use disorders and eating disorders.

**Araas, T. E., & Adams, T. B. (2008). Protective behavioral strategies and negative alcohol-related consequences in college students. *Journal of Drug Education*, 38(3), 211–224.**

*Objective:* Alcohol abuse among college students is associated with a quality of life burden. The current study replicated and extended previous research on protective behavioral strategies (PBS) by examining relationships between PBS use and negative alcohol-related consequences. *Method:* A national sample of 29,792 U. S. college students who completed the National College Health Assessment during spring 2004 was included. Using a retrospective analysis of cross-sectional data, relationships between PBS use and negative alcohol-related consequences were examined. *Results:* Greater PBS use was associated with fewer negative alcohol-related consequences, while less frequent use of PBS was correlated with increased negative alcohol-related consequences. *Discussion:* The current study findings strongly support expanded educational alcohol-intervention programs promoting greater PBS use aimed at reducing or completely alleviating negative alcohol-related consequences (e.g., BASICS, ASTP). Future research should further investigate such PBS-based intervention programs, examine the existence of latent PBS, and study use of combined PBS.

**Armeli, S., Todd, M., Conner, T. S., & Tennen, H. (2008). Drinking to cope with negative moods and the immediacy of drinking within the weekly cycle among college students. *Journal of Studies on Alcohol and Drugs*, 69(2), 313–322.**

**OBJECTIVE:** The purpose of this study was to examine among college students (N = 458; 249 women) whether drinking to cope (DTC) motives moderate the effect of daily negative mood states in predicting the onset of weekly drinking. **METHOD:** Using a secure, Internet-based survey across 2 consecutive years, participants first completed measures of drinking motives and then reported on

their mood states and alcohol use daily for 30 days. RESULTS: Multilevel discrete-time survival models indicated a significant interaction between DTC motives and anxiety in predicting the onset of drinking each week. As predicted, individuals with stronger DTC motives initiated drinking relatively earlier during high compared with low anxiety weeks. In contrast, individuals with weaker coping motives initiated drinking later during high compared with low anxiety weeks. We also found that coping motives moderated the association between anger and weekly drinking onset, with high DTC individuals showing later drinking onset on high anger weeks. CONCLUSIONS: Findings are discussed in terms of how time-to-drink models might inform us about the multiple processes involved in negative mood-related drinking, the importance of examining discrete negative mood states, and what strong endorsement of DTC motives might reflect among college students.

**Benton, S. L., Downey, R. G., Glider, P. S., Benton, S. A., Shin, K., Newton, D. W., Arck, W., & Price, A. (2006). Predicting negative drinking consequences: Examining descriptive norm perception. *Journal of Studies on Alcohol, 67*(3), 399–405.**

OBJECTIVE: This study explored how much variance in college student negative drinking consequences is explained by descriptive norm perception, beyond that accounted for by student gender and self-reported alcohol use. METHOD: A derivation sample (N=7565; 54% women) and a replication sample (N=8924; 55.5% women) of undergraduate students completed the Campus Alcohol Survey in classroom settings. RESULTS: Hierarchical regression analyses revealed that student gender and average number of drinks when “partying” were significantly related to harmful consequences resulting from drinking. Men reported more consequences than did women, and drinking amounts were positively correlated with consequences. However, descriptive norm perception did not explain any additional variance beyond that attributed to gender and alcohol use. Furthermore, there was no significant three-way interaction among student gender, alcohol use, and descriptive norm perception. CONCLUSIONS: Norm perception contributed no significant variance in explaining harmful consequences beyond that explained by college student gender and alcohol use.

**Bingham, C. R., Elliott, M. R., & Shope, J. T. (2007). Social and behavioral characteristics of young adult drink/drivers adjusted for level of alcohol use. *Alcoholism: Clinical and Experimental Research, 31*(4), 655–664.**

BACKGROUND: Alcohol consumption and drink/driving are positively correlated and many predictors of alcohol use also predict drink/driving. Past research has not fully distinguished the contributions of personal risk factors from the level of alcohol use in the prediction of drink/driving. As a result, the extent to which predictors are specific to drink/driving, versus due to a mutual association to alcohol use, is unclear. METHODS: This study examined the unique and shared risk factors for drink/driving and alcohol use, and examined the attributable risk (AR) associated with predictors of drink/driving while adjusting for alcohol use. Study data were from a telephone survey of 3,480 Michigan-licensed young adults who were drinkers. Four groups of drink/drivers were formed based on the prior 12-month maximum severity of drink/driving: (1) never drink/driving; (2) driving at least once within an hour of 1 or 2 drinks; (3) driving within an hour of 3 or more drinks or while feeling the effects of alcohol; and (4) drinking while driving. RESULTS: Lower perceived risk of drink/driving, greater social support for drinking and drink/driving, greater aggression and delinquency, more cigarette smoking, and more risky driving behaviors uniquely predicted drink/driving severity in models adjusted for alcohol use. The largest ARs were associated with social support for drinking and drink/driving and perceived risk of

drink/driving. CONCLUSIONS: These results confirm that alcohol use and drink/driving share risk factors, but also indicate that part of the variation in these factors is specific to drink/driving. Implications for interventions to reduce drink/driving are discussed.

**Borsari, B., Boyle, K. E., Hustad, J. T. P., Barnett, N. P., O'Leary Tevyaw, T., & Kahler, C. W. (2007). Drinking before drinking: Pregaming and drinking games in mandated students. *Addictive Behaviors, 32*(11), 2694–2705.**

Pregaming, the practice of consuming alcohol before attending a social function, has not received as much research attention as drinking games among college students. This study investigated the prevalence of both pregameing and drinking game participation in a sample of mandated students (N=334) who had been referred for an alcohol violation. Approximately one-third (31%) of the sample reported pregameing on the night of their referral event. Pregaming was associated with higher estimated blood alcohol content on that night, along with a greater history of pregameing and taking greater responsibility for the incident. A higher proportion of the students (49%) reported playing drinking games on the event night and reported the event to be less aversive than non-players. Neither drinking games nor pregameing was consistently related to recent alcohol consumption or problems, nor did they frequently occur together on the event night. Pregaming was a unique predictor of intoxication on the night of the referral, and drinking games were not. Therefore, pregameing and drinking games appear to be distinct activities. This research suggests methods of prevention for both activities as well as promising research directions for future research.

**Borsari, B., & Carey, K. B. (2006). How the quality of peer relationships influences college alcohol use. *Drug and Alcohol Review, 25*(4), 361–370.**

Peer relationships are consistently linked to alcohol use in college students. However, this disparate literature often reveals contradictory findings regarding the precise mechanisms of peer influence. In this review, we use an organisational framework based on social learning theory (SLT) to demonstrate how the quality of peer relationships may influence personal alcohol use. We propose that the quality of peer relationships enhance the influence of social reinforcement, modelling and cognitive processes on personal alcohol use. Research indicates that the quality of peer relationships influences drinking via three pathways: the lack or breakdown of quality peer relationships, alcohol use being an integral part of peer interactions, and if peers disapprove of alcohol use or do not drink. This conceptualisation of peer influence informs the consistent finding of gender differences in college student drinking. Limitations of the reviewed research include reliance on cross-sectional surveys, self-report and homogeneous populations. Future directions for research on quality peer relationships involve detailed longitudinal assessment and the application of advanced statistical methods.

**Borsari, B., Murphy, J. G., & Barnett, N. P. (2007). Predictors of alcohol use during the first year of college: Implications for prevention. *Addictive Behaviors, 32*(10), 2062–2086.**

The first year of college is a unique transition period, in which the student establishes a college identity and social network. Alcohol use is often part of this process, and many first-year college students develop a pattern of heavy drinking that puts them at risk for adverse consequences during their college years and into young adulthood. To better understand the development of risky alcohol use during this transition, we reviewed the literature on influences on college drinking and identified

moderators and mediators that were particularly relevant for first-year alcohol use. As the transition from high school to college presents a unique opportunity for intervention, we discuss how these moderators and mediators can inform alcohol abuse prevention programs. We also identify approaches aimed at changing the culture of alcohol use on campus. Limitations of the reviewed research are highlighted in the context of promising directions for future research.

**Buckner, J. D., Eggleston, A. M., & Schmidt, N. B. (2006). Social anxiety and problematic alcohol consumption: The mediating role of drinking motives and situations. *Behavior Therapy, 37*(4), 381–391.**

Social anxiety is inconsistently associated with alcohol use variables. To elucidate factors that contribute to the relationship between social anxiety and problematic alcohol use, the present study investigated drinking motives and drinking situations in an undergraduate sample (N=293). Social anxiety was significantly correlated with endorsement of enhancement drinking motives (i.e., drinking to enhance positive experiences or emotions) but not social or coping motives. Social anxiety was also correlated with endorsement of drinking in the following high-risk situations: unpleasant emotions, conflict with others, social pressure, and testing personal control. Importantly, enhancement motives and each of these drinking situations mediated the relationship between social anxiety and alcohol-related problems. Findings suggest that alcohol use to enhance positive affect or in response to these specific situations may account for the risk for alcohol-related problems among those with social anxiety.

**Carson, J., Barling, J., & Turner, N. (2007). Group alcohol climate, alcohol consumption, and student performance. *Group Dynamics: Theory, Research, and Practice, 11*(1), 31–41.**

This study explored the relationship between group norms for drinking and two indicators of student performance. Based on data from 96 undergraduate students (mean age = 22 years) living in 21 student houses, the multilevel hypotheses that (a) house alcohol climate is associated with student alcohol consumption, (b) student alcohol consumption is associated with student withdrawal behavior (i.e., absence from class), and (c) that student alcohol consumption mediates the link between house alcohol climate and student withdrawal behavior are supported. No link between student alcohol consumption and student academic performance (i.e., average grades) was found. Similarly, there was no empirical support for the hypothesis that house cohesion would moderate the relationship between house alcohol climate and student alcohol consumption. Implications for future research are discussed.

**Casey, P. F., & Dollinger, S. J. (2007). College students' alcohol-related problems: An autophotographic approach. *Journal of Alcohol and Drug Education, 51*(2), 8–25.**

This study related standard self-report measures to an innovative approach (the autophotographic essay) as a way to provide insight into patterns of alcohol consumption and associated problem behaviors. College students (N=135) completed self-report measures of alcohol consumption and created autophotographic essays of identity coded for alcohol content. Results indicated that “alcohol identity” related to a quantity-frequency alcohol measure, thereby replicating past findings, and also predicted alcohol-related problem behaviors rarely if ever depicted in self-photos (driving drunk, binge drinking, drinking for sake of getting drunk, and participating in drinking games). Findings suggest that alcohol identity predicts problematic alcohol use and support the photo essay as a promising methodology for exploring facets of behavior and personality.

**Chawla, N., Neighbors, C., Lewis, M. A., Lee, C. M., & Larimer, M. E. (2007). Attitudes and perceived approval of drinking as mediators of the relationship between the importance of religion and alcohol use. *Journal of Studies on Alcohol and Drugs, 68*(3), 410–418.**

**OBJECTIVE:** Previous research has consistently demonstrated that religiosity and personal importance of religion are associated with lower levels of alcohol use among both adolescents and college students. Although a number of different mechanisms have been proposed to account for this, few studies have empirically examined potential mediators of this relationship. Given the extensive literature on the impact of social norms on the drinking behavior of college students, the present study evaluates the role of perceived drinking norms as a mediator of the relationship between the importance of religion and alcohol use. Specifically, we examined both personal attitudes and perceived injunctive norms with regard to reference groups that vary in their proximity to students (i.e., close friends and typical college students). **METHOD:** Participants were 1,400 undergraduate students (60.6% women) who were assessed using self-report measures of alcohol consumption, importance of religion, attitudes, and perceived norms. **RESULTS:** Results indicated that, consistent with the hypotheses, personal attitudes were the strongest mediator of the relationship between importance of religion and alcohol use, followed by the approval of close friends, and, to a lesser extent, the approval of typical college students. **CONCLUSIONS:** These findings suggest that importance of religion may have an indirect effect on alcohol use via personal attitudes and the perceived approval or disapproval of important others, and this relationship varies as a function of reference group. Implications for interventions that incorporate information on social norms are discussed.

**Clapp, J. D., Min, J. W., Shillington, A. M., Reed, M. B., & Croff, J. K. (2008). Person and environment predictors of blood alcohol concentrations: A multi-level study of college parties. *Alcoholism: Clinical and Experimental Research, 32*(1), 100–107.**

**Aims:** This study builds upon previous research by assessing the relationship of breath blood alcohol concentrations (BrAC) to environmental and individual characteristics. **Design:** We conducted a multi-level study of college parties. Our design included observational measures of party environments, a brief self-administered questionnaire, and the collection of breath samples from partygoers. **Setting:** Data were collected in private residences of students living in a neighborhood adjacent to a large public university located in the Southwestern United States. **Participants:** A total of 1,304 individuals attending 66 parties participated in the study. **Measures:** Observational measures of party characteristics were made by 2 trained research assistants at each party. Four to 5 trained interviewers administered a brief field survey to partygoers at each party. In addition, the trained interviewers collected breath samples using handheld breathalyzer devices. **Findings:** Hierarchical linear modeling analyses revealed significant variation at the party and individual levels. At the individual level, motivations to socialize were significantly associated with lower BrAC, while drinking games and providing the sample after 11:00 pm were associated with higher BrACs. At the party level, large parties were significantly associated with lower BrACs while reports of many intoxicated partygoers were associated with higher BrACs. Finally, we identified a significant gender by theme party interaction, indicating women had higher BrACs at theme parties relative to nontheme parties; however, BrACs for men were similar regardless of the type of party attended. **Conclusions:** Alcohol consumption among young adults in natural settings is a function of both person and environmental factors.

**Clapp, J. D., Reed, M. B., Holmes, M. R., Lange, J. E., & Voas, R. B. (2006). Drunk in public, drunk in private: The relationship between college students, drinking environments and alcohol consumption. *American Journal of Drug and Alcohol Abuse, 32*(2), 275–285.**

This study examines environmental differences in public (bars) and private (parties) drinking settings among of-age (21 and up years of age) and underage (18-20 years of age) college students attending college near the US/Mexico border. A random telephone survey of graduate and undergraduate students attending two large public universities in the southwestern United States was conducted during the 2000-2003 academic years. A university-based social science research laboratory conducted the telephone interviews with respondents who reported an occasion in the past 28 days where alcohol was being consumed (N = 4,964). The data were analyzed using ordinary least squares multiple regression. The results suggest that drinking settings contributed to the amount of alcohol consumed by respondents. Additionally, environmental factors contributing to drinking vary by setting. In general, having many people intoxicated at an event, BYOB parties, playing drinking games, and having illicit drugs available contribute to heavier drinking.

**Cogan, R., & Ballinger, B. C., III. (2006). Alcohol problems and the differentiation of partner, stranger, and general violence. *Journal of Interpersonal Violence, 21*(7), 924–935.**

To explore the relationship between alcohol problems and physical violence with partners and strangers, 457 college men and 958 college women with low, intermediate, or high scores on the Short Michigan Alcohol Screening Test reported conflict tactics on the Conflict Tactics Scale in the past year to and by partners and strangers. More men than women had high alcohol problems scores. Men with alcohol problems were more likely than other men to commit violence toward strangers or to partners and strangers. However, men with alcohol problems were not more likely than other men to commit violence toward partners only. Among women, alcohol problems had little relationship to committing violence or being the victim of violence.

**Doumas, D. M., Turrisi, R., & Wright, D. A. (2006). Risk factors for heavy drinking and associated consequences in college freshmen: Athletic status and adult attachment. *The Sport Psychologist, 20*(4), 419–434.**

This study examined athletic status and adult attachment as risk factors for high-risk drinking in 249 freshmen. Results of hierarchical regression analyses indicated attachment avoidance was related positively to high-risk drinking for former high school and collegiate athletes, but related inversely to high-risk drinking for non-athletes. Further, athletes with high attachment avoidance reported the highest levels of heavy drinking and associated consequences. Findings suggest athletes with high attachment avoidance may use drinking as a coping strategy to manage discomfort associated with social situations and this strategy is likely an extension of patterns established in high school. Clinical implications include providing prevention programs for both high school and collegiate athletes, with an emphasis on targeting interpersonal avoidance and discomfort with relationships.

**Durant, R. H., McCoy, T. P., Champion, H., Parries, M. T., Mitra, A., Martin, B. A., Newman, J., & Rhodes, S. D. (2008). Party behaviors and characteristics and serial drunkenness among college students. *Journal of Studies on Alcohol and Drugs, 69*(1), 91–99.**

OBJECTIVE: This study examined the relationships between party behaviors and social contextual factors for the largest party attended by college students and serial drunkenness by students over the

3 traditional weekend party days (Thursday-Saturday). **METHOD:** On two separate 3-day party time periods in the spring of 2006, a random sample of 3,600 students from two large public universities completed a Web-based survey. The survey was administered on a Sunday evening and assessed alcohol consumption, party behaviors and observations, and other social contextual factors occurring during the 3 previous days. Serial drunkenness was measured as having gotten drunk on 0-3 days for the specified 3-day period for students who had attended one or more parties. **RESULTS:** Multivariate analysis indicated that serial drunkenness was associated with being white, being single without a partner, having ridden with a drinking driver over the weekend, drunken behaviors by other students at the largest party attended, the number of drinks the student consumed before attending the party, the number of drinks consumed at the largest party, and the number of friends that attended the party with the student. A lower frequency of serial drunkenness was associated with the perception that alcohol was difficult to obtain. **CONCLUSIONS:** The availability of alcohol before and at the largest party attended over the weekend, attending the party with a larger number of friends, and drunken behaviors by other students at the party, plus riding with a drinking driver after the party, were associated with serial drunkenness over the 3-day period by the students at these two universities.

**Edwards, C., Dunham, D. N., Ries, A., & Barnett, J. (2006). Symptoms of traumatic stress and substance use in a non-clinical sample of young adults. *Addictive Behaviors, 31*(11), 2094–2104.**

The link between symptoms of traumatic stress and substance abuse is well established in the literature, but the specific features of trauma that contribute to substance abuse remain elusive and have not been studied in non-clinical samples. The current study assessed the relationship between traumatic symptoms and alcohol use in a sample of Midwestern college students. Using multiple regression analysis, traumatic stress symptoms, overall, accounted for 55% of the variance in use of alcohol. Most importantly, dissociative behavior, intrusive thoughts, as well as low levels of tension reduction behaviors uniquely contributed to the self-reported use of alcohol. We discuss the importance of educating college-aged students about this relationship as a preventative measure to alcohol and other drug use/abuse.

**Fadardi, J. S., & Cox, W. M. (2008). Alcohol-attentional bias and motivational structure as independent predictors of social drinkers' alcohol consumption. *Drug and Alcohol Dependence, 97*(3), 247–256.**

Prior studies aimed at explaining cognitive-motivational reasons for drinking have focused on either cognitive or motivational factors, but not on both. This study examined the ability of both alcohol-attentional bias and motivational structure to predict alcohol consumption. Participants were university students (N = 87) who completed a battery of tests, including the Personal Concerns Inventory (a measure of adaptive and maladaptive motivation), an alcohol Stroop test (a measure of alcohol-attentional bias), and an alcohol-use inventory. Regression, moderation, and mediation analyses showed that (a) maladaptive motivation and alcohol-attentional bias were positive predictors of alcohol consumption after participants' age, gender, and executive cognitive functioning had been controlled, and (b) maladaptive motivation and alcohol-attentional bias independently predicted alcohol consumption. The implications of the results for both theory and practice are discussed.

**Fischer, J. L., Forthun, L. F., Pidcock, B. W., & Dowd, D. A. (2007). Parent relationships,**

**emotion regulation, psychosocial maturity and college student alcohol use problems. *Journal of Youth and Adolescence*, 36(7), 912–926.**

This study tested associations between problems in parent-youth relationships and problems with alcohol use among college students (N = 1592) using structural equation modeling. Hypotheses were that relationships between both substance-specific parenting factors (parental drinking) and non-substance-specific parenting factors (parental intrusive control and lack of support) and college student drinking behaviors would be mediated by the developmental tasks of managing difficult emotions and establishing a mature psychosocial identity. Sex, ethnicity and age were entered as control variables in the analyses and were tested for moderating effects. Results showed that the unconstrained model for males and females differed significantly from a model in which the two groups were constrained to be similar. Among young women, emotion regulation and psychosocial maturity were partial mediators of the effects of parent problems on alcohol use problems. Among young men, parent problems were indirectly related to alcohol use problems through emotion regulation. Implications for alcohol use prevention activities on college campuses are discussed.

**Fischer, S., Smith, G. T., Annus, A., & Hendricks, M. (2007). The relationship of neuroticism and urgency to negative consequences of alcohol use in women with bulimic symptoms. *Personality and Individual Differences*, 43(5), 1199–1209.**

The purpose of this study was to test hypotheses regarding why eating disordered college women report more frequent negative consequences of alcohol use than controls. Thirty-two women with eating disorder (ED) symptoms and 34 women without eating disorder symptom were individually administered structured clinical interviews regarding alcohol abuse/dependence and the eating disorders examination. They also completed self-report measures of neuroticism, urgency, sensation seeking, planning, and persistence. Women with ED symptoms reported more negative consequences of alcohol use, and higher levels of neuroticism and urgency. However, the two groups did not differ on any other personality variable. The presence of high levels of trait urgency moderated the effect of neuroticism on the negative consequences of drinking such that women with high levels of both traits reported the most consequences related to alcohol use. Rash affect regulation may be a characteristic of ED women and influence consequences of alcohol use.

**Gilles, D. M., Turk, C. L., & Fresco, D. M. (2006). Social anxiety, alcohol expectancies, and self-efficacy as predictors of heavy drinking in college students. *Addictive Behaviors*, 31(3), 388–398.**

Burke and Stephens (1999) [Burke, R.S., Stephens, R.S. Social anxiety and drinking in college students: A social cognitive theory analysis. *Clinical Psychology Review*, 19, (1999) 513-530.] proposed a social cognitive theory of heavy drinking in college students. According to this theory, alcohol expectancies for social facilitation and self-efficacy for refusing heavy drinking in anxiety-producing social situations moderate the relationship between social anxiety and drinking. In the current study, a significant three-way interaction was observed among social anxiety, expectancies, and self-efficacy when amount and frequency of drinking was the dependent variable. As predicted by the model, socially anxious college students with low self-efficacy for avoiding heavy drinking in social situations and high positive expectancies for social facilitation reported more alcohol consumption than other socially anxious individuals.

**Glindemann, K. E., Wiegand, D. M., & Geller, E. S. (2007). Celebratory drinking and**

**intoxication: A contextual influence on alcohol consumption. *Environment & Behavior*, 39(3), 352–366.**

Two field studies measured college students' actual intoxication levels using handheld breathalyzers on Halloween and St. Patrick's Day and compared these celebration days to typical nights surrounding these events. In addition, across all nights of Study 2, participants were asked if they were celebrating any occasion or event that night, and those reporting a celebration motive were compared to those with no such motive. The combined sample was 70% men ( $n = 498$ ), and 89.9% ( $n = 639$ ) were students at the local university. Across both years of the study, those reporting a celebration motive reached significantly higher levels of intoxication (mean blood alcohol concentration = .096,  $n = 413$ ) than those not celebrating (mean blood alcohol concentration = .074,  $n = 298$ ,  $p < .05$ ). These results support the hypothesis that those consuming alcohol with a specific reason to celebrate reach higher levels of intoxication.

**Grange, L. L., Hojnowski, N., & Nesterova, S. (2007). Personality correlates of alcohol consumption and aggression in a Hispanic college population. *Hispanic Journal of Behavioral Sciences*, 29(4), 570–580.**

The authors examined the association between alcohol consumption and aggression from a personality trait perspective with 92 self-identified Hispanic college students. They partially replicated a study by Quigley, Corbett, and Tedeshi, which examined the relationships between desired image of power, alcohol expectancies, and alcohol-related aggression. Among male participants, impulsivity did not correlate with either alcohol consumption or frequency of fighting, whereas with females there was a strong positive correlation between impulsivity and alcohol consumption and a weak positive correlation between impulsivity and frequency of fighting. When the results were compared to those of Quigley et al., it was found that the Hispanic participants drank and fought less. The best predictor variable for male alcohol consumption was the desire to be viewed as "tough." "Activity" was the primary predictor for female alcohol consumption.

**Grant, V. V., & Stewart, S. H. (2007). Impact of experimentally induced positive and anxious mood on alcohol expectancy strength in internally motivated drinkers. *Cognitive Behaviour Therapy*, 36(2), 102–111.**

The effects of musically-induced positive and anxious mood on explicit alcohol-related cognitions (alcohol expectancy strength) in 47 undergraduate students who consume alcohol either to enhance positive mood states (for enhancement motives) or to cope with anxiety (for anxiety-related coping motives) were investigated. Pre- and post-mood induction, participants completed the emotional reward and emotional relief subscales of the Alcohol Craving Questionnaire - Now. The hypothesis that anxiety-related coping motivated drinkers in the anxious mood condition (but not those in the positive mood condition) would exhibit increases in strength of explicit emotional relief alcohol expectancies after the mood induction was supported. An additional, unanticipated finding was that enhancement-motivated drinkers in the anxious condition also showed significant increases in strength of explicit emotional relief (but not emotional reward) alcohol expectancies. The hypothesis that enhancement-motivated (but not anxiety-related coping motivated) participants would exhibit increases in explicit emotional reward expectancies following exposure to the positive mood induction procedure was not supported. Taken together with past research findings, the current results highlight the importance of distinguishing between subtypes of negative affect (i.e., anxious and depressed affect) in exploring the affective antecedents of explicit alcohol outcome

expectancies.

**Grant, V. V., Stewart, S. H., & Birch, C. D. (2007). Impact of positive and anxious mood on implicit alcohol-related cognitions in internally motivated undergraduate drinkers. *Addictive Behaviors, 32*(10), 2226–2237.**

We explored the impact of musically induced positive and anxious mood on the implicit alcohol-related cognitions of 48 undergraduate students who drink either to enhance positive mood states (EM) or to cope with anxiety (CM-anxiety). Participants completed a post-mood induction computerized alcohol Stroop task that taps implicit alcohol-related cognitions. As hypothesized, CM-anxiety participants in the anxious (but not those in the positive) mood condition showed longer color-naming latencies for alcohol (vs. non-alcohol) targets (i.e., an attentional bias toward alcohol-related stimuli). Also conforming to expectation was the finding that EM participants in the positive (but not those in the anxious) mood condition displayed longer color-naming latencies for (i.e., an attentional bias toward) alcohol (vs. non-alcohol) target words.

**Grekin, E. R., Sher, K. J., & Krull, J. L. (2007). College spring break and alcohol use: Effects of spring break activity. *Journal of Studies on Alcohol and Drugs, 68*(5), 681–688.**

**OBJECTIVE:** This study examined the relationship between spring break vacation and changes in alcohol consumption among college students. Analyses also examined the effects of spring break activity (vacationing with friends, visiting parents, staying in college town, etc.) and selection (i.e., whether heavy drinkers are more likely to vacation with friends) on the spring break/alcohol consumption relationship. **METHOD:** Participants were 3,720 students (46% male; 90% white; mean age = 17.96) at a large midwestern university. Students were contacted during the fall and spring of their freshman, sophomore, and junior years and were asked to complete online surveys assessing (1) their typical alcohol use, (2) their alcohol use during spring break week, and (3) the activities they engaged in during spring break week. **RESULTS:** Students who vacationed with friends during spring break dramatically increased their alcohol use. In contrast, students who stayed home or vacationed with parents during spring break were at low risk for excessive alcohol use. **CONCLUSIONS:** Findings highlight the need for targeted drinking interventions geared specifically toward students taking trips with friends. Findings also highlight the need for further research into both person and environmental variables that predict increases in drinking during spring break.

**Gullette, D. L., & Lyons, M. A. (2006). Sensation seeking, self-esteem, and unprotected sex in college students. *Journal of the Association of Nurses in AIDS Care, 17*(5), 23–31.**

This descriptive correlational study examined the relationships of sexual sensation seeking, self-esteem, and self-efficacy in condom use, stages of change, and alcohol consumption to HIV risk-taking behaviors among college students. A total of 159 students completed an online survey in 2004. Instruments included the Sexual Sensation Seeking Scale, College Alcohol Problems Scale, Condom Use Scale, and Rosenberg Self-Esteem Scale. High sensation seekers had higher self-esteem, more self-efficacy in condom usage, fewer problems associated with alcohol consumption, and belonged to Greek organizations ( $F [1,158] = 12.54; p < .0005$ ). Women who were high sensation seekers perceived more advantages ( $F [1, 116] = 1.67; p = .05$ ) than disadvantages ( $F [1, 116] = 2.01; p = .01$ ) to using condoms. Men consumed significantly more alcohol and had more social problems related to alcohol use than women ( $F [1, 158] = 5.04; p < .03$ ). Students in Greek organizations had significantly more positive attitudes ( $X(2) [1] = 4.55; p < .03$ ) and more respect

for themselves ( $X(2) [1] = 11.22; p < .0008$ ) than other students and were more likely to be tested for HIV ( $X(2) [1] = 3.85; p < .05$ ). Students with low self-esteem consumed more alcohol, had more sexual partners, and had more HIV risk-taking behaviors than other students. Even though students were reported to be efficacious in condom usage, they used them inconsistently with their sexual partners and were in the earlier stages of change. Interventions are needed in the community to help sexually active individuals take responsibility for their sexual health and to increase the awareness of the need to be tested for HIV.

**Gustin, J. L., & Simons, J. S. (2008). Perceptions of level of intoxication and risk related to drinking and driving. *Addictive Behaviors, 33*(4), 605–615.**

This study investigated variables of perceived risk associated with one's decision to drink and drive, as well as with the occurrence and successfulness of intervention efforts by others in preventing individuals from drinking and driving. Undergraduate students were presented with scenarios manipulating number of drinks, consumption time, and distance needed to drive. Participants then provided estimates of intoxication, degree of impairment, and likelihood of getting in an accident and getting arrested for drinking and driving. In addition, participants rated three criterion variables: intention to drive, likelihood someone would try to intervene, and receptiveness to someone attempting to intervene. Data was analyzed using three random effects regression models, one for each of the criterion variables. Results indicated that perceptions of risk were associated with decisions to drive after drinking and expected likelihood of, and receptiveness to, intervention efforts, over and above one's estimate of intoxication.

**Haines, M. P., Barker, G., & Rice, R. M. (2006). The personal protective behaviors of college student drinkers: Evidence of indigenous protective norms. *Journal of American College Health, 55*(2), 69–75.**

Given the prevalence of alcohol consumption and the relative infrequency of harm among college students, the authors sought to determine how most college students protect themselves from alcohol-related harm. An analysis of the aggregate National College Health Assessment data identified a cluster of personal protective behaviors that correlated with reduced risk when drinking. Further analysis revealed that nearly three-quarters of student drinkers regularly employ at least 1 protective behavior, and well over half of the students who use protective behaviors routinely employ 2 or more. In addition, the data reveal that student drinkers employ situational abstinence, with nearly 7 out of 10 students reporting that they sometimes or usually refrain from drinking alcohol when they socialize. The use of these protective behaviors is a strong predictor of safety and harm for college-student drinkers.

**Harford, T. C., Yi, H. Y., & Hilton, M. E. (2006). Alcohol abuse and dependence in college and noncollege samples: A ten-year prospective follow-up in a national survey. *Journal of Studies on Alcohol, 67*(6), 803–809.**

Objective: This prospective study examines the association of educational status in 1984 and the risk for past-year Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), alcohol-use disorders (AUDs) in 1994, 10 years later. Method: A sample of 8,661 respondents was drawn from the National Longitudinal Survey of Labor Market Experience in Youth. Measures included baseline heavy episodic drinking, alcohol-dependence symptoms, early problem behaviors (antisocial behaviors, illicit substance use, family history of alcoholism, and age at onset of alcohol

use), demographic characteristics (gender, race/ethnicity, age, marital status), and 1994 assessment for past-year DSM-IV AUDs. Results: Findings from this 10-year prospective study indicate that education beyond high school had a protective effect for alcohol dependence, and dropping out of high school resulted in an elevated long-term risk for alcohol dependence. These associations remained significant when other early behavioral problems were included in the models. Conclusions: The risk of alcohol dependence and, consequently, the need for appropriately tailored prevention efforts is greater among high school dropouts and college nonattenders than among college students, although much of the current literature has focused on the latter.

**Higgins, G. E., Tewksbury, R., & Mustaine, E. E. (2007). Sports fan binge drinking: An examination using low self-control and peer association. *Sociological Spectrum, 27*(4), 389–404.**

Research has shown a connection between being a college sports fan and binge drinking; however, no research uses criminological theories when examining this connection. The purpose of the present study is to examine the ability of self-control and differential association theories to determine whether the relationship between college sports fans and binge drinking is individual or group situated. Using self-report data from (n = 693) college students from four southern universities, the results show that the connection between being a college sports fan and binge drinking can be accounted for by both low self-control and differential association. These results are discussed and policy implications are presented.

**Jessor, R., Costa, F. M., Krueger, P. M., & Turbin, M. S. (2006). A developmental study of heavy episodic drinking among college students: The role of psychosocial and behavioral protective and risk factors. *Journal of Studies on Alcohol, 67*(1), 86–94.**

OBJECTIVE: A theory-based protection/risk model was applied to explain variation in college students' heavy episodic drinking. Key aims were (1) to establish that psychosocial and behavioral protective factors and risk factors can account for cross-sectional and developmental variation in heavy episodic drinking, and (2) to examine whether protection moderates the impact of risk on heavy episodic drinking. METHOD: Random- and fixed-effects maximum likelihood regression analyses were used to examine data from a three-wave longitudinal study. Data were collected in fall of 2002, spring of 2003, and spring of 2004 from college students (N=975; 548 men) who were first-semester freshmen at Wave 1. RESULTS: Psychosocial and behavioral protective and risk factors accounted for substantial variation in college-student heavy episodic drinking, and protection moderated the impact of risk. Findings held for both genders and were consistent across the three separate waves of data. Key predictors of heavy episodic drinking were social and individual controls protection (e.g., parental sanctions for transgression and attitudinal intolerance of deviance, respectively); models risk (peer models for substance use); behavioral protection (attendance at religious services); and behavioral risk (cigarette smoking and marijuana use). Changes in controls protection, models risk, and opportunity risk were associated with change in heavy episodic drinking. CONCLUSIONS: An explanatory model based on both psychosocial and behavioral protective and risk factors was effective in accounting for variation in college-student heavy episodic drinking. A useful heuristic was demonstrated through the articulation of models, controls, support, opportunity, and vulnerability to characterize the social context, and of controls, vulnerability, and other behaviors to characterize individuals.

**Johnson, T. J., Sheets, V. L., & Kristeller, J. L. (2008). Identifying mediators of the**

**relationship between religiousness/spirituality and alcohol use. *Journal of Studies on Alcohol and Drugs*, 69(1), 160–170.**

Objective: Religiousness is known to be inversely related to alcohol use and problems, but few studies have attempted to identify mediators of this relationship. We examined beliefs about alcohol, social influences, well-being, and motives for drinking as potential mediators of the relationship between religiousness/spirituality and alcohol use and problems. Method: Participants were 315 female and 197 male college students who responded to a survey sent to a stratified (by gender and year in school) random sample. We used path analysis to test models specifying hypothesized mediators of the relationship between several religious/spiritual constructs (identified via factor analysis in previous studies) and alcohol use and problems. Models were tested in the full sample and a subsample consisting of alcohol users only. Results: The effect of religious/spiritual involvement on alcohol use was mediated by negative beliefs about alcohol, social influences, and spiritual well-being. The effect of religious struggle on alcohol problems was mediated by spiritual well-being. Search for meaning had both direct and indirect (via negative beliefs about alcohol) effects on use and problems. Negative beliefs about alcohol and social influences were related to alcohol use via enhancement motives and, in some models, social motives for drinking. Spiritual well-being was related to alcohol problems via coping motives. Social influences also had direct effects on alcohol use. Conclusions: Although future studies using longitudinal designs are needed, the study identified several plausible mechanisms by which religiousness/spirituality could causally impact alcohol use and problems. Results also provide further support for the motivational model of alcohol use.

**Kelly, A. B., & Masterman, P. W. (2008). Relationships between alcohol-related memory association and changes in mood: Systematic differences between high- and low-risk drinkers. *Alcohol and Alcoholism (Oxford, Oxfordshire)*, 43(5), 551–558.**

Heavy alcohol use is common in undergraduates and is associated with health-risk behaviors, negative consequences, and increased risk for future alcohol dependence. Alcohol-related memory associations (AMAs) and mood changes are independently related to student drinking, but more research on how these variables interact is needed. AIMS: To examine (i) how AMAs predict drinking behavior after accounting for depression, and (ii) how changes in negative and positive mood predict AMAs among low- and high-risk drinkers. METHODS: Positive and negative moods were manipulated using a musical mood induction procedure immediately prior to completion of memory association measures. A bootstrapped structural equation model was tested, permitting a sampling distribution free of the requirement of normality. RESULTS: Negative mood changes predicted AMAs in high-risk drinkers but not in low-risk drinkers, and the opposite was found for positive mood changes. CONCLUSION: The negative mood-AMA association appeared related to risky drinking, and these subtle implicit cognitive processes may warrant a special focus in intervention programs for high-risk drinkers.

**Kieffer, K. M., Cronin, C., & Gawet, D. L. (2006). Test and study worry and emotionality in the prediction of college students' reasons for drinking: An exploratory investigation. *Journal of Alcohol and Drug Education*, 50(1), 57–81.**

Educational environments can place an exorbitant strain on the psychological well-being of students, and oftentimes students resort to substance use as a means to escape the stress of performance expectations. This study explored the influence of test and study worry and emotionality on

students' reported reasons for-consuming alcohol. The Reasons for Drinking Scale (RFD; Cronin, 1997) and Test and Study Attitudes Inventory (TSAI; Spielberger & Lunsford, 2001) were used to assess student reported reasons for consumption and test and study worry and emotionality, respectively. Results indicated that students who experienced test and study related worry and emotionality reported drinking for tension reduction more so than for soda/ camaraderie or mood enhancement. Further, women reported that mood enhancement and tension reduction were less likely to be reasons why they consume alcohol. These findings suggest that strategies to reduce test and study anxiety may also decrease alcohol consumption related to tension reduction.

**King, K. M., & Chassin, L. (2007). A prospective study of the effects of age of initiation of alcohol and drug use on young adult substance dependence. *Journal of Studies on Alcohol and Drugs*, 68(2), 256–265.**

Objective: Previous cross-sectional research has disagreed about whether an adolescent's age of onset of alcohol use is a unique predictor of later alcohol dependence or whether it is merely a correlate of those factors that produce alcohol dependence. The current study tests this question in a longitudinal sample, and extends the literature by testing whether age of onset of alcohol and drug use predicts alcohol and drug dependence. Method: Data from an ongoing study of children of alcoholics and matched controls (n = 395) were collected during three annual interviews during adolescence and two 5-year follow-ups in young adulthood. Results: Taking a first drink of alcohol at or before age 13 was unrelated to the odds of alcohol and drug dependence when the adolescent did not also participate in early drug use or when correlated risk factors were taken into account. On the other hand, early drug use elevated the odds of drug dependence by young adulthood, even while controlling for shared risk factors. Conclusions: The current study provides support for the notion that early-adolescent onset of alcohol use is a marker of risk for later dependence rather than a causal influence. Moreover, it provides evidence for the impact of early drug use on drug-substance dependence. Implications for theory and intervention are discussed.

**LaBrie, J. W., & Pedersen, E. R. (2008). Prepartying promotes heightened risk in the college environment: An event-level report. *Addictive Behaviors*, 33(7), 955–959.**

Due to the emergence of research literature examining the prepartying behavior of college students, the present study examines students' varying drinking rates, blood alcohol levels (BALs), and alcohol-related consequences during two drinking events - one involving prepartying and one devoid of prepartying. Two-hundred and thirty-eight student drinkers completed an online drinking assessment detailing their two most recent drinking occasions involving and not involving prepartying. Participants responded to a series of questions regarding quantities consumed on the drinking day and occurrence of alcohol-related consequences. While men did not differ in drinking or estimated BALs, between the two drinking days, female participants drank significantly more drinks and reached higher BALs on the prepartying drinking day. Both males and females reported increased experience of alcohol-related consequences on the prepartying drinking day. In analyzing the prepartying drinking day specifically, we found that while men drink more alcohol during prepartying, but both men and women reached similar BALs during the event. Also, amount consumed during prepartying related to further drinking throughout the evening. It appears that prepartying may influence women to reach comparable levels of intoxication and alcohol-related consequences as their male peers. Quick drinking during prepartying may raise BALs and lead to alcohol-related consequences particularly for female students.

**LaBrie, J. W., Tawalbeh, S., Earleywine, M. (2006). Differentiating adjudicated from nonadjudicated freshmen men: The role of alcohol expectancies, tension, and concern about health. *Journal of College Student Development*, 47(5), 521–533.**

Identifying students at risk for violating alcohol policies could help college administrators minimize many problems. In this study, 154 male college freshmen [mean age 18.01 (SD = .50); 63% (n = 54) Caucasian], 68 of whom had been adjudicated for violating alcohol policies, completed an initial questionnaire assessing demographic characteristics and beliefs about drinking as well as a Timeline Followback of previous drinking behavior. Compared to the 86 nonadjudicated participants, adjudicated men were more likely to be Caucasian, from higher income families, involved in heavy drinking, and higher on positive alcohol expectancies. They reported less concern about their health and less tension. A logistic regression with these variables successfully distinguished between the two groups. Health and tension items alone correctly classified the groups almost as well. Results suggest that simple assessments about tension and concern for health may identify male students in need of prevention efforts.

**Lee, C. M., Maggs, J. L., & Rankin, L. A. (2006). Spring break trips as a risk factor for heavy alcohol use among first-year college students. *Journal of Studies on Alcohol*, 67(6), 911–916.**

Objective: Many high school and college students are believed to use spring break vacation to travel to destinations with the intent of engaging in extreme party behaviors, including excessive alcohol use. However, the extent to which spring break travelers' behaviors are more risky than their typical behaviors remains unclear. Method: To assess the impact of spring break as a situational risk factor, we analyzed data collected from 176 first-year college students across 10 weeks using weekly telephone interviews. Results: Using multilevel modeling, we found the following: (1) men, participants in fraternity/sorority organizations, students traveling on spring break trips, and those with higher fun-social alcohol expectancies drank more during the regular semester; (2) alcohol use did not increase during spring break week in general; however, (3) spring break travelers increased their alcohol use during spring break. Conclusions: Spring break trips are a risk factor for escalated alcohol use both during the academic semester and during spring break trips, suggesting that some students may seek out opportunities for excessive alcohol use. Results are discussed in terms of niche selection and prevention implications.

**Leffingwell, T. R., Neumann, C., Leedy, M. J., & Babitzke, A. C. (2007). Defensively biased responding to risk information among alcohol-using college students. *Addictive Behaviors*, 32(1), 158–165.**

Previous research has found that individuals who engage in risky health behaviors respond to health risk messages in a self-serving manner, limiting the impact of health messages among targeted individuals. The present study sought to investigate whether alcohol-using college students would respond to risk messages about alcohol use with a similar defensive bias. Both alcohol-using (N=244) and non-using (N=91) college students read a summary of alcohol risk information intended for college students. Participants then reported their attitudes about the seriousness of the problem of college drinking, personal risk, and the scientific credibility of the risk information. Results indicated that high-risk participants responded in a self-serving manner, with significantly lower ratings of problem importance among alcohol-using students and non-significant differences among assessments of personal risk between groups. Further, alcohol-using students were more critical of the scientific merit of the risk information and more skeptical about the empirical claims.

Defensively biased responding was more pronounced among more frequent and heavy drinking students than among lighter drinking students. The implications of these findings as well as possible ways to reduce defensive bias are discussed.

**Lewis, M. A., Phillippi, J., & Neighbors, C. (2007). Morally based self-esteem, drinking motives, and alcohol use among college students. *Psychology of Addictive Behaviors*, 21(3), 398–403.**

This research examined the relationship of morally based self-esteem with drinking motives and alcohol consumption among college students. Basing self-esteem on morals was expected to be negatively associated with drinking behavior. We further expected this relationship to be mediated by drinking motives. Participants (N = 201; 45% male, 55% female) completed self-report measures of contingencies of self-worth, drinking motives, and drinking behavior. Previous research was supported in that college students whose self-esteem was more strongly contingent upon following personal morals consumed less alcohol. The current research extended these findings by showing that this relationship was mediated by drinking motives. Results suggest that it may be useful to better incorporate personal values into interventions for college students. The implementation of personal values in combination with brief treatments is discussed.

**Lewis, T. F. (2007). Perceptions of risk and sex-specific social norms in explaining alcohol consumption among college students: Implications for campus interventions. *Journal of College Student Development*, 48(3), 297–310.**

The aim of this study was to expand the assessment of two explanatory models of drinking behavior—perceptions of risk and social norms—and determine their relationship to dimensions of alcohol involvement in a multivariate evaluation. The Alcohol and Drug Survey was administered to a sample (N = 235) of college students from a university in the Southeast. Results from the canonical correlation analysis revealed that perceived normative beliefs of closest friends of the same sex best explained dimensions of alcohol involvement. Perceptions of risk were associated with drinking involvement, although the direction of relationships was unexpectedly positive. Implications for campus interventions are discussed.

**Mackillop, J., Mattson, R. E., Anderson Mackillop, E. J., Castelda, B. A., & Donovan, P. J. (2007). Multidimensional assessment of impulsivity in undergraduate hazardous drinkers and controls. *Journal of Studies on Alcohol and Drugs*, 68(6), 785–788.**

ABSTRACT. Objective: Alcohol misuse in college students represents a significant public health problem. Toward improving the understanding of determinants of collegiate alcohol misuse, the current study examined several dimensions of impulsivity in relation to hazardous drinking in college students. Method: A one-way, two-group, cross-sectional design was used to compare hazardous drinkers (HZD) with social drinkers (SOC). HZD drinkers were required to score 6 or more on the Alcohol Use Disorders Identification Test (AUDIT); SOC drinkers were required to score 1-5 on the AUDIT. The sample comprised 93 participants (56% HZD; 76% male) who were recruited from a medium-sized public university. Participants were assessed under neutral conditions using the Eysenck Impulsivity Questionnaire (EIQ), Delay Discounting Task (DDT), and Stanford Time Perspective Inventory (STPI). Results: Consistent with predictions, HZD participants exhibited significantly greater impulsivity on the EIQ-Impulsivity subscale ( $p < .001$ ), the STPI-Present Hedonism subscale ( $p < .01$ ), and the STPI-Future subscale ( $p < .01$ ); however, no differences were

evident on the DDT ( $p > .40$ ). The HZD group also scored marginally higher than the SOC group on the EIQ-Venturesomeness subscale ( $p < .10$ ). Conclusions: These findings suggest that greater impulsivity is associated with alcohol misuse in college students, most prominently in the area of propensity toward risk-taking and nonplanning (EIQ-Impulsivity subscale). The correspondence between these findings and previous studies, methodological considerations, and the need for prospective studies on impulsivity and alcohol misuse in college students are discussed.

**MacKillop, J., & Murphy, J. G. (2007). A behavioral economic measure of demand for alcohol predicts brief intervention outcomes. *Drug and Alcohol Dependence, 89*(2–3), 227–233.**

Considerable basic and clinical research supports a behavioral economic conceptualization of alcohol and drug dependence. One behavioral economic approach to assess motivation for a drug is the use of demand curves, or quantitative representations of drug consumption and drug-reinforced responding across a range of prices. This study used a hypothetical alcohol purchase task to generate demand curves, and examined whether the resulting demand curve parameters predicted drinking outcomes following a brief intervention. Participants were 51 college student drinkers (67% female; 94% Caucasian; drinks/week:  $M=24.57$ ,  $S.D.=8.77$ ) who completed a brief alcohol intervention. Consistent with predictions, a number of demand curve indices significantly predicted post-intervention alcohol use and frequency of heavy drinking episodes, even after controlling for baseline drinking and other pertinent covariates. Most prominently,  $O(\max)$  (i.e., maximum alcohol expenditure) and breakpoint (i.e., sensitivity of consumption to increasing price) predicted greater drinking at 6-month post-intervention follow-up. These results indicate that a behavioral economic measure of alcohol demand may have utility in characterizing the malleability of alcohol consumption. Moreover, these results support the utility of translating experimental assays of reinforcement into clinical research.

**Magar, E. C. E., Phillips, L. H., & Hosie, J. A. (2008). Self-regulation and risk-taking. *Personality and Individual Differences, 45*(2), 153–159.**

The link between individual personality traits and risk-taking propensity is well documented. Recent theories suggest that one particular trait, individual differences in self-regulatory control, might also explain engagement in risky activities, with poor self-regulatory competence increasing the likelihood of risk participation (Byrnes, 1998, 2005; Steinberg, 2004, 2005). In the current study, 134 undergraduate students (45 males, 89 females; mean age 20.87 years) completed self-report measures of emotion regulation (Emotion Regulation Questionnaire), cognitive regulation (Dysexecutive Questionnaire), and risk-taking (Smoking & Drinking Survey, Youth Decision-Making Questionnaire, Benthin Risk Perception Measure). Poor cognitive self-regulation, or executive function, was linked to greater endorsement of risky activities portrayed in hypothetical vignettes (e.g. joy riding, shoplifting), an over-emphasis of the benefits associated with risky activities, and a higher incidence of problems associated with excessive alcohol consumption. In contrast, poor styles of emotion regulation predicted greater participation in risky behaviours such as cigarette smoking, as well as alcohol induced problem behaviours such as fighting and arguing. Assessment of cognitive and emotional regulation may improve understanding of the causes of risky behaviours.

**Magid, V., MacLean, M. G., & Colder, C. R. (2007). Differentiating between sensation seeking and impulsivity through their mediated relations with alcohol use and problems. *Addictive Behaviors, 32*(10), 2046–2061.**

Disinhibition is a strong correlate of alcohol use, yet limited alcohol research has examined the facets of this personality construct. Recent work suggests that sensation seeking and impulsivity show differential relations with alcohol outcomes, indicating unique mechanisms of risks associated with each of these dimensions of disinhibition. The goal of the study was to examine sensation seeking and impulsivity as unique predictors of alcohol use and problems, and to test a broad range of drinking motives as potential mediators of these relations. Self-reported data from college students (N=310) were utilized for the study. Results suggested that sensation seeking and impulsivity were associated with alcohol use and problems through different mediational pathways. There was some evidence for gender moderating these pathways. The findings indicate that alcohol prevention and intervention programs should be tailored to specifically target individuals elevated on impulsivity versus sensation seeking.

**Martens, M. P., Ferrier, A. G., & Cimini, M. D. (2007). Do protective behavioral strategies mediate the relationship between drinking motives and alcohol use in college students? *Journal of Studies on Alcohol*, 68(1), 106–114.**

**ABSTRACT.** Objective: Heavy alcohol use among college students represents a public health problem on American college campuses. Use of protective behavioral strategies (PBS) has been shown to be related to reduced alcohol use and fewer alcohol-related problems, but the relationship of PBS to other alcohol-related constructs is unclear. The purpose of this study was to determine whether the use of PBS mediated the relationship between positively and negatively reinforcing drinking motives and both alcohol use and alcohol-related problems. Method: Data were collected on 254 undergraduate students at a large, public university in the northeast region of the United States. Approximately one third (n = 90) of the participants were volunteers, whereas the remaining individuals enrolled in the study as an option for satisfying an alcohol-related campus judicial sanction. Results: Structural equation modeling analyses indicated that use of PBS partially mediated the relationships between positively reinforcing (i.e., social and enhancement) drinking motives and both alcohol use and alcohol-related problems. Use of PBS did not mediate the relationship between negatively reinforcing (i.e., coping) drinking motives and alcohol use or alcohol-related problems. The theoretical models accounted for 26% of the variance in alcohol use and 24% of the variance in alcohol-related problems. Conclusions: This study suggests that PBS should be incorporated into theoretical models devoted to understanding college student drinking.

**Martens, M. P., Neighbors, C., Lewis, M. A., Lee, C. M., Oster-Aaland, L., & Larimer, M. E. (2008). The roles of negative affect and coping motives in the relationship between alcohol use and alcohol-related problems among college students. *Journal of Studies on Alcohol and Drugs*, 69(3), 412–419.**

**OBJECTIVE:** Although studies have consistently indicated that among college students alcohol use and the likelihood of experiencing alcohol-related problems are related, it is possible that additional factors strengthen the magnitude of this relationship. The purpose of the present study was to assess the moderating effect of two such factors: negative affect and coping drinking motives. **METHOD:** Data were collected on 316 college students at a midsized, public university in the upper Midwest who reported using alcohol. **RESULTS:** Findings indicated that both negative affect and coping drinking motives moderated the alcohol use-alcohol problems relationship. The three-way interaction indicated that the strongest relationship between alcohol use and alcohol-related problems existed for individuals high in both negative affect and coping drinking motives.

**CONCLUSIONS:** This study suggests that college students high in negative affect and coping drinking motives are particularly at risk for experiencing problems as a result of their alcohol use, indicating that clinicians should consider screening for these factors when conducting alcohol-related prevention and intervention efforts.

**McCarthy, D. M., & Thompsen, D. M. (2006). Implicit and explicit measures of alcohol and smoking cognitions. *Psychology of Addictive Behaviors, 20*(4), 436–444.**

The present study tested convergent, discriminant, and incremental validity of implicit and explicit measures of alcohol and smoking cognitions. College-aged participants (n = 264) completed questionnaire measures of alcohol and smoking expectancies and behavior. Participants also completed the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) for alcohol and smoking on two occasions, approximately 1 month apart. Psychometric qualities of these IATs were evaluated. Modest associations were found between implicit and explicit measures for the same substance. Both implicit and explicit measures had unique associations with use. Discriminant validity was stronger for alcohol measures than for smoking measures. These results support the utility of the IAT as a technique for assessing implicit associations about alcohol and smoking. They also provide some evidence that smoking motivations may make unique contributions to alcohol use.

**Miller, T., Snowden, C., Birckmayer, J., & Hendrie, D. (2006). Retail alcohol monopolies, underage drinking, and youth impaired driving deaths. *Accident Analysis & Prevention, 38*(6), 1162–1167.**

**Objective:** To explore associations of state retail alcohol monopolies with underage drinking and alcohol-impaired driving deaths. **Data:** Surveys on youth who drank alcohol and binge-drank recently and their beverage choices; census of motor vehicle fatalities by driver blood alcohol level. **Methods:** Regressions estimated associations of monopolies with under-21 drinking, binge drinking, alcohol-impaired driving deaths, and odds a driver under 21 who died was alcohol-positive. **Results:** About 93.8% of those ages 12-20 who consumed alcohol in the past month drank some wine or spirits. In states with a retail monopoly over spirits or wine and spirits, an average of 14.5% fewer high school students reported drinking alcohol in the past 30 days and 16.7% fewer reported binge drinking in the past 30 days than high school students in non-monopoly states. Monopolies over both wine and spirits were associated with larger consumption reductions than monopolies over spirits only. Lower consumption rates in monopoly states, in turn, were associated with a 9.3% lower alcohol-impaired driving death rate under age 21 in monopoly states versus non-monopoly states. Alcohol monopolies may prevent 45 impaired driving deaths annually. **Conclusions:** Continuing existing retail alcohol monopolies should help control underage drinking and associated harms.

**Neal, D. J., & Carey, K. B. (2007). Association between alcohol intoxication and alcohol-related problems: An event-level analysis. *Psychology of Addictive Behaviors, 21*(2), 194–204.**

Heavy-drinking students experience a myriad of alcohol-related negative consequences. Use of event-level data permits predictions to be made regarding (a) the likelihood of alcohol-related consequences occurring after specific drinking events, and (b) moderators of the association between intoxication and consequences. College students (N = 183, 64% female) completed 4 consecutive 7-day drinking diaries and turned them in weekly. The diaries yielded prospective event-

level data on daily drinks, time spent drinking, and negative consequences related to each drinking event. Alcohol intoxication on a given day was significantly associated with increased levels of risk, although this association was moderated by average level of intoxication. Furthermore, self-control was associated with increased likelihood of negative consequences at all levels of intoxication, and self-regulation and impulsivity moderated the event-level association between daily intoxication and likelihood of negative consequences. Results suggest that self-regulation subsumes impulsivity and self-control.

**Neal, D. J., & Fromme, K. (2007). Hook ‘em horns and heavy drinking: Alcohol use and collegiate sports. *Addictive Behaviors, 32*(11), 2681–2693.**

Heavy alcohol consumption has been associated with collegiate sporting events, but little is known about specific levels of consumption over the course of an entire sports season. Ongoing web-based daily monitoring at the University of Texas at Austin allowed assessment of drinking levels of students ( $n = 541$ ) over two full football seasons. High-profile football game days were among the heaviest days for alcohol consumption, comparable to consumption on other well-known drinking days such as New Years Eve and Halloween weekend. Men increased their drinking for all games, and women with greater social involvement were more likely to drink heavily during away games. Among lighter drinkers, away games were associated with a greater likelihood of behavioral risks as intoxication increased.

**Okasaka, Y., Morita, N., Nakatani, Y., & Fujisawa, K. (2008). Correlation between addictive behaviors and mental health in university students. *Psychiatry and Clinical Neurosciences, 62*(1), 84–92.**

**AIMS:** The present study aims to clarify the relationships of addictive behaviors and addiction overlap to stress, acceptance from others and purpose in life. **METHODS:** A survey was conducted on 691 students at eight universities. The Eating Attitude Test-20 was used to identify students with food addiction or food addictive tendencies. The Kurihama Alcoholism Screening Test was used to identify students with alcohol addiction or alcohol addictive tendencies. The Fagerström Test for Nicotine Dependence was used to identify students with nicotine addictive tendencies or nicotine addiction. The Visual Analog Scale was used to assess stress and acceptance from others. The Purpose in Life Test was used to measure meaning and purpose in life. Results were compared between students with addictive behaviors, with addictive tendencies and without addictive behaviors. **RESULTS:** Significant differences among the three groups were observed for stress, acceptance from others, and Purpose in Life scores for students with food and nicotine addiction, but no significant differences existed in relation to alcohol addiction. In addition, 28.8% of students displayed addictive behaviors in one of the three areas (food, alcohol or nicotine), 8.5% displayed addictive behaviors in two of the three areas, and 0.4% had addictive behaviors in all three areas. Significant differences existed in stress and acceptance from others among students with one addictive behavior,  $\geq$ two addictive behaviors and no addictive behaviors. However, no significant differences existed in Purpose in Life scores with respect to overlapping addictions. **CONCLUSION:** The results suggest a relationship between mental health, addictive behaviors and overlapping addiction among university students.

**Palfai, T. P., & Weafer, J. (2006). College student drinking and meaning in the pursuit of life goals. *Psychology of Addictive Behaviors, 20*(2), 131–134.**

The current study was designed to examine the association between risky alcohol use and life goals among college students. Introductory psychology students completed a questionnaire that included measures of typical life goals and alcohol use behavior. Students listed their 5 most typical life goals and rated them each on a series of dimensions from which 2 factors were derived (i.e., Goal Meaning, Goal Efficacy). Hierarchical regression analyses showed that the lower levels of goal meaning were associated with more heavy episodic use of alcohol and alcohol-related negative consequences. Results are consistent with motivational models of drinking that depict alcohol use as a function of satisfaction from other life goals. Findings support the importance of understanding college student drinking within the broader context of life goal appraisal.

**Pardini, D., White, H. R., & Stouthamer-Loeber, M. (2007). Early adolescent psychopathology as a predictor of alcohol use disorders by young adulthood. *Drug and Alcohol Dependence, 88*(Supplement 1), S38–S49.**

Few prospective studies have examined the relation between early adolescent conduct disorder (CD) symptoms and the development of alcohol use disorders (AUD) by young adulthood. The relative contribution of other forms of adolescent psychopathology (i.e., attention-deficit hyperactivity disorder, depression, anxiety/withdrawal) to the development of AUD also remains poorly understood. There is some suggestion that the co-occurrence of conduct disorder symptoms with other forms of psychopathology may interact synergistically in predicting later alcohol use problems. The current study explores these issues using data on 506 boys from the oldest sample of the Pittsburgh Youth Study (PYS). Consistent with prior research, early conduct disorder symptoms emerged as a consistent predictor of increased AUD symptoms and an alcohol dependence diagnosis by young adulthood. In contrast, adolescent boys with high levels of anxiety/withdrawal had lower levels of AUD symptoms and were less likely to develop alcohol dependence by young adulthood. Increased depression in early adolescence was associated with higher AUD symptoms and alcohol abuse and dependence diagnoses by young adulthood, but only for boys with high levels of conduct disorder symptoms. No evidence was found for a relation between attention-deficit hyperactivity disorder symptoms and AUD symptoms or diagnoses after controlling for co-occurring psychopathology.

**Parra, G. R., Krull, J. L., Sher, K. J., & Jackson, K. M. (2007). Frequency of heavy drinking and perceived peer alcohol involvement: Comparison of influence and selection mechanisms from a development perspective. *Addictive Behaviors, 32*(10), 2211–2225.**

The present study investigated social influence and selection explanations for the association between frequency of heavy drinking and perceived peer alcohol involvement in emerging and early adulthood. Participants were 489 young adults recruited from a university setting who were taking part in an 11-year longitudinal study, which includes 6 waves of data. Piecewise latent growth curve analyses indicated that patterns of change from ages 18 to 30 for both frequency of heavy drinking and perceived peer alcohol involvement are best represented by two distinct developmental periods (i.e., college and post-college years). Several models were compared to identify a framework that yielded the best estimates of influence and selection effects. Evidence suggests that selection mechanisms may best account for the relation between frequency of heavy drinking and perceived peer alcohol involvement especially during the post-college years.

**Paschall, M. J., & Saltz, R. F. (2007). Relationships between college settings and student alcohol use before, during and after events: A multi-level study. *Drug and Alcohol Review,***

**26(6), 635–644.**

**INTRODUCTION AND AIMS:** We examined how alcohol risk is distributed based on college students' drinking before, during and after they go to certain settings. **DESIGN AND METHODS:** Students attending 14 California public universities (N=10,152) completed a web-based or mailed survey in the fall 2003 semester, which included questions about how many drinks they consumed before, during and after the last time they went to six settings/events: fraternity or sorority party, residence hall party, campus event (e.g. football game), off-campus party, bar/restaurant and outdoor setting (referent). Multi-level analyses were conducted in hierarchical linear modeling (HLM) to examine relationships between type of setting and level of alcohol use before, during and after going to the setting, and possible age and gender differences in these relationships. Drinking episodes (N=24,207) were level 1 units, students were level 2 units and colleges were level 3 units. **RESULTS:** The highest drinking levels were observed during all settings/events except campus events, with the highest number of drinks being consumed at off-campus parties, followed by residence hall and fraternity/sorority parties. The number of drinks consumed before a fraternity/sorority party was higher than other settings/events. Age group and gender differences in relationships between type of setting/event and 'before', 'during' and 'after' drinking levels also were observed. For example, going to a bar/restaurant (relative to an outdoor setting) was positively associated with 'during' drinks among students of legal drinking age while no relationship was observed for underage students. **DISCUSSION AND CONCLUSIONS:** Findings of this study indicate differences in the extent to which college settings are associated with student drinking levels before, during and after related events, and may have implications for intervention strategies targeting different types of settings.

**Peralta, R. L., & Cruz, J. M. (2006). Conferring meaning onto alcohol-related violence: An analysis of alcohol use and gender in a sample of college youth. *The Journal of Men's Studies, 14(1)*, 109–125.**

Alcohol-related violence among youth remains a significant social problem. This study examines the meanings students attach to alcohol-related violence. Seventy-eight in-depth, face-to-face interviews were conducted with college students at a mid-sized, mid-Atlantic university. The perceptions of these college students are analyzed for social meaning of alcohol-related violence. As to their experiences with alcohol-related violence, respondents overwhelmingly believed alcohol to be causally related to violence, especially for young males whose behavior was viewed as demonstrative of "macho" behavior. The gendered nature of alcohol-related violence on campus, its expectation among students, and its tie to socio-cultural constructs of masculinity are discussed in reference to future research and social policy.

**Poulson, R. L., Bradshaw, S. D., Huff, J. M., Peebles, L. L., & Hilton, D. B. (2008). Risky sex behaviors among African American college students: The influence of alcohol, marijuana, and religiosity. *North American Journal of Psychology, 10(3)*, 529–542.**

Relationships among alcohol and/or marijuana consumption, religious beliefs, and risky sex behaviors of 155 students at a Historically Black College/University (HBCU) in North Carolina were examined. Three fourths of the participants stated that they were sexually active. Men were significantly more likely to have five or more sexual partners during the previous year than were women. Correlational analyses showed that alcohol and marijuana consumption were both positively related to risky sex behaviors. Although participants professed rather strong religious beliefs, these

beliefs did not necessarily result in a significant reduction in their drinking or sexual behaviors. There was a significant negative relationship between religious beliefs and marijuana consumption. Implications for churches and school administrators are discussed.

**Reed, M. B., Lange, J. E., Ketchie, J. M., & Clapp, J. D. (2007).** The relationship between social identity, normative information, and college student drinking. *Social Influence, 2*(4), 269–294.

The role of peer influence has long been recognized as important in the drinking decisions and behaviors of young people. Specifying the mechanisms behind these relationships, however, remains relatively underdeveloped. In this study we examine the moderating influence of group identity on the relationship between injunctive norms and drinking behavior. A total of 620 male and female undergraduate students completed an Internet questionnaire comprised of social identity, injunctive norms (perceptions of others' approval of their heavy drinking), and alcohol consumption measures (drinks per occasion). Three separate hierarchical regression models were run examining the relationship between social identity, injunctive norms, and alcohol consumption for three reference groups: friends, peers, and fraternity/sorority members, controlling for participant gender and race/ethnicity. Stronger identification with a reference group was associated with heavier drinking for all three models. Participants' perceptions of their friends' acceptability of their heavy drinking was positively associated with alcohol consumption; however, the injunctive norms term was not significant for the models examining peers or fraternity/sorority member reference groups. In each model, significant two-way interaction terms representing the cross-product of the social identity and injunctive norms indices indicated that among respondents who identified strongly with a reference group, perceptions of heavy drinking acceptability were positively associated with greater alcohol consumption. These results have implications for norms-focused interventions that fail to account for varying identification with different social groups.

**Read, J. P., & O'Connor, R. M. (2006).** High- and low-dose expectancies as mediators of personality dimensions and alcohol involvement. *Journal of Studies on Alcohol, 67*(2), 204–214.

**OBJECTIVE:** The present study examined the influences of personality dimensions (extraversion, neuroticism) on college alcohol involvement both (1) directly and (2) mediated by positive and negative alcohol expectancies across two imagined (high and low) alcohol doses. **METHOD:** Participants (N = 339; 176 women) were regularly drinking college students who completed a questionnaire battery on demographic characteristics, personality, expectancies, and alcohol use and problems. **RESULTS:** Structural equation modeling analysis of low- and high-dose models revealed partial support for the Social Learning Theory conceptualization of expectancies as mediators of more distal (personality) influences. Interestingly, patterns of association differed by dose. At high-expectancy doses, positive alcohol expectancies fully mediated the extraversion-use association. At low doses, positive expectancies did not play a critical role. Two distinct pathways from neuroticism to alcohol use were observed: a direct pathway, whereby neuroticism is a protective factor for alcohol use, and an indirect pathway, through positive expectancies, whereby neuroticism is a risk factor. The protective pathway was evident regardless of expectancy doses, whereas the risk pathway was evident only at high doses. Negative expectancies partially mediated the association between neuroticism and alcohol problems at both high- and low-expectancy doses. **CONCLUSIONS:** These data underscore the unique role of both positive and negative expectancies in the association between personality and drinking behavior and point to the importance of considering alcohol dose

when assessing expectancies. Findings suggest that it may be beliefs about the effects resulting from heavy (rather than moderate) drinking that may be the active mechanism underlying drinking behavior.

**Rhoades, B. L., & Maggs, J. L. (2006). Do academic and social goals predict planned alcohol use among college-bound high school graduates? *Journal of Youth and Adolescence*, 35(6), 913–923.**

Actively pursuing important goals predicts positive affect and well-being (Emmons, 1986, *J. Pers. Soc. Psychol.* 51: 1058–1068; Emmons and King, 1988, *J. Pers. Soc. Psychol.* 54: 1040–1048; Salmela-Aro and Nurmi, 1997, *J. Adult Dev.* 4: 179–188). College-bound high school graduates ( $n=943$ ) completed the ULTRA Orientation Survey prior to college. Planned alcohol use differed by gender, fraternity/sorority participation, and Honors membership. Students who appraised academic goals as more important and less difficult/stressful planned to consume less alcohol in their 1st year of college. Greater importance and lower difficulty/stressfulness of social goals predicted more planned drinking. Relationships of personal goals with drinking remained after controlling for group differences, and academic and social goal importance predicted plans to drink after controlling for alcohol use during high school senior year. The discussion focuses on the impact of goal appraisals on risk behavior, niche selection during the transition to college, and implications for the prevention of heavy drinking.

**Rodriguez, C. A., & Span, S. A. (2008). ADHD symptoms, anticipated hangover symptoms, and drinking habits in female college students. *Addictive Behaviors*, 33(8), 1031–1038.**

One risk factor increasingly evaluated as a predictor of problem drinking over the last two decades is Attention-Deficit Hyperactivity Disorder (ADHD; e.g., [Smith, B.H., Molina, B.S.G., & Pelham, W.E., Jr. (2002). The clinically meaningful link between alcohol use and attention-deficit hyperactivity disorder. *Alcohol Research & Health*, 26(2), 122-129.]). Previous research has shown an inconsistent link between these two constructs indicating that a third variable, such as anticipated hangover symptoms, may be moderating this relation. In the current study, 68 female college students completed measures assessing alcohol consumption over the previous three months, ADHD symptoms, and anticipated hangover symptoms. Hierarchical linear regression, with Body Mass Index as a covariate, revealed that anticipated hangover symptoms moderated the relation between ADHD symptoms and frequency of drinking per month,  $\beta=-.25$ ,  $t(63)=-2.07$ ,  $p<.05$ . Simple slopes analyses indicated that only individuals anticipating lesser hangover symptoms demonstrated a positive relation between their ADHD symptoms and frequency of drinking per month,  $\beta=.44$ ,  $t(63)=2.64$ ,  $p<.05$ . Individuals anticipating greater hangover symptoms showed no relation between these two constructs. These results support the traditional punishment model of hangover symptoms, suggesting that those who do not anticipate the punishing effects of hangover may be at greatest risk for problem drinking.

**Rosenberg, H., & Mazzola, J. (2007). Relationships among self-report assessments of craving in binge-drinking university students. *Addictive Behaviors*, 32(12), 2811–2818.**

To assess the relationships among self-report craving questionnaires, and between craving and alcohol consumption, we administered four previously published measures of craving (Alcohol Urge Questionnaire, Obsessive-Compulsive Drinking Scale, Penn Alcohol Craving Scale, Temptation-Restraint Inventory), five single-item Visual Analog Scales (need, urge, craving, desire, compulsion),

and measures of alcohol consumption and drinking consequences to 112 university students attending a large, public state university who reported at least two binge-drinking episodes (5+ drinks in a row by men; 4+ drinks in a row by women) in the previous 30 days. The associations among the multi-item self-report measures of craving were often larger for men than women, but the coefficients were typically statistically significant and meaningful regardless of gender, indicating good convergent validity despite differences in phrasing of items, response formats, and time periods over which craving was assessed. Generally smaller correlations among the VAS items indicated that these five terms were not inter-changeable among themselves (nor were they inter-changeable with scores on the multi-item questionnaires). Similarly to investigations using clinical samples, regression analyses revealed that recent drinking by binge-drinking students was associated with certain measures of self-reported craving.

**Shealy, A. E., Murphy, J. G., Borsari, B., & Correia, C. J. (2007). Predictors of motivation to change alcohol use among referred college students. *Addictive Behaviors, 32*(10), 2358–2364.**

The current study investigated motivation and its relationship with alcohol use and life satisfaction. Participants were 49 undergraduates referred to a university-based clinic to participate in a brief alcohol intervention. All participants completed measures assessing readiness to change drinking, frequency of alcohol use and related problems, and life satisfaction. As hypothesized, higher levels of motivation to change drinking were related to higher frequency and quantity of alcohol use, alcohol-related problems, and lower levels of life satisfaction. Results indicate the importance of assessing motivation in students referred to receive alcohol interventions.

**Smith, J. P., & Tran, G. Q. (2007). Does negative affect increase change readiness among college hazardous drinkers? *Addictive Behaviors, 32*(10), 2281–2285.**

The Transtheoretical Stages of Change Model specifies that when the costs outweigh the benefits of substance abuse, the resulting discomfort can be a catalyst for change. The current study evaluated the roles of depression and anxiety in motivating readiness to change current drinking behaviors. Results from regression analyses of self-report data from 233 undergraduate hazardous drinkers indicated that higher levels of depression and anxiety were associated with elevated readiness to change. Additionally, study findings showed that when considered together, anxiety accounted for more of the individual differences in alcohol change readiness than depressive symptoms. Study results were discussed in the context of existing models of change readiness and implications for further research and clinical practice.

**Stewart, S. H., Morris, E., Mellings, T., & Komar, J. (2006). Relations of social anxiety variables to drinking motives, drinking quantity and frequency, and alcohol-related problems in undergraduates. *Journal of Mental Health, 15*(6), 671–682.**

Background: The co-morbidity between social phobia and alcohol disorder is well established. Aims: This study investigated the nature of the relationship between traits associated with these disorders. Method: A total of 157 undergraduate drinkers (112 women; 45 men) completed measures tapping aspects of social phobia (i.e., the Social Avoidance and Distress Scale and the Brief Fear of Negative Evaluation scale) and drinking behavior (i.e., the Drinking Motives Questionnaire—Revised, quantity and frequency of alcohol consumption, and the Rutgers Alcohol Problem Index). Results: Correlational analyses (controlling for gender) revealed that: (i) social avoidance and distress was significantly negatively related to drinking frequency; (ii) fear of negative evaluation and social

avoidance and distress were both significantly positively related to drinking to cope with negative emotions and to conform to peer pressure; and (iii) fear of negative evaluation was also significantly positively related to drinking to socialize and to drinking problems. The relationship between fear of negative evaluation and drinking problems was mediated by coping and conformity drinking motives. Conclusions: Implications for developing effective integrated treatments for co-occurring social anxiety and alcohol problems are discussed, as are preventative implications.

**Timberlake, D. S., Hopfer, C. J., Rhee, S. H., Friedman, N. P., Haberstick, B. C., Lessem, J. M., & Hewitt, J. K. (2007). College attendance and its effect on drinking behaviors in a longitudinal study of adolescents. *Alcoholism: Clinical and Experimental Research, 31*(6), 1020–1030.**

**BACKGROUND:** While college attendance has been shown to be associated with increased drinking behaviors, there are no studies to our knowledge that have examined whether college attendance moderates genetic influences for drinking. We first tested for changes in alcohol consumption in adolescents who did and did not subsequently attend college, and then tested for variation of the genetic and environmental determinants of drinking in these 2 groups. **METHODS:** Participants eligible for this study were selected from 2 samples from the National Longitudinal Study of Adolescent Health (Add Health), a national probability sample (n=7,083) and a sample of sibling pairs (n=855 pairs). Participants were assessed for measures of drinking behaviors as adolescents (wave I) and reinterviewed at 1 (wave II) and 6 years (wave III) following the initial survey. Changes in binge drinking and average quantity of alcohol consumed in the past year were estimated among 4 groups (2-year college students, 4-year college students, college withdrawers, noncollege participants) in sequential cohorts which spanned the ages of 13 to 24 across the 3 Add Health waves. Gene by environment interactions were then tested at wave III using biometrical models in the genetically informative pairs. **RESULTS:** Participants who did not attend college reported more binge drinking and consumed greater quantities of alcohol as adolescents than participants who subsequently attended college. However, the college students not only surpassed their noncollege peers in alcohol use as young adults, but also exhibited a greater genetic influence on quantity of alcohol consumed per drinking episode. **CONCLUSIONS:** Exposure to a college environment acts as an environmental moderator, supporting the hypothesis that the magnitude of genetic influence on certain aspects of alcohol consumption is greater in environments where drinking behaviors are more likely to be promoted.

**Turrisi, R., Mallett, K. A., Mastroleo, N. R., & Larimer, M. E. (2006). Heavy drinking in college students: Who is at risk and what is being done about it? *Journal of General Psychology, 133*(4), 401–420.**

Problem drinking and related consequences are a major social issue plaguing college campuses across the United States. Each year, alcohol is responsible for fatalities, assaults, serious injuries, and arrests that occur among college students. The authors review and discuss the risk factors, drinking patterns, and consequences that are relevant to the general student population. In addition, the authors highlight individuals at an increased risk of experiencing alcohol-related problems, such as Greek-letter social organization members and student athletes. The authors also discuss the interventions that attempt to reduce risky drinking and related problems in these subgroups as well as the future directions for research.

**Walters, S. T., Roudsari, B. S., Vader, A. M., & Harris, T. R. (2007). Correlates of protective**

**behavior utilization among heavy-drinking college students. *Addictive Behaviors*, 32(11), 2633–2644.**

Previous studies have suggested that college students who use protective strategies while drinking are at a lower risk for drinking-related consequences. This study evaluated the correlates of protective behavior utilization in a group of 281 heavy-drinking college students. Students who reported heavier drinking were less likely to use protective behaviors, even after adjusting for covariates. Male gender and perceived history of parental alcohol abuse also predicted lower protective behavior score. The most frequently endorsed strategies among females were “Knowing where your drink has been at all times” and “Going home with a friend,” whereas the most frequently endorsed strategies among males were “Knowing where your drink has been at all times” and “Using a designated driver.” For females, the factor structure of the protective behaviors measure was consistent with previous studies; however, for males, the results suggest a four-factor solution. Findings are discussed in terms of their implications on future research and prevention programming.

**Wetherill, R. R., & Fromme, K. (2007). Perceived awareness and caring influences alcohol use by high school and college students. *Psychology of Addictive Behaviors*, 21(2), 147–154.**

Perceived awareness and caring, or beliefs about how much parents and peers know and care about students' behavior, was assessed in relation to students' drinking patterns. Prior to and at the end of the first semester at college, participants completed Web-based surveys assessing alcohol use, family and social motives, and perceived awareness and caring from parents and peers. Family motives moderated the effect of perceived parental awareness and caring on the quantity of high school alcohol use, whereas social motives moderated the effect of perceived peer awareness and caring on frequency and quantity of college drinking. Longitudinally, college alcohol use was predicted by perceived awareness and caring from parents. Perceived awareness and caring may affect alcohol use whereby parents exert influence during high school but peers are more influential in college.

**White, H. R., McMorris, B. J., Catalano, R. F., Fleming, C. B., Haggerty, K. P., & Abbott, R. D. (2006). Increases in alcohol and marijuana use during the transition out of high school into emerging adulthood: The effects of leaving home, going to college, and high school protective factors. *Journal of Studies on Alcohol*, 67(6), 810–822.**

Objective: This study examined the effects of leaving home and going to college on changes in the frequency of alcohol use, heavy episodic drinking, and marijuana use shortly after leaving high school. We also examined how protective factors in late adolescence predict post-high school substance use and moderate the effects of leaving home and going to college. Method: Data came from subjects (N = 319; 53% male) interviewed at the end of 12th grade and again approximately 6 months later, as part of the Raising Healthy Children project. Results: Leaving home and going to college were significantly related to increases in the frequency of alcohol use and heavy episodic drinking from high school to emerging adulthood but not to changes in marijuana use. Having fewer friends who used each substance protected against increases in the frequency of alcohol use, heavy episodic drinking, and marijuana use. Higher religiosity protected against increases in alcohol- and marijuana-use frequency. Higher parental monitoring protected against increases in heavy episodic drinking and moderated the effect of going to college on marijuana use. Lower sensation seeking lessened the effect of going to college on increases in alcohol use and heavy episodic drinking. Conclusions: To prevent increases in substance use in emerging adulthood, interventions should

concentrate on strengthening prosocial involvement and parental monitoring during high school. In addition, youths with high sensation seeking might be targeted for added intervention.

**Wood, P. K., Sher, K. J., & Rutledge, P. C. (2007). College student alcohol consumption, day of the week, and class schedule. *Alcoholism: Clinical and Experimental Research, 31*(7), 1195–1207.**

**BACKGROUND:** For many college students, Friday class schedules may contribute to weekend-like drinking behaviors beginning on Thursday. This study characterizes college students' daily alcohol consumption patterns and the relation between Thursday drinking and Friday classes overall and for specific vulnerable groups. **METHODS:** A sample of 3,341 volunteer participants was drawn from 3,713 eligible first-time undergraduates (56% female, 90% non-Hispanic white). Eligible participation rates ranged from 66.5 to 74.0% across follow-ups; 90% contributed data at for least one follow-up. Precollege survey and web-based surveys administered in the fall and spring semesters across 4 years of college were merged with student academic transcripts and university academic schedules at a large Midwestern public university. The main outcome measures included past 7-day self-reports of drinking behavior for each of 8 semesters. **RESULTS:** Excessive drinking on Thursday, relative to other weekdays, was found and was moderated by Friday class schedule: hierarchical linear models indicated that students with no Friday classes drank approximately twice as much on Thursdays as students with early Friday classes (i.e., mean drinks=1.24 for students with early Friday class vs 2.41 for students with no Friday class). Students who had classes beginning at 12 pm. or later consumed similar amounts as those with no Friday classes (M=2.52). The magnitude of the Friday class effect was comparatively larger among males and among those who were members of the Greek system or participated in Greek activities. Ancillary analyses based on the subset of students who showed within-subject variability in Friday classes across semesters (i.e., had both early and late or no Friday classes) produced findings similar to those based on the entire sample. Little evidence was found for compensatory drinking on Friday and Saturday among those with early Friday classes. **CONCLUSIONS:** Rates and amounts of alcohol consumption on Thursday are high, although they appear to be influenced by the presence and timing of Friday classes. Friday classes, especially those before 10 am, may reduce excessive drinking. Controlled institutional interventions are suggested to provide definitive research on the causal status of these ostensibly strong effects. This research provides a strong rationale for conducting such research.

**Zamboanga, B. L. (2006). From the eyes of the beholder: Alcohol expectancies and valuations as predictors of hazardous drinking behaviors among female college students. *American Journal of Drug and Alcohol Abuse, 32*(4), 599–605.**

Research has shown that drinking expectancies are associated with alcohol use among college students; however, the bulk of these studies have focused exclusively on researcher-labeled "positive" or "negative" expectancies rather than on the student's valuation (i.e., rating of desirability) of these expectancies. The present study examined the utility of expectancies and valuations in predicting hazardous alcohol use in a sample of 330 female college students (mean age = 20.0; 18–25). Hierarchical regression analyses revealed that negative expectancies and favorable valuations of negative and positive expectancies were predictive of elevated hazardous use (controlling for age, athletic membership, and peer use). Expectancy valuations accounted for additional variance in the model beyond that of expectancies. The present findings shed light on the utility of expectancies and valuations of expectancies in predicting hazardous alcohol use among female college students. Future research directions and potential implications for prevention efforts

are discussed.

See also:

Anderson, D. A., Simmons, A. M., Martens, M. P., Ferrier, A. G., & Sheehy, M. J. (2006). The relationship between disordered eating behavior and drinking motives in college-age women. *Eating Behaviors, 7*(4), 419–422.

Boyd, C. J., McCabe, S. E., Cranford, J. A., Morales, M., Lange, J. E., Reed, M. B., Ketchie, J. M., & Scott, M. S. (2008). Heavy episodic drinking and its consequences: The protective effects of same-sex, residential living-learning communities for undergraduate women. *Addictive Behaviors, 33*(8), 987–993.

Cogan, R., & Ballinger, B. C., 3rd. (2006). Alcohol problems and the differentiation of partner, stranger, and general violence. *Journal of Interpersonal Violence, 21*(7), 924–935.

DeJong, W., Schneider, S. K., Towvim, L. G., Murphy, M. J., Doerr, E. E., Simonsen, N. R., Mason, K. E., & Scribner, R. A. (2006). A multisite randomized trial of social norms marketing campaigns to reduce college student drinking. *Journal of Studies on Alcohol, 67*(6), 868–879.

Doumas, D. M., Turrisi, R., & Wright, D. A. (2006). Risk factors for heavy drinking and associated consequences in college freshmen: Athletic status and adult attachment. *The Sport Psychologist, 20*(4), 419–434.

James, L. M., & Taylor, J. (2007). Impulsivity and negative emotionality associated with substance use problems and Cluster B personality in college students. *Addictive Behaviors, 32*(4), 714–727.

Kaysen, D., Neighbors, C., Martell, J., Fossos, N., & Larimer, M. E. (2006). Incapacitated rape and alcohol use: A prospective analysis. *Addictive Behaviors, 31*(10), 1820–1832.

Leppel, K. (2006). College binge drinking: Deviant versus mainstream behavior. *American Journal of Drug and Alcohol Abuse, 32*(4), 519–525.

Lewis, D. K., & Marchell, T. C. (2006). Safety first: A medical amnesty approach to alcohol poisoning at a U.S. university. *International Journal of Drug Policy, 17*(4), 329–338.

Lindsay, V. (2006). Factors that predict freshmen college students' preference to drink alcohol. *Journal of Alcohol and Drug Education, 50*(4), 7–19.

Martens, M. P., Dams-O'Connor, K., & Beck, N. C. (2006). A systematic review of college student-athlete drinking: Prevalence rates, sport-related factors, and interventions. *Journal of Substance Abuse Treatment, 31*(3), 305–316.

Rankin, L. A., & Maggs, J. L. (2006). First-year college student affect and alcohol use: Paradoxical within- and between-person associations. *Journal of Youth and Adolescence, 35*(6), 925–937.

Sher, K. J., & Rutledge, P. C. (2007). Heavy drinking across the transition to college: Predicting first-semester heavy drinking from precollege variables. *Addictive Behaviors, 32*(4), 819–835.

## II. OTHER DRUG ABUSE PREVENTION

### Scope of the Problem

*(Includes articles on incidence and consequences)*

**Arria, A., Caldeira, K. M., O'Grady, K. E., Vincent, K. B., Fitzelle, D. B., Johnson, E. P., & Wish, E. D. (2008). Drug exposure opportunities and use patterns among college students: Results of a longitudinal prospective cohort study. *Substance Abuse, 29*(4), 19–38.**

Underage drinking and drug use among college students are major public health concerns, yet few studies have examined these behaviors and their associated risk factors and consequences prospectively. This paper describes the sampling and recruitment methods of a longitudinal study of 1253 college students at a large, mid-Atlantic university. Incoming first-year students were screened during the unique window between high school and college in order to oversample drug users for longitudinal follow-up. Intensive recruitment strategies yielded a 95% cumulative response rate in annual interviews and semiannual surveys. The authors report preliminary results on exposure opportunity, lifetime prevalence, initiation, continuation, and cessation of substance use for alcohol, tobacco, and 10 illicit and prescription drugs during the first 2 years of college. Findings suggest that although some substance use represents a continuation of patterns initiated in high school, exposure opportunity and initiation of substance use frequently occur in college. Implications for prevention and early intervention are discussed.

**Arria, A. M., Caldeira, K. M., O'Grady, K. E., Vincent, K. B., Johnson, E. P., & Wish, E. D. (2008). Nonmedical use of prescription stimulants among college students: Associations with attention-deficit-hyperactivity disorder and polydrug use. *Pharmacotherapy, 28*(2), 156–169.**

**STUDY OBJECTIVE:** To define, among a sample of college students, the nature and extent of nonmedical use of prescription stimulants (NPS), including both overuse and use of someone else's drug, for attention-deficit-hyperactivity disorder (ADHD); to characterize NPS among individuals not medically using a prescription stimulant for ADHD; and to determine whether NPS and overuse of a medically prescribed stimulant for ADHD were independently associated with an increased risk of other illicit drug use and dependence on alcohol and marijuana. **DESIGN:** Cross-sectional analysis of personal interview data. **SETTING:** Large public university in the mid-Atlantic region. **Participants.** A cohort of 1253 first-year college students aged 17-20 years. **MEASUREMENTS AND MAIN RESULTS:** All students completed a 2-hour personal interview to ascertain medical use and overuse of prescription stimulants, NPS, nonmedical use of other prescription drugs and illicit drug use, and dependence on alcohol and marijuana. Comparisons were made among nonusers, nonmedical users, and medical users of prescription stimulants for ADHD (ADHD+), some of whom overused their drug. Of 1208 students who were not using prescription stimulants medically for ADHD (ADHD-), 218 (18.0%) engaged in NPS. Of 45 ADHD+ students, 12 (26.7%) overused their ADHD drug at least once in their lifetime, and seven (15.6%) nonmedically used someone else's prescription stimulants at least once in their lifetime. Among 225 nonmedical users, NPS was infrequent and mainly associated with studying, although 35 (15.6%) used prescription stimulants to party or to get high.

**Buckner, J. D., Keough, M. E., & Schmidt, N. B. (2007). Problematic alcohol and cannabis**

**use among young adults: The roles of depression and discomfort and distress tolerance. *Addictive Behaviors*, 32(9), 1957–1963.**

Problematic substance use is associated with depression. Clarifying the relationship between substance use and depression remains an important research goal, with implications for prevention and treatment. Individual differences in the ability to tolerate negative physical and emotional sensations were hypothesized to play a role in substance use behaviors among depressed individuals. The present study investigated the roles of discomfort and distress tolerance in the relationship between alcohol and cannabis problems and depression among undergraduates (N = 265). Consistent with other reports, depression was correlated with alcohol and cannabis problems. As predicated, distress tolerance mediated the relationships between depression and alcohol and cannabis problems. Interestingly, discomfort intolerance moderated the relationship between depression and cannabis problems such that depressed individuals with high discomfort tolerance were most vulnerable to cannabis problems. These data suggest that distress intolerance may at least partially account for alcohol and cannabis problems among depressed young adults whereas discomfort intolerance may actually serve a protective role in the development of cannabis problems.

**Caldeira, K. M., Arria, A. M., O’Grady, K. E., Vincent, K. B., & Wish, E. D. (2008). The occurrence of cannabis use disorders and other cannabis-related problems among first-year college students. *Addictive Behaviors*, 33(3), 397–411.**

This study reports the prevalence of cannabis use disorders (CUD) and other cannabis-related problems in a large cohort (n=1253) of first-year college students, 17 to 20 years old, at one large public university in the mid-Atlantic region of the U.S. Interviewers assessed past-year cannabis use, other drug use, and cannabis-related problems (including DSM-IV criteria for CUD). The prevalence of CUD was 9.4%(wt) among all first-year students and 24.6% among past-year cannabis users (n=739). Of those endorsing any CUD criteria, 33.8% could be classified as diagnostic orphans. Among 474 “at-risk” cannabis users (>or= 5 times in the past year), concentration problems (40.1%), driving while high (18.6%) and missing class (13.9%) were among the most prevalent cannabis-related problems, even among those who endorsed no CUD criteria. Placing oneself at risk for physical injury was also commonly reported (24.3%). A significant proportion of cannabis-using college students meet diagnostic criteria for disorder. Even in the absence of disorder, users appear to be at risk for potentially serious cannabis-related problems. Implications for prevention, service delivery, and future research are discussed.

**DeSantis, A. D., Webb, E. M., & Noar, S. M. (2008). Illicit use of prescription ADHD medications on a college campus: A multimethodological approach. *Journal of American College Health*, 57(3), 315–324.**

**OBJECTIVE:** The authors used quantitative and qualitative methodologies to investigate college students’ perceptions and use of illegal Attention Deficit Hyperactivity Disorder (ADHD) stimulants during spring and summer 2006. **PARTICIPANTS:** From fall 2005 through fall 2006, the authors studied 1,811 undergraduates at a large, public, southeastern research university in the United States. **METHODS:** The authors administered surveys to these students and conducted 175 in-depth interviews. **RESULTS:** Of the study participants, 34% reported the illegal use of ADHD stimulants. Most illegal users reported using ADHD stimulants primarily in periods of high academic stress and found them to reduce fatigue while increasing reading comprehension, interest, cognition, and

memory. Furthermore, most had little information about the drug and found procurement to be both easy and stigma-free. CONCLUSIONS: This study supplies a rich understanding of the growing national trend of illegal ADHD stimulant use. The authors discuss strategies for stemming the tide of ADHD stimulant use.

Lifetime NPS was associated with past-year other drug use. Both NPS and overuse of prescribed stimulants for ADHD were independently associated with past-year use of five drugs, holding constant sociodemographic characteristics; NPS was also associated with alcohol and marijuana dependence. CONCLUSIONS: Physicians should be vigilant for possible overuse and/or diversion of prescription stimulants for ADHD among college students who are medical users of these drugs, as well as the occurrence of illicit drug use with NPS. Initiation of comprehensive drug prevention activities that involve parents as well as college personnel is encouraged to raise awareness of NPS and its association with illicit drug use.

**Dupont, R. L., Coleman, J. J., Bucher, R. H., & Wilford, B. B. (2008). Characteristics and motives of college students who engage in nonmedical use of methylphenidate. *The American Journal on Addictions / American Academy of Psychiatrists in Alcoholism and Addictions*, 17(3), 167–171.**

Methylphenidate (MPH) has a long history of being an effective medication for attention deficit/hyperactivity disorder (ADHD). Recently, the nonmedical use of MPH has increased, particularly among college students. To investigate this, we surveyed 2,087 students regarding MPH misuse. Of 2,087 respondents, 110 (5.3%) used MPH nonmedically at least once. Most obtained MPH free from a friend, acquaintance, or family member. Misuse of Ritalin(R) occurred four times more frequently than Concerta. Among Ritalin abusers, intranasal use was reported more often than oral. Students reported using MPH nonmedically for recreational reasons as well as to improve academic performance.

**Ford, J. A., & Arrastia, M. C. (2008). Pill-poppers and dopers: A comparison of non-medical prescription drug use and illicit/street drug use among college students. *Addictive Behaviors*, 33(7), 934–941.**

Data from the 2001 College Alcohol Study, a national sample of U.S. college students, were used to conduct multinomial logistic regression analysis examining correlates of substance use. Students were divided into three groups based on their lifetime substance use: non-users, non-medical prescription drug use only, and illicit/street drug use only. The purpose of this analytic strategy was to examine the similarities/differences in the correlates of non-medical prescription drug use and illicit/street drug use. Findings indicate that race, age, G.P.A., sexual activity, health, binge drinking, marijuana use, social bonding and social learning measures are correlates of non-medical prescription drug use. Correlates of illicit/street drug use include gender, Hispanic ethnicity, sexual activity, binge drinking, marijuana use, social bonding and social learning measures. Finally, the focus of the paper is a comparison of students who report only non-medical prescription drug use to students who report only illicit/street drug use. Findings indicate that gender, race, marital status, sexual activity, marijuana use, and social bonding measures significantly distinguish illicit/street drug use from non-medical prescription drug use. Important implications, limitations, and future research needs were discussed.

**Greely, H., Sahakian, B., Harris, J., Kessler, R. C., Gazzaniga, M., Campbell, P., & Farah, M. J. (2008). Towards responsible use of cognitive-enhancing drugs by the healthy. *Nature*,**

456, 702–705.

The authors reflect upon the use of cognitive-enhancing drugs by healthy individuals. They present a brief overview of the use of Adderall and Ritalin by college students seeking to improve their learning capacity. They argue that prescription drug regulations are based on their potential for abuse, not their enhancing properties, and propose actions that will help people appreciate the benefits of enhancement through research and evolved regulation.

**Grekin, E. R., & Ayna, D. (2008). Argileh use among college students in the United States: An emerging trend. *Journal of Studies on Alcohol and Drugs*, 69(3), 472–475.**

OBJECTIVE: This study examined the prevalence and predictors of argileh (hookah pipe) use among a sample of nonselected college students. METHOD: Participants were 602 students (24% male; 43% white; mean age=22.06) at a large, ethnically diverse, urban university. All participants completed an online survey designed to assess various types of substance use. RESULTS: More than 15% of the sample reported having used argileh at least once in their lifetime, exceeding the percentage of students who had tried stimulants, barbiturates, cocaine, Ecstasy, heroin, or psychedelics. Arab ethnicity and cigarette smoking were the strongest predictors of argileh use; however, a substantial percentage of non-Arabs and nonsmokers also had tried argileh. CONCLUSIONS: Findings suggest that, in comparison with other substances, the prevalence of argileh use is high among college students in the United States. Physical health implications of these findings are discussed.

**Goldberger, B. A., Graham, N. A., Nelson, S. J., Cadet, J. L., & Gold, M. S. (2007). A marked increase in cocaine-related deaths in the state of Florida: Precursor of an epidemic? *Journal of Addictive Diseases*, 26(3), 113–116.**

The history of cocaine misuse includes a destructive epidemic during the 1980s. While recent surveys suggest cocaine use is stable or decreasing, we have observed increasing trends of cocaine-related death through analysis of medical examiner data collected by the Florida Department of Law Enforcement (FDLE). Florida's per capita cocaine-related death rates nearly doubled from 2001 to 2005. Electronic collection of data such as that collected by the FDLE nationally and in real-time would greatly advance understanding of drug-use patterns and consequences. For example, results from Florida suggest that high school and college students, and members of higher socioeconomic status, appear to be at increased risk of cocaine abuse. Public health interventions are necessary to prevent another full-fledged epidemic.

**Hoban, M., & Leino, E. V. (2006). American College Health Association National College Health Assessment (ACHA-NCHA) Spring 2005 Reference Group data report (abridged). *Journal of American College Health*, 55(1), 5–16.**

Assessing and understanding the health needs and capacities of college students is paramount to creating healthy campus communities. The American College Health Association-National College Health Assessment (ACHA-NCHA) is a survey instrument developed by the ACHA in 1998 to assist institutions of higher education in achieving this goal. The ACHA-NCHA contains approximately 300 questions assessing student health status and health problems, risk and protective behaviors, access to health information, impediments to academic performance, and perceived norms across a variety of content areas (e.g., injury prevention; personal safety and violence; alcohol,

tobacco, and other drug use; sexual health; weight, nutrition, and exercise; mental health). Twice a year, the ACHA compiles aggregate data from participating institutions in a reference group report for data comparison. Results from the Spring 2005 Reference Group (N = 54,111) are presented in this article.

**Kaloyanides, K. B., McCabe, S. E., Cranford, J. A., & Teter, C. J. (2007). Prevalence of illicit use and abuse of prescription stimulants, alcohol, and other drugs among college students: Relationship with age at initiation of prescription stimulants. *Pharmacotherapy*, 27(5), 666–674.**

STUDY OBJECTIVE: To examine associations between age at initiation of prescription stimulants and illicit use and abuse of prescription stimulants, alcohol, and other drugs among college students in the United States. DESIGN: Web-based survey of college students. SETTING: A large (full-time undergraduate population > 20,000) university. INTERVENTION: A Web-based survey was sent to a random sample of 5389 undergraduate college students plus an additional 1530 undergraduate college students of various ethnic backgrounds over a 2-month period. MEASUREMENTS AND MAIN RESULTS: Alcohol abuse was assessed by including a modified version of the Cut Down, Annoyance, Guilt, Eye-opener (CAGE) instrument. Drug use-related problems were assessed with a slightly modified version of the Drug Abuse Screening Test, short form (DAST-10). The final sample consisted of 4580 undergraduate students (66% response rate). For the analyses, five subgroups were created based on age at initiation of prescription stimulant use: no prescription stimulant use, grades kindergarten (K)-4, grades 5-8, grades 9-12, and college. Undergraduate students to whom stimulants were prescribed in grades K-4 reported similar rates of alcohol and other drug use compared with that of the group that had no prescription stimulant use. For example, students who started prescription stimulants in grades K-4 were no more likely to report coingestion of alcohol and illicit prescription stimulants (odds ratio [OR] 1.4, 95% confidence interval [CI] 0.2-11.5, NS) than the group that had no prescription stimulant use. However, undergraduate students whose prescription stimulant use began in college had significantly higher rates of alcohol and other drug use. For example, students who started a prescription stimulant in college were almost 4 times as likely (OR 3.7, 95% CI 1.9-7.1,  $p < 0.001$ ) to report at least three positive indicators of drug abuse on the DAST-10 compared with the group that had no prescription stimulant use. CONCLUSIONS: In concordance with results of previous research, these results indicate that initiation of prescription stimulants during childhood is not associated with increased future use of alcohol and other drugs.

**Khey, D. N., Miller, B. L., & Griffin, O. H. (2008). Salvia divinorum use among a college student sample. *Journal of Drug Education*, 38(3), 297–306.**

The recreational use of *Salvia divinorum* has received increased attention by media outlets and policy-makers in recent years. The vast absence of research to guide the dissemination of information has prompted this research note describing the use of this substance in a large public institution of higher education. The prevalence of *Salvia divinorum* is described in this context and a description of patterns of use, methods of acquisition, and a subjective estimation of continuance are proffered.

**Lange, J. E., Reed, M. B., Croff, J. M. K., & Clapp, J. D. (2008). College student use of salvia divinorum. *Drug and Alcohol Dependence*, 94(1–3), 263–266.**

OBJECTIVE: *Salvia divinorum* (salvia) is a plant that appears to be enjoying increased popularity as

a legal hallucinogen in many U.S. jurisdictions. While the popular press has claimed that its use has become widespread, there have been no epidemiological studies published documenting this within the U.S. **METHOD:** A sample of college students was randomly drawn from a large public university in the southwestern U.S. and invited to participate in an online survey that included salvia use among a set of other drug use items. **RESULTS:** From the sample of 1516 college student respondents, a pattern of use emerged that indicates that salvia is indeed becoming a significant member of the list of drugs used, with 4.4% of students reporting using salvia at least once within the past 12 months. Subpopulations that are typically most at risk for drug use within college students (Whites, males, fraternity members, heavy episodic drinkers) also were most likely to use salvia. **CONCLUSIONS:** The results indicate that more research is needed to determine the generalizability of these findings, and identify whether there are any negative consequences experienced either by the user or the community associated with this drug.

**Loe, M. (2008).** *The prescription of a new generation. Contexts: Understanding People in Their Social Worlds, 7(2), 46–49.*

The article discusses prescription drugs and their influence to the new generation. The article implies that college students in the United States are raised in a society that upholds such drugs as everyday commodities or even as school necessities. It is stated that the drugs, which include medications for Attention-Deficit Hyperactivity Disorder (ADHD), are socially branded and advertised directly to the consumers unlike other commercial products. As a result, college students take prescription drugs to be able to withstand the competition for college admission, a scenario which the article investigates.

**Marczinski, C. A., & Fillmore, M. T. (2006).** *Clubgoers and their trendy cocktails: Implications of mixing caffeine into alcohol on information processing and subjective reports of intoxication. Experimental and Clinical Psychopharmacology, 14(4), 450–458.*

Alcoholic drink preferences in college students have made an interesting shift recently, with trends in consumption leaning toward caffeinated alcohol in various forms (e.g., Red Bull and vodka or caffeinated beers such as Anheuser-Busch's B-to-the-E). Despite the dramatic rise in popularity of these beverages, little research has examined the combined effects of alcohol and caffeine, which is problematic for adequately informing the public about the risk or lack thereof of these drinks. The purpose of this study was to directly investigate the acute effects of alcohol and caffeine, alone and in combination, on well-validated measures of cognitive performance and subjective intoxication in social drinkers. Participants (N = 12) performed a psychological refractory period task that measured dual-task interference as the prolonged reaction time to complete the 2nd of 2 tasks performed in close temporal sequence. Performance was tested under 2 active doses and 1 placebo dose of caffeine (0.0 mg/kg, 2.0 mg/kg, and 4.0 mg/kg) in combination with 1 active dose and 1 placebo dose of alcohol (0.0 g/kg and 0.65 g/kg). As expected, alcohol impaired task performance by increasing dual-task interference and increasing errors. The coadministration of caffeine counteracted the effects of alcohol on interference but had no effect on the degree to which alcohol increased errors. Subjective measures of intoxication showed that coadministration of caffeine with alcohol reduced participants' perceptions of alcohol intoxication compared with administration of alcohol alone. The results highlight the complexity of drug interactions between alcohol and caffeine.

**McCabe, S. E., Brower, K. J., West, B. T., Nelson, T. F., & Wechsler, H. (2007).** *Trends in*

**non-medical use of anabolic steroids by U.S. college students: Results from four national surveys. *Drug and Alcohol Dependence*, 90(2–3), 243–251.**

This study assessed the prevalence, trends, and student- and college-level characteristics associated with the non-medical use of anabolic steroids (NMAS) among U.S. college students. Data were collected through self-administered mail surveys, from 15,282, 14,428, 13,953, and 10,904 randomly selected college students at the same 119 nationally representative colleges in 1993, 1997, 1999 and 2001, respectively. The prevalence of lifetime, past-year and past-month NMAS was 1% or less and generally did not change significantly between 1993 and 2001, with one exception: past-year NMAS increased significantly among men from 1993 (0.36%) to 2001 (0.90%). Multiple logistic regression analyses revealed that lifetime and past-year NMAS were associated with student-level characteristics such as being male and participation in intercollegiate athletics. Lifetime and past-year NMAS were also positively associated with several risky behaviors, including cigarette smoking, illicit drug use, drinking and driving, and DSM-IV alcohol use disorders. Nearly 7 out of every 10 lifetime non-medical users of anabolic steroids met past-year criteria for a DSM-IV alcohol use disorder. Although the overall prevalence of NMAS remained low between 1993 and 2001, findings suggest that continued monitoring is necessary because male student-athletes are at heightened risk for NMAS and this behavior is associated with a wide range of risky health behaviors. The characteristics associated with NMAS have important implications for future practice and research.

**McCabe, S. E., Cranford, J. A., Boyd, C. J., & Teter, C. J. (2007). Motives, diversion and routes of administration associated with nonmedical use of prescription opioids. *Addictive Behaviors*, 32(3), 562–575.**

**OBJECTIVES:** The main objectives of this study were to assess the motives, diversion sources and routes of administration associated with the nonmedical use of prescription opioids as well as to examine substance use related problems associated with the nonmedical use of prescription opioids. **METHOD:** A self-administered, cross-sectional Web survey was conducted in 2005 at a large public Midwestern 4-year university in the U.S. using a probability-based sampling approach. The final sample included 4580 full-time undergraduate students. **RESULTS:** The three most common motives associated with the nonmedical use of prescription opioids were to relieve pain, get high, and experiment. The leading sources of prescription opioids were friends and parents although there were gender differences in reports of primary sources. More than 1 in every 10 nonmedical users reported intranasal administration. Multivariate analyses indicated nonmedical users of prescription opioids who used for motives other than to relieve pain, obtained these drugs from non-parental sources, or used these drugs via non-oral routes of administration were significantly more likely to experience substance use related problems. **CONCLUSIONS:** These results indicate that nonmedical use of prescription opioids represents a considerable problem for particular subgroups of college students. While additional research is needed, the present study offers important new directions for policy and research regarding prescription opioid misuse.

**McCabe, S. E., Cranford, J. A., Morales, M., & Young, A. (2006). Simultaneous and concurrent polydrug use of alcohol and prescription drugs: Prevalence, correlates, and consequences. *Journal of Studies on Alcohol*, 67(4), 529–537.**

**OBJECTIVE:** In this study, we sought to examine the prevalence, correlates, and consequences associated with simultaneous polydrug use and concurrent polydrug use of alcohol and prescription drugs. For purposes of this investigation, simultaneous polydrug use referred to the co-ingestion of

different drugs at the same time, and concurrent polydrug use referred to the use of different drugs on separate occasions within the past 12 months. **METHOD:** Undergraduate students attending a large public midwestern university in the United States were randomly selected to self-administer a Web survey. The sample consisted of 4,580 undergraduate students, with a mean (SD) age of 19.9 (2.0) years; the sample consisted of 50% women, and the racial breakdown was 65% white, 13% Asian, 7% black, 5% Hispanic, and 10% other race/ethnicity. The survey assessed simultaneous polydrug use and concurrent polydrug use of alcohol and four classes of prescription drugs: (1) pain medication, (2) stimulant medication, (3) sedative medication, and (4) sleeping medication. **RESULTS:** The 12-month prevalence for polydrug use involving alcohol and abusable prescription drugs was 12.1% (including 6.9% simultaneous polydrug use). The majority of polydrug use involving alcohol and each class of prescription drugs was simultaneous polydrug use, with the exception of sleeping medication. Simultaneous polydrug use was more prevalent among undergraduate students who were male, were white, and reported early initiation of alcohol use. Simultaneous polydrug use was associated with more alcohol-related and other drug use-related problems than concurrent polydrug use. **CONCLUSIONS:** Based on the high prevalence and increased risk for consequences associated with simultaneous polydrug use of alcohol and prescription drugs, collegiate prevention efforts aimed at reducing substance abuse should clearly focus on co-ingestion of alcohol and prescription drugs.

**McCabe, S. E., & Teter, C. J. (2007). Drug use related problems among nonmedical users of prescription stimulants: A Web-based survey of college students from a Midwestern university. *Drug and Alcohol Dependence, 91*(1), 69–76.**

This college-based study compared nonmedical users of prescription stimulants to other types of drug users regarding drug use related problems. A Web survey was self-administered in 2005 by a probability sample of 3639 full-time undergraduate students (68% response rate) at a large public Midwestern 4-year university in the United States. The survey consisted of measures to assess substance use and misuse, including a modified version of the Drug Abuse Screening Test (DAST-10). Nonmedical users of prescription stimulants were more likely than other drug users to report polydrug use. Nonmedical users of prescription stimulants had over four times greater odds than other drug users to experience three or more DAST-10 items in the past 12 months (AOR=4.61, 95% CI=3.28-6.48). Among nonmedical users of prescription stimulants, those who used prescription stimulants via intranasal and other non-oral routes of administration had greater odds than oral only users to experience three or more DAST-10 items in the past 12 months. The findings of the present study suggest that the majority of nonmedical users of prescription stimulants are polydrug users and should be screened for potential drug abuse or dependence, especially those who report non-oral routes of administration.

**McCabe, S. E., Teter, C. J., & Boyd, C. J. (2006). Medical use, illicit use, and diversion of abusable prescription drugs. *Journal of American College Health, 54*(5), 269–278.**

The authors investigated the medical use, illicit use, and diversion of 4 distinct classes of abusable prescription medication (sleeping medication, sedative or anxiety medication, stimulant medication, and pain medication) in a random sample of undergraduate students. In spring 2003, 9,161 undergraduate students attending a large, public, midwestern research university in the United States self-administered a Web-based survey. The prevalence rate for illicit use within the past year was highest for pain medication, followed by stimulant medication, sedative or anxiety medication, and sleeping medication. Women generally reported higher past-year medical use rates. However,

undergraduate men reported higher illicit use rates. The illicit use-medical use ratio for stimulant medication was the highest among the 4 classes of prescription drugs. Medical users of stimulants for attention deficit hyperactivity disorder were the most likely to be approached to divert their medication. Multivariate results indicated that illicit users of prescription drugs were more likely to use other drugs than were students who did not use prescription drugs illicitly. The authors provide evidence that prescription drug abuse is a problem among college students.

**McCabe, S. E., West, B. T., & Wechsler, H. (2007). Trends and college-level characteristics associated with the non-medical use of prescription drugs among US college students from 1993 to 2001. *Addiction, 102*(3), 455–465.**

**Aims:** The present study examines the prevalence trends and college-level characteristics associated with the nonmedical use of prescription drugs (i.e. amphetamines, opioids, sedatives, tranquilizers) and illicit drug use among US college students between 1993 and 2001. **Design:** Data were collected from self-administered mail surveys, sent to independent cross-sectional samples of college students from a nationally representative sample of 119 colleges in 4 years between 1993 and 2001. **Setting:** Nationally representative 4-year US colleges and universities in 1993, 1997, 1999 and 2001. **Participants:** Representative samples of 15 282, 14 428, 13 953 and 10 904 randomly selected college students at these colleges in 1993, 1997, 1999 and 2001, respectively. **Findings:** The results indicate that life-time and 12-month prevalence rates of non-medical use of prescription drugs (NMPD) increased between 1993 and 2001. Specific college-level characteristics were found to be correlated positively (marijuana use) and negatively (historically black college status and commuter status) with NMPD, consistently across the four cross-sectional samples. Significant between-college variation in terms of trajectories in the prevalence of NMPD over time was found in hierarchical linear models, and selected college-level characteristics were not found to explain all of the variation in the trajectories, suggesting the need for further investigation of what determines between-college variance in the prevalence trends. **Conclusions:** The findings of the present study suggest that continued monitoring of NMPD and illicit drug use among college students is needed and collegiate substance prevention programs should include efforts to reduce these drug use behaviors.

**McCarthy, D. M., Lynch, A. M., & Pederson, S. L. (2007). Driving after use of alcohol and marijuana in college students. *Psychology of Addictive Behaviors, 21*(3), 425–430.**

Driving after use of marijuana is almost as common as driving after use of alcohol in youth (P. M. O'Malley & L. D. Johnston, 2003). The authors compared college students' attitudes, normative beliefs and perceived negative consequences of driving after use of either alcohol or marijuana and tested these cognitive factors as risk factors for substance-related driving. Results indicated that youth perceived driving after marijuana use as more acceptable to peers and the negative consequences as less likely than driving after alcohol use, even after controlling for substance use. Results of zero-inflated Poisson regression analyses indicated that lower perceived dangerousness and greater perceived peer acceptance were associated with increased engagement in, and frequency of, driving after use of either substance. Lower perceived likelihood of negative consequences was associated with increased frequency for those who engage in substance-related driving. These results provide a basis for comparing how youth perceive driving after use of alcohol and marijuana, as well as similarities in the risk factors for driving after use of these substances.

**Prudhomme, B., Becker-Blease, K. A., & Grace-Bishop, K. (2006). Stimulant medication use, misuse, and abuse in an undergraduate and graduate student sample. *Journal of***

***American College Health, 54(5), 261–268.***

In this study, the authors investigated the characteristics of use, misuse, and abuse of stimulant medication (primarily methylphenidate and variants) among students at a northeastern US university. Researchers sent an invitation to take an Internet survey to student e-mail addresses and passed 150 paper surveys in undergraduate classes, analyzing 1,025 (975 electronically) returned surveys. Sixteen percent of respondents reported abusing or misusing stimulant medication. Ninety-six percent of respondents who specified a medication preferred to abuse or misuse Ritalin. Men and women reported similar use patterns. Most respondents who abused or misused stimulant medication swallowed pills; 40% used intranasally. Reasons for abusing or misusing stimulant medication included improving attention, partying, reducing hyperactivity, and improving grades. Consistent with previous studies, results suggest that abuse of stimulant medication is a concern on college campuses. The results point to various reasons for and methods of abusing and misusing stimulant medication that may direct future research, prevention, and intervention.

**Sharp, J. T., & Rosén, L. A. (2007). Recreational stimulant use among college students. *Journal of Substance Use, 12(2), 71–82.***

This study investigated recreational (non-medical) use of stimulant medication, such as methylphenidate and amphetamine salts, in a western United States university population. Researchers recruited students from introductory psychology courses to take a 33-item Recreational Stimulant Use Survey that included questions on illicit drug use in addition to questions concerning recreational stimulant use. Of the 448 participants, 36% were males, and 89% were non-Hispanic White. The results indicated that the overall prevalence rate for recreational stimulant use was 18%. In addition, recreational stimulant use correlated positively with illicit drug use. The perceived availability of stimulant medication, along with usage rates, were discussed and possible treatment options examined.

**Teter, C. J., McCabe, S. E., LaGrange, K., Cranford, J. A., & Boyd, C. J. (2006). Illicit use of specific prescription stimulants among college students: Prevalence, motives, and routes of administration. *Pharmacotherapy, 26(10), 1501–1510.***

OBJECTIVES: To explore the illicit use of specific prescription stimulants among college students and add to our understanding of reasons (motives) and routes of administration associated with illicit use of these drugs. METHODS: A random sample of 4580 college students self-administered a Web-based survey. The survey contained a variety of items pertaining to the illicit use of prescription stimulants. An extensive list of prescription stimulants was provided, and students were asked to select all the specific prescription stimulants that they had used illicitly. Items were also included to assess the motives and routes of administration associated with illicit use of prescription stimulants. RESULTS: Lifetime and past-year prevalence rates for illicit use of prescription stimulants were 8.3% (382 students) and 5.9% (269 students), respectively. Approximately three fourths (75.8%) of the 269 past-year illicit users of prescription stimulants reported using an amphetamine-dextroamphetamine combination agent (e.g., Adderall) in the past year, and approximately one fourth (24.5%) reported using methylphenidate (e.g., Ritalin, Concerta, Metadate, Methylin). Past-year illicit use of prescription stimulants was more than 3 times more likely among Caucasians (odds ratio [OR] 3.1, 95% confidence interval [CI] 1.5-6.6) and Hispanics (OR 3.8, 95% CI 1.6-9.3) compared with African-Americans, and more than twice as likely among Caucasians (OR 2.1, 95% CI 1.3-3.4) and Hispanics (OR 2.6, 95% CI 1.4-5.1) compared with Asians. The most commonly

reported motives for illicit use were to help with concentration (65.2%), help study (59.8%), and increase alertness (47.5%). Other motives included getting high (31.0%) and experimentation (29.9%). Nearly every illicit user (95.3%) reported oral administration, and 38.1% reported snorting prescription stimulants. **CONCLUSION:** Illicit use of amphetamine-dextroamphetamine is more prevalent than illicit use of methylphenidate formulations among college students.

**Williams, J., Pacula, R. L., Chaloupka, F. J., & Wechsler, H. (2006). College students' use of cocaine. *Substance Use & Misuse, 41*(4), 489–509.**

After experiencing a period of rapid decline between 1986 and 1994, cocaine use is once again on the rise in the United States. The increased prevalence of use among college students is particularly troubling because of its potential impact on human capital acquisition and long-term labor market success. Merging information on the price of cocaine and marijuana from the U.S. Drug Enforcement Agency with data on cocaine use from the College Alcohol Study, we investigate the demand for cocaine in the college population. We find evidence that participation in cocaine use by college students is responsive to changes in the price of cocaine and marijuana and that cocaine and marijuana are economic complements for this population. Further investigation revealed significant differences in the demand for cocaine by those less than age 21 and those at least age 21, years, with the younger age group being more responsive to changes in the price of cocaine. No difference is found, however, in the demand for cocaine across gender.

**Wish, E. D., Fitzelle, D. B., O'Grady, K. E., Hsu, M. H., & Arria, A. M. (2006). Evidence for significant polydrug use among ecstasy-using college students. *Journal of American College Health, 55*(2), 99–104.**

Ecstasy (MDMA) has been added to the spectrum of illicit drugs used by college students. In this study, the authors estimated the prevalence of ecstasy use within a large college student sample and investigated the polydrug-use history of those ecstasy users. They administered an anonymous questionnaire to college students (N = 1,206) in classrooms at a large university in the mid-Atlantic United States. The overall student response rate was 91%. Nine percent of the sample reported lifetime ecstasy use. Because 98% of ecstasy users had used marijuana, the authors compared polydrug use between ecstasy users and individuals who had used marijuana but not ecstasy. Ecstasy users, as compared with these marijuana users, were significantly more likely to have used inhalants (38% vs. 10%), LSD (38% vs. 5%), cocaine (46% vs. 2%), and heroin (17% vs. 1%) in the past year. Significant polydrug use among college student ecstasy users has important implications for their substance abuse treatment.

**Wu, L.-T., Schlenger, W. E., & Galvin, D. M. (2006). Concurrent use of methamphetamine, MDMA, LSD, ketamine, GHB, and flunitrazepam among American youths. *Drug and Alcohol Dependence, 84*(1), 102–113.**

Background: The magnitude and the characteristics of the use of methamphetamine, MDMA (Ecstasy), LSD (D-lysergic acid diethylamide), ketamine, GHB (gamma-hydroxybutyrate), and flunitrazepam (Rohypnol) were examined in a probability sample of the U.S. civilian population that included multiethnic urban, suburban, and rural youths aged 16-23 (N=19,084). Methods: Data were drawn from the National Survey on Drug Use and Health (NSDUH). Logistic regression analyses were conducted to identify the characteristics associated with the use of each of these drugs and of multiple drugs. Results: Approximately 20% of youths aged 16-23 reported having ever used one or

more of these drugs. Less than 1% of club drug users used club drugs only, and 82% of them had ever used three or more drug classes. Females were more likely than males to report using multiple club drugs. Recent users of methamphetamine were most likely to be females and adolescents aged 16 or 17. Recent users of MDMA tended to be young adults aged 18-21 and residents of metropolitan areas. Most recent users of LSD were adolescents aged 16-19 and those in low-income families. Ketamine users were primarily employed youths. Staying in school and getting married were associated with decreased odds of club drug use. Club drug use was highly associated with the presence of criminal behaviors and recent alcohol abuse or dependence. Conclusions: Adolescents are more likely than young adults to use multiple drugs. The clustering of multidrug use and alcohol use disorder is a cause of concern.

## ***OTHER DRUG ABUSE PREVENTION***

### **Risk and Protective Factors**

*(Includes articles on drug use contexts and correlates of use)*

**Advokat, C. D., Guidry, D., & Martino, L. (2008). Licit and illicit use of medications for attention-deficit hyperactivity disorder in undergraduate college students. *Journal of American College Health, 56*(6), 601–606.**

**OBJECTIVE:** The authors studied the relationship between a diagnosis of Attention-Deficit Hyperactivity Disorder (ADHD), grade point average (GPA), and licit and illicit drug use. **PARTICIPANTS AND METHODS:** They obtained survey data from a convenience sample of undergraduates in a large southern public university. **RESULTS:** Among 1,550 respondents, 163 (10.5%) reported an ADHD diagnosis (ADHD Group). Of those without an ADHD diagnosis, 591 (43%) reported using prescription stimulants illicitly (No ADHD, Illicit Use group), and 794 (57%) reported not using prescription drugs illicitly (No ADHD, No Illicit Use group). The GPA of the ADHD group was significantly lower than the GPA of the other 2 groups. The ADHD group and the No ADHD, Illicit Use group reported significantly greater use of all other drugs than did the No ADHD, No Illicit Use group. **CONCLUSIONS:** Drug use was associated with a lower GPA in ADHD-diagnosed students than in students without ADHD.

**Arria, A. M., Caldeira, K. M., Vincent, K. B., O'Grady, K. E., & Wish, E. D. (2008). Perceived harmfulness predicts nonmedical use of prescription drugs among college students: Interactions with sensation-seeking. *Prevention Science: The Official Journal of the Society for Prevention Research, 9*(3), 191–201.**

This study describes the level of perceived harmfulness of nonmedical prescription stimulant and analgesic use in a sample of college students, and examines the prospective relationship between perceived harmfulness and subsequent nonmedical use. In addition, we explore whether the association between perceived harmfulness and nonmedical use varies by level of sensation-seeking. Personal interviews, including questions on sensation-seeking and drug use, were conducted with 1,253 first-year college students. Participants were then followed-up twice at 6-month intervals. Perceived harmfulness of nonmedical use of prescription drugs was assessed at 6 months via a web-based survey. At the 12-month follow-up interview, drug use was again assessed. Students who never had the opportunity to use prescription drugs nonmedically were excluded from all analyses. Results revealed that one in four students perceived a great risk of harm from occasional nonmedical use of prescription stimulants (25.2%) and analgesics (27.8%). As expected, low perceived

harmfulness and high sensation-seeking were independently associated with increased risk of nonmedical use, holding constant demographic characteristics. The protective effect of high perceived harmfulness could be seen at all levels of sensation-seeking with one important exception: Among high sensation-seekers, perceived harmfulness was not related to nonmedical use of prescription analgesics. Perceived harmfulness appears to distinguish nonmedical users from non-users, given the opportunity to use. Increasing perceived harmfulness may be a viable prevention strategy for most students, but alternative approaches might need to be developed that are tailored to high sensation-seekers.

**Bonn-Miller, M. O., Zvolensky, M. J., & Bernstein, A. (2007). Marijuana use motives: Concurrent relations to frequency of past 30-day use and anxiety sensitivity among young adult marijuana smokers. *Addictive Behaviors, 32*(1), 49–62.**

The present investigation examined two theoretically relevant aspects of marijuana motives using the Marijuana Motives Measure (MMM) [Simons, J., Correia, C. J., Carey, K. B., & Borsari, B. E. (1998). Validating a five-factor marijuana motives measure: Relations with use, problems, and alcohol motives. *Journal of Counseling Psychology 45*, 265-273] among 141 (78 female) young adults (M-sub(age)=20.17, S.D.=3.34). The first objective was to evaluate the incremental validity of marijuana motives in relation to frequency of past 30-day use after controlling for the theoretically relevant factors of the number of years using marijuana (lifetime), current levels of alcohol, as well as tobacco smoking use. As expected, coping, enhancement, social, and expansion motives each were uniquely and significantly associated with past 30-day marijuana use over and above the covariates; conformity motives were not a significant predictor. A second aim was to explore whether coping, but no other marijuana motive, was related to the emotional vulnerability individual difference factor of anxiety sensitivity (fear of anxiety). As hypothesized, after controlling for number of years using marijuana (lifetime), past 30-day marijuana use, current levels of alcohol consumption, and cigarettes smoked per day, anxiety sensitivity was incrementally and uniquely related to coping motives for marijuana use, but not other motives. These results are discussed in relation to the clinical implications of better understanding the role of motivation for marijuana use among emotionally vulnerable young adults.

**Grekin, E. R., Sher, K. J., & Wood, P. K. (2006). Personality and substance dependence symptoms: Modeling substance-specific traits. *Psychology of Addictive Behaviors, 20*(4), 415–424.**

Personality traits related to neuroticism and disinhibition have been consistently associated with substance use disorders (SUDs). It is unclear, however, whether different personality traits predict distinct forms of substance dependence. Additionally, it is unclear whether personality traits continue to predict alcohol, drug, and tobacco dependence after controlling for comorbid antisociality and other SUDs. The current study addresses these questions by characterizing relations between personality traits and substance dependence symptoms in a longitudinal sample of 3,720 college students. Results revealed that antisociality and certain core personality traits predicted multiple types of substance pathology. In addition, several personality traits were differentially associated with alcohol, drug, and tobacco symptomatology.

**Kilmer, J. R., Hunt, S. B., Lee, C. M., & Neighbors, C. (2007). Marijuana use, risk perception, and consequences: Is perceived risk congruent with reality? *Addictive Behaviors, 32*(12), 3026–3033.**

**Abstract:** The present study evaluates differences in risk perception related to marijuana use as a function of past use and, among those who report marijuana use, as a function of frequency of use and having experienced a consequence in the past. Participants were 725 incoming first year college students in a longitudinal study examining the efficacy of a marijuana prevention program. Analyses of cross-sectional data indicated that risk perception was greater among non-users of marijuana than for those who reported marijuana use (and, in turn, who were more likely to have actually experienced a drug-related consequence). Among marijuana users, risk perception was not influenced by the frequency of marijuana use nor was it influenced by the actual experience of a drug-related consequence. The findings suggest that for abstainers, perceived risk and the potential consequences of marijuana use may serve a protective role against the initiation of marijuana use. For those who use marijuana, intervention efforts utilizing motivation enhancement approaches could explore the discrepancy between perceived risks and actual experienced consequences.

**Miller, K. E. (2008). Energy drinks, race, and problem behaviors among college students. *Journal of Adolescent Health, 43*(5), 490–497.**

**Purpose:** This study examined relationships between energy drink consumption and problem behaviors among adolescents and emerging adults. It was hypothesized that frequent consumption of energy drinks would be positively associated with substance abuse and other risky behaviors, and that these relationships would be moderated by race. **Methods:** Cross-sectional, self-report survey data were collected from 602 Western New York undergraduate students in the spring of 2006. Differences in problem behaviors by frequency of energy drink consumption were assessed with multivariate linear and logistic regressions, controlling for gender, race, age, parental education, and college grade point average. Follow-up regressions were conducted to test for a moderating effect of race. **Results:** Frequency of energy drink consumption was positively associated with marijuana use, sexual risk-taking, fighting, seatbelt omission, and taking risks on a dare for the sample as a whole, and associated with smoking, drinking, alcohol problems, and illicit prescription drug use for white students but not for black students. **Conclusions:** These findings suggest that energy drink consumption is closely associated with a problem behavior syndrome, particularly among whites. Frequent consumption of energy drinks may serve as a useful screening indicator to identify students at risk for substance use and/or other health-compromising behavior.

**Piran, N., & Robinson, S. R. (2006). Associations between disordered eating behaviors and licit and illicit substance use and abuse in a university sample. *Addictive Behaviors, 31*(10), 1761–1775.**

**Objectives:** To examine associations between discrete eating disordered behaviors as well as clusters of eating disordered behaviors in relation to the use and abuse of a wide spectrum of substance classes, both licit and illicit, in a female university sample. **Methods:** Women with particular types of eating disordered behaviors were selected from a pool of 526 students who completed the Women's Health Survey. Analyses compared the frequencies of lifetime engagement in a wide range of licit and illicit substances between each of the eating disorder groups and the normal control group. **Results:** Associations were found between severe levels of alcohol consumption and binge eating, dieting with purging and the use of central nervous stimulants, and bingeing with dieting and tobacco use and the abuse of prescription medications. **Conclusion:** Examining a broad range of substance classes, with differing physiological properties and effects, in relation to specific disordered eating behaviors, could contribute to theory development regarding the functions of the

specific co-occurring behaviors.

**Lee, C. M., Neighbors, C., & Woods, B. A. (2007). Marijuana motives: Young adults' reasons for using marijuana. *Addictive Behaviors, 32*(7), 1384–1394.**

Previous research has evaluated marijuana motives among adolescents and emerging adults using a predetermined set of motives, largely adapted from the alcohol literature. This research was designed to identify marijuana motives from the perspective of the user. Recent high school graduates who reported using marijuana (N = 634) provided self-generated reasons for using. The most frequently reported reasons included enjoyment/fun, conformity, experimentation, social enhancement, boredom, and relaxation. Regression analyses revealed that experimentation was consistently associated with less use and fewer problems whereas enjoyment, habit, activity enhancement, and altered perception or perspectives were associated with heavier use and more problems.

**McCabe, S. E., West, B. T., & Wechsler, H. (2007). Alcohol-use disorders and nonmedical use of prescription drugs among U.S. college students. *Journal of Studies on Alcohol and Drugs, 68*(4), 543–547.**

Objective: The purpose of this study was to examine the association between Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), alcohol-use disorders (AUDs) and nonmedical use of prescription drugs (NMPD) among U.S. college students. A secondary aim of this study was to identify individual-level and college-level characteristics associated with the co-occurrence of AUDs and NMPD. Method: Data were collected from self-administered mail surveys, sent to a random sample of approximately 14,000 college students from a nationally representative sample of 119 U.S. colleges and universities. Results: Among U.S. college students, those with AUDs represented approximately 75% of nonmedical users of prescription drugs. Multivariate logistic regression analyses indicated that college students with past-year DSM-IV alcohol abuse only (adjusted odds ratio [AOR] = 4.46, 95% confidence interval [CI] = 3.59-5.55) and students with past-year DSM-IV alcohol dependence (AOR = 9.17, 95% CI = 7.05-11.93) had significantly increased odds of NMPD in the past year compared with students without AUDs. The co-occurrence of AUDs and NMPD was more likely among college students who were male, white, earned lower grade point averages, and attended co-ed colleges and institutions located in Southern or Northeastern U.S. regions. Conclusions: The findings provide evidence that NMPD is more prevalent among those college students with AUDs, especially individuals with past-year DSM-IV alcohol dependence. The assessment and treatment of AUDs among college students should account for other forms of drug use such as NMPD.

**Shillington, A. M., & Clapp, J. D. (2006). Heavy alcohol use compared to alcohol and marijuana use: Do college students experience a difference in substance use problems? *Journal of Drug Education, 36*(1), 91–103.**

This study examines the risk for alcohol and other drug (AOD) problems resulting from alcohol plus marijuana use compared to alcohol-only use. Data are from telephone interviews with 1113 randomly selected college students attending two large urban universities in the southwestern United States. Alcohol and marijuana users (dual users) were more likely to be younger and report a higher mean number of drinks per occasion and experiencing all AOD problems studied compared to alcohol-only users. Multivariate logistic regression analysis findings reveal the relationship between dual-substance use and increased risk for AOD problems remained after controlling for

demographics and alcohol use behaviors. Such problems include greater odds of legal problems and riding with or being an intoxicated driver. College students using alcohol and marijuana are at much higher risk for AOD problems than are students who use alcohol only, even when heavy drinking is taken into account.

**Simons, J. S., Christopher, M. S., Oliver, M. N. I., & Stanage, E. J. (2006). A content analysis of personal strivings: Associations with substance use. *Addictive Behaviors, 31*(7), 1224–1230.**

This study examined relations between personal strivings and frequency of alcohol, marijuana, and any drug use among college students. Personal strivings are ongoing goals that an individual is characteristically trying to achieve through their behavior. Participants generated lists of personal strivings following standard instructions and then completed an assessment of alcohol and marijuana use and days used any drug (aside from tobacco or medication as prescribed). Personal strivings were coded into content categories by trained raters using a coding manual. Four content categories were examined for this study: achievement, affect regulation, self-presentation, and interpersonal. A series of t-tests revealed that participants' achievement strivings were unrelated to substance use. In contrast, participants endorsing more affect regulation goals used all drugs more frequently. Self-presentation goals were positively associated with alcohol use but unrelated to marijuana or other drug use. Finally, interpersonal goals were associated with higher rates of alcohol use, lower rates of marijuana use, and not related to total use days.

**Simons, J. S., Neal, D. J., & Gaher, R. M. (2006). Risk for marijuana-related problems among college students: An application of zero-inflated negative binomial regression. *American Journal of Drug and Alcohol Abuse, 32*(1), 41–53.**

Method: This study examined the association between marijuana-related problems and social norms, impulsivity, and perceived use utility among 292 college students. Zero-inflated negative binomial regression was used to simultaneously predict expected nonusers as well as predict counts of reported marijuana-related problems among expected users. Gender, social norms, impulsivity, and perceived use utility were used to predict expected nonusers as well as number of marijuana-related problems among expected users. Results: Only social norms were associated with the prediction of zero-values. In contrast, only perceived use utility was associated with the prediction of number of marijuana-related problems. Conclusions: Results generally are consistent with theories of the differential association of social-environmental and biopsychological variables with use and problems, respectively. Zero-inflated regression models are a useful strategy to examine risk behaviors with low base rates.

**Taylor, J. (2006). Life events and peer substance use and their relation to substance use problems in college students. *Journal of Drug Education, 36*(2), 179–191.**

Substance use disorders among college students are not well understood, and the present study examined the relationship of two environmental factors to alcohol and drug use problems in 616 (316 women) college students. Participants completed measures assessing substance use problems, life events, and substance use among peers. Alcohol use problems were significantly associated with higher drug use problems and regular use of illicit drugs among friends. Drug use problems were significantly associated with male gender, higher alcohol use problems, regular use of alcohol and drugs among friends, illicit drug use among romantic partners, and higher numbers of negative life

events. Results extend previous research and suggest that college students who experience multiple negative life events and/or affiliate with substance using friends and romantic partners may be at risk for developing a substance use problem.

See also:

Chen, M.-J., Miller, B. A., Grube, J. W., & Waiters, E. D. (2006). Music, substance use, and aggression. *Journal of Studies on Alcohol*, *67*(3), 373–381.

Kashdan, T., Collins, R., & Elhai, J. (2006). Social anxiety and positive outcome expectancies on risk-taking behaviors. *Cognitive Therapy and Research*, *30*(6), 749–761.

McCarthy, D. M., Lynch, A. M., & Pederson, S. L. (2007). Driving after use of alcohol and marijuana in college students. *Psychology of Addictive Behaviors*, *21*(3), 425–430.

Rockafellow, B. D., & Saules, K. K. (2006). Substance use by college students: The role of intrinsic versus extrinsic motivation for athletic involvement. *Psychology of Addictive Behaviors*, *20*(3), 279–287.

### **III. VIOLENCE PREVENTION**

**Badolato, V. (June 2008). Campus violence and safety. *State Legislatures*, *34*(6), 18.**

This article deals with the re-emergence of U.S. campus security in the legislative spotlight. Lawmakers are looking at how to improve crisis alerts, the need for more open exchange of student information and whether faculty and students should be allowed to carry concealed firearms. State and national task forces formed after the tragedy at Virginia Tech concluded that college campuses require updated and carefully coordinated emergency response plans. Opponents say more guns on campus could increase isolated acts of violence.

**Banyard, V. L., Moynihan, M. M., & Plante, E. G. (2007). Sexual violence prevention through bystander education: An experimental evaluation. *Journal of Community Psychology*, *35*(4), 463–481.**

The current study used an experimental design to evaluate a sexual violence prevention program based on a community of responsibility model that teaches women and men how to intervene safely and effectively in cases of sexual violence before, during, and after incidents with strangers, acquaintances, or friends. It approaches both women and men as potential bystanders or witnesses to behaviors related to sexual violence. Three hundred and eighty-nine undergraduates participated and were randomly assigned to one of two treatment groups or a control group. Results from the research reveal that up to 2 months after participating in either a one- or three-session version of the program, participants in the treatment conditions showed improvements across measures of attitudes, knowledge, and behavior while the control group did not. Most program effects persisted at 4- and 12-month follow-ups. The program appeared to benefit both women and men. Implications and future directions for research are discussed.

**Bushman, B. J. (2007). That was a great commercial, but what were they selling? Effects of violence and sex on memory for products in television commercials. *Journal of Applied Social Psychology*, *37*(8), 1784–1796.**

College students (N = 324) watched a television program containing violence, sex, or no violence or sex. Each program contained 3 violent ads, 3 sexual ads, and 3 neutral ads. Participants were less likely to remember the advertised brands when the ads were embedded in a violent or sexual program than when the ads were embedded in a neutral program. Violent ads were the least memorable. This memory impairment occurred for both males and females, regardless of the content of the ads. If advertisers want viewers to remember advertised brands, they should think twice about sponsoring programs containing violence and sex.

**Fisher, D. (2006). Responding to students who disclose the violence in their lives. *English Journal*, 95(6), 65–70.**

The article discusses how teachers respond to students who disclose violence in their lives. The case of Briana, who grew up in the inner city, is considered. It is said that violence and death are part of her life. She wrote a poem about death. Five common ways how teachers can respond to disclosures of difficult subjects in writing include the Ostrich Approach which is ignoring the disclosure and not addressing it, the Rush Limbaugh Approach, which focus on grammar or spelling errors but ignoring the difficult content, the Sally Jessy Approach, which ask for more information but not addressing the pain, the Dr. Quinn Approach, which overreacts to the information when the writer was simply looking for a listener, and the Professional Approach, which recognizes the disclosure while offering help and asking the writer what he or she would like the listener to do, if anything.

**Flynn, C., & Heitzmann, D. (2008). Tragedy at Virginia Tech: Trauma and its aftermath. *Counseling Psychologist*, 36(3), 479–489.**

While college campuses are relatively safe environments, the promise of safety and security on campus was shattered by a single gunman on April 16, 2007. Seung-Hui Cho, a senior at Virginia Tech, shot 49 students and faculty, killing 32, before killing himself. The authors are psychologists and directors of university counseling centers; they examine the many implications of this tragedy on mental health counseling. The assailant's significant psychological disturbances and previous contact with mental health professionals are critical to understanding how he was able to act out his murderous rage. The mental health response to a traumatized community of families, friends, colleagues, and peers is reviewed. Out of the tragedy, there have emerged many issues that challenge the role of counseling centers within the university including the development of threat assessment teams, the potential conflicts between client confidentiality and crisis prevention/management, and the on-going education for the university community regarding suicide prevention, mental illness and support for potentially marginalized students.

**Gratz, K. L., & Chapman, A. L. (2007). The role of emotional responding and childhood maltreatment in the development and maintenance of deliberate self-harm among male undergraduates. *Psychology of Men & Masculinity*, 8(1), 1–14.**

Despite recent findings indicating comparable rates of deliberate self-harm across gender (Gratz, Conrad, & Roemer, 2002; Klonsky, Oltmanns, & Turkheimer, 2003; Muehlenkamp & Gutierrez, 2004; Zoroglu et al., 2003), little research has examined the pathogenesis of self-harm among men. Thus, the present study sought to extend extant research by examining the environmental (i.e., aspects of childhood maltreatment) and individual (i.e., emotional inexpressivity, affect intensity/reactivity, and emotion dysregulation) risk factors associated with the development and

maintenance of deliberate self-harm among male undergraduates (N=97). Results indicated that childhood physical abuse and emotion dysregulation distinguished men with frequent self-harm from men without a history of self-harm. Among men with a history of self-harm, emotion dysregulation was associated with more frequent self-harm. However, contrary to predictions, higher affect intensity/reactivity was associated with less frequent self-harm.

**Hatley, R. (2008). Observe, report, serve, protect, enforce, apprehend—or all of these? *Recruitment & Retention in Higher Education*, 22(3), 4–5.**

The article discusses the changes in the mission of campus protective agency which includes protecting the campus communities against the threats inside the campus. Formerly, programs and policies of protective agencies focus on protecting the students against violence outside the campus but, according to the author, it has changed after the tragedy in Virginia Tech. Campus protective agencies have been evaluating their policies and programs to protect the students, not only against outside threats but from the inside threats as well.

**Herrmann, M. (2008). Ready, set, respond. *University Business*, 11(4), 40–41.**

The article reports on the preparations made by Northern Illinois University officials for an act of violence after the Virginia Tech tragedy in the U.S. University officials nominated a panel to revise security measures and institute a new emergency action plan. With the Illinois shooting, officials responded instantly, sending notifications via electronic mail, public address system and the web while establishing a campus lockdown.

**Jennings, W. G., Gover, A. R., & Pudrzynskas, D. (2007). Are institutions of higher learning safe? A descriptive study of campus safety issues and self-reported campus victimization among male and female college students. *Journal of Criminal Justice Education*, 18(2), 191–208.**

This descriptive study provides an empirical examination of issues related to campus safety including college students' perceptions of fear and perceived risk of crime as reported by a convenience sample of 564 undergraduate students at a large southeastern university. Students also reported their use of constrained behavior in an attempt to reduce their likelihood of victimization. Prevalence estimates of personal, property, and sexual assault victimizations are reported. Results indicated that there were significant gender differences in perceptions of fear, safety, perceived risk, and involvement in constrained behavior. Significant gender differences were also found in self-reported sexual assault and property crime victimization. Directions for risk reduction and prevention strategies for campus victimization are discussed along with concluding remarks about the importance of these campus-related issues to educators and to the campus community as a whole.

### **Sexual Assault/Relationship Violence**

**Anderson, K. M., & Danis, F. S. (2007). Collegiate sororities and dating violence: An exploratory study of informal and formal helping strategies. *Violence Against Women*, 13(1), 87–100.**

Women in collegiate sororities are more at risk for violence within the context of dating relationships than is the general population of college women. Because assaulted women are more

likely to turn to their peer networks for support, this study explores the formal and informal helping strategies available to sorority members within the context of their sororities. A total of 35 women representing 17 different sororities participated in 4 focus groups. Although the central finding uncovered how violence is largely omitted from the formal agendas of sororities, community and campus-based programs addressing the issue can build on their sincere interest in helping each other.

**Angelone, D. J., Mitchell, D., & Pilafova, A. (2007). Club drug use and intentionality in perceptions of rape victims. *Sex Roles, 57*(3/4), 283–292.**

The purpose of the present study was to examine whether intentionality of alcohol or club drug use would affect observer attributions of a victim and a perpetrator after a sexual assault. Participants were 198 male and female college students sampled from a small college located in the United States. In general, participants attributed less blame to the victim, more guilt to the perpetrator, and were more likely to define the assault as rape and convict the perpetrator when the substance use was involuntary as opposed to voluntary. Participants also attributed more blame to the victim and less pleasure to the perpetrator when the sexual assault involved GHB as opposed to Everclear. Implications of these findings are discussed.

**Armstrong, E. A., Hamilton, L., & Sweeney, B. (2006). Sexual assault on campus: A multilevel, integrative approach to party rape. *Social Problems, 53*(4), 483–499.**

This article explains why rates of sexual assault remain high on college campuses. Data are from a study of college life at a large midwestern university involving nine months of ethnographic observation of a women's floor in a "party dorm," in-depth interviews with 42 of the floor residents, and 16 group interviews with other students. We show that sexual assault is a predictable outcome of a synergistic intersection of processes operating at individual, organizational, and interactional levels. Some processes are explicitly gendered, while others appear to be gender neutral. We discuss student homogeneity, expectations that partiers drink heavily and trust their party-mates, and residential arrangements. We explain how these factors intersect with more obviously gendered processes such as gender differences in sexual agendas, fraternity control of parties, and expectations that women be nice and defer to men. We show that partying produces fun as well as sexual assault, generating student resistance to criticizing the party scene or men's behavior in it. We conclude with implications for policy.

**Bagner, D., Storch, E., & Preston, A. (2007). Romantic relational aggression: What about gender? *Journal of Family Violence, 22*(1), 19–24.**

This study examined the relations among romantic relational aggression, social anxiety, loneliness, depressive symptoms, and alcohol and drug use in a sample of 215 undergraduate college students. Consistent with prior work, no gender differences were found in the experience of romantic relational aggression. Results indicated that romantic relational aggression was positively associated with social anxiety (for women only), loneliness, depressive symptoms, and alcohol use and drug use. Implications of these findings for the role of aggression within the context of intimate relationships during college are discussed.

**Baker, C. R., & Stith, S. M. (2008). Factors predicting dating violence perpetration among male and female college students. *Journal of Aggression, Maltreatment & Trauma, 17*(2),**

227–244.

This study examined the importance of witnessing parental violence, experiencing childhood violence, problems with alcohol, length of relationship, relationship satisfaction, anger management skills, and partner's use of physical and psychological aggression for male and female perpetrators of dating violence in college. For males, partner's use of physical aggression, low anger management skills, and high relationship satisfaction were the strongest predictors of physical aggression. For females, partner's uses of physical and psychological aggression were most important predictors of their use of physical aggression. The model in this study was a good predictor of male violence, accounting for 81% of the variance; however, it only accounted for 51% of the variance in female violence.

**Bell, K. M., & Naugle, A. E. (2007). Effects of social desirability on students' self-reporting of partner abuse perpetration and victimization. *Violence and Victims, 22*(2), 243–256.**

Little is still known about the degree to which social desirability affects reports of partner abuse. The current study builds on existing research exploring the relationship between social desirability and partner abuse reports by analyzing 49 male and 155 female students' responses to the Revised Conflict Tactics Scale (CTS2) and the Marlowe-Crowne Social Desirability Scale (MCSDS). Sex differences were not associated with partner abuse rates, regardless of type, severity, and violence role. Women had significantly higher social desirability scores than men, and women's MCSDS scores were negatively correlated with partner abuse perpetration and victimization rates. Social desirability was a significant predictor of psychological abuse perpetration, whereas gender was a significant predictor of sexual coercion perpetration. In all partner abuse cases, however, social desirability and gender accounted for less than 10% of the variance in partner abuse reports.

**Benson, B., Gohm, C., & Gross, A. (2007). College women and sexual assault: The role of sex-related alcohol expectancies. *Journal of Family Violence, 22*(6), 341–351.**

This study examined the relationship between alcohol, sex-related alcohol expectancies, and sexual assaults among women college students. Participants completed measures of sexual behaviors, sexual victimization experiences, sex related alcohol expectancies, and drinking habits. Based on participants' responses women were categorized as having experienced no assault, unwanted sexual contact, sexual coercion, attempted rape, and rape. It was observed across groups that relative to controls, women reporting attempted rape and rape consumed higher levels of alcohol. Within group comparisons revealed that relative to controls, victimized women endorsed higher levels of sex-related alcohol expectancies. In the prediction of severity of sexual victimization, regression analyses revealed an interaction between alcohol consumption and expectancy of vulnerability to sexual coercion. At higher levels of alcohol consumption women endorsing high vulnerability to sexual coercion experienced more severe victimization. Implications of the findings are discussed.

**Burgess, G. H. (2007). Assessment of rape-supportive attitudes and beliefs in college men: Development, reliability, and validity of the Rape Attitudes and Beliefs Scale. *Journal of Interpersonal Violence, 22*(8), 973–993.**

Discussed is the development and psychometric analysis of a measure of rape-supportive attitudes and beliefs called the Rape Attitudes and Beliefs Scale (RABS), intended for the use with college men. Items were developed from a literature review of "rape myths" that were correlated to some

measure of sexual aggression. An exploratory factor analysis using only male participants revealed five factors: a) justifications for sexual aggression based on women's behavior, b) belief that women should hold more responsibility for sexual assault, peer c) pressure/need for sexual status and misreading women's sexual intent, d) acceptance of the use of alcohol and coercive tactics to acquire sexual compliance, and e) dislike for the feminine and acceptance of traditional gender roles. Initial reliability and validity studies were favorable for the RABS, including evidence that these factors were positively related to measures of sexual aggression. Each factor demonstrated differential power to predict sexual aggression, with justifications being the most powerful. Implications for counseling and education are discussed.

**Cass, A. I. (2007). Routine activities and sexual assault: An analysis of individual- and school-level factors. *Violence and Victims, 22*(3), 350–366.**

The efficacy of routine activities theory is examined to explain sexual assault on the college campus. Although many research studies have utilized routine activities theory to predict sexual assault using individual-level factors, little is known about the effect of school-level factors on a student's risk of sexual assault. Based on interviews from 3,036 randomly selected students and surveys from 11 randomly selected colleges in the United States, a hierarchical linear model was created to predict student victimizations by school characteristics. For the individual, results reveal that being female, drug use, and marital status are statistically significant for predicting the probability of a sexual assault. At the institutional level, however, none of the variables are significant in predicting sexual assault among college coeds. Policy implications for prevention measures on college campuses are discussed.

**Castello, J., Coomer, C., Stillwell, J., & Cate, K. L. (2006). The attribution of responsibility in acquaintance rape involving ecstasy. *North American Journal of Psychology, 8*(3), 411–419.**

This study examined the attributions of responsibility for the parties involved in a date rape using a 2 x 2 between-subjects design. Forty-nine undergraduate female psychology students read one of four hypothetical date rape scenarios depicting identical circumstances except for the level of intoxication by either or both of the parties. Responsibility level was ascertained by participant response to eight questions ranked on a 7-point Likert-type scale. It was expected that intoxication of the victim would enhance her perceived level of responsibility for the rape while intoxication of the perpetrator would diminish his perceived level of responsibility, that intoxication of the victim would encourage participants to believe that she led the perpetrator to believe that she desired to have sex with him while decreasing support for her to report the crime, and that intoxication of the perpetrator would reduce the amount of control attributed to the perpetrator and also minimize the recommended punishment for the crime. Results are discussed in terms of the "Just World hypothesis," including implications for emotional recovery of rape victims.

**Cogan, R., & Fennell, T. (2007). Sexuality and the commission of physical violence to partners and non-partners by men and women. *Journal of Consulting and Clinical Psychology, 75*(6), 960–967.**

In 2 studies of physical violence and sexuality among college students, more than 75% of men and more than 60% of women reported committing physical violence in the past year, including more women to partners and more men to non-partners. More than 90% of men who committed violence to partners were also violent to non-partners. In Study 1, among 193 men and 203 women, people

who committed violence had higher scores on sexual depression and general depression than did people who were not violent. People violent to non-partners had more sexual preoccupation and more alcohol use problems than did other people. In Study 2, among 160 college men and 138 college women, people in 4 violence groups did not differ in total sexual fantasies or sexual functioning. The findings support the importance of differentiating between violence toward partners and toward non-partners among both men and women and suggest a role of depression in partner violence and antisocial features in violence toward non-partners.

**Coker, A. L., Sanderson, M., Cantu, E., Huerta, D., & Fadden, M. K. (2008). Frequency and types of partner violence among Mexican American college women. *Journal of American College Health, 56*(6), 665–673.**

**OBJECTIVE AND PARTICIPANTS:** The authors studied the prevalence of partner violence, by type, among Mexican American college women aged 18 to 35 years (N = 149; response rate = 85%). **RESULTS:** Twelve percent of women who reported a dating partner in the past year were physically or sexually assaulted, 12.1% were stalked, and 9.1% scored as psychologically abused. Among those experiencing partner violence, almost half experienced stalking and 89% reported psychological abuse. Few women (25%) who experienced physical violence believed violence was a problem in their relationship. **CONCLUSIONS:** Partner violence was prevalent in this population, and participants experienced many forms of violence. Because few women experiencing physical violence report that violence is a problem in their relationship, interventions must address perceptions of violence and its impact on women's mental and physical health in college populations.

**Cole, T. B. (2006). Rape at U.S. colleges often fueled by alcohol. *Journal of the American Medical Association, 296*(5), 504–505.**

According to a 2003 US Department of Justice (DOJ) report, rape is the most common violent crime at US universities. The incidence of rape is estimated to be 35 per 1000 female college students per year in the United States, although less than 5% of these rapes are reported to police. Women may decline to report rape for a variety of reasons, including shame, fear of social isolation from the assailant's friends, and self-reproach for drinking with the assailant before the rape. Ninety percent of college women who are raped know their assailants, according to the DOJ report. Most rapes occur in social situations, such as at a party or studying together in a dormitory room, and about half of perpetrators and rape survivors are drinking alcohol at the time of the assault, according to a National Institute on Alcohol Abuse and Alcoholism (NIAAA) review of recent studies of alcohol and sexual assault. The NIAAA report suggests different roles for alcohol in sexual assault. Some men who drink heavily may use alcohol intoxication as an excuse for socially unacceptable behavior, including sexual assault, and some men perceive women who drink alcohol to be more sexually available and therefore appropriate targets for sexual aggression. Regardless of the motives or perceptions of a man or a woman, nonconsensual sex is rape, and it is never justified by alcohol's pharmacologic or expectant effects, researchers emphasize.

**Cousins, A. J., & Gangestad, S. W. (2007). Perceived threats of female infidelity, male proprietariness, and violence in college dating couples. *Violence and Victims, 22*(6), 651–668.**

According to evolutionary theory, men faced the adaptive problem of keeping their partners sexually

faithful. In the current study, men's perception that their partners are interested in other men was hypothesized to be associated with more controlling behaviors in romantic relationships. Of the two dimensions of mating tactics, controlling and attentive behaviors, physically aggressive men were expected to be especially controlling, but not attentive. Using structural equation modeling with 116 college dating couples, women who reported greater interest in other men were perceived by their partners to do so and these men also exhibited more controlling behaviors, which were associated with physical aggression. Men's perception of women's interest in others was a more important predictor of male violence than women's actual interest in other men. The link between women's control tactics and their use of physical violence differed from men.

**Crawford, E., Wright, M. O. D., & Birchmeier, Z. (2008). Drug-facilitated sexual assault: College women's risk perception and behavioral choices. *Journal of American College Health, 57*(3), 261–272.**

Objective: The authors investigated relationships among prior victimization, risk perceptions, and behavioral choices in responding to drug-facilitated sexual assault in a college party where alcohol is available. Participants and Methods: From fall 2003 to spring 2004, over 400 female undergraduates rated risk perception following an acquaintance rape vignette. Results: In general, participants tended to perceive the risk of having someone else pour their beer; however, they did not tend to perceive the risk of leaving one's beer unattended. Results also indicated that college students who felt ill at a party were not likely to suspect the presence of a date-rape drug and when sexual assault occurred, a significant minority of respondents blamed the victim. Victims of prior sexual assault were more likely to report that they would make risky choices, such as accepting a male acquaintance's offer to help them into their bedroom. Conclusions: Implications for the prevention of sexual assault are discussed.

**Daigle, L. E., Fisher, B. S., & Cullen, F. T. (2008). The violent and sexual victimization of college women: Is repeat victimization a problem? *Journal of Interpersonal Violence, 23*(9), 1296–1313.**

Little attention has been given to repeat violent and sexual victimization among college women. Using two national-level data sets, the authors find that a small proportion of college women experience a large proportion of violent and sexual victimizations. Women are more likely to experience repeat sexual victimization than repeat violence incidents. Repeat victimization tends to happen in the same month of the initial victimization, and the most likely next type of victimization is by far the same type of victimization. Comparing incident-level characteristics of repeat incidents to single incidents, there are few differences, with the exception that, in a larger proportion of single incidents, women took self-protective action. Implications for prevention and educational programs are discussed.

**Eadie, E. M., Runtz, M. G., & Spencer-Rodgers, J. (2008). Posttraumatic stress symptoms as a mediator between sexual assault and adverse health outcomes in undergraduate women. *Journal of Traumatic Stress, 21*(6), 540–547.**

This study investigated the links between sexual assault experiences, posttraumatic stress symptoms, and adverse physical health outcomes among undergraduate women. Existing research has demonstrated that posttraumatic stress disorder mediates the relationship between trauma exposure and physical health in general, but this has yet to be tested for sexual assault specifically. Using

structural equation modeling, support was found for a model in which posttraumatic stress symptom severity partially mediates the association between sexual assault severity and self-reported health outcomes. An alternative model using depression symptoms did not meet the criteria for mediation. Implications for the physical health of sexual assault survivors are discussed.

**Elliott, S. M. (2008). Drug-facilitated sexual assault: Educating women about the risks. *Nursing for Women's Health, 12*(1), 30–37.**

“Andrea,” an 18-year-old college freshman, walked into her first fraternity party with a few of her sorority sisters. As she walked through the crowded house, one of the fraternity boys handed the girls large plastic cups. Another boy circulated through the crowd, filling up the cups of all guests from two pitchers of beer. When he filled Andrea’s cup, he smiled and was polite and charming. She thought his act of filling her cup was kind and gentlemanly, and was flattered by his attention. She didn’t notice he used a different pitcher for her than he had for her friends. She and her friends continued to mill through the crowd, sipping their beer. About 20 minutes later, Andrea suddenly had trouble focusing her vision. She felt disoriented and “drunk” even though she had only consumed a third of her beer. She started feeling nauseated, and tried to find her friends. The polite boy who had poured her beer asked her if she was all right, and offered to take her up to his room so she could rest. She followed him, grateful to be able to lie down. Forty-five minutes later, her concerned friends searched the house for Andrea. They found her upstairs passed out in a bedroom, lying on her side; she had vomited and her clothes were disheveled. Suspecting only alcohol intoxication; they picked her up, and walked her out of the party. After Andrea slept for about two hours, she woke up and told her friends something wasn’t right. She had only drunk a small amount of her beer, and had no recollection after she walked up the stairs with the boy. She burst into tears, stating she feels some vaginal discomfort, and is afraid she may have been raped. Her friends looked at each other, thinking, “How did this happen and what are we supposed to do?”

**Filipas, H. H., & Ullman, S. E. (2006). Child sexual abuse, coping responses, self-blame, posttraumatic stress disorder, and adult sexual revictimization. *Journal of Interpersonal Violence, 21*(5), 652–672.**

The present study examined the psychological sequelae of child sexual abuse (CSA) and the factors that contributed to revictimization in the form of adult sexual assault (ASA) using a survey of 577 female college students. CSA characteristics, maladaptive coping in response to CSA, degree of self-blame at the time of the abuse and currently, and posttraumatic stress disorder (PTSD) symptoms were examined as predictors of revictimization. Results indicated that individuals who reported both CSA and ASA had more PTSD symptoms, were more likely to use drugs or alcohol to cope, act out sexually, withdraw from people, and seek therapy services. In addition, the revictimized group reported more self-blame at the time of the abuse and currently. The only factor that predicted revictimization in this study was the number of maladaptive coping strategies used. Implications of these findings are discussed.

**Fincham, F. D., Cui, M., Braithwaite, S., & Pasley, K. (2008). Attitudes toward intimate partner violence in dating relationships. *Psychological Assessment, 20*(3), 260–269.**

Prevention of intimate partner violence on college campuses includes programs designed to change attitudes, and hence, a scale that assesses such attitudes is needed. Study 1 (N = 859) cross validates the factor structure of the Intimate Partner Violence Attitude Scale-Revised using exploratory factor

analysis and presents initial validity data on the scale. In Study 2 (N = 687), the obtained three-factor structure (Abuse, Control, Violence) is tested using confirmatory factor analysis, and it is shown to be concurrently related to assault in romantic relationships and to predict psychological aggression 14 weeks later. The findings are discussed in the context of how understanding and modifying attitudes assessed by the Intimate Partner Violence Attitude Scale-Revised may improve interventions aimed at reducing intimate partner violence.

**Flack, W. F., Jr., Daubman, K. A., Caron, M. L., Asadorian, J. A., D'Aureli, N. R., Gigliotti, S. N., Hall, A. T., Kiser, S., & Stine, E. R. (2007). Risk factors and consequences of unwanted sex among university students: Hooking up, alcohol, and stress response. *Journal of Interpersonal Violence, 22*(2), 139–157.**

This is the first study of unwanted sexual experiences in the collegiate “hooking-up” culture. In a representative sample of 178 students at a small liberal arts university. Twenty-three percent of women and 7% of men surveyed reported one or more experiences of unwanted sexual intercourse. Seventy-eight percent of unwanted vaginal, anal, and oral incidents took place while—“hooking up,”—whereas 78% of unwanted fondling incidents occurred at parties or bars. The most frequently endorsed reason for unwanted sexual intercourse was impaired judgment due to alcohol. The most frequently endorsed reason for unwanted fondling was that it happened before the perpetrator could be stopped. Of those affected by unwanted sexual intercourse or unwanted fondling, 46.7% and 19.2% reported unwanted memories, 50% and 32.7% reported avoidance and numbing responses, and 30% and 26.9% reported hyperarousal responses, respectively. A preliminary model of unwanted sex and collegiate social dynamics is proposed to provide a heuristic for further research.

**Flowe, H. D., Ebbesen, E. B., & Putcha-Bhagavatula, A. (2007). Rape shield laws and sexual behavior evidence: Effects of consent level and women’s sexual history on rape allegations. *Law and Human Behavior, 31*(2), 159–175.**

Rape shield laws, which limit the introduction of sexual history evidence in rape trials, challenge the view that women with extensive sexual histories more frequently fabricate charges of rape than other women. The present study examined the relationship between women’s actual sexual history and their reporting rape in hypothetical scenarios. Female participants (college students and a community sample, which included women working as prostitutes and topless dancers, and women living in a drug and alcohol rehabilitation center) imagined themselves in dating scenarios that described either a legally definable act of rape or consensual sexual intercourse. Additionally, within the rape scenarios, level of consensual intimate contact (i.e., foreplay) preceding rape was examined to determine its influence on rape reporting. Women were less likely to say that they would take legal action in response to the rape scenarios if they had extensive sexual histories, or if they had consented to an extensive amount of intimate contact before the rape. In response to the consensual sexual intercourse scenarios, women with more extensive sexual histories were not more likely to say that they would report rape, even when the scenario provided them with a motive for seeking revenge against their dating partner.

**Forke, C. M., Myers, R. K., Catalozzi, M., & Schwarz, D. F. (2008). Relationship violence among female and male college undergraduate students. *Archives of Pediatrics & Adolescent Medicine, 162*(7), 634–641.**

OBJECTIVES: To assess prevalence of victimization and perpetration of relationship violence

before and during college, to explore variations by gender, and to examine differences by relationship type. DESIGN: Anonymously surveyed students in 67 randomly chosen classes. SETTING: Three urban college campuses. PARTICIPANTS: Nine hundred ten undergraduate college students aged 17 to 22 years. MAIN OUTCOME MEASURES: Self-reported victimization and perpetration of physical, emotional, and sexual violence; relationship to the victim or perpetrator. RESULTS: Most (57.1%) students were female, and 58.7% were white, 16.4% black, and 15.1% Asian. Of 910 participants, 407 (44.7%) experienced partner or nonpartner violence: 383 (42.1%) reported victimization and 156 (17.1%) reported perpetration. All victimization and perpetration rates were highest before college. Emotional violence was most common before college (21.1%); during college, sexual and emotional violence were equally common (12.0% and 11.8%, respectively). Women reported more victimization than men, but male victimization was considerable (27.2%). More men perpetrated sexual violence; more women perpetrated physical violence. More than half (130 of 227) of the violence experienced during college was partner related. Students experiencing partner violence during college were more likely to experience physical and emotional violence and were less likely to experience sexual violence. CONCLUSIONS: Relationship violence is prevalent among college students and frequently occurs before college. Emotional violence was most frequent before college; sexual and emotional violence were equally common during college. Women reported more victimization than men, but male victimization was common. Men perpetrated more sexual violence; women perpetrated more physical violence. Physical violence and emotional violence were most often committed by partners, while sexual violence was less likely to be partner related.

**Fossos, N., Neighbors, C., Kaysen, D., & Hove, M. C. (2007). Intimate partner violence perpetration and problem drinking among college students: The roles of expectancies and subjective evaluations of alcohol aggression. *Journal of Studies on Alcohol and Drugs, 68*(5), 706–713.**

OBJECTIVE: The present research examined the effect of alcohol aggression expectancies and subjective evaluations of alcohol's effects on aggression in intimate partner violence (IPV) perpetration among college students. We were interested in determining the extent to which these relationships differed across gender. METHOD: A total of 780 (57.3% female) incoming heavy drinking college freshmen who were between the ages of 18 and 25 years completed self-reported measures of IPV perpetration, alcohol use and problems, and alcohol aggression expectancies and subjective evaluations of those expectancies as part of the baseline assessment for a larger social norms alcohol intervention study. Analyses evaluated the effect of alcohol aggression expectancies and subjective evaluations of those expectancies on IPV perpetration. RESULTS: Results indicated that problem drinking was positively associated with IPV perpetration for those who were lower ( $\beta = .32, p < .001$ ) versus those who were higher ( $\beta = .07, p = ns$ ) in alcohol aggression expectancies. Among men, there was a significantly stronger relationship between problem drinking and IPV perpetration among those who evaluated alcohol's effects on aggression more favorably ( $\beta = .41, p < .001$ ) versus less favorably ( $\beta = .11, p = ns$ ). Among women, there was not a significantly stronger relationship between problem drinking and IPV perpetration at less favorable ( $\beta = .17, p < .05$ ) versus more favorable ( $\beta = .11, p < .06$ ) evaluations of alcohol's effects on aggression. CONCLUSIONS: Findings suggest that, in understanding IPV perpetration, it may not be sufficient to evaluate expected alcohol effects without also including whether those effects are viewed as good or bad. Findings also suggest that the relationship between alcohol problems and IPV perpetration may be stronger and more straightforward for men than for women.

**Foubert, J., & Cremedy, B. (2007). Reactions of men of color to a commonly used rape prevention program: Attitude and predicted behavior changes. *Sex Roles, 57*(1/2), 137–144.**

African American, Latino, and Asian first-year college men (36) saw The Men's Program, an all-male rape prevention workshop, and wrote answers to four open-ended questions to determine how men from non-white groups react to a commonly used rape prevention program. Using a multi-stage inductive analysis, participant responses fell into five main themes including reinforced current beliefs and/or no changes, increased awareness of rape and its effects on survivors, increased understanding of consent, plans to intervene if a rape might occur, and plans to change behavior in their own intimate situations. Participants mentioned specific ways in which they planned to change personal behavior, and ways in which they planned to intervene if they saw potentially dangerous situations.

**Foubert, J. D., & Perry, B. C. (2007). Creating lasting attitude and behavior change in fraternity members and male student athletes: The qualitative impact of an empathy-based rape prevention program. *Violence Against Women, 13*(1), 70–86.**

Fraternity members and male student athletes responded to open-ended questions assessing the impact of an empathy-based rape prevention program. All participants reported either lasting attitude or behavior changes; most reported both. Participants reported increased understanding of how rape might feel and attributed this change to seeing a videotape describing a male-on-male rape situation. Participants refrained from telling jokes about rape and reported feeling more effective when helping survivors seeking assistance. These behavior changes were attributed to the videotape and to a section of the program encouraging participants to confront rape jokes and challenge sexist behaviors.

**Franiuk, R., Seefeldt, J., & Vandello, J. (2008). Prevalence of rape myths in headlines and their effects on attitudes toward rape. *Sex Roles, 58*(11/12), 790–801.**

The present research investigated the prevalence and effects of rape myths in newspaper headlines. In study 1, a content analysis of online news headlines from US media ( $N = 555$ ) surrounding the 2003–2004 Kobe Bryant sexual assault case showed that 10% endorsed a rape myth. In study 2, students at a mid-sized university in the mid-western USA ( $N = 154$ ) read headlines endorsing or not endorsing rape myths. Male participants exposed to myth-endorsing headlines were (a) less likely to think Bryant was guilty than those exposed to non-myth headlines, (b) more likely to hold rape-supportive attitudes than those exposed to non-myth headlines, and (c) more likely to hold rape-supportive attitudes than were female participants exposed to myth-endorsing headlines.

**Fried, C. B., & Maxwell, A. (2006). Rape rumors: The effects of reporting or denying rumors of sexual assaults on campus. *Journal of Applied Social Psychology, 36*(11), 2766–2784.**

Two studies examine the effects of reporting rumors of sexual assaults on a college campus. Participants read headlines and short articles about an unfamiliar college. Key headlines and articles reported an increase in sexual assaults as a fact, a rumor, a denied rumor, or a proven falsehood. Participants then rated perceptions of the college, including opinions on the level of crime and safety on campus. Results showed that both reporting the crimes as rumors and reporting denials of the rumors increased concerns compared to control conditions, but these concerns were lower than the concerns raised by reporting the assaults as fact. Findings are in line with predictions and match

previous research on rumors and the impact of reported innuendo.

**Gidycz, C. A., Orchowski, L. M., King, C. R., & Rich, C. L. (2008).** Sexual victimization and health-risk behaviors: A prospective analysis of college women. *Journal of Interpersonal Violence, 23*(6), 744–763.

The present study utilizes the National College Health Risk Behavior Survey to examine the relationship between health-risk behaviors and sexual victimization among a sample of college women. A prospective design is utilized to examine the relationship between health-risk behaviors as measured at baseline and sexual victimization during a 3-month follow-up period. After controlling for age and parents' education, a history of adolescent sexual victimization was associated with the following health-risk behaviors as measured at pretest: increased likelihood of cigarette smoking, marijuana use, suicidal ideation, experience of physical violence within a dating relationship, use of diet pills and vomiting or laxatives to lose weight, multiple sexual partners, and early sexual intercourse. Prospectively, women's history of adolescent sexual victimization was the strongest predictor of sexual victimization during the 3-month follow-up. Implications of univariate associations between early sexual intercourse, suicidal ideation, and problematic weight loss behaviors and subsequent experience of sexual victimization are discussed.

**Girard, A. L., & Senn, C. Y. (2008).** The role of the new “date rape drugs” in attributions about date rape. *Journal of Interpersonal Violence, 23*(1), 3–20.

This study investigates the effect of voluntary and involuntary drug use on attributions about sexual assault. The sample was composed of 280 randomly selected male and female undergraduate students. The type of drug used (GHB, alcohol, or none) and the voluntariness of the administration were varied in an unambiguous date rape scenario. Participants viewed sexual assault facilitated by alcohol or drugs similarly to sexual assault without drug or alcohol involvement, assigning the highest levels of responsibility and blame to the perpetrator and the lowest levels of both to the victim in these situations. In contrast, women's voluntary consumption of drugs prior to a sexual assault reduced perpetrator responsibility and blame and increased blame to the victim compared to other situations (except in some cases, voluntary drunkenness). These findings extend the limited research on date rape drugs and previous work on the influence of alcohol on date rape attributions.

**Gover, A. R., Kaukinen, C., & Fox, K. A. (2008).** The relationship between violence in the family of origin and dating violence among college students. *Journal of Interpersonal Violence, 23*(12), 1667–1693.

Prior research has established that violence in dating relationships is a serious social problem among adolescents and young adults. Exposure to violence during childhood has been linked to dating violence victimization and perpetration. Also known as the intergenerational transmission of violence, the link between violence during childhood and dating violence has traditionally focused on physical violence. This research examines the relationship between experiencing and perpetrating dating violence and exposure to violence in the family of origin. Specifically, the current research examines gender differences in the relationship between exposure to violence during childhood and physical and psychological abuse perpetration and victimization. Data were collected from a sample of approximately 2,500 college students at two southeastern universities. Findings indicate that childhood exposure to violence is a consistent predictor of involvement in relationships characterized by violence for males and females. The implications of the current research on policy

are discussed.

**Gross, A. M., Winslett, A., Roberts, M., & Gohm, C. L. (2006). An examination of sexual violence against college women. *Violence Against Women, 12*(3), 288–300.**

This investigation examined college women's experiences with unwanted sexual contact. Participants completed a questionnaire assessing the incidence of various types of forced sexual contact the women had experienced since enrolling in college. Demographic and situational variables associated with these incidents of sexual violence were also obtained. It was observed that since enrolling in college, 27% of the sample had experienced unwanted sexual contact ranging from kissing and petting to oral, anal, or vaginal intercourse. Type of sexual violence, perpetrator characteristics, and racial differences regarding types of unwanted sexual contact were examined. The implications of the data are discussed.

**Hammond, C. B., & Calhoun, K. S. (2007). Labeling of abuse experiences and rates of victimization. *Psychology of Women Quarterly, 31*(4), 371–380.**

Research has consistently found that a history of previous sexual victimization increases risk for future sexual assault, which might be due to women with a history of sexual victimization having difficulty identifying risky cues and not perceiving their own vulnerability for future assaults. This study investigated how acknowledgment of previous experiences with interpersonal violence is related to risk perception and rates of victimization. Participants were 198 college women who completed assessments of victimization, personal risk appraisal, and acknowledgment. Analyses indicated differences in rates of victimization based on labeling of experiences and differences in efforts to change behaviors to reduce risk for future assaults based on level of acknowledgment. Also, there were a number of situational factors significantly related to likelihood of acknowledgment. The findings differed for physical and sexual violence. This study suggests that acknowledgment is an important factor to consider in studies of sexual and physical revictimization.

**Hannawa, A. F., Spitzberg, B. H., Wiering, L., & Teranishi, C. (2006). "If I can't have you, no one can": Development of a Relational Entitlement and Proprietariness Scale (REPS). *Violence and Victims, 21*(5), 539–560.**

Relational proprietariness and entitlement have been theoretically related to partner violence following the threat of relationship dissolution. To date, however, no measure has been employed to verify such accounts. A multistage item pool development and refinement strategy was employed, resulting in a 32-item measure with strong construct validity. An online survey administered to 279 students resulted in an interpretable factor structure of sexual proprietariness and entitlement, consisting of social, behavioral, and information control, and a potential factor of face threat reactivity. These factors added unique variance to the prediction of instrumental and expressive aggression, were related to self-esteem and attachment, and were not contaminated by social desirability. Recommendations for bolstering the face threat reactivity factor and future studies are suggested. This measure provides a new tool that contributes to the prediction of intimate partner violence.

**Harrison, L. A., Howerton, D. M., Secarea, A. M., & Nguyen, C. Q. (2008). Effects of ingroup bias and gender role violations on acquaintance rape attributions. *Sex Roles, 59*(9), 713–725.**

Two studies of ethnically diverse US college students from northern California examined whether ingroup bias and gender norm violations influence acquaintance rape attributions (Study 1, N = 118; Study 2, N = 140). Participants read vignettes depicting acquaintance rape and completed questionnaires. Victims were part of participants' ingroup or outgroup. Study 1 manipulated the victim's sexual history (chaste or promiscuous). Study 2 manipulated the victim's alcohol use (sober or intoxicated). Ingroup victims were perceived more positively than outgroup victims if the victims were promiscuous or intoxicated. More guilt was attributed to rapists of ingroup victims than outgroup victims if the victims were promiscuous or intoxicated. Findings are examined in relation to ingroup bias and gender norm violations.

**Haywood, H., & Swank, E. (2008). Rape myths among Appalachian college students. *Violence and Victims, 23*(3), 373–389.**

Rape myths regularly admonish victims for supposedly provoking the violence done against them. While rape attitudes have been studied in national and urban samples, the support of rape myths in rural populations is seldom investigated. Furthermore, the few empirical studies on sexual coercion in Appalachia are mostly descriptive and rarely compare the sentiments of Appalachians and non-Appalachians. To address this gap, this study surveyed 512 college students at a public university in Eastern Kentucky. In testing an Appalachian distinctiveness question, this study revealed that Appalachian students were less likely to criticize rape victims. Students were also less inclined to condemn rape victims when they were victims themselves, came from egalitarian families, stayed in college longer, rejected modern sexism, and felt little animosity toward women.

**Herba, J. K., & Rachman, S. (2007). Vulnerability to mental contamination. *Behaviour Research and Therapy, 45*(11), 2804–2812.**

Mental contamination refers to feelings of contamination that arise without physical contact with a contaminant. Mental contamination has been documented among sexual assault victims, some of whom report feeling dirty and wanting to wash in response to memories of the assault. This study examined variables associated with increased vulnerability to mental contamination. Female undergraduates (n = 100) filled out a series of questionnaires and listened to an audiotape that instructed them to imagine experiencing a forced kiss by an undesirable male. Controls (n = 20) imagined a consensual kiss by a desirable male. Women in the non-consensual condition reported stronger feelings of dirtiness and urge to wash than those in the consensual condition. Twenty-seven women in the non-consensual condition spontaneously rinsed in order to alleviate physical sensations evoked by the tape. Regression analyses revealed that significant predictors of dirtiness included contact contamination fear and disgust sensitivity, and there was a trend for anxiety sensitivity to predict dirtiness. Contact contamination fear was also a significant predictor of urge to wash. Prior experience with unwanted sexual contact was a significant predictor of rinsing, and there was a trend for fear of negative evaluation to predict rinsing. Discussion focuses on the implications of these findings for our understanding of mental contamination.

**Higginbotham, B., Ketring, S., Hibbert, J., Wright, D., & Guarino, A. (2007). Relationship religiosity, adult attachment styles, and courtship violence experienced by females. *Journal of Family Violence, 22*(2), 55–62.**

This study assesses the association between adult attachment styles, religiosity, and courtship violence as experienced by females. The sample was composed of 299, 18 to 24-year-old females attending junior level Human Development and Family Studies courses at a midwestern state university. Statistical analyses evaluated interactional effects and mean-level differences for both victimization and perpetration of courtship violence. Additionally, structural equation models were generated. Results indicate significant relationships between adult attachment styles and religiosity on reports of victimization from intimate partners. In general, the results suggest that females with low religiosity and insecure attachment styles report experiencing more courtship violence than females reporting high religiosity and secure attachment styles. The analyses also provide support for a multidimensional conceptualization of religiosity. Indicators of 'relationship' religiosity were more strongly linked to lower reports of courtship violence than personal and private relationship measures. The findings suggest that future studies evaluating the effects of religiosity on courtship violence should include measures of 'relationship' religiosity.

**Howard, D. E., Griffin, M. A., & Boekeloo, B. O. (2008). Prevalence and psychosocial correlates of alcohol-related sexual assault among university students. *Adolescence, 43*(172), 733–750.**

This study examined the psychosocial correlates of alcohol-related sexual assault. Undergraduate students (N = 551) were recruited to complete a web-based survey. The outcome was a composite of 2 items: "experienced an unwanted sexual advance" or "was the victim of sexual assault or date rape" as a result of another's alcohol use. The predictors were substance use, other alcohol-related interpersonal violence victimization, and alcohol-related protective behaviors. Multivariate logistic regression analyses were conducted. Females reported higher prevalence of alcohol-related sexual assault than did males (20.4% vs. 6.6%). Females who reported binge drinking (OR = 7.74) and other alcohol-related interpersonal violence (OR = 5.03) were more likely to report alcohol-related sexual assault whereas only other alcohol-related interpersonal violence was associated with alcohol-related sexual assault (OR = 43.75) among males. The findings suggest that alcohol-related sexual assault is associated with other risk factors that deserve further attention through longitudinal research and intervention efforts.

**Humphreys, T., & Herold, E. (2007). Sexual consent in heterosexual relationships: Development of a new measure. *Sex Roles, 57*(3/4), 305–315.**

The extensive research on date rape attitudes and experiences has left sexual consent itself largely unexamined. The objective of this study was to develop a measure to assess women's and men's attitudes and behaviors regarding sexual consent. Using both focus groups (N = 18) and a mail survey (N = 514) of undergraduate students at a Canadian university, two scales of sexual consent were developed: (1) a Sexual Consent Attitudes Scale, and (2) a Sexual Consent Behaviors Scale. Preliminary psychometric evidence suggested good reliability and validity. As hypothesized, women, more than men, preferred a more cautious approach to sexual consent by stressing the need to obtain consent more explicitly. Multiple regression analyses supported a reciprocal relationship between sexual consent attitudes and sexual consent behaviors.

**Jordan, C. E., Wilcox, P., & Pritchard, A. J. (2007). Stalking acknowledgement and reporting among college women experiencing intrusive behaviors: Implications for the emergence of a "classic stalking case." *Journal of Criminal Justice, 35*(5), 556–569.**

Research confirms the risk of victimization faced by women who attend the nation's universities. While stalking began to receive heightened attention in the 1990s, relative to other types of victimization, research regarding college women's stalking experiences is in its infancy. In particular, relatively little is known about victim acknowledgement of stalking and the process whereby victims decide to report to police. Drawing upon data from 1,010 female university students, this study provided important advances in understanding stalking-related victimization for college women, highlighting the influences that fear, offender relationship, types of behaviors involved, and other victimization experiences have on victim acknowledgement and police reporting. Findings offered important advancements in defining a "classic stalking case." This study had implications for university and public policymakers, educators, and police officers who could benefit from improved understanding of women's perceptions of stalking and their formal help-seeking behavior in response to stalking-related behavior.

**Kahlor, L., & Morrison, D. (2007). Television viewing and rape myth acceptance among college women. *Sex Roles, 56*(11/12), 729–739.**

Prior research has shown that people who consume pornographic movies and magazines are more likely to accept rape myths. The results of the present study build on that research to link the acceptance of rape myths to general, daily television use among college women. Furthermore, our data show that college women who watch more television are more likely to believe that rape accusations are false. In addition, the data support a positive relationship between conservative political ideology and rape myth acceptance. However, the data do not support the cultivation hypothesis; that is, television use did not correlate with the overestimation of rape in society. The results suggest the need for additional research focused on the role that general television viewing may play in perpetuating rape-related misperceptions.

**Katz, J., Moore, J. A., & Tkachuk, S. (2007). Verbal sexual coercion and perceived victim responsibility: Mediating effects of perceived control. *Sex Roles, 57*(3/4), 235–247.**

Verbal coercion involves unwanted sexual penetration compelled by psychological pressure. It was hypothesized that, to the degree that verbal coercion is seen as controllable, victims may be held more responsible. Two samples of US undergraduates rated perceptions of hypothetical sexual coercion scenarios. In Study 1, participants (N = 120) read scenarios of either verbal coercion or rape by a male dating partner. Participants perceived verbal coercion as more controllable than rape, which accounted for the greater responsibility attributed to verbal coercion victims. In Study 2, participants (N = 275) read scenarios involving either male-to-female or female-to-male verbal coercion. Participants perceived female-to-male coercion as more controllable, which accounted for the greater responsibility attributed to a verbally coerced man.

**Kaura, S., & Lohman, B. (2007). Dating violence victimization, relationship satisfaction, mental health problems, and acceptability of violence: A comparison of men and women. *Journal of Family Violence, 22*(6), 367–381.**

Two of the most common reported consequences of dating violence are its impact on the victim's satisfaction with their romantic relationship and its impact on the victim's mental health. Recent research suggests that the strength of these relationships may be moderated by the degree to which the dating violence is acceptable to the victim. However, studies of these relationships have been limited to samples of women. The purpose of the present research was to examine the relationships

among dating violence victimization, relationship satisfaction, mental health problems, and acceptability of violence for a sample that includes not only female victims, but also male victims. Using a sample of 155 male and 417 female college students, hierarchical regression analyses found that dating violence victimization is associated with relationship satisfaction and mental health problems for both men and women. For men, acceptability of violence moderated the relationship between dating violence victimization and the mental health problems of depression, anxiety, and somatization. For women, acceptability of violence moderated the relationship between dating violence victimization and relationship satisfaction only.

**Kaysen, D., Neighbors, C., Martell, J., Fossos, N., & Larimer, M. E. (2006). Incapacitated rape and alcohol use: A prospective analysis. *Addictive Behaviors, 31*(10), 1820–1832.**

This study examined timing of alcohol-related sexual assaults (incapacitated rape) in relation to both alcohol consumption and alcohol-related negative consequences. The sample was drawn from a randomly selected pool of college students across three campuses ( $n = 1238$ ) followed over a three year time period. 91% of students never experienced an incapacitated rape, 2% reported an incapacitated rape prior to the first assessment point ( $n = 30$ ), and 6% reported one over the course of the study ( $n = 76$ ). Results indicated that incapacitated rape was associated with higher alcohol use and more negative consequences in the years prior to the assault. Incapacitated rape was also associated with higher alcohol use and more negative consequences during the year in which the rape took place and subsequent years, with highest rates measured for the year of the rape. These results suggest alcohol use can function as both risk factor and consequence of sexual victimization.

**Klanecky, A. K., Harrington, J., & McChargue, D. E. (2008). Child sexual abuse, dissociation, and alcohol: Implications of chemical dissociation via blackouts among college women. *American Journal of Drug and Alcohol Abuse, 34*(3), 277–284.**

The present study examined whether childhood sexual trauma moderated the relationships between dissociation and both problematic college drinking and alcohol-induced blackouts among a sample of college females ( $N = 156$ ). Cross-sectional data were consistent with the moderation hypotheses. Simple effects showed that the relationship between dissociation and blackout frequency as well as problematic drinking only existed among those with sexual trauma histories ( $p < .035$ ), but not among those reporting no sexual trauma exposure ( $p = .333$ ). Findings implicate the use of alcohol as a possible maladaptive coping mechanism among college females with childhood sexual trauma.

**Kress, V. E., Shepherd, J. B., Anderson, R. I., Petuch, A. J., Nolan, J. M., & Thiemeke, D. (2006). Evaluation of the impact of a coeducational sexual assault prevention program on college students' rape myth attitudes. *Journal of College Counseling, 9*(2), 148–157.**

The authors examined the impact of a mandatory, coeducational sexual assault prevention program on college freshmen's rape myth attitudes. Data from 174 college freshmen required to attend the program indicated that, regardless of gender, the proposed sexual assault prevention program significantly decreased participants' rape myth acceptance attitudes. Implications of the findings for college counselors and directions for future research are discussed.

**Lemieux, S. R., & Byers, E. S. (2008). The sexual well-being of women who have experienced child sexual abuse. *Psychology of Women Quarterly, 32*(2), 126.**

The present study examined the association between child sexual abuse (CSA) and a range of positive and negative aspects of women's sexual well-being. We also investigated the extent to which women's cognitive-affective sexual appraisals mediated these relationships. Participants were 272 female community college and university students. CSA involving fondling only was generally not associated with adverse sexual outcomes. However, the women who had experienced CSA involving sexual penetration or attempted sexual penetration were (a) more likely to be sexually revictimized in adulthood; (b) more likely to have engaged in casual sex, unprotected sex, and voluntary sexual abstinence; and (c) reported fewer sexual rewards, more sexual costs, and lower sexual self-esteem. These findings held over and above the effects of nonsexual abuse in childhood, and as predicted, sexual self-esteem partially or fully mediated most of these relationships. Nonsexual abuse in childhood and adult sexual victimization were also uniquely associated with a number of adverse sexual outcomes. However, outcomes were not worse for women who had experienced CSA involving actual or attempted sexual penetration and sexual assault in adulthood. The results highlight the fact that CSA is a serious and widespread problem with significant implications for adult women's sexual functioning.

**Leonard, D. J. (2007). Innocent until proven innocent. *Journal of Sport & Social Issues*, 31(1), 25–44.**

As the national media descended on Durham, North Carolina, in wake of public accusations of rape against three Duke Lacrosse student athletes, much of the discourse remained mired in its own shock and awe. Ignoring, if not erasing, histories of sexual violence involving White men and Black women while focusing on the problems plaguing college athletics, the media, and the numerous online defenders of the players used this instance to rearticulate tropes of White power, imagining the case as yet another assault on White masculinity. Beyond examining these deployed fictions and the denials of the possibility of guilt, given the player's Whiteness, sport of choice, educational institution, and class status, this article explores the ways in which their student athlete identities were seen as either meaningless or evidence of innocence, especially in juxtaposition to the discursive articulation of the criminalized Black male student athlete.

**Loiselle, M., & Fuqua, W. R. (2007). Alcohol's effects on women's risk detection in a date-rape vignette. *Journal of American College Health*, 55(5), 261–266.**

Researchers have established that alcohol is a risk factor for date rape for both victims and perpetrators. OBJECTIVE: The authors tried to experimentally address the link between alcohol consumption and women's risk detection abilities in a risky sexual vignette. PARTICIPANTS: The authors recruited 42 women from undergraduate classrooms at a large midwestern university and randomly assigned them to drink an alcoholic (.04 blood alcohol content) or a placebo beverage. METHODS: Participants completed self-report inventories and listened to a date-rape audiotaped vignette, which began with consensual sexual behavior and culminated in date rape, and the authors asked them to determine if and when the man should refrain from making further sexual advances. RESULTS: Student's t tests and Pearson r correlations showed that women who consumed alcohol and exhibited high levels of rape myth acceptance showed a significant decrease in risk recognition ( $p = .000$  and  $.001$ , respectively). CONCLUSION: These findings highlight the significance of even small amounts of alcohol on behavior and cognition in women who are self-reported experienced drinkers.

**Lyndon, A. E., White, J. W., & Kadlec, K. M. (2007). Manipulation and force as sexual**

**coercion tactics: Conceptual and empirical differences. *Aggressive Behavior*, 33(4), 291–303.**

This study examines the relationship between perpetrator characteristics, situational characteristics, and type of sexual coercion tactics used to obtain sexual contact (including sexual intercourse) with an unwilling partner. Men who used manipulation or force were compared to each other and to men who engaged in only consensual sex. Participants were college men drawn from the first wave of a 5-year longitudinal study. Stepwise discriminant function analyses, univariate analyses of variance (ANOVA), and chi(2) analyses tested group differences. As predicted, men who used force reported more childhood sexual abuse, witnessed more domestic violence, were more accepting of male violence, and were less likely to endorse love as a motive for sex than men in both the manipulation and consent groups. Men in the force group were also more likely to have had a casual relationship with the woman, and to be drinking and also intoxicated during the coercive incident than men in the manipulation group. Hypothesized differences between men who used force and manipulation regarding parental physical punishment, traditional gender role attitudes, delinquency, hedonistic and dominance motives for sex, prior sexual contact, and the length of the relationship were not supported. The results suggest that types of tactic used in sexual assaults can be distinguished on the basis of person and situational variables and that knowledge of these differences can facilitate future research, as well as rape deterrent and intervention programs

**Macy, R. J., Nurius, P. S., & Norris, J. (2006). Responding in their best interests: Contextualizing women's coping with acquaintance sexual aggression. *Violence Against Women*, 12(5), 478–500.**

Using an investigation of 202 college women who completed a survey about coping with sexual aggression from a known male assailant, the authors examined assailant behaviors, along with women's victimization history, alcohol use, positive relationship expectancies, and sexual assertiveness, to clarify how these factors shape women's responses to acquaintance sexual aggression. Multivariate regression analyses showed that these factors and assailant actions accounted uniquely and cumulatively for women's responding. Rape avoidance and resistance training programs can benefit by using a two-pronged approach: by targeting factors that impede and promote women's assertion and by helping women anticipate and respond to assailant actions.

**Macy, R. J., Nurius, P. S., & Norris, J. (2007). Latent profiles among sexual assault survivors: Implications for defensive coping and resistance. *Journal of Interpersonal Violence*, 22(5), 543–565.**

Rape resistance trainings need to prepare women to recognize and resist sexual assault across a range of experiences and contexts. To help address this need, this research used an investigation of 415 college women who completed a survey about their situational responding to an experience of acquaintance sexual assault. A previously established person-centered analysis model of four distinct risk and protective factor profiles was used to investigate the variability in women's responding. The profiling factors included women's prior victimization, alcohol consumption, relationship expectancies of the assailant, and assertive precautionary habits. Multivariate ANOVA was used to test for differences among the four profile groups on their cognitive, emotional, and behavioral responding. Results showed that the profile groups significantly differed in their assault responses. The findings highlight the utility of holistic, multivariate analyses for understanding women's sexual assault responses and help inform tailored resistance and empowerment trainings.

**Macy, R. J., Nurius, P. S., & Norris, J. (2007). Latent profiles among sexual assault survivors: Understanding survivors and their assault experiences. *Journal of Interpersonal Violence, 22*(5), 520–542.**

Little guidance exists about how to tailor empowerment and resistance sexual assault programming to be responsive to varying groups of women. Using an investigation of 415 college women who completed a self-administered survey about a range of sexually aggressive experiences by a known male assailant, this investigation tested for distinct multivariate profiles of contextual factors among sexually assaulted women to discern how these factors may differentially combine to influence women's vulnerability to sexual assault. We applied latent profile analysis (LPA) to determine meaningful subgroups of women based on interrelationships among factors that contextualize women's vulnerability to sexual assault, including prior victimization, alcohol consumption, relationship expectancies of the assailant, and assertive precautionary habits. LPA established four significantly distinct multivariate profiles of substantively different groups of women. Group difference tests reinforced the findings and aided in group profile interpretations. Implications for the development of tailored resistance and empowerment programs are discussed.

**Maurer, T. W., & Robinson, D. W. (2008). Effects of attire, alcohol, and gender on perceptions of date rape. *Sex Roles, 58*(5), 423–434.**

This investigation explored three categories of college students' perceptions of sexual assault: perceptions of similarity to vignette characters, perceptions of vignette characters' sexual intent, and victim-blaming behaviors, using a convenience sample of 652 U.S. undergraduates and an on-line factorial survey containing a two-part heterosexual date rape vignette. This investigation predicted that vignette character attire, character alcohol use, and participant gender would each significantly influence perceptions in all three categories. Strong associations appeared between all three experimental variables and perceptions, with characters that wore suggestive attire or became intoxicated perceived as less similar and having greater sexual intent than characters that wore neutral attire or abstained. Few differences in actual victim-blaming appeared, likely because of the elimination of hindsight bias.

**McCauley, J. L., & Calhoun, K. S. (2008). Faulty perceptions? The impact of binge drinking history on college women's perceived rape resistance efficacy. *Addictive Behaviors, 33*(12), 1540–1545.**

Abstract: College women who binge drink are at greater risk than their peers for experiencing an alcohol-involved rape. Evidence suggests that these women commonly underestimate their risk for assault. This study examines college women's perceptions of their rape resistance efficacy in two acquaintance rape scenarios (one involving the woman's alcohol consumption and one not) as a function of their binge drinking and alcohol-involved rape history. Alcohol-involved rape was inversely associated only with efficacy in situations involving alcohol. Binge drinking was differentially predictive of efficacy in the two scenarios, with regular binge drinkers being significantly more likely to have high perceived efficacy in rape scenarios in which they were drinking and significantly less likely than their peers to have high perceived efficacy in rape scenarios in which they weren't drinking. Findings have direct implications for both college drinking and rape risk reduction interventions, highlighting the need to address women's minimization of alcohol's impact on their rape resistance ability.

**McMahon, P. P. (2008). Sexual violence on the college campus: A template for compliance with federal policy. *Journal of American College Health, 57*(3), 361–365.**

OBJECTIVE: The author introduces a template, the Model Policy for the Prevention and Response to Sexual Assault, to assist institutions of higher education to benchmark campus policy compliance with federal laws directed at sexual assault. The author presents a detailed review of policy criteria recommended by the National Institute of Justice. The author proposes 2 unique criteria not found in the National Institute of Justice report for consideration for a comprehensive campus sexual assault policy. CONCLUSION: The template provides an inclusive system to benchmark campus sexual assault policies. Conforming to the template provides compliance with federal laws and demonstrates that the campus fosters a climate that does not tolerate sexual violence.

**McMullin, D., Wirth, R. J., & White, J. W. (2007). The impact of sexual victimization on personality: A longitudinal study of gendered attributes. *Sex Roles, 56*(7/8), 403–414.**

Little is known about how sexual victimization may affect a woman's self-reported personality ratings. In the present study endorsement ratings of gendered attributes, as measured by the Extended Personal Attributes Questionnaire, were examined over a 3-year span using multiple group latent growth modeling. Differences in the endorsement of gendered attributes between college female non-victims (N = 158) and victims (N= 158) of sexual aggression were tested. Whereas endorsement of communal and positive agentic attributes were stable across time, victims remained consistently less traditionally feminine (i.e., positively communal and nurturing) than non-victims. Victims also appeared to become relatively more self-focused (i.e., negative masculinity) across time than non-victims. This pattern suggests that sexual victimization may have lasting effects on victims' ability to focus on the nurturing, trusting aspects of relationships; rather they have a preoccupation with their own needs and goals that appears to strengthen with time. Such a pattern sheds insight into how self-processes may contribute to the relationship difficulties often observed in sexual assault victims. Implications of these results for both personality and sexual aggression researchers are discussed.

**Messman-Moore, T. L., Coates, A. A., Gaffey, K. J., & Johnson, C. F. (2008). Sexuality, substance use, and susceptibility to victimization: Risk for rape and sexual coercion in a prospective study of college women. *Journal of Interpersonal Violence, 23*(12), 1730–1746.**

An 8-month prospective study examined behavioral, personality, and psychological variables thought to increase vulnerability for college women's experience of rape and verbal sexual coercion. Participants were 276 college women who completed self-report surveys. During 1 academic year, 9.5% of women were raped and 11.7% reported verbal sexual coercion. Elevated levels of sexual concerns, dysfunctional sexual behavior, and impaired self-reference were associated with both verbal sexual coercion and rape. Alcohol and marijuana use increased risk only for rape, whereas self-criticism and depression increased risk only for verbal coercion. Findings suggest that multiple aspects of sexuality, such as shame regarding sexuality and using sex to meet nonsexual needs, may increase risk for both types of sexual victimization. Results support conclusions that rape and verbal sexual coercion have both shared and unique risk factors. Implications for future research and intervention programs are discussed.

**Miller, A. K., Markman, K. D., & Handley, I. M. (2007). Self-blame among sexual assault victims prospectively predicts revictimization: A perceived sociolegal context model of risk.**

***Basic and Applied Social Psychology, 29(2), 129–136.***

This investigation focused on relationships among sexual assault, self-blame, and sexual revictimization. Among a female undergraduate sample of adolescent sexual assault victims, those endorsing greater self-blame following sexual assault were at increased risk for sexual revictimization during a 4.2-month follow-up period. Moreover, to the extent that sexual assault victims perceived nonconsensual sex is permitted by law, they were more likely to blame themselves for their own assaults. Discussion focuses on situating victim-based risk factors within sociocultural context.

**Murnen, S., & Kohlman, M. (2007). Athletic participation, fraternity membership, and sexual aggression among college men: A meta-analytic review. *Sex Roles, 57(1/2), 145–157.***

A meta-analysis of the data relating either college athletic participation or fraternity membership to attitudes and behaviors associated with sexual aggression was conducted with 29 studies which yielded 57 effect sizes. Membership in each male group was associated to a moderate extent with rape-supportive attitudes, and to a smaller extent with self-report of sexually aggressive behavior. There was much variability in the data that could be partially predicted by variables such as the size of the college, the validity of the study, and the age of the research participants. The involvement of these all-male groups in the perpetuation of hypermasculine attitudes (Mosher and Sirkin 1984) in a patriarchal culture was discussed.

**Orchowski, L. M., Gidycz, C. A., & Raffle, H. (2008). Evaluation of a sexual assault risk reduction and self-defense program: A prospective analysis of a revised protocol. *Psychology of Women Quarterly, 32(2), 204–218.***

The current study extends the development and evaluation of an existing and previously evaluated sexual assault risk reduction program with a self-defense component for college women (N = 300). The program protocol was revised to address psychological barriers to responding assertively to risky dating situations, and a placebo-control group was utilized rather than a wait-list control group. Relative to the placebo-control group, the program was effective in increasing levels of self-protective behaviors, self-efficacy in resisting against potential attackers, and use of assertive sexual communication over a 4-month interim. Results also suggested reduction of incidence of rape among program participants over the 2-month follow-up. Implications for future development and evaluation of sexual assault risk reduction programming are presented.

**Osman, S. L. (2007). The continuation of perpetrator behaviors that influence perceptions of sexual harassment. *Sex Roles, 56(1/2), 63–69.***

This study was designed to investigate sexual harassment perceptions based on continuation of unwanted sexual attention following victim resistance. Participants were 504 undergraduates who responded to statements regarding a sexual harassment scenario, in which the perpetrator continued or discontinued attention, which varied in severity according to nonphysical, physical, or restraint contact. Results showed that continued attention and any type of physical contact strengthened harassment perceptions, although men's perceptions were weaker unless restraint was present. No sex differences were observed in the restraint condition. Women had stronger perceptions than men did in the physical condition, but showed a non-significant trend toward stronger perceptions in the nonphysical condition. Findings suggest that continuation following resistance may clarify for observers that harassment is occurring. Conceptualizations of harassment severity are suggested.

**Patton, T. O., & Snyder-Yuly, J. (2007). Any four Black men will do. *Journal of Black Studies*, 37(6), 859–895.**

This study examines the impact of false rape charges a former Iowa State University student brought against four Black males. Using textual analysis coupled with Barthes's theory of myth, the authors critically examine how the story took hold and the communicative impact of the falsified claims of rape that affected African American men, rape survivors, and women. Using previous scholarship on rape and race (macrocontext), the authors test the scholarly conclusions on the myth of rape and race in a microcontext case study. Thus, they are interested in how the false accusation revived the myth and how Iowa State University and the local community, the regional media, and the campus police perpetuated the myth. The authors argue that racism and sexism are allowed to continue in this situation because of the preservation of White hegemonic patriarchal power. This preservation of White patriarchal hegemony is echoed in macrocontext-level conclusions.

**Payne, B. K. (2008). Challenges responding to sexual violence: Differences between college campuses and communities. *Journal of Criminal Justice*, 36(3), 224–230.**

To increase understanding about the response to sexual assault, five focus group interviews were conducted with community-based sexual assault workers as well as officials affiliated with colleges and universities throughout the Commonwealth of Virginia. Attention was given to the differences in collaboration challenges confronted by those serving college students and those serving the general population. Results suggested that while the needs of the two types of workers are similar, the types of collaboration challenges confronted varied according to the cultural and spatial dynamics of each setting. College campus sexual assault workers confronted one set of obstacles, while community-based workers confronted a different set. Ways to address these challenges are considered. Implications focus on the development of protocol, increased funding, and collaborative training.

**Próspero, M. S. (2008). Effects of masculinity, sex, and control on different types of intimate partner violence perpetration. *Journal of Family Violence*, 23(7), 639–645.**

Controlling behaviors have been found to be a significant predictor in IPV perpetration (IPV) for both males and females. Studies have also revealed the relationship between IPV perpetration and masculinity among males; however, the literature has not investigated the relationship between masculinity and IPV perpetration among females. Additionally, studies have not explored the effects of controlling behaviors and masculinity on different types of IPV, such as physical and sexual perpetration. The present study investigated the relationship between controlling behaviors, masculinity, past victimization, and three types of IPV perpetration among 167 college students. Multivariate analyses revealed significant contributions of each factor varied according to the type of IPV perpetration (psychological, physical, and sexual). Implications from the results include the development of more inclusive violence prevention and intervention programs aimed addressing the perpetration of intimate partner violence.

**Próspero, M., & Vohra-Gupta, S. (2007). Gender differences in the relationship between intimate partner violence victimization and the perception of dating situations among college students. *Violence and Victims*, 22(4), 489–502.**

Although the prevalence and severity of dating violence among college students is well known, the relationship between past victimization and perceptions of future dating situations has not been examined. Using both qualitative and quantitative research methods, this study investigated gender differences in the relationship between intimate partner violence victimization and the perceptions of dating situations. The study found that the more psychological, physical, or sexual violence that was experienced by females, the more likely they perceived dating situations as inappropriate. Males, on the other hand, were more likely to report aggressive behaviors in dating situations only if victimized by sexual violence. Implications for professionals working with college students or community prevention programs are discussed.

**Ramirez, I. (2007). The relationship of acculturation and social integration to assaults on intimate partners among Mexican American and Non-Mexican White students. *Journal of Family Violence*, 22(7), 533–542.**

This study examined the role that Mexican ethnicity, acculturation into Anglo American society, and social integration play in intimate partner violence among a sample of 348 college students. The results indicated that Mexican American ethnicity and acculturation into Anglo American society by Mexican American college students had no relation to intimate partner violence. However, integration into society was associated with a decreased probability of severely assaulting a partner among both Mexican Americans and Non-Mexican Whites. The results support a control theory perspective (social integration) on intimate partner violence.

**Renaud, C. A., & Byers, S. E. (2006). Positive and negative cognitions of sexual submission: Relationship to sexual violence. *Archives of Sexual Behavior*, 35(4), 483–490.**

This study investigated gender differences in cognitions of sexual submission as well as their association with sexual violence. Participants were 292 heterosexual undergraduate students who completed a 56-item checklist assessing positive and negative sexual cognitions; they also completed measures assessing experiences of sexual abuse in childhood, experiences of sexual coercion in adulthood, and use of sexual coercion. Two 10-item sexual submission subscales were developed from the checklist. One reflected how often respondents had experienced the sexual submission items as positive. The other reflected how often these items were experienced as negative. When overall frequency of sexual cognitions was controlled, compared to the men, the women reported a significantly greater frequency of both positive and negative cognitions of sexual submission. Submission cognitions were more often negative for women and were more often positive for men. Men and women who had experienced sexual abuse in childhood reported more frequent positive sexual submission cognitions but not more negative sexual submission cognitions. Conversely, men and women who had experienced sexual coercion in adulthood reported more frequent negative sexual submission cognitions but not more positive sexual submission cognitions. Having used sexual coercion was associated with more frequent positive cognitions of sexual submission for both men and women. Implications for the proposed links between sexual violence and preferences for cognitions of sexual submission are discussed.

**Rosenthal, M. Z., & Follette, V. M. (2007). The effects of sexual assault-related intrusion suppression in the laboratory and natural environment. *Behaviour Research and Therapy*, 45(1), 73–87.**

Individuals with a history of sexual victimization often experience enduring intrusive thoughts

associated with their assault history. Research suggests that the characteristic ways in which sexually assaulted individuals respond to aversive internal experiences (i.e., thoughts, emotions, etc.) can influence the psychological distress associated with these intrusions. This study investigated the effects of suppressing sexual assault-related intrusions in a sample of 61 female college students with a history of adolescent or adult sexual assault and recent assault-related intrusions. Participants were randomly assigned to suppress or monitor intrusions during a laboratory task and for 48 h outside the laboratory. In contrast to study hypotheses, findings indicated that intrusion monitoring was associated with higher subjective distress than suppression both in the laboratory and in the natural environment. No differences were found for the frequency of intrusions between groups in the laboratory. However, modest evidence for a rebound effect in intrusion frequency was found outside the laboratory.

**Rothman, E., & Silverman, J. (2007). The effect of a college sexual assault prevention program on first-year students' victimization rates. *Journal of American College Health, 55*(5), 283–290.**

**OBJECTIVE:** Although a variety of sexual assault prevention programs are currently available to college health professionals, there is a dearth of information about the effect of these programs on sexual assault victimization rates. **PARTICIPANTS:** The authors evaluated the efficacy of a sexual assault prevention program for first-year students at a college in the Northeast (N = 1,982). **METHODS:** They used a retrospective cohort design and assessed the prevalence of sexual assault victimization among students exposed to the sexual assault prevention program and students 1 year their senior who were not exposed. **RESULTS:** Students who had no exposure were more likely to report that they were sexually assaulted during their first year of college (odds ratio = 1.74, 95% confidence interval [1.32-2.29]). Results suggest that the program was effective for males and females, but not for students with a prior history of sexual assault victimization. Gay, lesbian, and bisexual students were at increased risk for victimization as compared with heterosexual students, and students who drank alcohol or engaged in binge drinking were at increased risk as compared with alcohol abstinent students. **CONCLUSIONS:** Findings suggest that this program had a positive effect on victimization rates for certain sub-groups of students.

**Ryan, K., Weikel, K., & Sprechini, G. (2008). Gender differences in narcissism and courtship violence in dating couples. *Sex Roles, 58*(11/12), 802–813.**

The current study explored the relationship between courtship violence and the exploitativeness/entitlement factor of overt narcissism, covert narcissism, and sexual narcissism. Data were analyzed from 63 currently dating couples on their own and partner's aggression using the CTS2. All were white, heterosexual students from a small US college in Central Pennsylvania. An interdependence analysis showed that correlations were entirely explained at the individual-level, thus demonstrating that gender is a key element in understanding narcissism and courtship violence. For women, exploitativeness/entitlement was significantly correlated with sexual coercion in both dating partners. For men, covert narcissism was correlated with physical assault and sexual narcissism was correlated with their partner's sexual coercion. Narcissism also influenced some discrepancies in self- and partner-rated aggression.

**Sabina, C., & Straus, M. A. (2008). Polyvictimization by dating partners and mental health among U.S. college students. *Violence and Victims, 23*(6), 667–682.**

Studies on mental health effects of partner violence often ignore multiple victimizations or polyvictimization. The current study had several objectives: (a) examine the rate of physical, psychological, and sexual victimization and combinations of them (polyvictimization) among a sample of students at 19 U.S. colleges; (b) examine the association between victimization and depressive symptoms and posttraumatic stress (PTS) symptoms; and (c) examine the relation of polyvictimization to these mental health effects. A substantial number were polyvictims. As predicted, polyvictimization in almost all analyses was the strongest predictor of PTS symptoms for both men and women. Polyvictimization was a significant predictor of depressive symptoms for women. These findings highlight the importance of including polyvictimization in future work on the mental health effects of partner violence.

**Schwartz, J. R., Griffin, L. D., Russell, M. M., & Frontaura-Duck, S. (2006). Prevention of dating violence on college campuses: An innovative program. *Journal of College Counseling, 9*(1), 90–96.**

An innovative psychoeducational intervention designed to raise awareness, teach skills, and affect attitudes toward dating violence was presented to fraternity and sorority members. The content of the intervention focused specifically on ways that stereotypical and misogynistic beliefs contribute to dating violence. Initial evaluation indicated that the participants had significantly fewer stereotypical gender role attitudes that support dating violence. Implications are presented for the prevention of dating violence.

**Shorey, R. C., Cornelius, T. L., & Bell, K. M. (2008). A critical review of theoretical frameworks for dating violence: Comparing the dating and marital fields. *Aggression and Violent Behavior, 13*(3), 185–194.**

Abstract: Recent studies have focused on the widespread problem of violence among adolescent and college aged dating couples. Much of this research has focused on identifying risk factors and correlates of dating violence, along with implementing intervention and prevention programs for the amelioration of this aberrant behavior. However, limited discussion exists within the literature on theoretical frameworks to explain dating violence or the relationship between dating and marital violence. The present paper sought to critically review existing theories that have been postulated for intimate partner aggression in general and specifically for dating violence. The similarities and differences between dating violence and marital violence are also examined, with a discussion on how a theoretical framework developed to examine marital aggression can be effectively applied to violent dating relationships. Suggestions for future research on theoretical conceptualizations of dating violence and the co-examination of dating and marital violence are discussed.

**Simons, L. G., Burt, C. H., & Simons, R. L. (2008). A test of explanations for the effect of harsh parenting on the perpetration of dating violence and sexual coercion among college males. *Violence and Victims, 23*(1), 66–82.**

This study uses structural equation modeling (SEM) with a sample of 760 college males to test various hypotheses regarding the avenues whereby harsh corporal punishment and a troubled relationship with parents increase the risk that a boy will grow up to engage in sexual coercion and dating violence. We found that three variables—a general antisocial orientation, sexually permissive attitudes, and believing that violence is a legitimate component of romantic relationships—mediated most of the association between negative parenting and our two outcomes. In addition to this

indirect influence, we found that harsh corporal punishment had a direct effect upon dating violence. The findings are discussed with regard to various theoretical perspectives regarding the manner in which family of origin experiences increase the chances that a young man will direct violence toward a romantic partner.

**Sims, C. M., Noel, N. E., & Maisto, S. A. (2007). Rape blame as a function of alcohol presence and resistance type. *Addictive Behaviors, 32*(12), 2766–2775.**

Abstract: Attributions of rape blame may be related to variables such as alcohol presence and resistance type used during a sexual assault. The current study sought to assess participants' attributions of responsibility for a sexual assault based on these two variables through the use of several written scenarios. Two hundred and thirteen male and female college students participated in the study. Results indicated that responsibility ratings given to the victim varied by the presence of alcohol but not by resistance type. If the female target had been drinking, she was judged as being more responsible for the assault than if she had not been drinking. However, how she resisted the assault did not affect ratings of her responsibility. Additionally, participant gender was found to not be an important factor for attributing blame to the woman target. Future research should focus on two important factors: 1) how participants' judgments of blame may change during actual alcohol administration and 2) how the use of video, rather than written vignettes, may produce stronger effects.

**Sisco, M. M., & Figueredo, A. J. (2008). Similarities between men and women in non-traditional aggressive sexuality: Prevalence, novel approaches to assessment and treatment applications. *Journal of Sexual Aggression, 14*(3), 253–266.**

Surveys and focus groups were administered to two samples of US university undergraduates to compare sexual aggression prevalence as assessed based on the Power-Assertion model (n = 139) versus the Confluence model (n = 318). Men were more likely to commit all illegal acts, especially conventional rape. Women also committed illegal acts, especially non-traditional behaviours such as forcing the victim to initiate sexual contact. Men and women committed similar rates of verbal coercion. However, conventional lying and pressuring were not as common as harassing someone through e-mails/calls, manipulating the victim's social network, stalking and using pledges, bets or dares. The Confluence model was found to fit the data more effectively. We must expand beyond traditional conceptualizations of perpetrators, behaviours and treatment methods to address the current state of affairs. Non-traditional notions were especially valuable as they were based on the comments of young adults about what was missing from the traditional perspective.

**Turchik, J. A., Probst, D. R., Chau, M., Nigoff, A., & Gidycz, C. A. (2007). Factors predicting the type of tactics used to resist sexual assault: A prospective study of college women. *Journal of Consulting and Clinical Psychology, 75*(4), 605–614.**

The purpose of the current study was to examine how women's intentions, as well as psychological and situational factors, predicted the actual use of resistance tactics in response to a sexual assault situation over a 2-month follow-up period. Twenty-eight percent of the 378 undergraduate women who participated at the baseline assessment and returned for the follow-up session 8 weeks later were victimized over the interim period. The results suggested that women's reported use of verbally assertive tactics was predicted by the intention to use verbally assertive tactics, concern about injury, greater confidence, and feelings of being isolated or controlled by the perpetrator. The use of

physically assertive tactics was predicted by increased severity of the attack, greater confidence, and feelings of being isolated or controlled by the perpetrator. The use of nonforceful tactics was predicted by intentions to use nonforceful tactics, increased self-consciousness, knowing the perpetrator prior to the assault, fears of losing the relationship with the perpetrator, and no history of childhood sexual victimization. These findings have important implications in sexual assault risk-reduction programming.

**Ullman, S. E., Filipas, H. H., Townsend, S. M., & Starzynski, L. L. (2006). The role of victim-offender relationship in women's sexual assault experiences. *Journal of Interpersonal Violence, 21*(6), 798–819.**

This study's goal is to identify differences in background, assault, and postassault factors according to the victim-offender relationship. A mail survey is conducted with more than 1,000 female sexual assault survivors (response rate 90%) recruited from college, community, and mental health agency sources. Stranger assailants are associated with a greater victim perceived life threat, more severe sexual assaults, and ethnic minority victims. Positive social reactions do not vary according to the victim-offender relationship, but stranger victims report more negative social reactions from others than do victims of acquaintances or romantic partners. Assaults by strangers and relatives are associated with more posttraumatic stress disorder (PTSD) symptoms than assaults by acquaintances and romantic partners. As expected, survivors' social cognitive responses to rape and social reactions from support providers are stronger correlates of PTSD symptoms than demographic or assault characteristics in general, but correlates vary across victim-offender relationship groups.

**Ullman, S. E., Filipas, H. H., Townsend, S. M., & Starzynski, L. L. (2007). Psychosocial correlates of PTSD symptom severity in sexual assault survivors. *Journal of Traumatic Stress, 20*(5), 821–831.**

This study's goal was to assess the effects of preassault, assault, and postassault psychosocial factors on current posttraumatic stress disorder (PTSD) symptoms of sexual assault survivors. An ethnically diverse sample of over 600 female sexual assault survivors was recruited from college, community, and mental health agency sources (response rate = 90%). Regression analyses tested the hypothesis that postassault psychosocial variables, including survivors' responses to rape and social reactions from support providers, would be stronger correlates of PTSD symptom severity than preassault or assault characteristics. As expected, few demographic or assault characteristics predicted symptoms, whereas trauma histories, perceived life threat during the assault, postassault characterological self-blame, avoidance coping, and negative social reactions from others were all related to greater PTSD symptom severity. The only protective factor was survivors' perception that they had greater control over their recovery process in the present, which predicted fewer symptoms. Recommendations for intervention and treatment with sexual assault survivors are discussed.

**Ullman, S. E., Starzynski, L. L., Long, S. M., Mason, G. E., & Long, L. M. (2008). Exploring the relationships of women's sexual assault disclosure, social reactions, and problem drinking. *Journal of Interpersonal Violence, 23*(9), 1235–1257.**

The goal of this exploratory study was to examine correlates of sexual assault disclosure and social reactions in female victims with and without drinking problems. An ethnically diverse sample of sexual assault survivors was recruited from college, community, and mental health agencies. Ethnic minority women were less likely to disclose assault, and women with a greater number of traumatic

life events disclosed assault more often. Although there were no differences in disclosure likelihood by drinking status; of those disclosing, problem drinkers told more support sources and received more negative and positive social reactions than nonproblem drinkers. Correlates of receiving negative social reactions were similar for normal and problem drinkers; however, negative social reactions to assault disclosure were related to more problem drinking for women with less frequent social interaction. Implications for future research and possible support interventions with problem-drinking victims are provided.

**Vik, P. W., Islam-Zwart, K. A., & Ruge, L. N. (2008). Application of the PTSD-alcohol expectancy questionnaire (P-AEQ) to sexually assaulted college women. *Addiction Research & Theory, 16*(6), 585–594.**

Risk of alcohol use problems is an important clinical concern for women who have been sexually assaulted and experience PTSD symptoms. This study explored this risk by testing a factor structure of an alcohol expectancy questionnaire that assesses beliefs about alcohol's effects on posttraumatic stress symptoms (P-AEQ). Symptom-specific expectancy scores were then tested as predictors of alcohol consumption. Subjects were 96 female undergraduate women who reported being forced to have sex, 68 who experienced pressure to have sex, and 149 who denied any forced or pressured sex. Alternative factor models were tested using Confirmatory Factor Analysis. A four-factor model reflecting posttraumatic stress symptom domains (Intrusions, Avoidance, Arousal, and Numbing) was found. The numbing factor was correlated with drinking among assaulted women; however, no support was found for symptom-specific expectancies to moderate between assault and drinking. Findings supported a role for posttrauma symptom-specific alcohol expectancies as a potential link between sexual assault and alcohol consumption.

**Walsh, K., Blaustein, M., Knight, W. G., Spinazzola, J., & van der Kolk, B. A. (2007). Resiliency factors in the relation between childhood sexual abuse and adulthood sexual assault in college-age women. *Journal of Child Sexual Abuse, 16*(1), 1–17.**

Research has suggested that childhood sexual abuse (CSA) may be a risk factor for adulthood sexual assault. This study examined associations between CSA experiences, cognitive resiliency variables, and revictimization. Participants were 73 college-age females who completed self-report questionnaires assessing CSA, adult assault, self-efficacy, locus of control (LOC), and coping styles. Sexual assault was categorized as forced or coerced assault based on the tactics used by the perpetrator. Results indicated that CSA alone was the strongest independent predictor of forced adult assault; however, LOC and positive coping were associated with resiliency to coercive sexual assault. The current findings have clinical implications in that LOC and coping styles are characteristics that can be enhanced through therapy.

**Warkentin, J. B., & Gidycz, C. A. (2007). The use and acceptance of sexually aggressive tactics in college men. *Journal of Interpersonal Violence, 22*(7), 829–850.**

This study extended the findings of Cleveland, Koss, and Lyon's (1999) research on rape tactics to a sample of college men by examining the use and acceptance of sexually aggressive tactics. Participants included 297 male undergraduate students who filled out instruments assessing for a history of sexual aggression and other personality characteristics. In addition, a measure was created to assess acceptance of sexually aggressive tactics, the Sexual Strategies Questionnaire, and a principal components analysis indicated the presence of two components: overt and covert tactics.

Although the overt and covert tactics are comparable to those found by Cleveland and colleagues, the former may provide a greater level of discrimination between general and tactical alcohol usage. Finally, a regression analysis demonstrated that a history of sexually aggressive behavior and increased hypergender ideology were found to predict acceptance of sexually aggressive tactics. Directions for future research are discussed.

**Williams, J. R., Ghandour, R. M., & Kub, J. E. (2008). Female perpetration of violence in heterosexual intimate relationships: Adolescence through adulthood. *Trauma, Violence & Abuse, 9*(4), 227–249.**

This article critically reviews 62 empirical studies that examine the prevalence of female-perpetrated intimate partner violence across three distinct populations (adolescents, college students, and adults). All studies were published between 1996 and 2006 and reported prevalence rates of physical, emotional, and/or sexual violence perpetrated by females in heterosexual intimate relationships. The highest rates were found for emotional violence, followed by physical and sexual violence. Prevalence rates varied widely within each population, most likely because of methodological and sampling differences across studies. Few longitudinal studies existed, limiting the extent to which we could identify developmental patterns associated with female-perpetrated intimate partner violence. Differences and similarities across populations are highlighted. Methodological difficulties of this area of inquiry as well as implications for practice, policy, and research are discussed.

**Winslett, A. H., & Gross, A. M. (2008). Sexual boundaries: An examination of the importance of talking before touching. *Violence Against Women, 14*(5), 542–562.**

This study examined a woman's clearly articulated sexual boundary and its effect on college students' discrimination of when a woman wants her date to stop making sexual advances. Male and female participants listened to an audio recording of a date rape vignette and signaled when the man should stop making sexual advances. Relative to participants in the no-boundary condition, participants who heard a discussion including a sexual boundary before intimate physical contact occurred displayed significantly shorter latencies to identify the inappropriateness of the man's behavior. No significant difference was observed between male and female participants.

See also:

Forbes, G. B., Adams-Curtis, L. E., Pakalka, A. H., & White, K. B. (2006). Dating aggression, sexual coercion, and aggression-supporting attitudes among college men as a function of participation in aggressive high school sports. *Violence Against Women, 12*(5), 441–455.

Foubert, J. D., & Newberry, J. T. (2006). Effects of two versions of an empathy-based rape prevention program on fraternity men's survivor empathy, attitudes, and behavioral intent to commit rape or sexual assault. *Journal of College Student Development, 47*(2), 133–148.

Jennings, W. G., Gover, A. R., & Pudrzynskas, D. (2007). Are institutions of higher learning safe? A descriptive study of campus safety issues and self-reported campus victimization among male and female college students. *Journal of Criminal Justice Education, 18*(2), 191–208.

Lanier, C. A., & Green, B. A. (2006). Principal component analysis of the College Date Rape Attitude Survey (CDRAS): An instrument for the evaluation of date rape prevention programs.

*Journal of Aggression, Maltreatment & Trauma*, 13(2), 79–93.

Wilcox, P., Jordan, C. E., & Pritchard, A. J. (2007). A multidimensional examination of campus safety: Victimization, perceptions of danger, worry about crime, and precautionary behavior among college women in the post-Clery era. *Crime & Delinquency*, 53(2), 219–254.

## Suicide

**Appelbaum, P. S. (2006). Law & psychiatry: “Depressed? Get out!”: Dealing with suicidal students on college campuses. *Psychiatric Services*, 57(7), 914–916.**

This column examines college and university policies under which students who manifest suicidal ideation are barred from campus, usually by immediate suspension or mandatory withdrawal. Such policies, which appear to be increasing on U.S. campuses, generally reflect administrators’ fears of legal liability if students commit suicide on campus. The author reviews two recent cases—*Schieszler v. Ferrum College* and *Shin v. Massachusetts Institute of Technology*—that have created a climate of fear among administrators and suggests ways to change blanket policies so that students at low risk of suicide will not be barred from campus and will seek and obtain appropriate treatment.

**Ellis, J. B., & Lamis, D. A. (2007). Adaptive characteristics and suicidal behavior: A gender comparison of young adults. *Death Studies*, 31(9), 845–854.**

Differences in suicidal behavior and adaptive characteristics were examined in college students with a particular emphasis on gender differences. Participants consisted of 344 undergraduate students who were administered a revised version of the Suicide Behaviors Questionnaire (SBQ), the Expanded Reasons for Living Inventory (RFL), and a demographic questionnaire. Results of this study suggest that there are significant differences between levels of adaptive characteristics in women and men. Women consistently scored higher on the Survival and Coping Beliefs, Responsibility to Family, Child-Related Concerns, and Fear of Suicide subscales of the RFL. No difference between genders was found for suicidal behavior. The current study provides insight into the similarities as well as the differences in adaptive characteristics and suicidal behavior between genders. The results of this study should be useful in preparing more specific target interventions for preventing suicide and strengthening coping skills among young adults.

**Ellis, T. E., & Trumpower, D. (2008). Health-risk behaviors and suicidal ideation: A preliminary study of cognitive and developmental factors. *Suicide and Life-Threatening Behavior*, 38(3), 251–259.**

Abstract Various theorists have suggested that unhealthy behaviors such as cigarette smoking and problem drinking may be subtle forms of suicidality. Consistent with this view, prior research has shown an association between health risk behaviors and suicidal ideation. In the present study we examined relationships among suicidal ideation, health-related attitudes and behaviors, and adverse childhood events. We hypothesized that unhealthy attitudes, perhaps shaped by adverse childhood events, would help explain the association between suicidal phenomena and unhealthy behaviors. Three-hundred eighteen college students completed surveys covering health risk behaviors, depression, suicidal ideation, and health-related attitudes. Results supported the hypothesized associations among these variables. However, contrary to our hypotheses, the association between suicidal ideation and health-compromising behaviors was limited largely to substance-related

behaviors. Moreover, the association between suicidal ideation and health-related attitudes was mediated by depression. Adverse childhood events were associated with health-related attitudes, but this relationship was mediated by depression. These results are less suggestive of the notion of unhealthy behaviors as subtle suicidality than a model in which suicidality associates specifically with psychopathological states such as depression and substance abuse. Implications for treatment and prevention programs are discussed.

**Flamenbaum, R., & Holden, R. R. (2007). Psychache as a mediator in the relationship between perfectionism and suicidality. *Journal of Counseling Psychology, 54*(1), 51–61.**

E. S. Shneidman (1993) has proposed that psychache (i.e., unbearable psychological pain) is directly associated with suicide and mediates the effects of all other relevant psychological factors. The present research tested this proposition by examining whether psychache mediates the relationship between perfectionism and suicidality. Furthermore, the link between perfectionism and psychache was examined for mediation by unfulfilled psychological needs. Participants were 264 undergraduate students. Structural equation modeling with bootstrapped estimates determined that psychache fully mediated the relationship between socially prescribed perfectionism and suicidality. Additionally, the relationship between socially prescribed perfectionism and psychache was partially mediated by unfulfilled psychological needs.

**Gillman, J. L., Kim, H. S., Alder, S. C., & Durrant, L. H. (2006). Assessing the risk factors for suicidal thoughts at a nontraditional commuter school. *Journal of American College Health, 55*(1), 17–26.**

The sample of students completing the National College Health Assessment (NCHA) Survey at the University of Utah differs from the national reference group for the NCHA 2003 in age, employment, residence, and marital status. The purpose of this study is to determine if the defining characteristics of a commuter school increase the risk for suicidal thoughts. During the fall semester of 2004, the University of Utah implemented a randomized electronic survey assessing the student body's health status in several areas. The authors compared 88 respondents who endorsed seriously considered suicide in the previous 12 months were with the remaining 954 respondents to identify discriminating variables. Those students who seriously considered suicide more likely lived off campus, indicated they were emotionally abused, were in only fair health, experienced being assaulted, experienced unwanted sexual touching, or were not heterosexual. Students who were employed were significantly less likely to consider suicide.

**Gratz, K. L., & Roemer, L. (2008). The relationship between emotion dysregulation and deliberate self-harm among female undergraduate students at an urban commuter university. *Cognitive Behaviour Therapy, 37*(1), 14–25.**

Despite the theoretical emphasis on the role of emotion dysregulation in deliberate self-harm (DSH), few studies have examined this relationship. The present study sought to examine the role of emotion dysregulation in DSH by extending the findings of Gratz (2006) regarding the environmental (i.e. childhood maltreatment) and individual (i.e. emotional inexpressivity and affect intensity/reactivity) factors associated with DSH among 249 female undergraduates. Specifically, the present study examined whether emotion dysregulation (a) is associated with DSH above and beyond these other risk factors and (b) mediates the relationship between these risk factors and DSH. Findings indicate that overall emotion dysregulation distinguished women with frequent DSH

from those without a history of DSH, adding reliably to the prediction of DSH status above and beyond maltreatment, inexpressivity, and affect intensity/reactivity. Moreover, among self-harming women, emotion dysregulation accounted for a significant amount of additional variance in DSH frequency and mediated the relationship between emotional inexpressivity and DSH frequency. Results also suggest the particular relevance of two specific dimensions of emotion dysregulation to DSH: limited access to effective emotion regulation strategies and a lack of emotional clarity, each of which reliably improved the prediction of DSH status and accounted for unique variance in DSH frequency among self-harming women above and beyond the other risk factors in the models. Results suggest the potential utility of teaching self-harming women more adaptive ways of responding to their emotions, including nonavoidant strategies for modulating emotional arousal and the ability to identify, label, and differentiate among emotional states.

**Haas, A., Koestner, B., Rosenberg, J., Moore, D., Garlow, S. J., Sedway, J., Nicholas, L., Hendin, H., Mann, J. J., & Nemeroff, C. B. (2008). An interactive Web-based method of outreach to college students at risk for suicide. *Journal of American College Health, 57*(1), 15–22.**

**Objective and Participants:** From 2002 to 2005, the authors tested an interactive, Web-based method to encourage college students at risk for suicide to seek treatment. **Methods:** The authors invited students at 2 universities to complete an online questionnaire that screened for depression and other suicide risk factors. Respondents received a personalized assessment and were able to communicate anonymously with a clinical counselor online. At-risk students were urged to attend in-person evaluation and treatment. **Results:** A total of 1,162 students (8% of those invited) completed the screening questionnaire; 981 (84.4%) were designated as at high or moderate risk. Among this group, 190 (19.4%) attended an inperson evaluation session with the counselor, and 132 (13.5%) entered treatment. Students who engaged in online dialogues with the counselor were 3 times more likely than were those who did not to come for evaluation and enter treatment. **Conclusions:** The method has considerable promise for encouraging previously untreated, at-risk college students to get help.

**Hirsch, J. K., Wolford, K., LaLonde, S. M., Brunk, L., & Morris, A. P. (2007). Dispositional optimism as a moderator of the relationship between negative life events and suicide ideation and attempts. *Cognitive Therapy and Research, 31*(4), 533–546.**

Relatively little research has focused on the role that positive psychological characteristics, such as optimism, might play in the mitigation of stressors and reduction of psychopathology. Dispositional optimism is a trait-like characteristic reflecting a positive attitude or mood regarding the future. This study examined the moderating effect of dispositional optimism on the relationship between negative life experiences and suicide ideation and attempts in a college student sample. Negative life events were associated with current suicide ideation and previous suicide attempts, and dispositional optimism moderated these relationships, after controlling for hopelessness and severity of depression. Individuals with greater optimism have reduced risk for suicide ideation and attempts in the face of low to moderate negative life events; however, this association is changed at the highest levels of negative life events. Implications for treatment include strengthening active and future-focused coping in patients who have experienced negative or potentially traumatic life events to protect against suicidal thoughts and behaviors.

**Jeglic, E. L., Pepper, C. M., Vanderhoff, H. A., & Ryabchenko, K. A. (2007). An analysis of**

**suicidal ideation in a college sample. *Archives of Suicide Research*, 11(1), 41–56.**

Two studies were designed to develop and validate a model of current suicidal ideation. In Study 1, students that reported past suicide attempts ( $n = 48$ ) were compared to controls ( $n = 49$ ) on nine variables previously linked to suicidal behavior. In the resulting model, borderline personality characteristics and social support were found to correlate with current suicidal ideation, supporting a mediating model. In Study 2, the Borderline/Social Support (BTSS) model was validated in an independent sample. Implications for risk assessment, prevention and treatment of suicidal college students are discussed.

**King, K. A., Vidourek, R. A., & Strader, J. L. (2008). University students' perceived self-efficacy in identifying suicidal warning signs and helping suicidal friends find campus intervention resources. *Suicide and Life-Threatening Behavior*, 38(5), 608–617.**

Currently, suicide is the third leading cause of death among youth 18 to 24 years of age and the second leading cause of death on college campuses. A sample of students ( $N = 1,019$ ) from three Midwestern universities were surveyed regarding their perceived self-efficacy in identifying suicide warning signs and campus suicide intervention resources. The results indicated that 11% strongly believed they could recognize a friend at suicidal risk, while 17% strongly believed they could ask a friend if he or she was suicidal. Students who had received high school suicide prevention education and who had ever had a family member or friend express suicidal thoughts to them were those most confident in recognizing a friend at risk, asking a friend if he/she is suicidal, and helping a friend to see a counselor. Most (71%) were not aware of on-campus help resources. These findings underscore the importance of suicide prevention education throughout the high school and college years.

**Lamberg, L. (2006). Experts work to prevent college suicides. *Journal of the American Medical Association*, 296(5), 502–504.**

An estimated 1100 suicides and 24 000 suicide attempts occur annually among US college students aged 18 to 24 years. About 10 million such students were enrolled in US colleges and universities in 2003—about one third of individuals in that age group living in the United States. The suicide rate on campus, estimated to be about 7.5 per 100 000 students, is about half that in nonstudents the same ages. Suicide is the third leading cause of death after unintentional injuries and homicides in persons aged 15 to 24 years in the United States, according to the Centers for Disease Control and Prevention. Because homicides occur less frequently in college students than in age-matched nonstudents, however, researchers suggest suicides likely rank second only to unintentional injuries as a cause of death among college students. Schools commonly focus on problems of adjustment to school by freshmen, but suicide rates among undergraduates are highest among seniors. They are even higher among graduate students, most of whom live off campus and get relatively little attention from college mental health services. More students with psychiatric disorders attend college today than in the past, a reflection of successful treatment of young children who might not otherwise have been on a college track. Colleges and universities need a best practices model for dealing with suicidal students, with clear policies for adequately and fully informing students about the limits of confidentiality and possible consequences of revealing suicidal thoughts. Ideally, the institution would promote help-seeking behavior, and provide genuine options for help on and off campus.

**Paladino, D., & Minton, C. A. B. (2008). Comprehensive college student suicide assessment: Application of the basic id. *Journal of American College Health, 56*(6), 643–650.**

Whether one knows someone who is thinking of suicide, has attempted suicide, or has completed suicide, nearly all individuals who encounter suicide are affected. The influence and residual affects of suicide are further amplified as the issue reaches across communities such as college or university campuses. College and university staff must improve their response to suicidal ideation with comprehensive assessment and intervention. The authors discuss risk factors and basic screening methods for suicide risk. They present Lazarus' BASIC ID tool (ie, Behavior, Affective Responses, Sensations, Images, Cognitions, Interpersonal Relationships, and Drugs or Biological Influences) as a method for conducting a comprehensive suicide assessment. The authors demonstrate assessment procedures through a case vignette.

**Pavela, G. (2006). Should colleges withdraw students who threaten or attempt suicide? *Journal of American College Health, 54*(6), 367–371.**

This article presents insights on whether colleges or universities should withdraw students who are threatening or attempting to commit suicide. The general rule concerning student suicide liability for non-mental health professionals stated that the act of suicide is considered a deliberate, intentional and intervening act which precludes another's responsibility for the harm. Mental health professionals and school administrators who take counsel of their fears and react to them by adopting medical withdrawal policies are only expanding their legal risks.

**Rutter, P. A., Freedenthal, S., & Osman, A. (2008). Assessing protection from suicidal risk: Psychometric properties of the Suicide Resilience Inventory. *Death Studies, 32*(2), 142–153.**

This study investigated psychometric properties of the Suicide Resilience Inventory-25 (SRI-25) in a diverse sample of 239 college students. Participants completed the SRI-25, Beck Hopelessness Scale (BHS), Suicidal Ideation Questionnaire, and the Multidimensional Scale of Perceived Social Support (MSPSS). Confirmatory factor analysis supported the 3 dimensions described by SRI-25 authors (A. Osman et al., 2004): internal protective, emotional stability, and external protective. Correlations with the BHS ( $r = -0.68$ ) and SIQ ( $r = -0.67$ ) supported the scale's validity, although the external protective subscale and MSPSS were only moderately correlated ( $r = 0.47$ ). Overall, the SRI-25's reliability and validity support its use in suicide research. Implications for exploring young adults' resilience in the face of suicidal thoughts via clinical interview or administration of the SRI-25 are discussed as they create an opportunity to potentially infuse hope, tap into strengths, and identify avenues for positive change.

**Sari, N., de Castro, S., Newman, F. L., & Mills, G. (2008). Should we invest in suicide prevention programs? *Journal of Socio-Economics, 37*(1), 262–275.**

Abstract: Suicide is the third leading cause of death among college aged youths in Florida. However, there is no prevention program targeting this population group. This paper examines the potential impact of making two prevention programs, general suicide education and peer support programs, available for college students. The results show that both programs increase social welfare by creating social benefits which exceed the costs of the programs. These results hold true even with conservative estimates for effect rates and benefits of the programs.

**Schwartz, A. J. (2006). College student suicide in the United States: 1990–1991 through 2003–2004. *Journal of American College Health, 54(6)*, 341–352.**

Suggestions that there is a growing epidemic of suicide among college students in the United States are false. The National Survey of Counseling Center Directors reports 1,404 student suicides over a 14-year period and an adjusted suicide rate of 6.5, half the rate of the general US population (12.6 for all races) during this period when matched for gender and age. Counseling centers appear effective in treating suicidal students, for although the suicide rate for students who were currently or previously clients at campus counseling centers is 3 times the rate of other students, student clients have 18 times the risk of suicide compared to students in general. Identifying and referring students at elevated risk for suicide could further reduce the crude and relative rate of student suicide. However, even programs that do this only moderately well may require substantial increases in counseling staffing.

**Schwartz, A. J. (2006). Four eras of study of college student suicide in the United States: 1920–2004. *Journal of American College Health, 54(6)*, 353–366.**

Studies of college student suicide can be grouped into the following 4 eras: 1920-1960, 1960-1980, 1980-1990, and 1990-2004. The suicide rate for students has declined monotonically across these 4 eras, from 13.4 to 8.0 to 7.5 and, most recently, to 6.5. The decreasing proportion of men in the student populations studied largely accounts for this decline. Since 1960, the suicide rate for students has consistently been about half the rate of the general US population, matched for age and gender. This highly favorable relative suicide rate is the result of firearms having been effectively banned from campuses. Additional population-oriented approaches warrant implementation to further reduce student-suicide rates. Approaches focused on high-risk groups also hold promise. These findings are based upon and may be most valid for the 70% of all students who attend 4-year colleges and universities full time.

**Selby, E. A., Anestis, M. D., & Joiner, T. E., Jr. (2007). Daydreaming about death: Violent daydreaming as a form of emotion dysregulation in suicidality. *Behavior Modification, 31(6)*, 867–879.**

Anecdotal and empirical evidence suggests that suicidal individuals may daydream about suicide as a method of mood regulation (including increasing positive affect). These daydreams may center on future suicidal plans, previous suicide attempts, or on the ways that others will react to their death. Yet, even though violent daydreams may increase positive affect in the short term, in the long run they may actually increase both suicidality and the ability to engage in suicidal behavior. In this study, a sample of 83 college students was given the Beck Depression Inventory, Anger Rumination Scale, and the Beck Scale for Suicide Ideation. The authors hypothesized that a two-way interaction would exist between high levels of depression and high levels of violent daydreaming to predict increased levels of suicidality. Using linear regression, the results of this study supported the hypothesis. The clinical and theoretical implications of these findings are discussed.

**Simonson, R. H. (2008). Religiousness and non-hopeless suicide ideation. *Death Studies, 32(10)*, 951–960.**

Individuals who think about suicide but do not feel suicidally hopeless tend to be less religious and can therefore entertain thoughts of suicide unabated by religiousness. Religiousness, suicide ideation,

and hopelessness were surveyed among 279 Idaho college students, 37 (13%) of whom were non-hopeless suicide ideators. A total of only 21 (7%) qualified as ideator/hopeless or non-ideator/hopeless with the remaining 221 (79%) qualifying as non-ideator/non-hopeless. Lower religiousness coinciding with greater ideation supports Durkheim's position that religious social affiliation protects against suicide. The fact that non-hopeless ideators were less religious than all others suggests that religion may provide hope that buffers against suicidal ideas.

**Van Orden, K. A., Witte, T. K., James, L. M., Castro, Y., Gordon, K. H., Braithwaite, S. R., Hollar, D. L., & Joiner, T. E. (2008). Suicidal ideation in college students varies across semesters: The mediating role of belongingness. *Suicide and Life-Threatening Behavior, 38*(4), 427–435.**

The interpersonal-psychological theory of suicidal behavior (Joiner, 2005) proposes that the need to belong is fundamental; when met it can prevent suicide and when thwarted it can substantially increase the risk for suicide. We investigate one source of group-wide variation in belongingness among college students—changes in the social composition of college campuses across academic semesters—as an explanation for variation in suicidal ideation across the academic year. Our results indicate that in a sample of college students at a large southern state university ( $n = 309$ ), suicidal ideation varied across academic semesters, with highest levels in summer compared to both spring and fall. Differences in suicidal ideation between summer and spring were, in large part, accounted for by belongingness. Theoretical, as well as practical, implications are discussed regarding mechanisms for seasonal variation in suicidal ideation.

**Walker, R. L., Lester, D., & Joe, S. (2006). Lay theories of suicide: An examination of culturally relevant suicide beliefs and attributions among African Americans and European Americans. *Journal of Black Psychology, 32*(3), 320–334.**

The purpose of this study was to examine African Americans' lay beliefs and attributions toward suicide. The Attitudes Toward Suicide Scale, Life Ownership Orientation Questionnaire, Stigma Questionnaire, and Suicide Ideation Questionnaire were administered to 251 undergraduate college students. Beliefs about stigma associated with suicide were comparable across ethnic groups. However, African American college students were significantly less likely than European American college students were to attribute suicide to interpersonal problems and to report that the individual or government is responsible for life. African American students were significantly more likely to report that God is responsible for life. These findings have important implications for suicide risk and also for developing culturally appropriate interventions.

**Walker, R. L., Wingate, L. R., Obasi, E. M., & Joiner, T. E., Jr. (2008). An empirical investigation of acculturative stress and ethnic identity as moderators for depression and suicidal ideation in college students. *Cultural Diversity and Ethnic Minority Psychology, 14*(1), 75–82.**

The purpose of this study was to explore the relationships of acculturative stress and ethnic identity to depressive symptomatology and suicidal ideation in college students. The SAFE Acculturative Stress Scale, Multi-Group Ethnic Identity Measure, Beck Depression Inventory, and Beck Suicide Scale were administered to 452 college students. The authors found that acculturative stress and ethnic identity moderated the depression-suicide ideation relationship for African American but not European American college students. Given that vulnerability toward suicidal thoughts is increased

for African American college students who report symptoms of depression accompanied by either high-aculturative stress or poor group identity, these culturally relevant factors should be included in protocol for suicide risk assessment.

**Westefeld, J. S., Button, C., Haley, J. T., Jr., Kettmenn, J. J., MacConnell, J., Sandil, R., & Tallman, B. (2006). College student suicide: A call to action. *Death Studies, 30*(10), 931–956.**

This article examines current issues related to the topic of college student suicide and why it continues to be an issue of major concern. The nature/extent of the problem, risk and protective factors, responses to college student suicide, legal issues, and training issues are discussed. The importance of addressing the issue of college student suicide and its prevention on college campuses is emphasized as is the importance of protective factors. Although more is being done to address this issue than has been done in the past, it remains a major concern, and it is an issue that requires a strong national response.

**Whitlock, J., & Knox, K. L. (2007). The relationship between self-injurious behavior and suicide in a young adult population. *Archives of Pediatrics & Adolescent Medicine, 161*(7), 634–640.**

**OBJECTIVE:** To test the hypothesis that self-injurious behavior (SIB) signals an attempt to cope with psychological distress that may co-occur or lead to suicidal behaviors in individuals experiencing more duress than they can effectively mitigate. **DESIGN:** Analysis of a cross-sectional data set of college-age students. **SETTING:** Two universities in the northeastern United States in the spring of 2005. **PARTICIPANTS:** A random sample of 8300 students was invited to participate in a Web-based survey; 3069 (37.0%) responded. Cases in which a majority of the responses were missing or in which SIB or suicide status was indeterminable were omitted, resulting in 2875 usable cases. **Exposure** Self-injurious behavior. **MAIN OUTCOME MEASURES:** Main outcome was suicidality; adjusted odds ratios (AORs) for suicidality by SIB status when demographic characteristics, history of trauma, distress, informal help-seeking, and attraction to life are considered. **RESULTS:** One quarter of the sample reported SIB, suicidality, or both; 40.3% of those reporting SIB also report suicidality. Self-injurious behavior status was predictive of suicidality when controlling for demographic variables (AOR, 6.2; 95% confidence interval [CI], 4.9-7.8). Addition of trauma and distress variables attenuated this relationship (AOR, 3.7; 95% CI, 2.7-4.9). Compared with respondents reporting only suicidality, those also reporting SIB were more likely to report suicide ideation (AOR, 2.8; 95% CI, 2.0-3.8), plan (AOR, 5.6; 95% CI, 3.9-7.9), gesture (AOR, 7.3; 95% CI, 3.4-15.8), and attempt (AOR, 9.6; 95% CI, 5.4-17.1). Lifetime SIB frequency exhibits a curvilinear relationship to suicidality. **CONCLUSIONS:** Since it is well established that SIB is not a suicidal gesture, many clinicians assume that suicide assessment is unnecessary. Our findings suggest that the presence of SIB should trigger suicide assessment.

**Williams, C. B., Galanter, M., Dermatis, H., & Schwartz, V. (2008). The importance of hopelessness among university students seeking psychiatric counseling. *Psychiatric Quarterly, 79*(4), 311–319.**

Hopelessness is a clinically important state relative to morbidity and suicide risk among university students. We examined its role in relation to presenting concerns, diagnosis, psychopharmacologic treatment and spiritual orientation among students seeking treatment at a university counseling center. The most commonly identified concern was anxiety, followed by stress and depression.

Eighty-two percent were given a DSM IV diagnosis. Hopelessness was higher among students dually diagnosed with anxiety and depressive disorders and those who were started on psychiatric medication. Spirituality was inversely correlated with hopelessness and constitutes a personal characteristic warranting further investigation. The concerns bringing students to counseling, the rates of DSM IV diagnosis and the use of psychiatric medication suggest a preponderance of psychopathology over developmental or situational concerns that may be more prominent than has been noted in the counseling literature. In this regard, hopelessness appears to be an important feature even beyond its relationship to suicidality and merits attention and evaluation in student counseling.

See also:

Robertson, J. M., Benton, S. L., Newton, F. B., Downey, R. G., Marsh, P. A., Benton, S. A., Tseng, W.-C., & Shin, K.-H. (2006). K-State Problem Identification Rating Scales for college students. *Measurement and Evaluation in Counseling and Development, 39*(3), 141–160.

### **Aggression and Interpersonal Violence**

**Banyard, V. L. (2008). Measurement and correlates of prosocial bystander behavior: The case of interpersonal violence. *Violence and Victims, 23*(1), 83–97.**

The field of social psychology has long investigated the role of prosocial bystanders in assisting crime victims and helping in emergency situations. This research has usually been experimental and has established important principles about the conditions under which individuals will choose to engage in prosocial bystander behaviors. More recently, interest has grown in applying this work to the important practical problem of preventing interpersonal violence in communities. Yet, to date, there has been little research on the role of bystanders in cases of interpersonal violence. The current study is thus exploratory. Using a sample of 389 undergraduates, the study discusses key issues in the development of measures to investigate these questions and presents preliminary analyses of correlates of bystander behavior in the context of sexual and intimate partner violence.

**Brady, S. S. (2007). Young adults' media use and attitudes toward interpersonal and institutional forms of aggression. *Aggressive Behavior, 33*(6), 519–525.**

Links between media violence exposure and favorable attitudes toward interpersonal violence are well established, but few studies have examined whether associations extend to include favorable attitudes toward institutional forms of aggression. Studies on this topic have not assessed multiple forms of media use and statistically controlled for individual characteristics likely to influence attitudes beyond sociodemographic information. In this study, undergraduate students (N=319) aged 18-20 years (56% male) completed a survey assessing media use (number of hours per week spent playing videogames, watching movies/TV shows, watching TV sports) and attitudes toward interpersonal violence, punitive criminal justice policies, and different types of military activities (preparedness/defense and aggressive intervention). Greater number of hours spent watching TV contact sports was associated with more favorable attitudes toward military preparedness/defense, aggressive military intervention, and punitive criminal justice policies among men independently of parental education, lifetime violence exposure within the home and community, aggressive personality, and constrained problem solving style. Greater number of hours spent watching violent movies/TV was associated with more favorable attitudes toward military preparedness/defense

among men and with more favorable attitudes toward interpersonal violence and punitive criminal justice policies among women, but these associations became non-significant when adjusting for covariates.

**Chen, M.-J., Miller, B. A., Grube, J. W., & Waiters, E. D. (2006). Music, substance use, and aggression. *Journal of Studies on Alcohol*, 67(3), 373–381.**

**OBJECTIVE:** This study investigated whether young people's substance use and aggressive behaviors are related to their listening to music containing messages of substance use and violence. **METHOD:** Using self-administered questionnaires, data were collected from a sample of community-college students, ages 15-25 years (N=1056; 57% female). A structural equation model (maximum likelihood method) was used to simultaneously assess the associations between listening to various genres of music and students' alcohol use, illicit-drug use, and aggressive behaviors. Respondents' age, gender, race/ethnicity, and level of sensation seeking were included in the analyses as control variables. **RESULTS:** Listening to rap music was significantly and positively associated with alcohol use, problematic alcohol use, illicit-drug use, and aggressive behaviors when all other variables were controlled. In addition, alcohol and illicit-drug use were positively associated with listening to musical genres of techno and reggae. Control variables (e.g., sensation seeking, age, gender and race/ethnicity) were significantly related to substance use and aggressive behaviors. **CONCLUSIONS:** The findings suggest that young people's substance use and aggressive behaviors may be related to their frequent exposure to music containing references to substance use and violence. Music listening preference, conversely, may reflect some personal predispositions or lifestyle preferences. There is also the possibility that substance use, aggression, and music preference are independent constructs that share common "third factors".

**Cowan, G., & Ullman, J. B. (2006). Ingroup rejection among women: The role of personal inadequacy. *Psychology of Women Quarterly*, 30(4), 399–409.**

We examined predictors and outcomes of women's hostility toward other women. Based on a projection model, we hypothesized and tested the theory via structural equation modeling that women's sense of personal inadequacy, the tendency to stereotype, and general anger would predict hostility toward women, and hostility toward women would predict blaming victims of violence and poor relationships with a female friend. Participants were 464 college women with an average age of 28.08. All measures were pencil and paper. Women's hostility toward women served as an intervening variable between a personal sense of inadequacy, tendency to stereotype, blaming women victims of violence, and intimacy with one's best female friend.

**Giumetti, G. W., & Markey, P. M. (2007). Violent video games and anger as predictors of aggression. *Journal of Research in Personality*, 41(6), 1234–1243.**

Considerable research has demonstrated that playing violent video games can increase aggression. The theoretical framework upon which a good deal of this research has rested is known as the General Aggression Model (GAM; [Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, 53, 27-51]). The current study tested an assumption of the GAM by examining if the dispositional trait of anger moderated the relation between violent video games and aggression. A total of 167 undergraduate students (79 females, 88 males) first completed a measure of anger and were then randomly assigned to play either a non-violent or violent video game. After the video game play period, participants completed ambiguous story stems in order to assess

aggression. Consistent with predictions of the GAM, anger significantly moderated the effect of video game violence on aggression. Specifically, participants who were angry were more affected by violent video games than participants who were not angry.

**Haden, S. C., & Scarpa, A. (2008). Community violence victimization and depressed mood: The moderating effects of coping and social support. *Journal of Interpersonal Violence, 23*(9), 1213–1234.**

The objectives of the current study were to (a) determine how lifetime community violence (CV) victimization, coping behavior, social support (SS), and depressed mood are related in young adults, and (b) assess whether the relationship between CV victimization and depressive reactions is moderated by perceived SS and coping style. Five hundred fifty college students (160 men, 355 women) completed questionnaires measuring lifetime experiences with violence, current depressed mood, perceptions of SS from family and friends, and general coping styles. Results of a series of hierarchical regressions indicated a positive relationship between frequency of CV victimization and depressed mood. Low levels of perceived SS and problem-focused coping and high levels of disengagement coping were associated with increased depression scores overall, but there was an interaction effect such that high disengagement coping strengthened the relationship between CV and depressed mood. Moreover, when controlling for the effect of posttraumatic stress, high-perceived friend support and low disengagement coping served as protective factors for depressed mood. These results were particularly strong in individuals whose last CV experience occurred within the previous 2 years. Findings suggest that perceptions of support and ability to actively cope with stressors are very important in the adjustment to CV victimization.

**Haden, S. C., Scarpa, A., & Stanford, M. S. (2008). Validation of the Impulsive/Premeditated Aggression Scale in college students. *Journal of Aggression, Maltreatment & Trauma, 17*(3), 352–373.**

Impulsive (IA) and premeditated (PM) aggression reflect functions of aggressive behavior that may have differential correlates and clinical utility. The purpose of this study was to extend the use of the Impulsive/Premeditated Aggression Scale (IPAS) for characterizing aggression in a college student sample. Three hundred forty students completed the IPAS, Buss and Perry's (1992) Aggression Questionnaire (AQ), and measures of childhood maltreatment and negative life events. Principal components analyses supported reliable IA and PM factors. The degree of IA was significantly higher than that of PM. Convergent validity for the IA scale was supported with significant relationships with certain AQ scales. Implications for studying aggressive functions in this age group may inform violence prevention and treatment on college campuses.

**Howells, N., & Rosenbaum, A. (2008). Effects of perpetrator and victim gender on negative outcomes of family violence. *Journal of Family Violence, 23*(3), 203–209.**

Growing up in a violent home predisposes children to a host of behavioral and emotional difficulties. This study examined whether perpetrator and victim gender have an impact on depressive symptoms and aggressive behavior for victims of child physical abuse (CPA) and also with regard to witnessing interparental violence (IPV). This study also examined whether witnessing siblings being abused would elicit high levels of depressive symptoms and aggressive behavior. College students (n = 675) were assessed for both exposure to IPV and child physical abuse prior to age 18. Participants completed measures of depression and aggression. With regard to victims of

CPA, participants victimized by both parents and those victimized by mothers only had significantly higher levels of aggression. For depressive symptoms, females having both parents as perpetrators or fathers only had significantly higher depressive symptoms. With regard to witnessing IPV, being abused by both parents was associated with endorsement of more aggression and depressive symptoms. With regard to witnessing sibling violence, the results were similar to those found for victims of CPA.

**Kelly, B. T., & Torres, A. (2006). Campus safety: Perceptions and experiences of women students. *Journal of College Student Development, 47*(1), 20–36.**

The purpose of this research was to examine the campus experiences of undergraduate and graduate women students at a research university. Although it has been more than 20 years since the term “chilly campus climate” was described in Hall and Sandler’s (1984) seminal work, this study found such a climate, in terms of campus safety, still exists for women students. Across race, university classification, and level of involvement, the women students in this study reported a chilly campus climate that served to further perpetuate a culture of fear women students felt for their campus safety.

**Luthra, R., & Gidycz, C. A. (2006). Dating violence among college men and women: Evaluation of a theoretical model. *Journal of Interpersonal Violence, 21*(6), 717–731.**

This study empirically evaluates the Riggs and O’Leary (1989) model of dating violence. A sample of 200 college students completes assessments concerning the occurrence of violence in their dating relationships. The incidence of self-reported partner violence is 25% for women and 10% for men. Multivariate logistic regression analyses are performed to determine the most salient predictors of dating violence for each gender. Findings reveal that the model is more accurate in predicting female, as compared with male perpetration of dating violence. The model accurately classifies 83% of violent women and only 30% of violent men. This study has several implications for the field of dating violence. Results indicate that although there is some degree of overlap, variant constructs predict violence for each gender. Identifying these constructs will guide prevention efforts in more effectively decreasing the occurrence of dating violence.

**Marmion, S. L., & Lundberg-Love, P. K. (2008). PTSD symptoms in college students exposed to interparental violence: Are they comparable to those that result from child physical and sexual abuse? *Journal of Aggression, Maltreatment & Trauma, 17*(3), 263–278.**

Undergraduate students completed the Trauma Symptom Inventory and a childhood history questionnaire that assessed their experience of three types of childhood traumatic events: physical abuse (CPA), sexual abuse (CSA), and interparental violence (CPV). Six posttraumatic stress disorder (PTSD) subscales previously found to be associated with these types of abuse (anxious arousal, anger/irritability, intrusive experiences, depression, tension reduction behaviors, and defensive avoidance) were examined through multiple regression analyses to determine the extent to which each type of trauma history was most predictive of elevated symptomatology. For several subscales, having exposure to interparental violence was the strongest predictor of elevated symptomatology, suggesting that CPV is at least as powerful as CPA or CSA in producing symptoms of PTSD in adulthood.

**McCoy, K., Fremouw, W., Tyner, E., Clegg, C., Johansson-Love, J., & Strunk, J. (2006).**

**Criminal-thinking styles and illegal behavior among college students: Validation of the PICTS. *Journal of Forensic Sciences*, 51(5), 1174–1177.**

The present study examined the relation of self-reported criminal-thinking styles and self-reported illegal behavior among college students. Participants were 177 male and 216 female (N=393) undergraduate students. Participants were divided by gender and further classified into four groups of self-reported illegal behavior: control-status offenses, drug crimes, property crimes, and violent crimes against people. The psychological inventory of criminal-thinking styles (PICTS) (1) measured criminal-thinking patterns on eight scales. Results indicated that males who committed violent crimes against people endorsed significantly higher levels of distorted criminal-thinking patterns on all scales than the control-status offenses, and drug crimes groups. Interestingly, female participants who committed property crimes displayed six significantly elevated PICTS scales whereas females with violent crimes against people had significant elevations on only four of the criminal-thinking style scales. These results extend Walter's initial validation of the PICTS with incarcerated respondents to a non-incarcerated population and show potential use of the PICTS with other populations.

**Mechling, J. (2008). Paddling and the repression of the feminine in male hazing. *Thymos: Journal of Boyhood Studies*, 2(1), 60–75.**

Despite a nearly two decades' long war on high school and college hazing, the traditional practice of paddling male pledges on the buttocks persists as a physical and psychological test of worthiness for membership in certain All Male organizations. In its elements of nudity, homoeroticism, and stylized sadomasochism, this ritual condenses a great many of the psychological processes essential to male bonding in groups. An application of Freud's insights in his 1919 essay, "A Child Is Being Beaten," to the puzzle of posterior paddling reveals a complex psychological process by which the pledge is feminized by the paddling, represses the feminine part of his self, and is initiated into the status of a brother among other heterosexual males.

**Mitchell, I. J., Rutherford, V., Wrinch, K. A. J., & Egan, V. (2008). Paradoxical effects of alcohol intake in a convivial social setting on attitudes to violence. *Addiction Research & Theory*, 16(5), 503–513.**

The mechanisms by which acute alcohol intoxication results in increased violent behaviours are not fully understood. Pro-violent attitudes can act as a predictor of aggressive behaviour. It was hypothesised that alcohol intake would lead to shifts in attitudes to violence such that participants would express more pro-violent attitudes when drunk. This hypothesis was tested in two separate experiments with undergraduate students who were drinking in a familiar social setting. Results were the converse of what was predicted, in that the intake of alcohol resulted in decreased positive attitudes to violence. This attitudinal shift was accompanied by a significant increase in interference on an emotional Stroop test in response to words associated with conviviality implying that alcohol consumption did indeed result in an increase in pro-social feelings. These findings add support to the view that the effects of alcohol on behaviour are strongly influenced by situational and individual factors.

**Parks, K. A., Hsieh, Y.-P., Bradizza, C. M., & Romosz, A. M. (2008). Factors influencing the temporal relationship between alcohol consumption and experiences with aggression among college women. *Psychology of Addictive Behaviors*, 22(2), 210–218.**

The authors assessed temporal relationships among alcohol use, aggression, and mood using daily data from 179 college women. Participants called an interactive voice response system over an 8-week period. The odds of experiencing verbal, sexual, and physical aggression (odd ratios = 2.25, 19.44, and 11.84, respectively) were significantly higher on heavy drinking days ( $M = 7.46$  drinks) compared to nondrinking days. Both a history of victimization and greater psychological symptom severity influenced the odds of involvement in verbal aggression. The odds of alcohol consumption were 3 times higher during the 24 hr following verbal aggression compared with days in which verbal aggression did not occur. On the day immediately following involvement in either verbal or physical aggression, positive mood decreased and negative mood increased. During the week (2-7 days) following sexual aggression, women's positive mood was decreased. These findings reinforce the need for interventions aimed at reducing heavy episodic drinking on college campuses.

**Sigurdsson, J. F., Gudjonsson, G. H., Bragason, A. V., Kristjansdottir, E., & Sigfusdottir, I. D. The role of violent cognition in the relationship between personality and the involvement in violent films and computer games. *Personality and Individual Differences*, 41(2), 381–392.**

**Abstract:** The study investigates the relationship between empathy and attitudes towards violence and real-life exposure to violent films and computer games. It is hypothesised that low empathy and attitudes that predispose people towards violence are more strongly related to exposure to violent films and computer games than to superordinate personality traits (e.g., EPQ psychoticism, extraversion, antisocial personality traits), or subtraits, such as sensation-seeking. Four hundred and thirty-three students in further education completed three personality questionnaires, a questionnaire of attitudes towards violence, and reported on their use of violent computer games, films and videos. Multivariate analyses in the form of ordinary least squares (OLS) models were used to test the primary hypotheses. Acceptance of violence, as measured by the Maudsley Violence Questionnaire (MVQ), was the strongest and most consistent predictor of violent media use. Superordinate personality traits were generally fully mediated by acceptance of violence. The findings emphasise the importance of general acceptance of violence in the consumption of violent games and films. Some gender differences emerged; particularly in relation to the use of violent computer games. Empathy had no significant effects for either males or females.

**Spitzberg, B. H., & Veksler, A. E. (2007). The personality of pursuit: Personality attributions of unwanted pursuers and stalkers. *Violence and Victims*, 22(3), 275–289.**

A sample of 292 college students recalled a partner who had engaged in unwanted pursuit (46%) or recalled their most recent “normal” dating relationship. Subjects rated their own level of stalking victimization and rated the partner on a series of personality characteristics and social competence. Unwanted pursuers were perceived as less socially competent, more histrionic, more borderline, and less obsessive-compulsive, with discrimination of “normals” from unwanted pursuers of approximately 75% to 80% accuracy. These attributions also significantly predicted a continuous measure of unwanted pursuit victimization ( $R = .406$ ). Implications for developing more precise and practical risk profiles of unwanted pursuers are discussed.

**Wilcox, P., Jordan, C. E., & Pritchard, A. J. (2007). A multidimensional examination of campus safety: Victimization, perceptions of danger, worry about crime, and precautionary behavior among college women in the post-Clery era. *Crime & Delinquency*, 53(2), 219–254.**

Using data from a spring 2004 telephone survey of 1,010 female undergraduate and graduate students at one southeastern state university, the authors examine the objective and subjective experiences with sexual assault or coercion, physical assault, and stalking among college women, paying particular attention to whether actual victimization experiences while in college coincide with cognitive assessments of campus risk, emotionally based worry about crime, and fear-related precautionary behavior. Furthermore, the authors explore whether these interrelationships might be perpetrator specific, focusing on differences in risk perception, worry, or precautionary behavior across acquaintance versus stranger-perpetrated victimization experiences. Results suggest that there is a loose coupling between actual victimization and subjective crime experiences. Implications for how colleges and universities publicly report crime and victimization, as mandated by the Clery Act, are discussed in light of these findings.

### **Sexual Harassment**

**Berdahl, J. L. (2007). The sexual harassment of uppity women. *Journal of Applied Psychology, 92*(2), 425–437.**

In 3 studies, the author tested 2 competing views of sexual harassment: (a) It is motivated primarily by sexual desire and, therefore, is directed at women who meet feminine ideals, and (b) it is motivated primarily by a desire to punish gender-role deviants and, therefore, is directed at women who violate feminine ideals. Study 1 included male and female college students (N = 175) and showed that women with relatively masculine personalities (e.g., assertive, dominant, and independent) experienced the most sexual harassment. Study 2 (N = 134) showed that this effect was not because women with relatively masculine personalities were more likely than others to negatively evaluate potentially harassing scenarios. Study 3 included male and female employees at 5 organizations (N = 238) and showed that women in male-dominated organizations were harassed more than women in female-dominated organizations, and that women in male-dominated organizations who had relatively masculine personalities were sexually harassed the most.

**DeSouza, E. R., Solberg, J., & Elder, C. (2007). A cross-cultural perspective on judgments of woman-to-woman sexual harassment: Does sexual orientation matter? *Sex Roles, 56*(7/8), 457–471.**

We investigated perceptions between Brazilian and U.S. college students regarding a hypothetical case involving woman-to-woman sexual harassment in which the sexual orientation of both the target and the alleged harasser was experimentally manipulated. Thus, there were four different scenarios, which were randomly given to 952 college students (89% of whom reported to be White). We found that the scenario that depicted heterosexual woman-to-heterosexual woman sexual harassment was rated as the least likely to be sexual harassment, to need an investigation, and to be punishable than the other scenarios. Generally, Brazilians viewed the case as more likely to be sexual harassment and to need an investigation than did U.S. respondents. In the U.S., women perceived the case as more likely to be sexual harassment, to need an investigation, and to be punishable than men did; however, no such gender differences were found in Brazil. Lastly, hostile sexism and perceptions of woman-to-woman sexual harassment predicted respondents rating the case as sexual harassment and in need of an investigation.

**DuRant, R., Champion, H., Wolfson, M., Omlil, M., McCoy, T., D'Agostino, R. B., Jr., Wagoner, K., & Mitra, A. (2007). Date fighting experiences among college students: Are**

**they associated with other health-risk behaviors?** *Journal of American College Health*, 55(5), 291–296.

**OBJECTIVE:** The authors examined the clustering of health-risk behaviors among college students who reported date fight involvement. **PARTICIPANTS AND METHODS:** The authors administered a Web-based survey to a stratified random sample of 3,920 college students from 10 universities in North Carolina. **RESULTS:** Among men, 5.6% reported date fight victimization, and 1% reported date fight perpetration. Victimization among men was associated with (1) first drink at age 15 years or younger, (2) a recent threat of violence by someone who had been drinking, (3) smoking, (4) amphetamine use, and (5) older age. Among women, 6.7% reported date fight victimization, which was associated with (1) older age, (2) assault from a student who had been drinking, (3) sex with 2 or more persons, (4) consumption of alcohol in high school, (5) illegal drug use, (6) nonsexual assault requiring medical treatment, and (7) living off campus. Of the women, 4.2% reported date fight perpetration, which was associated with (1) minority race/ethnicity, (2) older age, (3) frequency of sexual intercourse, and (4) alcohol and marijuana use. **CONCLUSIONS:** Date fight experiences were associated with multiple health-risk behaviors among this sample of college students.

**Lonsway, K. A., Cortina, L. M., & Magley, V. J. (2008). Sexual harassment mythology: Definition, conceptualization, and measurement. *Sex Roles*, 58(9/10), 599–615.**

Using rape myth research as a template, we developed a conceptual definition and measurement instrument for the mythology regarding male sexual harassment of women, resulting in the 20-item Illinois Sexual Harassment Myth Acceptance (ISHMA) Scale. Surveys from 337 students in the Midwestern region of the United States revealed that this measure consists of four factors, which share predicted relationships with rape mythology, sexism, hostility toward women, traditional attitudes toward women, and ideological support for the feminist movement. We also found that women and individuals with prior training on sexual harassment reject these myths more than men and untrained individuals. It is hoped that this new definition, conceptualization, and measure will advance knowledge on attitudes that support and perpetuate violence against women.

**Lyons, C. J. (2008). Individual perceptions and the social construction of hate crimes: A factorial survey. *Social Science Journal*, 45(1), 107–131.**

Although the rapid diffusion of hate crime legislation since the 1980s indicates widespread success of the antiviolence movement at the policy level, effective responses to hate crimes—such as reporting incidents to authorities—are partly contingent on how individuals initially interpret potential incidents. This paper investigates the degree to which individuals' perceptions of concrete events of harassment and violence mirror the interpretive frameworks offered by proponents of hate crime legislation. Specifically, the study examines the determinants of definitions of hate crime and perceptions of seriousness, focusing on both incident-level and respondent-level variables. Using data from a multilevel factorial survey gathered from a sample of undergraduates, I find a general alignment between the political construction of hate crimes and college student perceptions of incidents of harassment and violence, although sensitivity to hate crimes varies by witness demographic and attitudinal characteristic.

**Mais, J., & Masterson, G. (2007). What is the best method of preventing sexual harassment? *Coach and Athletic Director*, 76(8), 78–79.**

This article discusses the prevention of sexual harassment in college athletic programs. The article notes that proper sexual harassment training can help prevent sexual harassment incidents from occurring, and a definition of sexual harassment is also presented. Advice is also provided for proper sexual harassment training for athletic department employees.

**Mohipp, C., & Senn, C. Y. (2008). Graduate students' perceptions of contrapower sexual harassment. *Journal of Interpersonal Violence, 23*(9), 1258–1276.**

This study compared the perceptions of 172 graduate students to traditional versus contrapower sexual harassment. Graduate students are a unique sample due to their dual role as a student and a teacher. After controlling for attitudes toward feminism and sexual harassment, participants viewed contrapower sexual harassment as less indicative of sexual harassment than traditional sexual harassment. Those with teaching experience perceived the scenarios provided as more indicative of sexual harassment than participants without teaching experience, and this effect was magnified for males. These findings suggest that people take sexual harassment less seriously in contrapower sexual harassment than in traditional sexual harassment. Furthermore, it is possible that teaching experience makes graduate students more aware of the complicated power differentials involved in classroom settings.

**Nagoshi, J., Adams, K., Terrell, H., Hill, E., Brzuzy, S., & Nagoshi, C. (2008). Gender differences in correlates of homophobia and transphobia. *Sex Roles, 59*(7/8), 521–531.**

A scale of prejudice against transgender individuals was developed, validated, and contrasted with a homophobia measure in 153 female and 157 male US college undergraduates. For both sexes, transphobia and homophobia were highly correlated with each other and with right-wing authoritarianism, religious fundamentalism, and hostile sexism, but aggression proneness was predictive of transphobia and homophobia only in men. Benevolent sexism and rape myth acceptance were more predictive of transphobia and homophobia in women than men. With homophobia partialled out, authoritarianism, fundamentalism, and aggression proneness no longer predicted transphobia for men, but authoritarianism, fundamentalism, benevolent sexism, and rape myth acceptance continued to predict transphobia in women. Discussion focused on gender differences in issues that drive prejudice against transgender and homosexual individuals.

**Nelson, C. G., Halpert, J. A., & Cellar, D. F. (2007). Organizational responses for preventing and stopping sexual harassment: Effective deterrents or continued endurance? *Sex Roles, 56*(11/12), 811–822.**

Survey data from a student population of experienced workers was used to examine perceptions of organizational responses to sexual harassment. Results revealed significant differences in the perceived seriousness of gender harassment, unwanted sexual attention, and sexual coercion. Moreover, women viewed all three types of harassment as being significantly more serious than men. Terminating perpetrators' employment, providing a verbal/written reprimand, and mandating an apology were rated as being the most common organizational responses to sexual harassment. A significant positive relationship existed between perceived organizational response severity and effectiveness in combating harassment. Results partially supported the notion that more severe responses are associated with greater effectiveness in communicating organizational intolerance of harassment. Contrary to hypotheses, ratings of organizational response effectiveness and

appropriateness were not dependent upon harassment type. Further, organizational responses that involved transferring or reassigning victims were not viewed as less severe punishment for perpetrators than were most responses that involved the perpetrator directly.

**Ohse, D. M., & Stockdale, M. S. (2008). Age comparisons in workplace sexual harassment perceptions. *Sex Roles, 59*(3), 240–253.**

Few studies have systematically examined the influence of perceivers' age on perceptions of sexual harassment. We sought to fill this gap, determine whether sexist attitudes mediate relations between age and sexual harassment perceptions, and whether relations between gender, sexist attitudes and perceptions are moderated by age. Results from an age-stratified sample of 965 students and staff employees at a US Midwestern university found a positive relationship between age and sexual harassment perceptions. Hostile sexism partially mediated this relationship, but age did not moderate correlations with gender or sexist attitudes. College-aged samples are less sensitive to harassment than older-aged samples, but the validity of other predictors of sexual harassment perceptions, such as gender and sexist attitudes, remains intact regardless of sample age.

**Rederstorff, J. C., Buchanan, N. T., & Settles, I. H. (2007). The moderating roles of race and gender-role attitudes in the relationship between sexual harassment and psychological well-being. *Psychology of Women Quarterly, 31*(1), 50–61.**

Although previous research has linked sexual harassment to negative psychological outcomes, few studies have focused on moderators of these relationships. The present study surveyed Black (n= 88) and White (n= 170) female undergraduates who endorsed experiences of sexual harassment to examine whether traditional gender attitudes differentially moderated the relationship between sexual harassment and three outcomes: posttraumatic stress symptoms, general clinical symptoms, and satisfaction with life. We replicated past findings that sexual harassment is related to negative outcomes. Further, the results supported our hypothesis that less traditional gender attitudes (i.e., more feminist attitudes) would buffer the negative effects of sexual harassment for White women, whereas the same attitudes would exacerbate its negative effects for Black women. We discuss reasons for these differences, including Black women's double consciousness and differences in the meaning of feminist and traditional gender attitudes for Black and White women.

**Silverschanz, P., Cortina, L., Konik, J., & Magley, V. (2008). Slurs, snubs, and queer jokes: Incidence and impact of heterosexist harassment in academia. *Sex Roles, 58*(3/4), 179–191.**

Previous research has suggested that overt hostility against sexual minorities is associated with decrements in their well-being. However, subtler forms of heterosexism and their potential effects have been overlooked, heterosexuals have not been asked how they fare in a heterosexist environment, and no research has examined whether women and men might respond differently to heterosexism. Data from 3,128 northwestern US university students (representing all sexual orientations) address these gaps. Approximately 40% reported experiences of heterosexist harassment (HH) in the past year, and those who encountered both ambient and personal HH reported worse psychological and academic well-being than those who encountered no HH. Similar patterns of findings held for sexual minorities and heterosexuals, and for women and men.

**Wigman, S., Graham-Kevan, N., & Archer, J. (2008). Investigating sub-groups of harassers: The roles of attachment, dependency, jealousy and aggression. *Journal of Family Violence,***

23(7), 557–568.

The study aimed to classify non-harassers, minor, and severe harassers based on responses to measures of jealousy, dependency, attachment, perpetration, and victimization of relationship aggression, and harassment victimization, in a convenience sample of undergraduate students. Respondents ( $n = 177$ ) replied on the following scales: Unwanted Pursuit Behaviors Inventory (UPBI: Langhinrichsen-Rohling et al., *Violence and Victims* 15:73–89, 2000), Conflict Tactics Scale (CTS: Straus, *Journal of Marriage and the Family* 41:75–88, 1979, measuring physical and verbal aggression for respondents and their partners), Sexual Jealousy Scale (SJS: Nannini and Meyers, *The Journal of Sex Research* 37:117–122, 2000), Interpersonal Dependency Inventory (IDI: Hirschfeld et al., *Journal of Personality Assessment* 41:610–618, 1997), and the Relationship Questionnaire (RQ: Bartholomew and Horowitz, *Journal of Personality and Social Psychology* 61:226–244, 1991, measuring adult attachment). Discriminant Function Analysis (DFA), with responses to these measures entered as predictors, produced significant differences between the groups in the univariate results on measures of: preoccupied attachment, jealousy, emotional reliance, verbal aggression and harassment victimization, and physical aggression perpetration. The functions identified by the DFA correctly classified 61% of cases, and identified the important roles of jealousy, dependency, attachment, and relationship aggression in harassment. Differing responses to the measurement of these can theoretically distinguish between non-, minor, and severe harassers.

#### IV. ALCOHOL AND OTHER DRUG ABUSE AND VIOLENCE PREVENTION WITH SPECIFIC POPULATIONS

##### Athletes

**Berning, J. M., Adams, K. J., DeBeliso, M., Stamford, B. A., & Newman, I. M. (2008).** Anabolic androgenic steroids: Use and perceived use in nonathlete college students. *Journal of American College Health*, 56(5), 499–504.

Objective: The authors investigated the use and perceived use of anabolic androgenic steroids (AAS) among nonathlete college students. Participants: The authors surveyed a sample of 485 nonathlete college students at a major metropolitan university. Methods: They administered a survey on use and perceived use of AAS to the students. Results: Forty-two participants (9%) reported using AAS (37 men, 5 women). Seniors were the most likely to use AAS (36%), and freshman the least likely (7%). Thirty-four percent of nonusers and 41% of users indicated they knew between 1 and 5 AAS users. Of the total sample, 36% perceived that 5% to 10% of nonathlete college students used AAS. Reasons for AAS use were because friends were using (7%), a desire to enhance physical appearance (45%), and a desire to increase physical performance (48%). Conclusions: These findings may have significant implications in planning strategic preventive educational programs, and health educators should target incoming college freshmen with the intent of dissuading AAS use.

**Dams-O'Connor, K., Martin, J. L., & Martens, M. P. (2007).** Social norms and alcohol consumption among intercollegiate athletes: The role of athlete and nonathlete reference groups. *Addictive Behaviors*, 32(11), 2657–2666.

The relationship between perceived alcohol use among peers and personal alcohol use was assessed in a sample of collegiate athletes. Data were collected on 109 intercollegiate athletes during the

competitive season and 119 athletes during the off-season at a large, state university in the Northeastern United States. Participants were asked to estimate the normative alcohol use of four reference groups (closest athlete friend, closest nonathlete friend, typical athlete, and typical nonathlete). Results of both in-season and off-season analyses indicated that athletes estimated that others consumed more drinks per week than they did, and perceptions of these social norms predicted personal use. Although the typical athlete norm emerged as the strongest predictor of personal alcohol use, the relative strength of the relationships between individual behavior and the athlete and nonathlete norms varied according to seasonal status. Results have implications for the content and timing of prevention and intervention programs aimed at reducing high-risk alcohol use among intercollegiate athletes.

**Dodge, T., Litt, D., Seitchik, A., & Bennett, S. (2008). Drive for muscularity and beliefs about legal performance enhancing substances as predictors of current use and willingness to use. *Journal of Health Psychology, 13*(8), 1173–1179.**

Using a sample of college-aged male athletes ( $n = 56$ ) and nonathletes ( $n = 43$ ), negative and positive beliefs were tested as mediators of the relationship between Drive for Muscularity (DM) and use of performance enhancing substances (PES). Results showed that the Muscularity Behavior (MB) and Muscularity-oriented Body Image (MBI) subscales of the DM scale differentially predicted PES use. Results also showed that negative and positive beliefs are mediators MB-PES use relationship. Neither the MB nor MBI subscales predicted willingness to use a new performance enhancing drug.

**Forbes, G. B., Adams-Curtis, L. E., Pakalka, A. H., & White, K. B. (2006). Dating aggression, sexual coercion, and aggression-supporting attitudes among college men as a function of participation in aggressive high school sports. *Violence Against Women, 12*(5), 441–455.**

Aggressive male sports have been criticized as bastions of sexism and training grounds for aggression against women, but there have been few empirical demonstrations of these alleged relationships. The authors studied self-reported dating aggression and sexual coercion in 147 college men. Men who had participated in aggressive high school sports, as compared with other men, engaged in more psychological aggression, physical aggression, and sexual coercion toward their dating partners, caused their partners more physical injury, were more accepting of violence, had more sexist attitudes and hostility toward women, were more accepting of rape myths, and were less tolerant of homosexuality. Results indicate that participation in aggressive high school sports is one of the multiple developmental pathways leading to relationship violence.

**Ford, J. A. (2007). Substance use among college athletes: A comparison based on sport/team affiliation. *Journal of American College Health, 55*(6), 367–373.**

Objective: Prior research shows that college athletes have higher rates of substance use, especially alcohol, than do college students who are not involved in athletics. To augment the literature, the author sought to determine which sports/teams are at the greatest risk for substance use. Participants: The author used data from the 1999 Harvard School of Public Health College Alcohol Study, a national survey of college and university students in the United States. Methods: A series of chi-square and logistic regression models examined variation in substance use among college athletes on the basis of sport/team affiliation. Results: Findings indicated that male hockey and female

soccer athletes were the most likely to report substance use and that male basketball and cross-country/track athletes reported lower levels of substance use. Conclusion: There is variation in substance use on the basis of sport/team affiliation, and future researchers should examine why certain groups of athletes have higher rates of substance use.

**Ford, J. A. (2008). Nonmedical prescription drug use among college students: A comparison between athletes and nonathletes. *Journal of American College Health, 57*(2), 211–220.**

Objective: Given the substantial increase in nonmedical prescription drug use in recent years and a lack of research on the topic, the author analyzed data on nonmedical prescription drug use among college students. Participants and Methods: Using data from the 2001 College Alcohol Study (N = 10,904), the author examined variation in nonmedical prescription drug use on the basis of athletic involvement. Previous research shows that college athletes are at greater risk for certain types of substance use. Results: Findings indicate that athletes are less likely to report nonmedical prescription drug use than are nonathletes. Conclusions: This shows that involvement in athletics, especially for women, is a protective factor for substance use among college students.

**Glassman, T., Dodd, V., Sheu, J.-J., Miller, M., Arthur, A., & Book, E. (2008). Winning isn't everything: A case study of high-risk drinking the night of the 2006 National Championship football game. *Journal of Alcohol and Drug Education, 52*(2), 31–48.**

The article presents a study which assessed high-risk drinking among college students the night of the 2006 National College Football Championship game in the U.S. Findings of the study revealed that while nearly 50% of students reported drinking the night of the game, less than one third of students engaged in high-risk drinking. It is noted that college students watching the game at on-campus alcohol free venues were three and half times less likely to engage in high-risk drinking than student viewing the game in other venues. Also discussed is the importance of advance planning of prevention efforts such as the police patrolled and barricaded celebration zone.

**Goldberg, L., Elliot, D. L., MacKinnon, D. P., Moe, E. L., Kuehl, K. S., Yoon, M., Taylor, A., & Williams, J. (2008). Erratum: "Outcomes of a prospective trial of student-athlete drug testing: The student athlete testing using random notification (SATURN) study." *Journal of Adolescent Health, 42*(1), 107–107.**

Reports an error in "Outcomes of a prospective trial of student-athlete drug testing: The Student Athlete Testing Using Random Notification (SATURN) study" by Linn Goldberg, Diane L. Elliot, David P. MacKinnon, Esther L. Moe, Kerry S. Kuehl, Myeongsun Yoon, Aaron Taylor and Jason Williams (*Journal of Adolescent Health, 2007*[Nov], Vol 41[5], 421-429). Table 1 incorrectly reports baseline prevalence of narcotics use in the prior year for the DAT cohort. The percent of the DAT cohort reporting any use of narcotics in the prior year should be 2.6%. (The following abstract of the original article appeared in record 2007-15768-002). Purpose: To assess the effects of random drug and alcohol testing (DAT) among high school athletes. Methods: This was a 2-year prospective randomized controlled study of a single cohort among five intervention high schools with a DAT policy and six schools with a deferred policy, serially assessed by voluntary, confidential questionnaires. DAT school athletes were at risk for random testing during the full academic year. Positive test results were reported to parents or guardians, with mandatory counseling. Indices of illicit drug use, with and without alcohol use, were assessed at the beginning and end of each school year for the past month and prior year. Potential mediating variables were evaluated. Results:

Student-athletes from intervention and control schools did not differ in past 1-month use of illicit drug or a combination of drug and alcohol use at any of the four follow-up periods. At the end of the initial school year and after 2 full school years, student-athletes at DAT schools reported less drug use during the past year ( $p < .01$ ) compared to athletes at the deferred policy schools. Combining past year drug and alcohol use together, student-athletes at DAT schools reported less use at the second and third follow-up assessments ( $p < .05$ ). Paradoxically, DAT athletes across all assessments reported less athletic competence ( $p < .001$ ), less belief authorities were opposed to drug use ( $p < .01$ ), and indicated greater risk-taking ( $p < .05$ ). At the final assessment, DAT athletes believed less in testing benefits ( $p < .05$ ) and less that testing was a reason not to use drugs ( $p < .01$ ). Conclusions: No DAT deterrent effects were evident for past month use during any of four follow-up periods. Prior-year drug use was reduced in two of four follow-up self-reports, and a combination of drug and alcohol use was reduced at two assessments as well. Overall, drug testing was accompanied by an increase in some risk factors for future substance use. More research is needed before DAT is considered an effective deterrent for school-based athletes.

**Grossbard, J., Geisner, I. M., Neighbors, C., Kilmer, J. R., & Larimer, M. E. (2007). Are drinking games sports? College athlete participation in drinking games and alcohol-related problems. *Journal of Studies on Alcohol*, 68(1), 97–105.**

ABSTRACT. Objective: Studies indicate greater heavy episodic drinking and related consequences for college student-athletes compared with nonathletes. Surprisingly, little research has examined college athletes' participation in drinking games, a context associated with excessive alcohol consumption and negative alcohol-related consequences in college students. Method: We examined how drinking game participation contributes to alcohol consumption and alcohol-related consequences among college-level intramural and intercollegiate athletes compared with nonathletes in two independent samples. Study 1 consisted of 1,395 randomly selected students (61% women) at a West Coast college campus, including 335 students who reported intramural athletic participation. Study 2 consisted of 6,055 randomly selected college students (63% women) from three college campuses, including 1,439 intramural athletes and 317 intercollegiate athletes. Results: Results of Study 1 indicated that intramural athletes consumed significantly more drinks per week, had significantly higher typical and peak blood alcohol concentration levels, and reported more negative consequences than nonathletes. Drinking game participation mediated the relationship between intramural athlete status and measures of consumption and consequences. Results of Study 2, including both intramural and intercollegiate athletes, were consistent with those of Study 1, revealing drinking game participation as a mediator of the relationships between athlete status and alcohol consumption and consequences. Conclusions: Drinking games represent contexts for college athletes to engage in heavy episodic drinking, and participation in drinking games mediates the relationship between alcohol consumption and negative consequences in athletes. Interventions targeted at college athletes should consider the impact of drinking game participation.

**Grossbard, J. R., Lee, C. M., Neighbors, C., Hendershot, C. S., & Larimer, M. E. (2007). Alcohol and risky sex in athletes and nonathletes: What roles do sex motives play? *Journal of Studies on Alcohol and Drugs*, 68(4), 566–574.**

Objective: Studies indicate greater sexual risk-taking behaviors and alcohol use in student-athletes compared with nonathletes, particularly in college samples. Although research has documented an association between drinking and risky sex, studies have not examined the role of sex motives in predicting risky sex in athletes. The purpose of the current study was to extend previous research on

athletes' risk-taking behaviors by examining incoming college student-athletes and nonathletes' alcohol consumption, risky sexual behavior, and sex motives. Method: Participants included 2,123 (58.9% female) incoming college students attending a northwest university, 221 of whom reported intercollegiate athletic participation during their upcoming year. Hierarchical multiple regression analyses were conducted to examine associations between sex motives and risky sexual behaviors using a cross-sectional design. Results: Results indicated greater weekly alcohol consumption, frequency of drinking before or during sex, and number of sexual partners in athletes compared with nonathletes. Athletes also reported greater levels of enhancement motives for sex and lower levels of intimacy motives than nonathletes, although no differences were found for coping motives. Significant interactions indicated that, for athletes, greater levels of enhancement sex motives predicted a greater number of sexual partners and more frequent drinking before or during sex, and greater levels of intimacy motives predicted less frequent drinking before or during sex. Conclusions: Student-athletes are at risk for problematic outcomes associated with risky sex, including drinking before or during sex and having sex with multiple partners. Prevention efforts targeted at incoming college student-athletes should consider the role of sex motives.

**Lewis, T. F. (2008). An explanatory model of student-athlete drinking: The role of team leadership, social norms, perceptions of risk, and coaches' attitudes toward alcohol consumption. *College Student Journal*, 42(3), 818–831.**

Research has established that student-athletes drink more alcohol and experience greater consequences compared to their non-athlete peers, prompting many investigators to consider university athletes an at risk subpopulation of college students. However, a dearth of research exists on explaining drinking behavior among student-athletes in general, and among team leaders compared to nonleaders in particular. This article responds to calls in the literature for more explanatory research assessing differences in alcohol use between team members and team leaders. Specifically, the aim of this study was to investigate, in a multivariate assessment, the ability of normative beliefs, perceptions of risk, coaches' attitudes toward drinking, and socio-demographic variables to discriminate among four groups of student athletes classified across levels of drinking intensity and leadership status. An anonymous survey was administered to 211 student-athletes at a mid-size, southeastern university. Results indicated substantial drinking behavior among this group. A multiple discriminant function analysis revealed that student-athletes who were non-leaders and engaged in heavy, episodic drinking perceived greater risks associated with alcohol consumption, greater leniency from coaches, and greater levels of alcohol use among peers. Implications for university interventions are discussed.

**Martens, M. P., Dams-O'Connor, K., & Beck, N. C. (2006). A systematic review of college student-athlete drinking: Prevalence rates, sport-related factors, and interventions. *Journal of Substance Abuse Treatment*, 31(3), 305–316.**

Alcohol use among college students has become a considerable public health problem. Among this group, intercollegiate athletes are at a particularly high risk for excessive alcohol consumption and resulting negative alcohol-related consequences. The purpose of our review was to systematically examine three main issues related to alcohol consumption among intercollegiate athletes: (a) the prevalence rates and alcohol consumption patterns of this group, especially in comparison with those of collegiate nonathletes; (b) the various factors that might motivate or encourage alcohol use among intercollegiate athletes, primarily sport-related individual and environmental variables; and (c) considerations for conducting alcohol-related interventions with intercollegiate athletes.

**Martens, M. P., Dams-O'Connor, K., Duffy-Paiement, C., & Gibson, J. T. (2006). Perceived alcohol use among friends and alcohol consumption among college athletes. *Psychology of Addictive Behaviors, 20*(2), 178–184.**

Intercollegiate athletes have been identified as an at-risk group for heavy alcohol consumption (e.g., T. F. Nelson & H. Wechsler, 2001). The purpose of this study was to assess the relationship between descriptive drinking norms among one's closest friends and personal alcohol consumption among athletes. Specifically, the authors sought to determine whether perceptions of alcohol consumption among one's closest friend who was an athlete (athlete norms) demonstrated a stronger relationship with personal alcohol use than normative perceptions among one's closest friend who was not an athlete (nonathlete norms). Data were collected on 165 athletes competing at the National Collegiate Athletic Association Division I level. Results indicated that the athlete norms demonstrated a stronger main effect with personal alcohol use than the nonathlete norms, although both norms demonstrated strong effects. However, an interaction effect indicated that the athlete norms demonstrated a stronger relationship with personal consumption among men, whereas the nonathlete norms demonstrated a stronger relationship among women. Implications for alcohol prevention programs among college athletes are discussed.

**Martens, M. P., Labrie, J. W., Hummer, J. F., & Pedersen, E. R. (2008). Understanding sport-related drinking motives in college athletes: Psychometric analyses of the athlete drinking scale. *Addictive Behaviors, 33*(7), 974–977.**

Researchers have identified college student-athletes as a high-risk group for heavy alcohol consumption (e.g., Nelson, T. F., & Wechsler, H. (2001). Alcohol and college athletes. *Medicine and Science in Sports and Exercise, 33*, 43-47). Recently, Martens and colleagues (Martens, M. P., Watson, J. C., Royland, E. M., & Beck, N. C. (2005). Development of the Athlete Drinking Scale. *Psychology of Addictive Behaviors, 19*, 158-164) developed a measure of sport-related motivations for drinking: the Athlete Drinking Scale (ADS). Initial research on the reliability and validity of the measure was promising, and the purpose of this study was to conduct additional psychometric analyses on the scale. Data were analyzed from 483 NCAA Division I athletes who volunteered to participate in the study. Results of a confirmatory factor analysis provided satisfactory support for the hypothesized factor structure of the ADS. Correlation and regression analyses indicated that scores on the ADS were associated with relevant alcohol-related outcome variables, even after controlling for the effects of demographic factors and general drinking motives. Thus, the ADS may be a useful tool for both clinicians and researchers working in alcohol prevention among collegiate athletes.

**Rockafellow, B. D., & Saules, K. K. (2006). Substance use by college students: The role of intrinsic versus extrinsic motivation for athletic involvement. *Psychology of Addictive Behaviors, 20*(3), 279–287.**

Certain types of athletic involvement may confer risk for substance use by college students. This study investigated whether motivational factors play a role in the relationship between athletic involvement and substance use. Intercollegiate athletes (n=98) and exercisers (n=120) were surveyed about substance use and motivation for athletic involvement. Athletes and exercisers who were extrinsically motivated had significantly higher rates of alcohol use than their intrinsically motivated counterparts. Results suggest that college students who are extrinsically motivated for involvement

in physical activity/athletics—particularly those involved in team sports—may be in need of targeted prevention efforts.

**Tewksbury, R., Higgins, G. E., & Mustaine, E. E. (2008). Binge drinking among college athletes and non-athletes. *Deviant Behavior*, 29(4), 275–293.**

Concerns about incidence, forms, and consequences of alcohol use among college students lack examinations of the lifestyles and predictors of college student athletes. This article, using a sample of student-athletes and non-athletes from four Southern universities, identifies the lifestyle predictors for each population, identifying patterns and sets of predictors of binge drinking behavior. Findings indicate that for both samples, binge drinking behavior is explained by sex, drinking in bars, number of male friends who drink, and cigarette smoking. Student-athletes' binge drinking is explained further by residing on campus. Non-athlete binge drinking is related to race and amount of study time per week. Implications for these findings are also discussed.

**Thevis, M., Sauer, M., Geyer, H., Sigmund, G., Mareck, U., & Schänzer, W. (2008). Determination of the prevalence of anabolic steroids, stimulants, and selected drugs subject to doping controls among elite sport students using analytical chemistry. *Journal of Sports Sciences*, 26(10), 1059–1065.**

Drug abuse by adolescents has been investigated in various surveys that reported correlations between age, gender, and activity. However, none of these studies included chemical analyses to help substantiate the statements of participants. In the present study, the urine specimens of 964 students (439 females, 525 males; mean age 22.1 years,  $s = 1.7$ ), who applied to study sports sciences at university, were assessed for anabolic steroids, stimulants, and selected drugs prohibited in sports. In total, 11.2% of the urine specimens provided contained drugs covered by doping controls. The most frequently detected compound was the major metabolite of tetrahydrocannabinol (9.8%) followed by various stimulants related to amphetamine and cocaine (1.0%). Indications of anabolic steroid use were found in 0.4% of urine samples but originated from contraceptives containing norethisterone. The present study provided unambiguous data on the status quo of drug (ab)use by adolescents hoping for a career related to elite sport or sports sciences. No use of anabolic steroids was detected. However, evidence for stimulants and tetrahydrocannabinol administration was obtained, although not reported by any participant, which highlights the issue of under-reporting in surveys based solely on questionnaires.

**Turrisi, R., Mastroleo, N. R., Mallett, K. A., Larimer, M. E., & Kilmer, J. R. (2007). Examination of the mediational influences of peer norms, environmental influences, and parent communications on heavy drinking in athletes and nonathletes. *Psychology of Addictive Behaviors*, 21(4), 453–461.**

The present study used perspectives from the general literature on college alcohol consumption to examine mediational influences of peer, environmental, and parental variables on heavy drinking for student athlete and nonathlete samples. Eight hundred thirty-five freshmen who differed in organized sports involvement were compared on heavy drinking outcomes, peer norms, environmental influences, and parental communication. College athletes reported significantly more heavy drinking experiences than nonathletes. Peer norms, environmental influences, and parental communication were all significant mediators of the athlete-heavy drinking relationship. Athletes reported a higher perception of peer drinking, peer approval of drinking, higher alcohol availability,

and direct drink offers, which, in turn, were related to higher rates of heavy drinking. Parental communication mediated the athlete-heavy drinking relationship differently, depending on the specific topic of conversation. Discussion surrounding the importance of incorporating a variety of interventions aimed at reducing collegiate athlete drinking on the basis of the peer, environmental, and parental influences observed in the present analyses are presented. Limitations and directions for future research are also noted.

**Yusko, D. A., Buckman, J. F., White, H. R., & Pandina, R. J. (2008). Alcohol, tobacco, illicit drugs, and performance enhancers: A comparison of use by college student athletes and nonathletes. *Journal of American College Health, 57*(3), 281–290.**

**OBJECTIVE:** The authors compared the prevalence and pattern of substance use in undergraduate student athletes and nonathletes from 2005-2006. **PARTICIPANTS:** Authors collected data from male (n = 418) and female (n = 475) student athletes and nonathletes from 2005-2006. **Methods:** The authors administered self-report questionnaires to assess prevalence, quantity, and frequency of alcohol and drug use, and to determine patterns of student athletes' alcohol and drug use during their athletic season versus out of season. **RESULTS:** Male student athletes were at high risk for heavy drinking and performance-enhancing drug use. Considerable in-season versus out-of-season substance use fluctuations were identified in male and female student athletes. **CONCLUSIONS:** Additional, and possibly alternative, factors are involved in a student athlete's decision-making process regarding drug and alcohol use, which suggests that the development of prevention programs that are specifically designed to meet the unique needs of the college student athlete may be beneficial.

**Zamboanga, B. L., & Ham, L. S. (2008). Alcohol expectancies and context-specific drinking behaviors among female college athletes. *Behavior Therapy, 39*(2), 162–170.**

Alcohol expectancies have been associated with drinking behaviors among college students. Few studies, however, have focused on researcher-labeled “positive” and “negative” expectancies as well as the valuations (i.e., desirability) of these expectancies. Moreover, research on the correlates of heavy drinking among female college athletes remain relatively sparse, despite the prevalence of elevated alcohol use in this population. We examined the associations of expectancies and valuations with frequency of heavy drinking and context-specific drinking behaviors. The sample consisted of 145 female college athletes (mean age=19.6; range=17 to 22) who completed self-report surveys and indicated alcohol use in the past 30 days. Regression analyses indicated that favorable valuations of negative expectancies were related to heavy drinking, and that valuations accounted for significant proportions of variance in the model. Elevated endorsement of negative expectancies was also associated with the perceived likelihood of heavy use in convivial and personal-social drinking contexts, and favorable valuations of these expectancies accounted for significant variance in these models. These findings highlight the relevance of negative expectancies and valuations with respect to heavy drinking and context-specific drinking behaviors among female college athletes. The perception of “negative” effects of alcohol as “positive” could help explain the high rates of problematic drinking among female athletes. Future research considerations and potential implications for assessment and prevention efforts are discussed.

**Zamboanga, B. L., Horton, N. J., Leitkowski, L. K., & Wang, S. C. (2006). Do good things come to those who drink? A longitudinal investigation of drinking expectancies and hazardous alcohol use in female college athletes. *Journal of Adolescent Health, 39*(2), 229–**

236.

Purpose: To prospectively examine the link between positive and negative drinking expectancies and hazardous alcohol use, and to explore the reciprocal associations between expectancies and hazardous use among female college athletes. Method: Participants were part of a larger (n = 189), ongoing longitudinal study on female athletes' socialization experiences and health behaviors from an all-women's college in the Northeastern United States. The sample for the present study were 85 college-aged (17-22 years) female students (Mean age = 19.6) who indicated alcohol use in the past year and provided data at both time points (baseline and one year later). Respondents completed self-report questionnaires on their age, hazardous alcohol use, and expectations about the effects of drinking. Results: Logistic regression analyses showed that positive drinking expectancies predicted increased odds of hazardous alcohol use at baseline and one year later (even after controlling for baseline hazardous use). Positive expectancies accounted for a higher proportion of variance in predicting increased odds of hazardous alcohol use at both time points than did negative expectancies. Bivariate correlational analyses examining the bi-directional associations between expectancies and hazardous alcohol use also revealed some indication that positive expectancies were associated with hazardous alcohol use rather than vice-versa. No such relations emerged for negative expectancies. Conclusions: Findings shed light on the utility of positive expectancies in predicting concurrent and subsequent hazardous alcohol use among female student-athletes. Future research directions and potential implications for prevention efforts are discussed.

**Zamboanga, B. L., Rodriguez, L., & Horton, N. J. (2008). Athletic involvement and its relevance to hazardous alcohol use and drinking game participation in female college athletes: A preliminary investigation. *Journal of American College Health, 56(6), 651–656.***

OBJECTIVE AND PARTICIPANTS: The authors designed this cross-sectional study to examine sports team differences in hazardous alcohol use and drinking game participation, as well as the social correlates of these behaviors among female college athletes (N = 176; M age = 19.9 years, SD = 1.24, range = 18-22). METHODS: Respondents completed self-report surveys in small groups. They reported drinking behaviors, frequency of team social events involving alcohol use, and team cohesion. RESULTS: The authors found significant differences across sports teams with regard to hazardous alcohol use and participation in drinking games with teammates. Findings also revealed that a high frequency of team social events involving alcohol use was associated with elevated use and an increased likelihood of drinking game participation. CONCLUSIONS: The authors discuss future research directions and implications.

See also:

Doumas, D. M., Turrisi, R., & Wright, D. A. (2006). Risk factors for heavy drinking and associated consequences in college freshmen: Athletic status and adult attachment. *The Sport Psychologist, 20(4)*, 419–434.

Foubert, J. D., & Newberry, J. T. (2006). Effects of two versions of an empathy-based rape prevention program on fraternity men's survivor empathy, attitudes, and behavioral intent to commit rape or sexual assault. *Journal of College Student Development, 47(2)*, 133–148.

Neighbors, C., Oster-Aaland, L., Bergstrom, R. L., & Lewis, M. A. (2006). Event- and context-specific normative misperceptions and high-risk drinking: 21st birthday celebrations and football

tailgating. *Journal of Studies on Alcohol*, 67(2), 282–289.

Perkins, H. W., & Craig, D. W. (2006). A successful social norms campaign to reduce alcohol misuse among college student-athletes. *Journal of Studies on Alcohol*, 67(6), 880–889.

### **Fraternities and Sororities**

**Capone, C., Wood, M. D., Borsari, B., & Laird, R. D. (2007). Fraternity and sorority involvement, social influences, and alcohol use among college students: A prospective examination. *Psychology of Addictive Behaviors*, 21(3), 316–327.**

This study used latent growth curve modeling to investigate whether the effects of gender and Greek involvement on alcohol use and problems over the first 2 years of college are best characterized by selection, socialization, or reciprocal influence processes. Three social influences (alcohol offers, social modeling, and perceived norms) were examined as potential mediators of these effects. Undergraduate participants (N = 388) completed self-report measures prior to enrollment and in the spring of their freshmen and sophomore years. Male gender and involvement in the Greek system were associated with greater alcohol use and problems prior to college. Both gender and Greek involvement significantly predicted increases in alcohol use and problems over the first 2 years of college. Cross-domain analyses provided strong support for a mediational role of each of the social influence constructs on alcohol use and problems prior to matriculation, and prematriculation social modeling and alcohol offers mediated relations between Greek involvement and changes in alcohol use over time. Findings suggest that students, particularly men, who affiliate with Greek organizations constitute an at-risk group prior to entering college, suggesting the need for selected interventions with this population, which should take place before or during the pledging process.

**Danis, F. S., & Anderson, K. M. (2008). An underserved population and untapped resource: A preliminary study of collegiate sorority response to dating violence. *Journal of Aggression, Maltreatment & Trauma*, 17(3), 336–351.**

To what extent do national collegiate sororities have formal programs and policies addressing dating violence? Given that undergraduate women are at high risk for violence by a male partner, sororities represent an opportunity to reach large numbers of undergraduates as well as women in the community who are active in alumni chapters. Based on a telephone survey and review of organizational Web sites, study results suggest that collegiate sororities are an underserved population with regard to prevention, education, and outreach services and an untapped resource with regard to opportunities for community service. Suggestions for building collaboration between sororities and service providers to raise awareness, support victims, create safety planning, and develop resources are addressed.

**DeSimone, J. (2007). Fraternity membership and binge drinking. *Journal of Health Economics*, 26(5), 950–967.**

This paper examines the relationship that social fraternity and sorority membership has with binge drinking incidence and frequency among 18-24 year old full-time 4-year college students who participated in the 1995 National College Health Risk Behavior Survey. To net out unobserved heterogeneity, several measures of situational and total alcohol use are entered into the regressions

as explanatory variables. Fraternity membership coefficients are substantially reduced in size, but remain large and highly significant, suggesting a causal effect on binge drinking. Otherwise, the estimates identify idiosyncratic selection into fraternities and binge drinking across students with similar overall drinking profiles. Particularly notable is that behavior by underage students appears to drive the relationship.

**Foubert, J. D., & Newberry, J. T. (2006). Effects of two versions of an empathy-based rape prevention program on fraternity men's survivor empathy, attitudes, and behavioral intent to commit rape or sexual assault. *Journal of College Student Development, 47*(2), 133–148.**

Fraternity men (N = 261) at a small to midsized public university saw one of two versions of a rape prevention program or were in a control group. Program participants reported significant increases in empathy toward rape survivors and significant declines in rape myth acceptance, likelihood of raping, and likelihood of committing sexual assault. Program participants' scores significantly differed from an untreated control group in several areas. Implications for describing a male-on-male rape to increase men's empathy toward female survivors and other related attitudes are discussed.

**Glindemann, K. E., Ehrhart, I. J., Drake, E. A., & Geller, E. S. (2007). Reducing excessive alcohol consumption at university fraternity parties: A cost-effective incentive/reward intervention. *Addictive Behaviors, 32*(1), 39–48.**

The impact of an incentive/reward intervention on college students' intoxication from alcohol consumption at fraternity parties was explored using a group-randomized trial. Participants included 702 college students (447 men, 225 women) attending fraternity parties in Blacksburg, VA. Six fraternities were randomly assigned to a control or experimental group, and each of these fraternities hosted two parties. The three fraternities in the experimental group hosted a baseline party first and then hosted an intervention party at which those having a blood alcohol concentration (BAC) level below 0.05 were entered in a \$100 cash lottery. The three fraternities in the control group hosted two control (non-intervention) parties. For the experimental fraternities, mean BAC levels were significantly lower at the intervention parties (M=0.079) than the baseline parties (M=0.098) and the percentage of partygoers with a BAC below 0.08 was significantly higher at intervention parties (40.1%) than at baseline parties (30.6%). This field study supports the efficacy of differential reinforcement in controlling student intoxication at party settings.

**Huchting, K., Lac, A., & LaBrie, J. W. (2008). An application of the theory of planned behavior to sorority alcohol consumption. *Addictive Behaviors, 33*(4), 538–551.**

Greek-affiliated college students have been found to drink more heavily and frequently than other students. With female student drinking on the rise over the past decade, sorority women may be at particular risk for heavy consumption patterns. The current study is the first to apply the Theory of Planned Behavior (TPB) to examine drinking patterns among a sorority-only sample. Two-hundred and forty-seven sorority members completed questionnaires measuring TPB variables of attitudes, norms, perceived behavioral control, and intentions, with drinking behaviors measured one month later. Latent structural equation modeling examined the pathways of the TPB model. Intentions to drink mediated the relationship between attitudes and norms on drinking behavior. Subjective norms predicted intentions to drink more than attitudes or perceived behavioral control. Perceived behavioral control did not predict intentions but did predict drinking behaviors. Interpretation and

suggestions from these findings are discussed.

**Park, A., Sher, K. J., & Krull, J. L. (2006). Individual differences in the “Greek effect” on risky drinking: The role of self-consciousness. *Psychology of Addictive Behaviors, 20*(1), 85–90.**

Although the environmental influence of Greek affiliation on drinking has been established, little is known about intrapersonal characteristics that make individuals susceptible to this influence. Self-consciousness (attending to one’s self) was hypothesized to represent dispositional vulnerability to environmental influence. The potential moderating effect of self-consciousness on the relation between Greek involvement and drinking was examined longitudinally among college students (N = 319). The effect of Greek status was moderated by private and public self-consciousness and by gender. Specifically, non-Greek members’ drinking was not influenced by self-consciousness. However, sorority members increased drinking as private self-consciousness increased, whereas fraternity members increased drinking as private and public self-consciousness decreased. These findings indicate that the “Greek effect” interacts with individual characteristics to affect drinking.

**Park, A., Sher, K. J., & Krull, J. L. (2008). Risky drinking in college changes as fraternity/sorority affiliation changes: A person-environment perspective. *Psychology of Addictive Behaviors, 22*(2), 219–229.**

This study aimed to resolve the direction of the relation between Greek affiliation and substance use by taking advantage of the quasi-experimental nature of change in college fraternity/sorority affiliation. Precollege individual differences and college substance use were examined as a function of time-varying Greek status to characterize self-selection (by which heavy substance users opt into Greek systems) and socialization (by which Greek systems foster heavy substance use). Prospective data on continuously enrolled college students (N=2,376), assessed at precollege and in the first 6 semesters of college, were used. Latent class analysis indicated 4 discrete groups of status: constant Greek members (30%), constant nonmembers (64%), late joiners (2%), and droppers (4%). Random coefficient models demonstrated disaffiliation with Greek systems is associated with decreases in risky drinking and alcohol-conducive environmental factors (peer norms and alcohol availability), whereas affiliation is associated with increases, indicating Greek socialization via sociocognitive and physical environments. Future Greeks differed from nonmembers in diverse individual characteristics and heavier substance use at precollege, suggesting multiple selection paths into Greek systems. Findings suggest a reciprocal relation between Greek environment and individuals in determining the trajectories of college drinking and heterogeneity in drinking as functions of changes in Greek affiliation.

### **Ethnic Minorities**

**Chen, M.-J., Paschall, M. J., & Grube, J. W. (2006). Motives for malt liquor consumption in a sample of community college students. *Addictive Behaviors, 31*(8), 1295–1307.**

Health and community advocates have raised concerns about consumption of malt liquor, a high alcohol content beverage, among youth. Research on malt liquor use is, however, very limited, leaving unanswered questions about what strategies may effectively prevent this use. This study employed qualitative and quantitative research methods with ethnically diverse college samples to explore and identify motives associated with consumption of malt liquor. Of the motives examined,

those representing social facilitation and mood enhancement were the most important predictors of malt liquor use. Anticipation of quick intoxication and economic considerations were also uniquely associated with increased consumption of malt liquor after controlling for other motives and background variables. Coping motives and availability of malt liquor, although being significantly related to malt liquor use in bivariate analyses, were not significantly associated with increased consumption of malt liquor in multivariate analyses. Conformity motives were endorsed by few malt liquor drinkers. Study findings suggest that raising the price and lowering the alcohol content of malt liquor may help reduce consumption of this beverage by young people.

**Croyle, K. L. (2007). Self-harm experiences among Hispanic and non-Hispanic White young adults. *Hispanic Journal of Behavioral Sciences, 29*(2), 242–253.**

Very little research exists on self-harm in Hispanic populations, although there is a strong literature that addresses suicidality in Hispanics. This study compares self-reported rates of self-harm in 255 non-Hispanic White (NHW) and 187 Hispanic (predominantly Mexican American) undergraduate students. Results indicated that self-harm is relatively common, with 31% of the sample reporting some history of self-harm. Rates and specific types of self-harm did not significantly differ between the NHW and Hispanic groups. A global measure of Mexican American acculturation was not related to reports of self-harm. However, a more specific scale assessing Mexican orientation was significantly and negatively related to self-harm for Hispanic men, suggesting that Mexican orientation may be a protective factor with regard to self-harm for men.

**Doran, N., Myers, M. G., Luczak, S. E., Carr, L. G., & Wall, T. L. (2007). Stability of heavy episodic drinking in Chinese- and Korean-American college students: Effects of ALDH2 gene status and behavioral undercontrol. *Journal of Studies on Alcohol and Drugs, 68*(6), 789–797.**

ABSTRACT. Objective: A previous cross-sectional study showed that, among individuals of Chinese and Korean descent, possession of ALDH2\*2 alleles was associated with protection against alcohol dependence, whereas conduct disorder was associated with increased vulnerability to dependence. The purpose of this longitudinal study was to examine the roles of ALDH2 and behavioral undercontrol (a temperamental trait that is associated with conduct disorder) in stability of heavy episodic drinking. Method: Chinese- and Korean-American college students (N = 336; 51% female), who had initiated alcohol use before study enrollment, provided information on drinking habits during their freshman and sophomore years. Participants were classified as (1) stable nonheavy drinkers, (2) regressors, (3) progressors, or (4) stable heavy drinkers. Results: Participants with ALDH2\*2 alleles were more likely to be classified as stable nonheavy drinkers than as progressors ( $z = -2.49$ ,  $p = .013$ ). Higher levels of behavioral undercontrol were associated with a greater probability of being classified as a stable heavy drinker relative to a stable nonheavy drinker ( $z = 2.26$ ,  $p = .024$ ). Stable heavy drinkers reported the most alcohol-related problems, whereas progressors reported more problems than either regressors or stable nonheavy drinkers, particularly at Year 2. Conclusions: Elevated behavioral undercontrol appears to predispose Asian-American college students to increased frequency of heavy drinking, whereas ALDH2\*2 may act as a protective factor. The degree of alcohol consumption observed among participants with ALDH2\*2 alleles is consistent with previous findings showing that, although their presence may be protective, it does not preclude heavy drinking episodes.

**Liu, W. M., & Iwamoto, D. K. (2007). Conformity to masculine norms, Asian values, coping**

**strategies, peer group influences and substance use among Asian American men. *Psychology of Men & Masculinity*, 8(1), 25–39.**

This study explores the relationship between Asian values (AVS-R; Kim & Hong, 2004), Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003), Peer Substance Use, Coping Styles (Carver, 1997), and Substance Use among 154 Asian American college men. Results showed 47.9% reported consuming alcohol; 27% reported binge drinking; 8% used illicit drugs; 18% reported marijuana use; and 3% indicated cocaine use in the 30 days prior to completing the survey. Peer drug use was significant and the most robust predictor of substance use in all of the regression analyses. Logistic regression analysis suggests CMNI subscales of Winning, Disdain for Homosexuality, Playboy, and Violence predicted marijuana use; Power Over Women predicted binge drinking. The multiple regression analysis revealed that Emotional Control and Risk Taking significantly predicted alcohol. Clinical and research implications are discussed.

**Mori, L., Panova, A., Keo, Z., Cheung, C., & Stokes, J. (2007). Ego identity and substance use of ethnically diverse college students. *Psychology Journal*, 4(4), 161–172.**

The article provides information on the study concerning the ego identity and drug use of ethnically diverse college students in the U.S. According to the results, foreclosed participants were less probably to drink and smoke cigarettes, while moratorium participants reported increased alcohol and cigarette use.

**Pedersen, E. R., & LaBrie, J. (2006). Drinking game participation among college students: Gender and ethnic implications. *Addictive Behaviors*, 31(11), 2105–2115.**

Participation in drinking games by college students has recently sparked research attention. While previous research indicates that women play drinking games at lower frequencies than men, the current study reveals that college women may be playing games at rates similar to college men. In a sample of 105 coed college students, participants completed a 3-month Timeline Followback recording every drinking event and quantity consumed. They then were prompted to identify which drinking events involved drinking games and how much alcohol was consumed during game playing. Both men and women engaged in drinking games at similar rates and consumed more drinks on game playing days than on non-game drinking days. However, drinking game participation was related to alcohol-related consequences in women only. Further, while Caucasian participants played drinking games more often than non-Caucasian participants, an association between game participation and alcohol-related consequences emerged in non-Caucasian participants.

**Siebert, D. C., & Wilke, D. J. (2007). High-risk drinking among young adults: The influence of race and college enrollment. *American Journal of Drug and Alcohol Abuse*, 33(6), 843–850.**

This secondary data analysis of the 2001 National Household Survey on Drug Abuse examines the influence of individual, interpersonal, and contextual social risk and protective factors on high risk drinking, focusing on the influence of minority status and college enrollment among 5,895 young adults. Hierarchical regression predicted 39.4% of the variance in high-risk drinking. Being male, increased risk-taking behavior, being older, and higher numbers of friends getting drunk all positively influenced high-risk drinking, and disapproval of daily drinking reduced high-risk drinking. Interaction effects showed all significant variables to be more influential for Whites than Blacks,

including college attendance.

See also:

Raffaelli, M., Stone, R. A. T., Iturbide, M. I., McGinley, M., Carlo, G., & Crockett, L. J. (2007). Acculturation, gender, and alcohol use among Mexican American college students. *Addictive Behaviors*, *32*(10), 2187–2199.

### **First-Year Students**

**Fromme, K., Corbin, W. R., & Kruse, M. I. (2008). Behavioral risks during the transition from high school to college. *Developmental Psychology*, *44*(5), 1497–1504.**

The transition from high school to college is an important developmental milestone that holds the potential for personal growth and behavioral change. A cohort of 2,245 students was recruited during the summer before they matriculated into college and completed Internet-based surveys about their participation in a variety of behavioral risks during the last 3 months of high school and throughout the 1st year of college. Alcohol use, marijuana use, and sex with multiple partners increased during the transition from high school to college, whereas driving after drinking, aggression, and property crimes decreased. Those from rural high schools and those who elected to live in private dormitories in college were at highest risk for heavy drinking and driving after drinking.

**Grekin, E. R., & Sher, K. J. (2006). Alcohol dependence symptoms among college freshmen: Prevalence, stability, and person-environment interactions. *Experimental and Clinical Psychopharmacology*, *14*(3), 329–338.**

College students are at risk for problematic alcohol use. Few studies, however, have examined alcohol dependence symptoms within a college sample. The current study assesses the prevalence, predictors, and stability of proxy Diagnostic and Statistical Manual of Mental Disorders (4th ed.; American Psychiatric Association, 1994) alcohol dependence symptoms among college freshmen. Participants were 3,720 freshmen taking part in a longitudinal study. Participants completed measures of alcohol use, fraternity and sorority membership, and behavioral undercontrol. Results revealed that alcohol dependence symptoms were prevalent and moderately stable among college freshmen. Both membership in a Greek organization and behavioral undercontrol predicted responses to our alcohol dependence proxy. In addition, Greek status interacted with behavioral undercontrol to predict alcohol dependence symptoms, such that Greek members high in behavioral undercontrol were especially vulnerable to symptoms of dependence.

**LaBrie, J. W., Pedersen, E. R., Lamb, T. F., & Bove, L. (2006). Heads up! A nested intervention with freshmen male college students and the broader campus community to promote responsible drinking. *Journal of American College Health*, *54*(5), 301–304.**

The National Institute on Alcohol Abuse and Alcoholism developed several guidelines for effective interventions in dealing with problematic college student drinking, including targeted individual interventions paired with broader campus community involvement. The project Heads UP! combines these suggestions in an effort to intervene with high-risk first-year male college students. The objective of the program is to reduce campus alcohol-related negative events and prevent these

high-risk students from developing dangerous drinking patterns throughout college. The project provides an environment that supports students in actively following the goals outlined by the intervention, and it actively impacts the overall campus by helping students make responsible drinking decisions. Promising results are forthcoming, and the authors encourage other universities to design and adopt similar campus-supported programs nested within the broader campus community that target high-risk populations on campus.

**LaBrie, J. W., Pedersen, E. R., Lamb, T. F., & Quinlan, T. (2007). A campus-based motivational enhancement group intervention reduces problematic drinking in freshmen male college students. *Addictive Behaviors, 32*(5), 889–901.**

The current study employs an adaptation to Motivational Interviewing (AMI) group intervention with freshmen male undergraduates. The program follows suggestions of the National Institute on Alcohol Abuse and Alcoholism for effective interventions with problematic college student drinking, and combines several empirically validated strategies to prevent drinking problems throughout college. All participants reduced drinking and alcohol-related problems; heavier drinkers and those experiencing the most alcohol-related problems reduced drinking most. Additionally, freshmen who completed the intervention were less likely than their non-intervention freshmen male peers to commit alcohol-related violations of campus policies. In addition to the reductions in problematic drinking, the group AMI has advantages over individual formats because larger numbers of students can benefit with comparable expenditures of time and effort.

**Lewis, M. A., Neighbors, C., Oster-Aaland, L., Kirkeby, B. S., & Larimer, M. E. (2007). Indicated prevention for incoming freshmen: Personalized normative feedback and high-risk drinking. *Addictive Behaviors, 32*(11), 2495–2508.**

This research evaluated the efficacy of a computerized, freshmen-specific personalized normative feedback (PNF) intervention on reducing alcohol consumption among high-risk drinking freshmen. Students (N = 316; 53.8% female) completed measures of perceived drinking norms and drinking behavior. After completing the baseline assessment, students were randomly assigned to receive either freshmen-specific PNF that was gender-specific or gender-neutral, or to assessment only control. Findings demonstrated that students exhibited normative misperceptions for typical freshmen drinking behavior and that perceptions of typical same-sex freshmen drinking were positively associated with riskier drinking behavior. At follow-up, students randomly assigned to receive PNF reduced perceptions of typical freshmen drinking behavior and personal drinking behavior relative to those who did not receive PNF. Findings extend previous evaluations of computer-based PNF and suggest that computer-based PNF for incoming freshmen utilizing freshmen-specific norms that are gender-specific may constitute a promising prevention strategy.

**Lindsay, V. (2006). Factors that predict freshmen college students' preference to drink alcohol. *Journal of Alcohol and Drug Education, 50*(4), 7–19.**

Students who drank in high school are three times more likely to begin heavy episodic drinking in college. The question remains if location of attending college and high school drinking behaviors are significant predictors of college drinking behaviors. The current study will try to determine that question as well as determine which factors motivate students to begin drinking in college. There were 65.6% female and 34.4 % male freshmen in the sample. Only one-fifth of the freshmen class actually started drinking within their first year. This could be because they had already started

drinking before college, or they were still abstaining. Only one-fourth of the students were still abstaining within their first year. Of all the freshmen that begin drinking within their first year of college, 70% were female. A significant correlation between college drinking behaviors and location of college was found. This finding shows that change of scenery or change of normal patterns could lead to destructive behaviors in college freshmen.

**McCabe, S. E., Boyd, C. J., Cranford, J. A., Slayden, J., Lange, J. E., Reed, M. B., Ketchie, J. M., & Scott, M. S. (2007). Alcohol involvement and participation in residential learning communities among first-year college students. *Journal of Studies on Alcohol and Drugs*, 68(5), 722–726.**

**OBJECTIVE:** Residential learning communities (RLCs) on U.S. college campuses are assumed to build connections between formal learning opportunities and students' living environment. The objective of this longitudinal study was to examine the association between living in RLCs and alcohol misuse among first-year undergraduate students. **METHOD:** A Web-based survey was self-administered to a stratified random sample of 923 first-year undergraduate students (52.7% women) attending a large Midwestern research university. The sample included 342 students who lived and participated in RLCs (termed RLC) and 581 students who did not participate in RLCs (termed non-RLC). First-year students were asked about their drinking behaviors before college, during their first semester, and approximately 6 months later during their second semester. **RESULTS:** RLC students reported lower rates of drinking than non-RLC students before college. RLC students reported lower rates of drinking and fewer alcohol-related consequences than non-RLC students during the first and second semesters. Maximum drinks in 1 day increased from precollege to first semester, and this increase was larger among non-RLC students than RLC students. The number of drinks per occasion and alcohol-related consequences increased between first semester and second semester for all students regardless of RLC status. **CONCLUSIONS:** Lower rates of alcohol misuse among RLC students predate their entrance into college, and the increase in drinking from precollege to first semester is lower in magnitude among RLC students. RLCs' influence involves selection and socialization processes. These findings have implications for prevention and intervention efforts aimed at incoming first-year undergraduate students.

**Moore, M. J., & Werch, C. (2008). Relationship between vigorous exercise frequency and substance use among first-year drinking college students. *Journal of American College Health*, 56(6), 686–690.**

**OBJECTIVE:** The authors explored the relationship between self-reported vigorous exercise frequency and alcohol, tobacco, and other drug (ATOD) use behaviors among first-year college students who self-identified as drinkers. **PARTICIPANTS:** The authors recruited 391 freshman college students in Northeast Florida to participate in an alcohol abuse prevention study. **METHODS:** The authors conducted a multivariate analysis of variance to assess the relationship between vigorous exercise frequency and 6 measures of ATOD use at baseline. **RESULTS:** Frequent exercisers drank significantly more often and a significantly greater quantity than did infrequent exercisers. However, frequent exercisers smoked cigarettes significantly less often than did infrequent exercisers. **CONCLUSIONS:** These findings suggest that vigorous exercise frequency is differentially associated with alcohol and cigarette consumption among college students. Researchers should further examine the reasons for these differences.

**Neal, D. J., & Fromme, K. (2007). Event-level covariation of alcohol intoxication and**

**behavioral risks during the first year of college. *Journal of Consulting and Clinical Psychology, 75(2), 294–306.***

The authors examined the global- and event-level associations between alcohol intoxication and 10 behavioral risks during the 1st year of college. Participants (n = 1113; 62% female; 54% Caucasian) completed 30 days of Web-based self-monitoring that assessed alcohol consumption and involvement in 10 behavioral risks. Generalized estimating equations analyses were used to determine which behaviors covaried with event-level versus global indices of intoxication as well as the moderating effects of gender on the intoxication-behavior associations. Alcohol use was globally related to 8 of the 10 behavioral risks; more important, 5 of the 10 behaviors specifically covaried with daily alcohol intoxication. The differential pattern of associations observed can inform clinical work by identifying groups of students who may most benefit from various intervention approaches and content.

**O'Hare, T., & Sherrer, M. V. (2006). Stress, recent changes in alcohol consumption level, and problem drinking in freshman first offenders. *Journal of Human Behavior in the Social Environment, 13(3), 33–50.***

Although stress has been shown to be related to college drinking and related problems, little research on this subject has specifically targeted freshmen, a particularly vulnerable group. The current study of 389 college freshman surveyed after having been cited their first time for underage drinking examines the relationship between self-reported stress, recent changes in drinking patterns, gender and problem drinking as measured by the Alcohol Use Disorders Identification Test. Results support hypotheses asserting that stress and recent changes in consumption level independently and additively predict drinking problems. Subsequent analysis explores which specific stress items predict problem drinking for these young women and men. Implications for prevention are discussed.

**Rankin, L. A., & Maggs, J. L. (2006). First-year college student affect and alcohol use: Paradoxical within- and between-person associations. *Journal of Youth and Adolescence, 35(6), 925–937.***

Based on 10 weekly telephone interviews with first-year college students (N=202; 63% women; M=18.8 years, SD=.4), within- and between-person associations of positive and negative affect with alcohol use were examined. Multi-level models confirmed hypothesized within-person associations between weekly positive affect and alcohol use: Higher positive affect weeks had greater alcohol consumption, more drinking and heavy drinking days in the same week, and less plans to drink the following week. However, between-person, average positive affect did not predict individual differences in alcohol use. The negative effect–alcohol use association was complex: Within-person, higher negative affect was associated with less drinking days but between-person, with more drinking days; lability in negative affect was associated with greater average alcohol use and more drinking and heavy drinking days. Health promotion efforts for late adolescent and emerging adult students are advised to recognize these paradoxical effects (e.g., promoting dry celebratory campus-events, strategies to manage negative mood swings).

**Sher, K. J., & Rutledge, P. C. (2007). Heavy drinking across the transition to college: Predicting first-semester heavy drinking from precollege variables. *Addictive Behaviors, 32(4), 819–835.***

Parents, public health officials, college personnel, and society at-large continue to be concerned about the increase in heavy drinking that occurs across the transition to college, prompting alcohol researchers to continue the search for effective interventions. In this report we use data from a large (N=3720) prospective study to (1) estimate how predictable heavy drinking in the first semester of college is on the basis of information obtained prior to college and (2) identify precollege variables that are important predictors of heavy drinking in the first semester. We found that first-semester heavy drinking is highly predictable, primarily because of continuity from precollege heavy drinking, but also from precollege peer drinking norms, precollege other substance use (esp. tobacco use), and precollege party motivation for attending college. These findings have implications for both the timing and targets of interventions. Interventions timed to occur prior to college and/or in the early months of college may disrupt the momentum of previously established drinking behavior. Furthermore, interventions may be most effective if they target conjoint alcohol and tobacco use, college party motivation, and self-selection into heavy-drinking social environments.

**Talbott, L. L., Martin, R. J., Usdan, S. L., Leeper, J. D., Umstatted, M. R., Cremeens, J. L., & Geiger, B. F. (2008). Drinking likelihood, alcohol problems, and peer influence among first-year college students. *American Journal of Drug and Alcohol Abuse, 34*(4), 433–440.**

Excessive alcohol consumption is a predominant health concern on college campuses in the United States. A stepwise multiple regression analysis was used to examine the predictive values of demographic factors in relation to alcohol subscales (Drinking Context Scale, College Alcohol Problems Scale-revised, and Social Modeling Scale) with the outcome of number of drinking days in the past 30 days among a sample (n = 224) of first-year college students. The final model predicted 37.5% of the variability in drinking days in the past month. All variables, except for race, were significantly associated with the outcome (p < .05).

**Thombs, D. L., Olds, R. S., Osborn, C. J., Casseday, S., Glavin, K., & Berkowitz, A. D. (2007). Outcomes of a technology-based social norms intervention to deter alcohol use in freshman residence halls. *Journal of American College Health, 55*(6), 325–332.**

Objective: The authors tested a prototype intervention designed to deter alcohol use in residence halls. Participants: Approximately 384 freshmen participated in the study over a 2-year period. Methods: The authors devised a feedback method that assessed residents' blood alcohol concentration (BAC) at night and allowed the readings to be retrieved the next day via the Web. Residents in an intervention hall received their BAC readings as well as normative feedback. In a comparison hall, residents could retrieve only the BAC readings. Results: The authors found statistically significant hall differences, but they were small in size and not meaningful. Conclusions: Qualitative findings suggest the intervention had an overall positive impact, but the actions of a subgroup of rebellious drinkers might have obscured the effect. Social norms interventions could provoke some episodes of excessive drinking in students who find these messages objectionable. More research is needed to evaluate delayed BAC feedback.

See also:

Abar, C., & Turrisi, R. (2008). How important are parents during the college years? A longitudinal perspective of indirect influences parents yield on their college teens' alcohol use. *Addictive Behaviors, 33*(10), 1360–1368.

Boyle, J. R., & Boekeloo, B. O. (2006). Perceived parental approval of drinking and its impact on problem drinking behaviors among first-year college students. *Journal of American College Health, 54*(4), 238–244.

Doumas, D. M., Turrisi, R., & Wright, D. A. (2006). Risk factors for heavy drinking and associated consequences in college freshmen: Athletic status and adult attachment. *The Sport Psychologist, 20*(4), 419–434.

Kilmer, J. R., Hunt, S. B., Lee, C. M., & Neighbors, C. (2007). Marijuana use, risk perception, and consequences: Is perceived risk congruent with reality? *Addictive Behaviors, 32*(12), 3026–3033.

LaBrie, J. W., Tawalbeh, S., & Earleywine, M. (2006). Differentiating adjudicated from nonadjudicated freshmen men: The role of alcohol expectancies, tension, and concern about health. *Journal of College Student Development, 47*(5), 521–533.

Lee, C. M., Maggs, J. L., & Rankin, L. A. (2006). Spring break trips as a risk factor for heavy alcohol use among first-year college students. *Journal of Studies on Alcohol, 67*(6), 911–916.

Michael, K. D., Curtin, L., Kirkley, D. E., Jones, D. L., & Harris, R., Jr. (2006). Group-based motivational interviewing for alcohol use among college students: An exploratory study. *Professional Psychology: Research and Practice, 37*(6), 629–634.

### **High-Risk Drinkers**

**Barber, M. W., & Fairclough, A. (2006). A comparison of alcohol and drug use among dental undergraduates and a group of non-medical, professional undergraduates. *British Dental Journal, 201*(9), 581–584.**

**OBJECTIVE:** To compare the alcohol and drug use of dental and law undergraduates. **DESIGN:** Anonymous self-report questionnaire. **SUBJECTS AND METHODS:** All dental undergraduates (n = 263) and a randomly selected group of law undergraduates (n = 180) from the same university were questioned on their use of alcohol, tobacco and illicit drugs. **RESULTS:** Current tobacco use was reported by 7% of dental students and 19% of law students. Alcohol use was reported by 86% of dental students and 88% of law students, with 44% of dental students and 52% of law students estimating they drank above recommended safe limits (14 units for females, 21 units for men). Binge drinking was reported by 71% of dental students and 75% of law students, with weekly binge drinking reported by 27% and 34% of dental and law students respectively. Cannabis experience was reported by 44% of dental students and 52% of law students, with current use reported by 12% and 25% of dental and law students respectively. A small proportion of dental and law students reported using other class A and B drugs including ecstasy, amphetamines and cocaine. **CONCLUSIONS:** Dental students appear to be indulging in similar levels of alcohol and illicit drug use when compared to students of a different, non-medical faculty. Binge drinking may be more prevalent than previously thought, with potential risks to health, patient safety and professional status.

**Cho, H. (2006). Readiness to change, norms, and self-efficacy among heavy-drinking college students. *Journal of Studies on Alcohol, 67*(1), 131–138.**

**OBJECTIVE:** The purpose of this study was to investigate the association between the readiness to

change of college heavy drinkers and their normative and self-efficacy beliefs. **METHOD:** A multiple regression method analyzed the association in a heavy-drinker subsample (n=306; men = 53.3%) drawn from a survey of a convenience sample of college students in two large-size midwestern universities. **RESULTS:** Precontemplation was most strongly associated with the descriptive and injunctive norms of campus peers as well as friends. Contemplation was significantly associated with descriptive and injunctive norms of friends. The size of association between readiness and normative beliefs decreased as the readiness progressed. Both precontemplation and contemplation were negatively associated with self-efficacy. **CONCLUSIONS:** Differences in readiness to change are related to different normative and self-efficacy beliefs to different degrees. Incorporating these differences could improve the effectiveness of future interventions. In particular, addressing friends' norms in addition to campus norms could help increase self-efficacy and facilitate the behavioral change process of college heavy drinkers.

**Crawford, L. A., & Novak, K. B. (2006). Alcohol abuse as a rite of passage: The effect of beliefs about alcohol and the college experience on undergraduates' drinking behaviors. *Journal of Drug Education, 36*(3), 193–212.**

Qualitative studies of alcohol's ritual influences indicate that college undergraduates who drink heavily tend to view alcohol use as integral to the student role and feel entitled to drink irresponsibly. Our analyses, based on a standardized measure of these beliefs administered to approximately 300 students, confirmed these findings. Among our sample, beliefs about alcohol and the college experience had an effect on levels of alcohol consumption similar in magnitude to that of other variables commonly associated with a risk for heavy drinking. Moreover, the alcohol beliefs index moderated the effects of three risk factors—gender, high school drinking, and friends' use of alcohol—on respondents' drinking behaviors. These findings are discussed within the context of the anthropological literature on liminality and rites of passage and with regard to strategies for intervention that address the structural roots of the widespread abuse of alcohol on college campuses.

**Fox, K. (2006). Alcohol and drug use among dental and law undergraduates. *British Dental Journal, 201*(9), 576.**

**OBJECTIVE:** To compare the alcohol and drug use of dental and law undergraduates. **DESIGN:** Anonymous self-report questionnaire. **SUBJECTS AND METHODS:** All dental undergraduates (n = 263) and a randomly selected group of law undergraduates (n = 180) from the same university were questioned on their use of alcohol, tobacco and illicit drugs. **RESULTS:** Current tobacco use was reported by 7% of dental students and 19% of law students. Alcohol use was reported by 86% of dental students and 88% of law students, with 44% of dental students and 52% of law students estimating they drank above recommended safe limits (14 units for females, 21 units for men). Binge drinking was reported by 71% of dental students and 75% of law students, with weekly binge drinking reported by 27% and 34% of dental and law students respectively. Cannabis experience was reported by 44% of dental students and 52% of law students, with current use reported by 12% and 25% of dental and law students respectively. A small proportion of dental and law students reported using other class A and B drugs including ecstasy, amphetamines and cocaine. **CONCLUSIONS:** Dental students appear to be indulging in similar levels of alcohol and illicit drug use when compared to students of a different, non-medical faculty. Binge drinking may be more prevalent than previously thought, with potential risks to health, patient safety and professional status.

**Leppel, K. (2006). College binge drinking: Deviant versus mainstream behavior. *American Journal of Drug and Alcohol Abuse*, 32(4), 519–525.**

College binge drinking is examined from the perspectives of two cultures. The traditional culture views bingeing as deviant; the second culture promotes it. In this context, logit regression is used to explore the effects of various factors, including student employment and parental education. Employed students are less likely to binge than are students who are not employed. Also, students whose mother is a college graduate, but whose father is not, are more likely to binge than other students. The prescriptions for reducing binge drinking are different when the behavior is perceived as mainstream rather than deviant. The research calls for the development of a process for promoting cultural change in an environment of continually changing student leadership.

See also:

Carey, K. B., Carey, M. P., Maisto, S. A., & Henson, J. M. (2006). Brief motivational interventions for heavy college drinkers: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 74(5), 943–954.

Gilles, D. M., Turk, C. L., & Fresco, D. M. (2006). Social anxiety, alcohol expectancies, and self-efficacy as predictors of heavy drinking in college students. *Addictive Behaviors*, 31(3), 388–398.

Juarez, P., Walters, S. T., Daugherty, M., & Radi, C. (2006). A randomized trial of motivational interviewing and feedback with heavy drinking college students. *Journal of Drug Education*, 36(3), 233–246.

LaBrie, J. W., Pedersen, E. R., Earleywine, M., & Olsen, H. (2006). Reducing heavy drinking in college males with the decisional balance: Analyzing an element of motivational interviewing. *Addictive Behaviors*, 31(2), 254–263.

Lanza, S. T., & Collins, L. M. (2006). A mixture model of discontinuous development in heavy drinking from ages 18 to 30: The role of college enrollment. *Journal of Studies on Alcohol*, 67(4), 552–561.

Lee, C. M., Maggs, J. L., & Rankin, L. A. (2006). Spring break trips as a risk factor for heavy alcohol use among first-year college students. *Journal of Studies on Alcohol*, 67(6), 911–916.

Lewis, T. F. (2006). Discriminating among levels of college student drinking through an Eriksonian Theoretical Framework. *Journal of Addictions & Offender Counseling*, 27(1), 28–45.

Ostafin, B. D., & Palfai, T. P. (2006). Compelled to consume: The implicit association test and automatic alcohol motivation. *Psychology of Addictive Behaviors*, 20(3), 322–327.

Palfai, T. P., & Weafer, J. (2006). College student drinking and meaning in the pursuit of life goals. *Psychology of Addictive Behaviors*, 20(2), 131–134.

Shillington, A. M., & Clapp, J. D. (2006). Heavy alcohol use compared to alcohol and marijuana use: Do college students experience a difference in substance use problems? *Journal of Drug Education*, 36(1), 91–103.

Zamboanga, B. L., Horton, N. J., Leitkowski, L. K., & Wang, S. C. (2006). Do good things come to those who drink? A longitudinal investigation of drinking expectancies and hazardous alcohol use in female college athletes. *Journal of Adolescent Health, 39*(2), 229–236.

Zamboanga, B. L., Raffaelli, M., & Horton, N. J. (2006). Acculturation status and heavy alcohol use among Mexican American college students: Investigating the moderating role of gender. *Addictive Behaviors, 31*(12), 2188–2198.

## **The Role of Gender**

**Blinn-Pike, L., & Worthy, S. L. (2008). Undergraduate women who have gambled in casinos: Are they at risk? *Family & Consumer Sciences Research Journal, 37*(1), 71–83.**

The aim of this study is to describe female undergraduates who have gambled in casinos compared with their peers who have never participated in casino gambling or gambling in any form. Pathological gambling has been linked to financial problems, marital stress, lost time at work and school, depression, and even suicide. Female students (n = 179, mean age 21.64) from a southeastern university are questioned about their gambling behaviors, sensation-seeking traits, and alcohol consumption. Female college students who have participated in casino gambling have higher sensation-seeking scores, higher scores on a measure of gambling severity, consumed alcohol on more occasions over the past 30 days, and have binge drunk more frequently than their peers. Implications are presented for gambling prevention and research.

**Boyd, C. J., McCabe, S. E., Cranford, J. A., Morales, M., Lange, J. E., Reed, M. B., Ketchie, J. M., & Scott, M. S. (2008). Heavy episodic drinking and its consequences: The protective effects of same-sex, residential living-learning communities for undergraduate women. *Addictive Behaviors, 33*(8), 987–993.**

Gender and living environment are two of the most consistent factors associated with heavy episodic drinking on college campuses. This study aimed to determine group differences in alcohol misuse and its attendant consequences between undergraduate women living in four distinct on-campus residential environments. A Web-based survey was self-administered to a stratified random sample of full-time students attending a large Midwestern University, and living in four distinct on-campus residential environments: 1) single-sex (all female) residential learning communities (RLCs), 2) mixed-sex (male and female) RLCs, 3) single-sex (all female) non-RLCs and 4) mixed-sex (male and female) non-RLCs. Respondents living in single-sex and mixed-sex RLCs had significantly lower rates of alcohol use, heavy episodic drinking and related primary alcohol-related consequences when compared to respondents living in non-RLCs; however, women in single-sex RLCs had the lowest rates. RLCs - particularly single-sex learning communities - appear to provide undergraduate women with an environment that supports lower rates of alcohol use and abuse.

**Corbin, W. R., Vaughan, E. L., & Fromme, K. (2008). “Ethnic differences and the closing of the sex gap in alcohol use among college-bound students”: Correction to Corbin, Vaughan, and Fromme (2008). *Psychology of Addictive Behaviors, 22*(3), 457.**

Reports an error in “Ethnic differences and the closing of the sex gap in alcohol use among college-bound students” by William R. Corbin, Ellen L. Vaughan and Kim Fromme (*Psychology of*

Addictive Behaviors, 2008[Jun], Vol 22[2], 240-248). The article was published with incorrect figures. The correct Figures 1 and 2 are reprinted in this correction. (The following abstract of the original article appeared in record 2008-06772-009.) In this study, the authors used Web-based surveys to examine differences in alcohol use by sex and ethnicity and factors associated with these group differences among 2,241 college-bound students. A Sex x Ethnicity interaction indicated that the sex gap was much larger for Latino than for Caucasian students. Although peer influence was important for both Caucasian and Latino students, family influences were significant only for Latino youths. The sex differences in drinking among Latino youths were largely explained by the combination of same-sex family member and same-sex peer drinking through values about the acceptability of drinking behavior. Among Caucasians, perceptions of peer behavior exerted a stronger influence on drinking behavior than among Latinos. These results suggest that interventions targeting peer influence are likely to be most effective for Caucasian students. In contrast, for Latinos, particularly Latina women, family characteristics may be an important target for prevention.

**Ehrmann, N., & Massey, D. S. (2008). Gender-specific effects of ecological conditions on college achievement. *Social Science Research*, 37(1), 220–238.**

This analysis combines results and models from prior analyses of ecological effects on educational outcomes to specify a comprehensive path model estimated separately for male and female respondents to the National Longitudinal Survey of Freshmen. We find that males are exposed to higher levels of violence and disorder than females, and that the gender gap in such exposure grows as the ecological concentration of minority group members increases. At the same time, however, ecological effects on academic performance appear to be stronger for females than males. In the rare cases where females are exposed to high levels of disorder and violence, the effects on college grades are quite large. Nonetheless, relatively few females experience high exposure to violence and social disorder, and, as a result, male grades are more influenced by the ecological disadvantage.

**Ford, J. A., & Jasinski, J. L. (2006). Sexual orientation and substance use among college students. *Addictive Behaviors*, 31(3), 404–413.**

This study examined the relationship between sexual orientation and substance use among a nationally representative sample of U.S. college and university students. Data from the 1999 College Alcohol Survey were analyzed to compare marijuana and other illicit drug use among heterosexual, homosexual, and bisexual students. Findings indicate no significant differences in either marijuana or other illicit drug use for homosexual students. However, bisexuals, especially females, were more likely to have used both marijuana and other illicit drugs. These findings underscore the importance of examining bisexuals as a separate group rather than combining them together with homosexuals. The findings also indicate the presence of unique risk and protective factors based on sexual orientation.

**Hatgis, C., Friedmann, P. D., & Wiener, M. (2008). Attributions of responsibility for addiction: The effects of gender and type of substance. *Substance Use & Misuse*, 43(5), 700–708.**

In 1997, 248 urban university students in central Massachusetts rated responsibility for addiction using the Attributions of Responsibility for Addiction Scale (ARAS), developed for this study with university-based financial support. The vignette-based factorial design varied sex of drug user and

type of addictive substance. Factor analysis yielded two subscales: internal and external responsibility attributions; the dependent variable was the internal-to-external attribution ratio. Analysis of variance indicated main effects for substance type and drug abuse experience and showed interaction effects for participant's sex by user's sex and user's sex by substance type. Authors discuss implications, study limitations, and future research.

**Kelly-Weeder, S. (2008). Binge drinking in college-aged women: Framing a gender-specific prevention strategy. *Journal of the American Academy of Nurse Practitioners, 20(12), 577–584.***

Purpose: To provide an overview of binge drinking in college-aged women and to suggest strategies for nurse practitioners (NPs) to assist women in preventing the negative consequences associated with this behavior. Data sources: Original research articles and comprehensive review articles identified through Medline, CINAHL, and OVID databases. Conclusions: Researchers have shown that the rates of binge drinking in college-aged women are increasing, which places these women at increased risk for the long-term complications associated with alcohol use. Implications for practice: NPs must be aware of this phenomenon and carefully screen women for high-risk alcohol use. Prevention strategies are reviewed and include the use of brief motivational interviews delivered during individual client encounters as well as through Web-based programs.

**LaBrie, J. W., Thompson, A. D., Ferraiolo, P., Garcia, J. A., Huchting, K., & Shelesky, K. (2008). The differential impact of relational health on alcohol consumption and consequences in first year college women. *Addictive Behaviors, 33(2), 266–278.***

The Relational Health Indices (RHI) is a relatively new measure that assesses the strength of relationships. It has been found that relational health has a protective factor for women, such that it enhances positive experiences and limits negative ones. The current study is the first to use the RHI to examine the effect of relational health on alcohol consumption and alcohol consequences. First year college women were given questionnaires assessing relational health, drinking motives, and alcohol use in their first few months at a mid-sized, private university. Due to the social nature of college settings, it was predicted that relational health would moderate the relationship between motives and alcohol consumption. Further, due to the protective factor of relational health, it was predicted that relational health would attenuate the relationship between drinking and negative consequences. These hypotheses were supported. Relational health, moderated the relationship between both social and coping drinking motives and drinking, such that women with strong relational health towards their peers and community who also had high social and coping motives, drank more than those with weaker relationships. Paradoxically, relational health also moderated the relationship between drinking and consequences such that heavy drinking women with strong relational health experienced fewer negative consequences than women with weaker relational health. Results indicate that although relational health is associated with an increase in alcohol consumption, it may also serve as a protective factor for alcohol-related negative consequences. Future research and interventions may seek to de-link the relational health-drinking connection in the college student environment.

**Murphy, J. G., Barnett, N. P., Goldstein, A. L., & Colby, S. M. (2007). Gender moderates the relationship between substance-free activity enjoyment and alcohol use. *Psychology of Addictive Behaviors, 21(2), 261–265.***

Laboratory research suggests that there is an inverse relationship between substance use and substance-free reinforcement, but the relevance of this relationship to the prevention of human substance abuse remains somewhat unclear. The present study evaluated the relationship between alcohol use and enjoyment from substance-free activities in a sample of college students who had previously completed an alcohol intervention (N = 107; 55% women; 45% men). The authors used a modified 30-day timeline follow-back interview to collect data on enjoyment from specific substance-free activities that occurred in the evening. Regression analyses revealed that there was a negative association between alcohol consumption and substance-free activity enjoyment for women but not for men. Women who reported greater enjoyment on abstinent evenings reported lower past-month alcohol consumption. Greater average enjoyment from substance-free activities was associated with greater motivation to change drinking among men and women. Although further research is required to determine procedures for increasing participation in substance-free activities and to explicate possible gender differences, these results suggest that increasing enjoyable substance-free activities may be an important prevention component.

**Oinonen, K. A., & Sterniczuk, R. (2007). An inverse relationship between typical alcohol consumption and facial symmetry detection ability in young women. *Journal of Psychopharmacology*, 21(5), 507–518.**

The relationship between monthly alcohol consumption over the past 6 months and facial symmetry perception ability was examined in young sober women with typical college-age drinking patterns. Facial symmetry detection performance was inversely related to typical monthly alcohol consumption,  $r(41) = -0.57$ ,  $p < 0.001$ . Other variables that were predictive of facial symmetry detection included alcohol-related hangover and blackout frequency over the past 6 months, number of alcoholic drinks over the past week, early adolescent alcohol consumption and frequency of drug use. The relationship between alcohol use and symmetry detection could not be explained by individual differences in personality, family alcoholism history or other drug use. These findings suggest the possibility of a neurotoxic effect of alcohol on facial symmetry perception ability in female undergraduate students. As similar results did not emerge for a test of dot symmetry detection, the findings appear specific to facial symmetry. No previous studies have examined the effect of alcohol history on symmetry detection. The findings add to a growing literature indicating negative visuospatial effects of early alcohol use, and suggest the importance of further research examining alcohol and drug effects on sober facial perception in non-alcoholic populations.

**Parks, K. A., Romosz, A. M., Bradizza, C. M., & Hsieh, Y.-P. (2008). A dangerous transition: Women's drinking and related victimization from high school to the first year at college. *Journal of Studies on Alcohol and Drugs*, 69(1), 65–74.**

**OBJECTIVE:** The current study assessed women's risk for victimization during the first year at college, based on changes in drinking during the transition from high school to college. We were specifically interested in differential risk for victimization based on women's change in drinking status over the transition to college. We compared continued abstainers with women who began drinking ("new" drinkers) and women who continued drinking but either decreased, increased, or did not change their level of weekly drinking. **METHOD:** Data were collected using a Web-based survey each fall for the first 2 years at college with one cohort (N = 886) of incoming freshmen women at a large state university in New York. Women reported on their alcohol and other drug use, psychological symptoms, number of sexual partners, and experiences with physical and sexual victimization for the year before entering college (Year 1 survey) and for the first year at college

(Year 2 survey). RESULTS: Abstainers were significantly less likely to experience physical or sexual victimization during the first year at college, compared with drinkers. Logistic regression indicated that there were differences in the predictors of physical and sexual victimization during the first year at college. These differences included history of victimization, psychological symptoms, and number of sexual partners, as well as the type of change in drinking over the transition. CONCLUSIONS: In comparison with abstainers, having a history of physical victimization, greater psychological symptoms, and being a “new” drinker increased the odds of physical victimization, whereas having a greater number of current psychological symptoms, sexual partners, and increasing weekly drinking increased the odds of sexual victimization during the first year at college. These findings have implications for prevention efforts targeting young women entering college.

**Patrick, M. E., Blair, C., & Maggs, J. L. (2008). Executive function, approach sensitivity, and emotional decision making as influences on risk behaviors in young adults. *Journal of Clinical and Experimental Neuropsychology*, 30(4), 449–462.**

Relations among executive function, behavioral approach sensitivity, emotional decision making, and risk behaviors (alcohol use, drug use, and delinquent behavior) were examined in single female college students (N = 72). Hierarchical multiple regressions indicated a significant Approach Sensitivity x Working Memory interaction in which higher levels of alcohol use were associated with the combination of greater approach tendency and better working memory. This Approach Sensitivity x Working Memory interaction was also marginally significant for drug use and delinquency. Poor emotional decision making, as measured by a gambling task, was also associated with higher levels of alcohol use, but only for individuals low in inhibitory control. Findings point to the complexity of relations among aspects of self-regulation and personality and provide much needed data on neuropsychological correlates of risk behaviors in a nonclinical population.

**Raffaelli, M., Stone, R. A. T., Iturbide, M. I., McGinley, M., Carlo, G., & Crockett, L. J. (2007). Acculturation, gender, and alcohol use among Mexican American college students. *Addictive Behaviors*, 32(10), 2187–2199.**

Prior research with non-college samples of Mexican Americans has demonstrated that gender moderates the association between acculturation and alcohol use. We replicated this finding in a college student sample and attempted to account for the differential impact of acculturation on Mexican American men and women by examining the mediating effects of social context, family conflict and psychological functioning. Participants were 148 Mexican Americans (67% female; mean age 23 years) from three state universities in California and Texas who completed self-report surveys. In multivariate analyses controlling for age, maternal education, living situation, and site, linguistic acculturation was associated with increased alcohol use and misuse among women but not men. Two social context variables (social facilitation and family drinking) mediated the association between acculturation and alcohol use (heavy drinking, past year alcohol use, and a composite drinking variable) among women. The findings highlight the importance of social context for understanding alcohol use by Latina college students and indicate directions for future research and intervention development.

**Stoltenberg, S. F., Batién, B. D., & Birgenheir, D. G. (2008). Does gender moderate associations among impulsivity and health-risk behaviors? *Addictive Behaviors*, 33(2), 252–265.**

The present study explores the relations among gender, impulsivity and three health-risk behaviors relevant to young adults (tobacco use, alcohol problems and gambling problems) in a sample of 197 college-age individuals. We sought to determine whether impulsivity is associated with health-risk behaviors in the same ways for men and women. For tobacco use and gambling problems, men were at higher risk than women, and impulsivity was not significantly associated with higher risk. Higher levels of motor impulsivity in men accounted for a significant amount of the gender difference in risk for alcohol problems. That is, impulsivity as measured by the Barratt Impulsiveness Scale (version 11), mediated the association between gender and risk for alcohol problems. For impulsivity as measured by Stop Signal Reaction Time (i.e. response inhibition), gender moderated the association between impulsivity and alcohol problems. Specifically, lower levels of impulsivity were associated with greater risk for alcohol problems in both men and women, but the effect was stronger in men. We speculate that this seemingly paradoxical result might be the result of coping drinking to deal with negative affect associated with behavioral overcontrol. These findings suggest that prevention efforts might well focus on identifying individuals at high risk for alcohol problems, especially males, by assessing response inhibition.

**VonDras, D. D., Schmitt, R. R., & Marx, D. (2007). Associations between aspects of spiritual well-being, alcohol use, and related social-cognitions in female college students. *Journal of Religion & Health, 46*(4), 500–515.**

This research explores relationships between aspects of spiritual well-being, alcohol use and related social-cognitions in college women. The sample included 151 female college students ranging in age from 18 to 25 years. Participants read a behavioral vignette depicting alcohol use by a student and completed a survey that included measures of alcohol use, counterfactual attributions and beliefs about drinking, as well as religious and existential aspects of spiritual well-being. Results suggested religious- and existential well-being to be inversely associated with indices of alcohol use and the likelihood of attending a social event where alcohol is present. Further, religious well-being was found to be negatively associated with beliefs concerning the social-effects of alcohol, while existential well-being was observed to be a significant predictor of a composite set of attributions related to alcohol prevention. Importantly, these data suggest religious and existential aspects of spiritual well-being as moderators of behavior as well as causal attributions and beliefs that represent a cognitive mechanism of alcohol prevention in college women. Use of counterfactual exercises as an educational technique, and potential barriers of religious and existential oriented prevention programs are briefly discussed.

**Zack, M., Poulos, C. X., Aramakis, V. B., Khamba, B. K., & MacLeod, C. M. (2007). Effects of drink-stress sequence and gender on alcohol stress response dampening in high and low anxiety sensitive drinkers. *Alcoholism: Clinical and Experimental Research, 31*(3), 411–422.**

**BACKGROUND:** This study tested the appraisal disruption hypothesis of alcohol stress response dampening (SRD) in male and female high or low anxiety sensitive (AS) undergraduates. The hypothesis predicts that alcohol SRD will be greater when drinking occurs before versus after stress exposure. High AS males' predominant social-evaluative concerns further implied that alcohol SRD to a social stressor (i.e., a speech) would be relatively stronger in high AS males than in high AS females. **METHODS:** Male and female (n=90/gender) high and low AS participants (>or=70th; <or=30th percentile on Anxiety Sensitivity Index-Revised) were matched on drinking habits and randomly assigned to 1 of 9 experimental cells. Drink type—alcohol (0.7 g/kg males; 0.63 g/kg females), placebo, soda—was fully crossed with stress condition—drink before stress (DBS), drink

after stress (DAS), and no stress control (NSC). Stress was induced by telling participants they would be required to make a self-revealing speech. Stress response dampening was assessed for state anxiety on the Spielberger scale and Stroop interference to threat-related words. Subjective desire for alcohol was also assessed. RESULTS: Relative to placebo, alcohol (peak blood alcohol concentration, 0.064%) reliably reduced state anxiety in high AS but not in low AS participants. Alcohol decreased STAI scores and Stroop interference to social threat words significantly more in the DBS than the DAS condition in high AS males; high AS females displayed the exact opposite pattern of effects. In contrast to other participants, high AS males also reported relatively strong desire scores under alcohol. CONCLUSIONS: Overall, the results do not support the appraisal disruption hypothesis as a general mechanism of alcohol SRD in undergraduate drinkers. The findings for high AS males do support the hypothesis, while the opposing profile for high AS females implies that the nature of the stressor (i.e., social challenge) may contribute to gender differences in alcohol SRD in high AS individuals.

**Zamboanga, B. L., Leitkowski, L. K., Rodriguez, L., & Cascio, K. A. (2006). Drinking games in female college students: More than just a game? *Addictive Behaviors, 31*(8), 1485–1489.**

The present study examined the characteristics of drinking games (DG). Study participants were 164 female college students (Mean age = 20; 18-23 years) who completed self-report measures of DG participation and alcohol-related behaviors. Results showed variations in popularity, type of alcohol consumed, and intoxication levels across DG. Findings also revealed that DG involvement (frequency of participation, amount consumed, perceived intoxication, and type of alcoholic beverage consumed) were associated with hazardous alcohol use. Prevention efforts and future research implications are discussed.

**Zamboanga, B. L., Raffaelli, M., & Horton, N. J. (2006). Acculturation status and heavy alcohol use among Mexican American college students: Investigating the moderating role of gender. *Addictive Behaviors, 31*(12), 2188–2198.**

We examined whether gender moderates the association between acculturation and heavy alcohol use. The sample consisted of 126 Mexican American college students (Mean age=24.7 years; 57% female) who completed self-report measures of heavy alcohol use, acculturation status (global acculturation and ethnic identity), and relevant control variables (age, peer alcohol use). Multivariable regression revealed that higher levels of ethnic identity were associated with greater frequency of heavy alcohol among men. Conversely, neither measure of acculturation was associated with heavy alcohol use among women. These findings suggest that interventions for Latino/a students should consider the role of culturally relevant variables in heavy alcohol use, particularly for men. They also have implications regarding how acculturation is operationalized in alcohol studies, and suggest directions for future research.

**Zucker, A., & Landry, L. (2007). Embodied discrimination: The relation of sexism and distress to women's drinking and smoking behaviors. *Sex Roles, 56*(3/4), 193–203.**

Discrimination has been conceptualized as a stressor that may be more negative than generic stress because it is tied to valued and unchangeable social identities. As with other stressful events, the experience of sexism has been related to poorer mental health and some physical health outcomes. This study of 179 female college students (79% of whom were White) showed that the relation

between perceived sexism and binge drinking and smoking was mediated by psychological distress. In addition, there was a direct relation between sexism and smoking for weight control. Given the large toll that tobacco and excessive alcohol use exact on the U.S. population, we suggest that policy makers aim to reduce discrimination as one method to improve overall health.

See also:

Anderson, D. A., Simmons, A. M., Martens, M. P., Ferrier, A. G., & Sheehy, M. J. (2006). The relationship between disordered eating behavior and drinking motives in college-age women. *Eating Behaviors, 7*(4), 419–422.

Armstrong, E. A., Hamilton, L., & Sweeney, B. (2006). Sexual assault on campus: A multilevel, integrative approach to party rape. *Social Problems, 53*(4), 483–499.

Carey, K. B., Borsari, B., Carey, M. P., & Maisto, S. A. (2006). Patterns and importance of self-other differences in college drinking norms. *Psychology of Addictive Behaviors, 20*(4), 385–393.

Castello, J., Coomer, C., Stillwell, J., & Cate, K. L. (2006). The attribution of responsibility in acquaintance rape involving ecstasy. *North American Journal of Psychology, 8*(3), 411–419.

Cowan, G., & Ullman, J. B. (2006). Ingroup rejection among women: The role of personal inadequacy. *Psychology of Women Quarterly, 30*(4), 399–409.

Gidycz, C. A., Orchowski, L. M., King, C. R., & Rich, C. L. (2008). Sexual victimization and health-risk behaviors: A prospective analysis of college women. *Journal of Interpersonal Violence, 23*(6), 744–763.

Howells, N., & Rosenbaum, A. (2008). Effects of perpetrator and victim gender on negative outcomes of family violence. *Journal of Family Violence, 23*(3), 203–209.

Jessor, R., Costa, F. M., Krueger, P. M., & Turbin, M. S. (2006). A developmental study of heavy episodic drinking among college students: The role of psychosocial and behavioral protective and risk factors. *Journal of Studies on Alcohol, 67*(1), 86–94.

Kashdan, T., Collins, R., & Elhai, J. (2006). Social anxiety and positive outcome expectancies on risk-taking behaviors. *Cognitive Therapy and Research, 30*(6), 749–761.

Kelly, B. T., & Torres, A. (2006). Campus safety: Perceptions and experiences of women students. *Journal of College Student Development, 47*(1), 20–36.

Lewis, M. A., & Neighbors, C. (2007). Optimizing personalized normative feedback: The use of gender-specific referents. *Journal of Studies on Alcohol and Drugs, 68*(2), 228–237.

Nagoshi, J., Adams, K., Terrell, H., Hill, E., Brzuzy, S., & Nagoshi, C. (2008). Gender differences in correlates of homophobia and transphobia. *Sex Roles, 59*(7/8), 521–531.

Parks, K. A., Hsieh, Y.-P., Bradizza, C. M., & Romosz, A. M. (2008). Factors influencing the temporal relationship between alcohol consumption and experiences with aggression among college

women. *Psychology of Addictive Behaviors*, 22(2), 210–218.

Parks, K. A., Pardi, A. M., & Bradizza, C. M. (2006, March). Collecting data on alcohol use and alcohol-related victimization: A comparison of telephone and Web-based survey methods. *Journal of Studies on Alcohol*, 67(2), 318–323.

Pedersen, E. R., & LaBrie, J. (2006). Drinking game participation among college students: Gender and ethnic implications. *Addictive Behaviors*, 31(11), 2105–2115.

Piran, N., & Robinson, S. R. (2006). Associations between disordered eating behaviors and licit and illicit substance use and abuse in a university sample. *Addictive Behaviors*, 31(10), 1761–1775.

Ryan, K., Weikel, K., & Sprechini, G. (2008). Gender differences in narcissism and courtship violence in dating couples. *Sex Roles*, 58(11/12), 802–813.

Zamboanga, B. L. (2006). From the eyes of the beholder: Alcohol expectancies and valuations as predictors of hazardous drinking behaviors among female college students. *American Journal of Drug and Alcohol Abuse*, 32(4), 599–605.

Zamboanga, B. L., Horton, N. J., Leitkowski, L. K., & Wang, S. C. (2006). Do good things come to those who drink? A longitudinal investigation of drinking expectancies and hazardous alcohol use in female college athletes. *Journal of Adolescent Health*, 39(2), 229–236.

### **Minors/Underage Students**

**Lewis, D. K., & Marchell, T. C. (2006). Safety first: A medical amnesty approach to alcohol poisoning at a U.S. university. *International Journal of Drug Policy*, 17(4), 329–338.**

Despite the minimum legal drinking age of 21 in the United States, alcohol consumption among underage college students is widespread. Patterns of consumption among students often include episodes of heavy drinking that contribute to a range of negative consequences, including alcohol poisoning. Although failure to seek medical assistance in cases of alcohol poisoning can lead to fatal outcomes, evidence suggests that the threat of judicial consequences resulting from enforcement of the minimum drinking age or other law or policy violations leads some students to refrain from calling for emergency medical services. Beginning in the fall of 2002, Cornell University attempted to address this dilemma by implementing a Medical Amnesty Protocol (MAP) designed to: (1) increase the likelihood that students will call for help in alcohol-related medical emergencies; and (2) increase the likelihood that students treated for alcohol-related medical emergencies will receive a brief psycho-educational intervention at the university health centre as a follow-up to their medical treatment. This article provides a case study of the MAP at Cornell University and reviews data from emergency room and health centre records, calls to emergency medical services, and student self-report survey data to evaluate the extent to which the protocol's goals were achieved during the first two years of implementation. Results include consecutive increases in alcohol-related calls for assistance to emergency medical services during the two-year period. Survey results suggest that, following initiation of the MAP, students were less likely to report fear of getting an intoxicated person in trouble as a barrier to calling for help. Furthermore, the percentage of students seen by health centre staff for a brief psycho-educational intervention after an alcohol-related emergency more than doubled (from 22% to 52%) by the end of the second year. In their discussion, the

authors explore the inherent tension between the responsibility of colleges and universities to enforce the minimum legal drinking age of 21 as well as other laws and university policies versus the need to motivate underage students to call for assistance when alcohol-related medical emergencies occur. Recommendations to other colleges and universities considering a medical amnesty approach are provided.

**Miller, T. R., Levy, D. T., Spicer, R. S., & Taylor, D. M. (2006). Societal costs of underage drinking. *Journal of Studies on Alcohol*, 67(4), 519–528.**

**OBJECTIVE:** Despite minimum-purchase-age laws, young people regularly drink alcohol. This study estimated the magnitude and costs of problems resulting from underage drinking by category—traffic crashes, violence, property crime, suicide, burns, drownings, fetal alcohol syndrome, high-risk sex, poisonings, psychoses, and dependency treatment—and compared those costs with associated alcohol sales. Previous studies did not break out costs of alcohol problems by age. **METHOD:** For each category of alcohol-related problems, we estimated fatal and nonfatal cases attributable to underage alcohol use. We multiplied alcohol-attributable cases by estimated costs per case to obtain total costs for each problem. **RESULTS:** Underage drinking accounted for at least 16% of alcohol sales in 2001. It led to 3,170 deaths and 2.6 million other harmful events. The estimated \$61.9 billion bill (relative SE = 18.5%) included \$5.4 billion in medical costs, \$14.9 billion in work loss and other resource costs, and \$41.6 billion in lost quality of life. Quality-of-life costs, which accounted for 67% of total costs, required challenging indirect measurement. Alcohol-attributable violence and traffic crashes dominated the costs. Leaving aside quality of life, the societal harm of \$1 per drink consumed by an underage drinker exceeded the average purchase price of \$0.90 or the associated \$0.10 in tax revenues. **CONCLUSIONS:** Recent attention has focused on problems resulting from youth use of illicit drugs and tobacco. In light of the associated substantial injuries, deaths, and high costs to society, youth drinking behaviors merit the same kind of serious attention.

**Montgomery, J. M., Foley, K. L., & Wolfson, M. (2006). Enforcing the minimum drinking age: State, local and agency characteristics associated with compliance checks and cops in shops programs. *Addiction*, 101(2), 223–231.**

**AIMS:** To identify state, local and organizational characteristics associated with local law enforcement agencies' implementation of two dramatically different approaches to enforcement of underage drinking laws: compliance checks and Cops in Shops programs. Compliance checks use underage decoys to attempt to purchase alcohol from retail merchants, while Cops in Shops programs deploy undercover law enforcement officers in alcohol outlets to detect and cite persons under the age of 21 who attempt to purchase alcohol. **DESIGN:** Cross-sectional telephone interview conducted as part of the Tobacco Enforcement Study (TES), which examined enforcement of laws related to youth access to tobacco. **SETTING:** Data were collected in 1999 among law enforcement agencies in all 50 states of the United States. **PARTICIPANTS:** Representatives of city police departments, departments of public safety, sheriffs or county police were included (n = 920 local agencies). **MEASUREMENTS:** Alcohol compliance checks and Cops in Shops programs were the primary outcomes. Covariates included state level policies (e.g. beer tax), agency resources (e.g. number of sworn officers) and community demographics (e.g. college dormitory population). **FINDINGS:** Local enforcement agencies were more likely to perform alcohol compliance checks than to have a Cops in Shops program (73.9% compared to 41.1% in cities > 25 000 and 55.7% compared to 23.9% in cities < or = 25 000). Conducting compliance checks for tobacco age-of-sale laws was positively associated with alcohol compliance checks and Cops in Shops (OR 3.30, P <

0.001; OR 1.84,  $P = 0.001$ , respectively). Having a Drug Abuse Resistance Education (DARE) officer was negatively related to conducting compliance checks (OR 0.67,  $P = 0.03$ ). Special community policing units were associated with departments having Cops in Shops programs (OR 1.80,  $P = 0.006$ ). CONCLUSIONS: This study used a nationally representative sample of communities to better understand state and local factors that shape local law enforcement agencies' use of two distinct approaches to underage drinking enforcement. The strong link observed between tobacco and alcohol compliance checks may indicate a culture within some law enforcement agencies supporting strict enforcement of age-of-sale laws.

**Reboussin, B. A., Song, E.-Y., Shrestha, A., Lohman, K. K., & Wolfson, M. (2006). A latent class analysis of underage problem drinking: Evidence from a community sample of 16–20 year olds. *Drug and Alcohol Dependence*, 83(3), 199–209.**

The aim of this paper is to shed light on the nature of underage problem drinking by using an empirically based method to characterize the variation in patterns of drinking in a community sample of underage drinkers. A total of 4056 16-20-year-old current drinkers from 212 communities in the US were surveyed by telephone as part of the National Evaluation of the Enforcing Underage Drinking Laws (EUDL) Program. Latent class models were used to create homogenous groups of drinkers with similar drinking patterns defined by multiple indicators of drinking behaviors and alcohol-related problems. Two types of underage problem drinkers were identified; risky drinkers (30%) and regular drinkers (27%). The most prominent behaviors among both types of underage problem drinkers were binge drinking and getting drunk. Being male, other drug use, early onset drinking and beliefs about friends drinking and getting drunk were all associated with an increased risk of being a problem drinker after adjustment for other factors. Beliefs that most friends drink and current marijuana use were the strongest predictors of both risky problem drinking (OR=4.0; 95% CI=3.1, 5.1 and OR=4.0; 95% CI=2.8, 5.6, respectively) and regular problem drinking (OR=10.8; 95% CI=7.0, 16.7 and OR=10.2; 95% CI=6.9, 15.2). Young adulthood (ages 18-20) was significantly associated with regular problem drinking but not risky problem drinking. The belief that most friends get drunk weekly was the strongest discriminator of risky and regular problem drinking patterns (OR=5.3; 95% CI=3.9, 7.1). These findings suggest that underage problem drinking is most strongly characterized by heavy drinking behaviors which can emerge in late adolescence and underscores its association with perceptions regarding friends drinking behaviors and illicit drug use.

See also:

Miller, T., Snowden, C., Birckmayer, J., & Hendrie, D. (2006). Retail alcohol monopolies, underage drinking, and youth impaired driving deaths. *Accident Analysis & Prevention*, 38(6), 1162–1167.

O'Hare, T., & Sherrer, M. V. (2006). Stress, recent changes in alcohol consumption level, and problem drinking in freshman first offenders. *Journal of Human Behavior in the Social Environment*, 13(3), 33–50.

## Parents

**Abar, C., & Turrisi, R. (2008). How important are parents during the college years? A longitudinal perspective of indirect influences parents yield on their college teens' alcohol use. *Addictive Behaviors*, 33(10), 1360–1368.**

Building on previous findings supporting the continuing influence of parents on their teens after they have gone to college [Turrisi, R., Jaccard, J., Taki, R., Dunnam, H., & Grimes, J. (2001). Examination of the short-term efficacy of a parent intervention to reduce college student drinking tendencies. *Psychology of Addictive Behaviors*, 15(4), 366-372.; Turrisi, R., Padilla, K., & Wiersma, K. (2000). College student drinking: An examination of theoretical models of drinking tendencies in freshman and upperclassmen. *Journal of Studies on Alcohol*, 61, 598-602.], this study examined the possible indirect influence that parents may have on their teen's alcohol use through the selection of alcohol using peers in college. Friend use served as a mediator of the relationship between parenting characteristics and alcohol use in a longitudinal college sample. As part of a larger study, 392 incoming college freshmen were assessed for their perceptions of their parent's parenting practices, and peer alcohol use. Results from SEM indicated that friend alcohol use (first semester freshman year) mediated the relationship between parental knowledge about what their teen was doing in his/her free time (baseline pre-matriculation to college) and individual use in college (second semester freshman year). Findings suggest that even at this late stage of early adulthood parents continue to exhibit influence on the choices their teens make as far as friends, which in turn influences their teens' drinking in college. Implications for prevention are discussed.

**Boyle, J. R., & Boekeloo, B. O. (2006). Perceived parental approval of drinking and its impact on problem drinking behaviors among first-year college students. *Journal of American College Health*, 54(4), 238–244.**

There is a paucity of research investigating the impact that parents may have on college drinking. In this study, the authors investigated the relationship between students' perceptions of parent approval of drinking and problem drinking occurrence. They conducted a Web-based survey of 265 first-year students living on campus during their second semester. The authors used logistic regression to examine the relationship between students' perceptions of their mothers' and fathers' attitudes toward their drinking, their mothers' and fathers' drinking habits, and problem drinking since they had begun college. Sixty-nine percent of respondents reported experiencing at least 1 drinking problem. Over one third of students perceived that their parents would approve of them drinking occasionally. Students perceiving more parental approval for their drinking were more likely to report at least 1 drinking problem. Student perceptions of parental approval of drinking warrant further investigation as a potentially mutable correlate of problem drinking.

**Capone, C., & Wood, M. D. (2008). Density of familial alcoholism and its effects on alcohol use and problems in college students. *Alcoholism: Clinical and Experimental Research*, 32(8), 1451–1458.**

**BACKGROUND:** Previous studies of family history of alcoholism (FHA) in college students have typically relied on dichotomous indices of paternal drinking. This study examined the prevalence of FHA and its effects on alcohol use and problems using a density measure in a sample ( $n = 408$ ) of college students. **METHODS:** Undergraduate students completed an anonymous survey in exchange for course credit. Data was collected between 2005 and 2006. **RESULTS:** Using a density measure of FHA, we observed an overall prevalence rate of 65.9% and a rate of 29.1% for FHA in both first and second-degree relatives. Structural equation modeling (SEM) was used to investigate relations among FHA, alcohol use/problems and previously identified etiological risk factors for alcohol use disorders (AUD). Results indicated a significant positive association between FHA and alcohol-related problems and this relationship was mediated by age of onset of drinking, behavioral undercontrol and current cigarette use. Behavioral undercontrol also mediated the relationship

between gender and alcohol problems. Additionally, FHA was associated with an earlier age of onset of drinking and this was related to greater alcohol use. **CONCLUSIONS:** Assessing density of FHA in future trajectory research may capture a greater number of students at risk for acute alcohol-related problems and/or future development of AUDs. Future preventive interventions with this population, which should begin well before the college years, may benefit from considering personality factors and incorporating smoking cessation to help identify at-risk students and assist those who wish to cut down on their alcohol use but find that smoking acts as a trigger for increased drinking.

**Gorsline, D., Holl, A., Pearson, J. C., & Child, J. T. (2006). It's more than drinking, drugs, and sex: College student perceptions of family problems. *College Student Journal, 40*(4), 802–807.**

The colorful misbehavior of college students trumps considerations of college students' relationships with their families. With broad coverage of behaviors such as binge drinking, on-line gambling, and risky sexual behavior, the image of the college student is one of a person worrying about what time the bar opens, rather than problems at home. This image may be a myth, just as believing a parent who drinks too much on a given evening forgets about his or her family problems is a myth. Understanding the role of family influence on college students expands the view of the concerns of college students. This study will identify problems facing college students' families today.

**Kelley, M. L., French, A., Schroeder, V., Bountress, K., Fals-Stewart, W., Steer, K., & Cooke, C. G. (2008). Mother-daughter and father-daughter attachment of college student ACOAs. *Substance Use & Misuse, 43*(11), 1562–1573.**

This 2005 study compared parent-child attachment in 89 American female Adult Children of Alcoholics (ACOAs) as compared to 201 non-ACOAs. Women attended a large university in the southeastern United States. Participants categorized as ACOA on the Children of Alcoholics Screen Test (CAST; Jones, 1983) reported significantly more negative affect and less support from their fathers as indicated on the Parental Attachment Questionnaire (Kenney, 1987). When results were examined by the gender of the alcohol-abusing parent, participants who suspected their fathers were problem drinkers did not differ from non-ACOAs in their attachment to either parent. As compared to non-ACOAs, women who self-identified as daughters of problem-drinking mothers reported poorer attachment both to mothers and fathers.

**Montgomery, C., Fisk, J. E., & Craig, L. (2008). The effects of perceived parenting style on the propensity for illicit drug use: The importance of parental warmth and control. *Drug and Alcohol Review, 27*(6), 640–649.**

**Introduction and Aims.** Research in adolescents has shown that parental warmth and control are important factors in drug use. The present study focused upon investigating perceived parental warmth and control in a sample of post-adolescent ecstasy/polydrug users, and investigating their relationship to severity of drug use. **Design and Methods.** A total of 128 (65 male) ecstasy/polydrug users, 51 (17 male), cannabis-only users and 54 (13 male) non-users were recruited from a university population. All participants completed the parenting styles and drug use questionnaires. **Results.** Compared to non-users, a greater proportion of ecstasy/polydrug users characterised their parents' style as neglectful. The modal style endorsed by non-users was authoritative. Those who rated their

parents' style as authoritative had significantly lower lifetime consumption and average dose of ecstasy relative to those describing their parents as neglectful. Again, relative to those describing their parents as neglectful, participants from authoritarian backgrounds had significantly smaller lifetime consumption of ecstasy and cocaine and significantly smaller average doses of cannabis, ecstasy and cocaine. Contrary to expectation, there was no significant association between perceived parental warmth and the severity of ecstasy use. Discussion and Conclusions. The present study is, to our knowledge, the first to quantify drug use, and relate it to perceived parental practices in a post-adolescent sample of ecstasy/polydrug users. The results provide further support for the relationship between perceived parental control and drug use.

**Padilla-Walker, L. M., Nelson, L. J., Madsen, S. D., & Barry, C. M. (2008). The role of perceived parental knowledge on emerging adults' risk behaviors. *Journal of Youth and Adolescence*, 37(7), 847–859.**

The purpose of this study was to gain a clearer understanding of the relation between parents' knowledge of their emerging-adult children and emerging adults' risk behaviors. Participants included 200 undergraduate students between the ages of 18 and 25 (121 women, 78 men; M age = 19.59, SD = 1.62) and both of their parents. Results revealed that knowledge of the emerging-adult child's activities varied as a function of parent- and child-reports, and that child outcomes associated with parental knowledge were generally positive, including less drinking, drug use, and risky sexual behavior (although this varied as a function of reporter). The links between maternal knowledge and lower drug and alcohol use were particularly strong in the presence of maternal closeness. Implications for understanding the parent-child relationship during the transition to adulthood were discussed.

**Patock-Peckham, J. A., & Morgan-Lopez, A. A. (2006). College drinking behaviors: Mediation links between parenting styles, impulse control, and alcohol-related outcomes. *Psychology of Addictive Behaviors*, 20(2), 117–125.**

Mediation links between parenting styles (authoritative, authoritarian, permissive), impulsiveness (general control), drinking control (specific control), and alcohol use and abuse were tested. A pattern-mixture approach (for modeling nonignorable missing data) with multiple-group structural equation models with 421 (206 female, 215 male) college students was used. Gender was examined as a potential moderator of parenting styles on control processes related to drinking. Specifically, the parent-child gender match was found to have implications for increased levels of impulsiveness (a significant mediator of parenting effects on drinking control). These findings suggest that a parent with a permissive parenting style who is the same gender as the respondent can directly influence control processes and indirectly influence alcohol use and abuse.

**Shutt, M. D., Oswald, S. B., & Cooper, D. L. (2006). Parent misperceptions of incoming student use of alcohol and other drugs. *Journal of College Student Development*, 47(5), 577–585.**

This study concludes that parental perceptions of college student drinking and intent to drink during the first year of college are much different than the actual use and intent to use by first-time, first-year students. Parental perceptions and their students' actual use significantly differed not only regarding alcohol, but also tobacco, marijuana, and other illegal drug use. There were 1,399 parents or guardians who completed all or part of the 13-item parent survey designed to measure parent

perceptions of their student's alcohol and other drug use. Two instruments were used for this data collection, Student Alcohol, Tobacco, and Other Drug Survey and Parent Alcohol, Tobacco, and Other Drug Survey. To engage parents more, campuses are beginning to expand intervention and prevention efforts by encouraging parental involvement. Parents must be educated on their role in alcohol and other drug education and prevention efforts for their college student. This must include information on how to talk to students about alcohol and other drugs before coming to campus and after they arrive.

See also:

Howells, N., & Rosenbaum, A. (2008). Effects of perpetrator and victim gender on negative outcomes of family violence. *Journal of Family Violence, 23*(3), 203–209.

Marmion, S. L., & Lundberg-Love, P. K. (2008). PTSD symptoms in college students exposed to interparental violence: Are they comparable to those that result from child physical and sexual abuse? *Journal of Aggression, Maltreatment & Trauma, 17*(3), 263–278.

White, H. R., McMorris, B. J., Catalano, R. F., Fleming, C. B., Haggerty, K. P., & Abbott, R. D. (2006). Increases in alcohol and marijuana use during the transition out of high school into emerging adulthood: The effects of leaving home, going to college, and high school protective factors. *Journal of Studies on Alcohol, 67*(6), 810–822.

## **V. PREVENTION THEORY AND PRACTICE**

### **Evaluation**

*(Includes articles that discuss evaluation strategies as well as studies that test the use of instruments or measurements of use)*

**Bernhardt, J. M., Usdan, S., Mays, D., Arriola, K. J., Martin, R. J., Cremeens, J., McGill, T., & Weitzel, J. A. (2007). Alcohol assessment using wireless handheld computers: A pilot study. *Addictive Behaviors, 32*(12), 3065–3070.**

Abstract: The present study sought to test the feasibility of measuring quantity and frequency of self-reported alcohol consumption among college students using the Handheld Assisted Network Diary (HAND) by comparing results to a retrospective Timeline Followback (TLFB). A total of 40 undergraduate college students completed a HAND assessment during the two-week study period and completed a TLFB at follow-up. The HAND recorded similar levels of alcohol consumption compared to the TLFB. There were no significant differences in overall alcohol consumption, drinks per drinking day, or heavy drinking days between the two methods of assessment. Handheld computers may represent a useful tool for assessing daily alcohol use among college students.

**Brand, P. A., & Anastasio, P. A. (2006). Violence-related attitudes and beliefs: Scale construction and psychometrics. *Journal of Interpersonal Violence, 21*(7), 856–868.**

The 50-item Violence-Related Attitudes and Beliefs Scale (V-RABS) includes three subscales measuring possible causes of violent behavior (environmental influences, biological influences, and mental illness) and four subscales assessing possible controls of violent behavior (death penalty, punishment, prevention, and catharsis). Each subscale demonstrates good internal consistency and

test-retest reliability. Thus, the V-RABS and its component subscales can be valuable research tools for understanding people's beliefs about the causes and controls of violent crime.

**Clapp, J. D., Holmes, M. R., Reed, M. B., Shillington, A. M., Freisthler, B., & Lange, J. E. (2007). Measuring college students' alcohol consumption in natural drinking environments: Field methodologies for bars and parties. *Evaluation Review*, 31(5), 469–489.**

In recent years researchers have paid substantial attention to the issue of college students' alcohol use. One limitation to the current literature is an over reliance on retrospective, self-report survey data. This article presents field methodologies for measuring college students' alcohol consumption in natural drinking environments. Specifically, we present the methodology from a large field study of student drinking environments along with some illustrative data from the same study. Field surveys, observational methods, sampling issues, and breath alcohol concentration sample collection are detailed.

**Corbin, W. R., Morean, M. E., & Benedict, D. (2008). The Positive Drinking Consequences Questionnaire (PDCQ): Validation of a new assessment tool. *Addictive Behaviors*, 33(1), 54–68.**

Expected and experienced negative consequences and expected positive consequences of alcohol use have been widely studied, while little attention has been given to experienced positive drinking consequences. Although existing studies suggest that positive consequences may be important [Park, C.L. (2004). Positive and negative consequences of alcohol consumption in college students. *Addictive Behaviors*, 29, 311-321.; Park, C.L. & Grant, C. (2005). Determinants of positive and negative consequences of alcohol consumption in college students: Alcohol use, gender, and psychological characteristics. *Addictive Behaviors*, 30, 755-765.], it is not clear if they are distinct from expected positive outcomes or uniquely associated with drinking behavior. The primary goal of the current study was to develop a measure that directly assessed specific, real life drinking consequences rather than relying on general past tense derivations ("I forgot my worries") of expectancy items. Such a measure is necessary to determine whether or not positive consequences are distinct from positive expectancies and to assess the unique contribution of positive drinking consequences to drinking behavior. Participants were 423 undergraduate students who completed an online survey; 277 drinkers (56.5% women) completed all data necessary for analyses. Principal components analysis of the Positive Drinking Consequences Questionnaire (PDCQ) identified a single-factor structure with good internal and split-half reliability. The PDCQ also demonstrated discriminant validity relative to a positive expectancy measure and incremental validity in relation to drinking behavior. Although additional studies with heavier drinking populations are needed, the PDCQ may ultimately serve as a valuable research and clinical assessment tool.

**Correia, C. J., & Little, C. (2006). Use of a multiple-choice procedure with college student drinkers. *Psychology of Addictive Behaviors*, 20(4), 445–452.**

The Multiple-Choice Procedure (MCP) was developed to investigate the relationship between drug preferences and alternative reinforcers. The current studies were designed to validate survey and laboratory versions of the MCP with college student drinkers. In Study 1, 320 undergraduates with a recent history of alcohol consumption used a survey version of the MCP to make 120 discrete hypothetical choices between two amounts of alcohol and escalating amounts of money delivered immediately or after a 1-week delay. In Study 2, 21 undergraduates completed a laboratory version

of the MCP to make 120 discrete choices involving real alcohol and monetary payments. Responses to both versions of the MCP were related to measures of alcohol use and varied as a function of delay associated with the money choice. Responses to the survey version of the MCP also varied as a function of the amount of alcohol hypothetically available. The results of the 2 studies are consistent with a behavioral choice perspective of alcohol use, which focuses on preferences in the context of competing alternative reinforcers.

**Cranford, J. A., McCabe, S. E., & Boyd, C. J. (2006). A new measure of binge drinking: Prevalence and correlates in a probability sample of undergraduates. *Alcoholism: Clinical and Experimental Research, 30*(11), 1896–1905.**

Background: A standard measure defines binge drinking as the consumption of 5 or more drinks in a row for men (4 or more drinks for women) on at least 1 occasion during the past 2 weeks. A revised operational definition of binge drinking was developed by the National Institute on Alcohol Abuse and Alcoholism in 2004 and incorporated the duration of the drinking episode in addition to the quantity of alcohol consumed. This study compares the standard and new binge measures for overall and subgroup prevalence rates; associations with gender, race/ethnicity, and age of drinking onset; and associations with negative drinking consequences. Methods: A probability sample of 4,580 randomly selected college students (50.3% female, M age=19.9, SD=2.0) at a large Midwestern university in the United States completed a Web-based survey of alcohol and other drug use. Participants reported on past 2-week binge drinking using the standard measure and past-year binge drinking using the new measure. Results: The longer past-year time frame of the new measure yielded a higher prevalence estimate of binge drinking (63.6%) compared with the 2-week standard measure (53.2%). Approximately 9.9% of those who were classified as binge drinkers using the 2-week standard measure were classified as non-binge drinkers using the new measure specification of a 2-hour duration for the drinking episode. The past-year new binge measure was positively associated with negative drinking consequences even when the 2-week measure was statistically controlled. Conclusions: Using a longer time frame and incorporating the duration of the drinking episode, the new measure of binge drinking appears to capture an important element of risky alcohol involvement in college students that is not fully assessed by the standard measure.

**Cranford, J. A., McCabe, S. E., Boyd, C. J., Slayden, J., Reed, M. B., Ketchie, J. M., Lange, J. E., & Scott, M. S. (2008). Reasons for nonresponse in a Web-based survey of alcohol involvement among first-year college students. *Addictive Behaviors, 33*(1), 206–210.**

This study conducted a follow-up telephone survey of a probability sample of college students who did not respond to a Web survey to determine correlates of and reasons for nonresponse. A stratified random sample of 2502 full-time first-year undergraduate students was invited to participate in a Web-based survey. A random sample of 221 students who did not respond to the original Web survey completed an abbreviated version of the original survey by telephone. Nonresponse did not vary by gender, but nonresponse was higher among Blacks and Hispanics compared to Whites, and Blacks compared to Asians. Nonresponders reported lower frequency of past 28 days drinking, lower levels of past-year and past 28-days heavy episodic drinking, and more time spent preparing for classes than responders. The most common reasons for nonresponse were “too busy” (45.7%), “not interested” (18.1%), and “forgot to complete survey” (18.1%). Reasons for nonresponse to Web surveys among college students are similar to reasons for nonresponse to mail and telephone surveys, and some nonresponse reasons vary as a function of alcohol involvement.

**DiRamio, D., & Payne, R. (2007). Assessing the relationship between campus programs, student self-efficacy, stress, and substance abuse. *College Student Journal, 41*(3), 676–693.**

Student life educators continue searching for ways to assess campus programs. This is an exploratory study for an alternative assessment approach based on a hypothesized relationship between participation in campus activities, student self-efficacy, and student dispositions toward aspects of mental health and substance abuse. Focusing on the psyche of our students is desirable, especially in light of litigation holding colleges liable for student suicide, and may prove useful as an outcomes measure for assessment and evaluation in the future. Bandura's concept of self-efficacy is used as a conceptual framework for the survey. The authors surveyed nearly 10% of underclassmen at a public research university. Despite having the hypothesis contradicted in several analyses, results have implications for campus health policy and student life programming.

**Fishburne, J. W., & Brown, J. M. (2006). How do college students estimate their drinking? Comparing consumption patterns among quantity-frequency, graduated frequency, and timeline follow-back methods. *Journal of Alcohol and Drug Education, 50*(1), 15–33.**

This exploratory study was designed to compare several commonly used measures of alcohol use among college students in order to appreciate how estimations of college drinking may be affected by the type of assessment tool used. Consumption patterns of 42 college student drinkers were compared using a quantity-frequency measure, a graduated frequency measure, and a timeline follow-back (TLFB) interview. Within subject repeated measures were used to compare drinking variables across the two self-report measures and the interview procedure. The results showed that both the specificity of the measure, as well as the type of administration, result in significant differences on variables that describe the quantity of alcohol consumed. Measures of frequency appeared to be less dependent on these assessment factors.

**Gaher, R. M., & Simons, J. S. (2007). Evaluations and expectancies of alcohol and marijuana problems among college students. *Psychology of Addictive Behaviors, 21*(4), 545–554.**

Two studies examined the associations between evaluations (good-bad) and expected likelihood (likely-unlikely) of alcohol- and marijuana-related problems and hazardous consumption and problems among college students. Participants provided data on alcohol use, alcohol-related problems, and expectancies and evaluations of alcohol problems; marijuana use indices, marijuana-related problems, marijuana effect expectancies, and likelihood and evaluations of marijuana problems. Evaluations of alcohol problems were positively related to the number of binge drinking occasions and alcohol-related problems. The interaction between evaluations and expectancies was significant in predicting the number of binge drinking occasions. Expectancies demonstrated a curvilinear relationship with binge drinking and alcohol-related problems. Marijuana users evaluated marijuana-related problems as less negative and less likely to occur than did nonusers. Expectancies, but not evaluations, of negative consequences were significantly associated with marijuana use intensity. Expectancies of problems demonstrated a curvilinear relationship with marijuana-use intensity and marijuana problems. Men evaluated alcohol and marijuana problems less negatively than did women. In summary, the expected likelihood of alcohol-marijuana problems and the evaluation of such problems represent a vulnerability factor associated with increased liability for hazardous alcohol and marijuana use.

**Grant, V. V., Stewart, S. H., O'Connor, R. M., Blackwell, E., & Conrod, P. J. (2007).**

**Psychometric evaluation of the five-factor Modified Drinking Motives Questionnaire—Revised in undergraduates. *Addictive Behaviors*, 32(11), 2611–2632.**

The psychometric properties of the Modified Drinking Motives Questionnaire—Revised (Modified DMQ-R) [Blackwell, E., & Conrod, P. J. (2003). A five-dimensional measure of drinking motives. Unpublished manuscript, Department of Psychology, University of British Columbia], based on a five-factor model of drinking motives with separate coping-anxiety and coping-depression factors, were evaluated in undergraduates. In Study 1, confirmatory factor analyses supported the correlated five-factor model in two samples of undergraduate drinkers (N=726 and N=603). Furthermore, the five-factor model fit the data better than a four-factor model conceptually equivalent to that of Cooper [Cooper, M. L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment*, 6, 117-128] (i.e., with coping-anxiety and coping-depression items constrained to a single factor). In Study 1, drinking motives were predictive of concurrent drinking frequency and typical number of alcoholic beverages per occasion, over and above demographics. In Study 2, the Modified DMQ-R scores showed good to excellent test-retest reliability in a sample of undergraduates who were relatively frequent drinkers (N=169). Also, drinking motives prospectively predicted number of drinks consumed per week and alcohol-related problems, over and above demographics and initial alcohol use. Notably, coping-anxiety and coping-depression motives were distinctly related to alcohol consumption and alcohol problems.

**Hagman, B. T., Clifford, P. R., Noel, N. E., Davis, C. M., & Cramond, A. J. (2007). The utility of collateral informants in substance use research involving college students. *Addictive Behaviors*, 32(10), 2317–2323.**

Collateral informants have been routinely included in substance abuse treatment research to corroborate subject self-reported alcohol and other drug use. However, only a few studies to date have examined subject-collateral correspondence with respect to non-clinical populations (e.g., college students). The purpose of the present study was to examine the associations between college students self-reported substance use and corresponding collateral (i.e., friends') reports. A total of 100 subject-collateral pairs were recruited from psychology courses at a large public university located in the Southeastern, United States. Subjects and collaterals provided information specific to their own, as well as their friend's, recent (i.e., last 90-days) substance use. Study data yielded moderate to good, statistically significant, correlations between subject-friend pairs for each type of substance use. Discrepancy analyses revealed that the majority of subjects reported greater substance use relative to their collateral reports. This pattern of response (i.e., subject reporting greater use) is consistent with the extant literature. In addition, the friend's personal substance use appeared to influence his/her report of the subject's alcohol and other drug use. It appears that college student self-reports regarding alcohol and other drug use are reasonably accurate.

**Hamby, S., Sugarman, D. B., & Boney-McCoy, S. (2006). Does questionnaire format impact reported partner violence rates? An experimental study. *Violence and Victims*, 21(4), 507–518.**

Researchers assess partner violence using numerous formats, but whether questionnaire format affects obtained rates has rarely been examined. We compared paper-and-pencil versus computer administrations, and standard Revised Conflict Tactics Scales (CTS2) categories versus dichotomous (yes/no) response categories, in a 2 x 2 experiment with 160 undergraduate students. Differential validity was also examined for gender. Results provide some support for the use of all formats,

although sexual coercion rates showed more measurement variability than reports of psychological aggression, physical assault, or injury. Sexual coercion effects also differed by gender. The standard CTS2 categories resulted in more disclosures than dichotomous categories for some variables. Differences between computer and paper-and-pencil formats were generally minimal. More attention to the effects of questionnaire design on disclosures of violence is urgently needed.

**Hernandez, D. V., Skewes, M. C., Resor, M. R., Villanueva, M. R., Hanson, B. S., & Blume, A. W. (2006). A pilot test of an alcohol skills training programme for Mexican American college students. *International Journal of Drug Policy*, 17(4), 320–328.**

The alcohol skills training program for college students (ASTP) is an empirically supported intervention to reduce the harmful consequences of drinking behaviour among college students in the United States (US). However, ASTP had not been previously tested among college student samples in other cultures. In addition, very little is known about how to intervene upon risky alcohol use among Mexican-American college students, although this population is at high risk for alcohol abuse. In this study, the ASTP was revised to meet the cultural and language needs of bilingual Mexican-American college students. Mexican-American undergraduates (N = 109) attending a predominantly Latino university located along the US-Mexico border were randomly assigned to one of two intervention groups (manual-only and full ASTP). Participants were assessed at three time points (baseline, 3-month follow-up, and 12-month follow-up) to determine drinking patterns and alcohol-related consequences. Study results found that Mexican-American college students in both conditions consumed less alcohol and experienced fewer alcohol-related consequences after the intervention. The culturally relevant ASTP may be a promising harm reduction programme for Mexican-American college students, and ASTP strategies appear to be transportable into other cultures.

**Hettema, J. E., Miller, W. R., Tonigan, J. S., & Delaney, H. D. (2008). The test-retest reliability of the Form 90-DWI: An instrument for assessing intoxicated driving. *Psychology of Addictive Behaviors*, 22(1), 117–121.**

Although driving while intoxicated (DWI) is a pervasive problem, reliable measures of this behavior have been elusive. In the present study, the Form 90, a widely utilized alcohol and substance use instrument, was adapted for measurement of DWI and related behaviors. Levels of reliability for the adapted instrument, the Form 90-DWI, were tested among a university sample of 60 undergraduate students who had consumed alcohol during the past 90 days. The authors administered the instrument once during an intake interview and again, 7-30 days later, to determine levels of test-retest reliability. Overall, the Form 90-DWI demonstrated high levels of reliability for many general drinking and DWI behaviors. Levels of reliability were lower for riding with an intoxicated driver and for variables involving several behavioral conjunctions, such as seat belt use and the presence of passengers when driving with a blood alcohol concentration above .08. Overall, the Form 90-DWI shows promise as a reliable measure of DWI behavior in research on treatment outcome and prevention.

**Hohman, M., Finnegan, D., & Clapp, J. D. (2008). A concurrent validation study of the Alcohol and Other Drug Identification (AODI) scale. *Journal of Social Work Practice in the Addictions*, 8(3), 367–379.**

This study measured the concurrent validity of the Alcohol and Other Drug Identification (AODI)

scale, a measure of barriers to social workers addressing substance abuse issues with their clients. The scale was administered along with the Drug and Drug Problems Perceptions Questionnaire (DDPPQ), a measure of mental health workers' attitudes toward working with substance abusers. A total of 197 graduate social work students and field supervisors participated in a Web-based administration of the scales. Principal components analysis indicated that three subscale factors of the AODI remained, with two items deleted. All subscale factors of the AODI negatively correlated with the DDPPQ, indicating evidence for concurrent validity.

**Kahler, C. W., Hustad, J., Barnett, N. P., Strong, D. R., & Borsari, B. (2008). Validation of the 30-day version of the Brief Young Adult Alcohol Consequences Questionnaire for use in longitudinal studies. *Journal of Studies on Alcohol and Drugs, 69*(4), 611–615.**

**OBJECTIVE:** The Brief Young Adult Alcohol Consequences Questionnaire (B-YAACQ) was developed using item response modeling to provide a brief and readily interpretable measure of negative alcohol consequences over the past year among college students. The purpose of the present study was to extend evaluation of the B-YAACQ by examining its psychometric properties when administered to college students cited for a university alcohol violation using a past 30-day time frame of assessment. **METHOD:** The B-YAACQ was administered at baseline and at a 6-week follow-up to 291 students cited for a university alcohol violation. Reliability and validity analyses, in addition to Rasch model analyses, were conducted using these data. **RESULTS:** Results demonstrated that the B-YAACQ was internally consistent, showed strong unidimensionality and additive properties, displayed minimal item redundancy and minimal floor or ceiling effects, was reliable over a 6-week period, and was sensitive to change in drinking following an alcohol intervention. In addition, the relative severity of items was preserved over time and generally consistent with results from an earlier study. **CONCLUSIONS:** The 30-day B-YAACQ seems valid for use with college students who have received an alcohol violation and for use in evaluating changes in alcohol consequences.

**Labrie, J. W., Pedersen, E. R., & Tawalbeh, S. (2007). Classifying risky-drinking college students: Another look at the two-week drinker-type categorization. *Journal of Studies on Alcohol, 68*(1), 86–90.**

**ABSTRACT.** Objective: The present study examined the effectiveness of the 2-week period currently used in the categorization of heavy episodic drinking among college students. Two-week drinker-type labels included the following: nonbinge drinker, binge drinker, and frequent binge drinker. Method: Three samples of college student drinkers (104 volunteers, 283 adjudicated students, and 238 freshmen male students) completed the 3-month Timeline Followback assessment of drinking. Drinking behavior during the last 2 weeks of the month before the study was compared with drinking behavior during the first 2 weeks of the same month to compare behavior and resulting labels during both 2-week periods. Results: Inconsistencies existed in drinker-type labels during the first 2 weeks of the month and the last 2 weeks of the month for all three samples. Between 40% and 50% of participants in the three samples were classified as a different drinker type across the month. Nonbinge drinkers experienced a wide range of alcohol-related problems, and much variation existed among the frequent-binge-drinker label. Conclusions: The results suggest that the current definition needs to be modified to accurately identify risky-drinking college students. Expanding the assessment window past 2 weeks of behavior, as well as developing different classification schemes, might categorize risky drinkers more accurately.

**Lanier, C. A., & Green, B. A. (2006). Principal component analysis of the College Date Rape Attitude Survey (CDRAS): An instrument for the evaluation of date rape prevention programs. *Journal of Aggression, Maltreatment & Trauma, 13*(2), 79–93.**

The College Date Rape Attitude Survey (CDRAS), a measure intended to assess attitudes related to risk for committing rape in adolescents and young adults, was examined to determine the principal component structure of rape-related attitudes in data collected on an undergraduate college sample. Results provide evidence that responses to the instrument are reliable with regard to internal consistency, and that the CDRAS measures four rape-related attitudes: Entitlement, Blame Shifting, Traditional Roles, and Overwhelming Sexual Arousal. The CDRAS could be used to elicit information about student's attitudes, which could then be used to develop, implement, and evaluate an intervention specific to the needs of that population.

**Leedy, M. J., & Leffingwell, T. R. (2006). Evaluation of a measure of incidental legal risk behaviors in college students who use alcohol. *Journal of Drug Education, 36*(2), 125–139.**

The purpose of this study was to develop a new measure of incidental behaviors that put college students at increased risk of legal consequences while using alcohol, the Legal Risk Behaviors while using Alcohol (LRBA) scale. Two hundred and twenty one college students who used alcohol were recruited to complete an online study about their use of alcohol, specific behaviors engaged in while using alcohol, and associated consequences. Analyses revealed that the 19-item LRBA consisted of three factors—"Risky Behaviors," "Protective Behaviors," and "Private Settings." Analyses suggested that the LRBA had adequate test-retest reliability and internal consistency. Initial results indicate that the LRBA may be a useful measure to help us better understand what behaviors college student engage in that increase their risk for experiencing a legal encounter.

**Leeman, R. F., Fenton, M., & Volpicelli, J. R. (2007). Impaired control and undergraduate problem drinking. *Alcohol and Alcoholism (Oxford, Oxfordshire), 42*(1), 42–48.**

AIMS: Impaired control, one of the hallmarks of addiction, is also one of the earliest dependence symptoms to develop. Thus impaired control is particularly relevant to undergraduates and other young adults with relatively brief drinking histories. The main goal of this study was to determine whether impaired control predicted heavy episodic drinking and alcohol-related problems cross-sectionally in an undergraduate sample after controlling for gender, family history of alcohol and drug problems, and several other established predictor variables from the undergraduate alcohol literature. METHODS: A sample of first-year undergraduates (n = 312) completed Part 2 of the Impaired Control Scale (ICS) and other measures related to alcohol use as part of a larger study on problem drinking in undergraduates. RESULTS: Scores on Part 2 of the ICS predicted heavy episodic drinking and alcohol-related problems cross-sectionally even after controlling for all other predictor variables. Notably, impaired control was a stronger predictor of alcohol-related problems than overall weekly alcohol consumption. Part 2 of the ICS was found to be a reliable and valid measure for use with undergraduates. CONCLUSIONS: These findings support the notion that impaired control is one of the earliest dependence symptoms to develop. The ICS is an effective tool for identifying young adults at risk for problem drinking.

**Lewis, M. A., Neighbors, C., Lee, C. M., & Oster-Aaland, L. (2008). 21st birthday celebratory drinking: Evaluation of a personalized normative feedback card intervention. *Psychology of Addictive Behaviors, 22*(2), 176–185.**

This research was designed to evaluate a personalized normative feedback birthday card intervention aimed at reducing normative perceptions, alcohol consumption, and negative consequences associated with 21st birthday celebrations among college students (N=281; 59.15% women). Students were randomly assigned to receive or not receive a birthday card about 1 week prior to their 21st birthday. Approximately 1 week following their birthday, students were asked to complete a brief survey concerning their birthday celebration activities. Findings indicated that the birthday card intervention was not successful at reducing drinking or consequences; however, the card did reduce normative misperceptions. Additional findings indicated that many students experienced negative consequences, such as passing out or driving after consuming alcohol. Combined, these findings suggest that prevention is needed for drinking associated with turning 21. However, prevention efforts should consist of more than a birthday card.

**Mackintosh, M. A., Earleywine, M., & Dunn, M. E. (2006). Alcohol expectancies for social facilitation: A short form with decreased bias. *Addictive Behaviors, 31*(9), 1536–1546.**

The social facilitation scale of the Alcohol Expectancy Questionnaire-Adolescent version predicts subsequent drinking behavior and covaries with other important constructs. An examination of the interval-level measurement properties and potential biases of items could help improve the scale. Responses in a large sample (N = 518) of undergraduates confirmed that the items fit a Rasch model for a single-factor, interval scale. Two items were biased when comparing non-drinkers, social drinkers and extreme drinkers. Four additional items showed gender bias. Removal of these items shortened the scale without decreasing correlations with two measures associated with drinking, while the strength with one measure was slightly decreased. This short form of the questionnaire should prove useful in the study of alcohol expectancies for social facilitation without drinking- or gender-related bias. These results also support the utility of Rasch modeling.

**Martens, M. P., Neighbors, C., Dams-O'Connor, K., Lee, C. M., & Larimer, M. E. (2007). The factor structure of a dichotomously scored Rutgers Alcohol Problem Index. *Journal of Studies on Alcohol and Drugs, 68*(4), 597–606.**

Objective: Heavy college-student alcohol use and its resulting negative consequences represent a public-health problem on American college campuses. The Rutgers Alcohol Problem Index (RAPI) is a commonly used measure of alcohol problems among college students, but the psychometric properties of this measure never have been comprehensively assessed with the college-student population. The purpose of this research was to conduct reliability and validity analyses, particularly exploratory and confirmatory factor analysis, on a dichotomously scored version of the measure. Method: Data were collected on 4,686 undergraduate students at a large, public university in the Northwest region of the United States and 438 students at a large, public university in the Northeast. Results: Exploratory factor analysis suggested that a three-factor model provided the best fit to the data. This finding was replicated via confirmatory factor analyses in two separate samples. The three factors were labeled Abuse/Dependence Symptoms, Personal Consequences, and Social Consequences. Each individual factor demonstrated adequate internal consistency and convergent validity. Conclusion: The results of this study suggest that a dichotomously scored RAPI consists of three subfactors that are reliable and valid in identifying alcohol-related problems among college students.

**Martens, M. P., Pederson, E. R., LaBrie, J. W., Ferrier, A. G., & Cimini, M. D. (2007).**

**Measuring alcohol-related protective behavioral strategies among college students: Further examination of the Protective Behavioral Strategies Scale. *Psychology of Addictive Behaviors*, 21(3), 307–315.**

Heavy drinking among college students has been recognized as a public health problem on American college campuses (e.g., R. Hingson, T. Heeren, M. Winter, & H. Wechsler, 2005). Recently, protective behavioral strategies, or cognitive-behavioral strategies that can be implemented when using alcohol to reduce consumption and resulting negative consequences, have been shown to be associated with less alcohol use and fewer alcohol-related problems (e.g., S. L. Benton et al., 2004; M. P. Martens et al., 2005). The purpose of the present study was to conduct additional psychometric work on a measure designed to assess the use of such strategies: the Protective Behavioral Strategies Scale (PBSS; M. P. Martens et al., 2005). Data were collected on 505 undergraduate students from 2 universities who reported having consumed alcohol at least once in the past 30 days. Results of a confirmatory factor analysis supported the hypothesized 3-factor version of the PBSS, and scores on each subscale were correlated in the expected direction with both alcohol use and alcohol-related problems. Thus, the PBSS appears to be reliable and valid for use among college student drinkers.

**McCabe, S. E., Boyd, C. J., Cranford, J. A., Morales, M., & Slayden, J. (2006). A modified version of the Drug Abuse Screening Test among undergraduate students. *Journal of Substance Abuse Treatment*, 31(3), 297–303.**

The present study assesses the prevalence of items from a modified version of the Drug Abuse Screening Test, Short Form (DAST-10) for substances other than alcohol among undergraduate students. More than 4,500 undergraduate students at a large Midwestern research university completed a web-based survey in 2005. Nearly 1 every 10 undergraduate students experienced three or more DAST-10 items in the past 12 months. Although the prevalence of illicit drug use did not differ by gender, undergraduate men were significantly more likely than women to report DAST-10 items. Less than 6% of individuals who reported three or more drug DAST-10 items had ever used treatment services for substance use. As a brief screening instrument, the DAST-10 offers promise for detecting possible drug abuse among college students. Based on the prevalence of drug use, colleges and universities are encouraged to provide screening opportunities to identify and to provide services for students at high risk for drug abuse.

**McCabe, S. E., Couper, M. P., Cranford, J. A., & Boyd, C. J. (2006). Comparison of Web and mail surveys for studying secondary consequences associated with substance use: Evidence for minimal mode effects. *Addictive Behaviors*, 31(1), 162–168.**

**OBJECTIVES:** The present study examined the impact of using a Web survey vs. a more traditional mail survey on the reporting of secondary consequences associated with substance use by undergraduate students. **METHODS:** During the spring of 2001, a survey questionnaire was administered to a randomly selected sample of 7000 undergraduate students attending a large Midwestern research university in the United States. Sampled students were randomly assigned to a Web survey mode (n = 3500) or a mail survey mode (n = 3500). **RESULTS:** The majority of respondents experienced a secondary consequence of substance use in the past 12 months. Bivariate and multivariate results showed minimal differences between Web and mail survey modes in the reporting of secondary consequences associated with substance use. **CONCLUSIONS:** The present study provides evidence that Web surveys can be used as an effective mode for collecting data

regarding secondary consequences among undergraduate college students. The present study suggests secondary consequences associated with substance use are highly prevalent among undergraduate students.

**McCabe, S. E., Diez, A., Boyd, C. J., Nelson, T. F., & Weitzman, E. R. (2006). Comparing web and mail responses in a mixed mode survey in college alcohol use research. *Addictive Behaviors, 31*(9), 1619–1627.**

Objective: This exploratory study examined potential mode effects (web versus U.S. mail) in a mixed mode design survey of alcohol use at eight U.S. colleges. Methods: Randomly selected students from eight U.S. colleges were invited to participate in a self-administered survey on their alcohol use in the spring of 2002. Data were collected initially by web survey (n = 2619) and nonresponders to this mode were mailed a hardcopy survey (n = 628). Results: College students who were male, living on-campus and under 21 years of age were significantly more likely to complete the initial web survey. Multivariate analyses revealed few substantive differences between survey modality and alcohol use measures. Conclusions: The findings from this study provide preliminary evidence that web and mail surveys produce comparable estimates of alcohol use in a non-randomized mixed mode design. The results suggest that mixed mode survey designs could be effective at reaching certain college sub-populations and improving overall response rate while maintaining valid measurement of alcohol use. Web surveys are gaining popularity in survey research and more work is needed to examine whether these results can extend to web surveys generally or are specific to mixed mode designs.

**Neal, D. J., Corbin, W. R., & Fromme, K. (2006). Measurement of alcohol-related consequences among high school and college students: Application of item response models to the Rutgers Alcohol Problem Index. *Psychological Assessment, 18*(4), 402–414.**

The Rutgers Alcohol Problem Index (RAPI; H. R. White & E. W. Labouvie, 1989) is a frequently used measure of alcohol-related consequences in adolescents and college students, but psychometric evaluations of the RAPI are limited and it has not been validated with college students. This study used item response theory (IRT) to examine the RAPI on students (N = 895; 65% female, 35% male) assessed in both high school and college. A series of 2-parameter IRT models were computed, examining differential item functioning across gender and time points. A reduced 18-item measure demonstrating strong clinical utility is proposed, with scores of 8 or greater implying greater need for treatment.

**Orona, J. A., Blume, A. W., Morera, O. F., & Perez, S. (2007). Examining drinking consequences and reasons for drinking in a bilingual college sample. *Hispanic Journal of Behavioral Sciences, 29*(1), 101–115.**

College drinking behavior is a national public health concern. However, little research has been conducted to test the psychometric validity and reliability of alcohol use measures among Spanish-speaking Hispanic college students. Adopting a translation-back-translation approach, the Rutgers Alcohol Problem Index (RAPI) was translated into Spanish and the Razones del Consumo de Alcohol (RCA), a newly created measure of one's reasons for drinking, was developed in Spanish. Both measures were administered to 155 Spanish-speaking students at a university in the Southwestern United States. All translated measures demonstrated adequate internal consistency reliability. Support for the construct validity of the translated RAPI measure was demonstrated as gender and RCA scores were predictive of RAPI scores in their expected directions [ $R^2 = .438$ ,  $F(2,$

138) = 53.36,  $p = .000$ ]. Acculturation was not significantly associated with RAPI scores nor did acculturation interact with RCA scores to enhance the predictability of RAPI scores. Finally, an exploratory factor analysis was performed on the RCA revealing a one-factor solution as the most adequate description of the RCA data. Knowledge of reasons for drinking as assessed by the RCA seems useful in predicting drinking-related consequences among Hispanic college students.

**Ostafin, B. D., & Palfai, T. P. (2006). Compelled to consume: The Implicit Association Test and automatic alcohol motivation. *Psychology of Addictive Behaviors*, 20(3), 322–327.**

The Implicit Association Test (IAT; A. G. Greenwald, D. E. McGhee, & J. L. K. Schwartz, 1998) has recently been used to assess the role of alcohol-affect associations in drinking behavior. The current study examined the validity of an alcohol IAT with 88 hazardous-drinking college students who completed measures of drinking behavior, an explicit measure of alcohol motivation, and an IAT that assessed alcohol-motivation associations. Regression analyses indicated that IAT scores correlated with binge drinking and cue reactivity, replicating T. P. Palfai and B. D. Ostafin's (2003) results. Results also indicated convergent validity (the IAT was related to an explicit measure of alcohol motivation) and incremental validity (IAT scores were correlated with alcohol behavior after controlling for the explicit measure). Implications for understanding the self-regulation of drinking are discussed.

**Parks, K. A., Pardi, A. M., & Bradizza, C. M. (2006). Collecting data on alcohol use and alcohol-related victimization: A comparison of telephone and Web-based survey methods. *Journal of Studies on Alcohol*, 67(2), 318–323.**

**OBJECTIVE:** Traditionally, personal contact with an experienced interviewer has been thought to facilitate collection of data on alcohol use and victimization experiences. Recent studies indicate that Web-based surveys may be an efficient alternative for gathering these sensitive data. To date, telephone interviewing and Web-based collection of data on alcohol-related negative consequences, particularly victimization, have not been compared. This study was designed to compare data from an interviewer-administered and Web-based survey on alcohol use and alcohol-related negative consequences in a sample of college women. **METHOD:** Seven hundred women from a second semester freshmen college class were randomly selected to participate in either the telephone interview or Web-based modes of survey administration. **RESULTS:** Fifty-three percent of invited women ( $N = 370$ ) completed the survey. Completion rates were higher, and estimated dollar costs were significantly lower, for the Web-based survey. There were no differences in reported rates of alcohol or drug use by survey method; however, there were differences in several specific alcohol-related negative consequences. **CONCLUSIONS:** These findings suggest that, for college women, Web-based surveys versus telephone interviews can be an effective and more cost-efficient means for collecting data on alcohol use and related negative consequences, particularly victimization. In addition, we found some evidence that women may be more forthcoming when responding to a Web-based survey as compared with an interviewer-administered telephone survey.

**Paschall, M. J., Bersamin, M., Fearnow-Kenney, M., Wyrick, D., & Currey, D. (2006). Short-term evaluation of a web-based college alcohol misuse and harm prevention course (College Alc). *Journal of Alcohol and Drug Education*, 50(3), 49–65.**

This study examined the short-term effects of a web-based alcohol misuse and harm prevention course (College Alc) among incoming freshmen at a California public university. Analysis results

indicated that at the end of the fall semester, students randomly assigned to College Alc (n = 173) had a higher level of alcohol-related knowledge and less positive attitudes toward alcohol use than students in the control group (n = 197). Students assigned to College Alc also reported a somewhat higher level of intentions to use strategies to minimize alcohol-related harm. College Alc did not have and effects on other targeted psychosocial factors (e.g., alcohol expectancies), alcohol use and heavy drinking, and alcohol-related problems. Observed effect sizes were generally small, suggesting that College Alc may have no effect on students' risk for alcohol misuse and related harm.

**Pedersen, E. R., & LaBrie, J. W. (2006). A within-subjects validation of a group-administered timeline followback for alcohol use. *Journal of Studies on Alcohol*, 67(2), 332–335.**

**OBJECTIVE:** The current study uses a within-subjects randomized design with the Timeline Followback (TLFB) method administered in groups or to individuals to determine the equivalence of these methods. **METHOD:** One hundred and four male and female college students who reported drinking at least once in the past 3 months completed the TLFB during a one-on-one interview, as well as in a group setting days apart. The two administrations were counterbalanced among the participants. Drinking variables assessed were drinking days, average drinks, total drinks, and maximum drinks consumed both during a 3-month (90 days) and a 1-month (30 days) period. **RESULTS:** Repeated measures analyses revealed no differences within subjects between the individual TLFB and the group TLFB on any of the four assessed drinking variables in the past 3 months and the past 1 month. Pearson's correlation coefficients revealed strong and significant correlations between the two administration styles. Heavy episodic drinking behavior was similar across administration styles as well. No differences between administration styles were consistent regardless of which administration was received first. **CONCLUSIONS:** The study suggests that the group TLFB yields similarly accurate results to the previously validated individual TLFB. The group-administered TLFB could be used in clinical and research settings as an efficient means of collecting information from large numbers of individuals.

**Presley, C. A., & Pimentel, E. R. (2006). The introduction of the heavy and frequent drinker: A proposed classification to increase accuracy of alcohol assessments in postsecondary educational settings. *Journal of Studies on Alcohol*, 67(2), 324–331.**

**OBJECTIVE:** This study demonstrates the differences that exist within college drinkers identified as high-risk drinkers. **METHOD:** The study looked at alcohol and other drug (AOD) use patterns of the entire U.S. college student body, using a cross-section of institutions (public, private, 2-year, and 4-year) and students that reflected the enrollment patterns within geographic regions of the country. A survey that focused on safety and violence on college campuses, in addition to more traditional questions regarding the prevalence of alcohol and other drug use and negative consequences, was mailed to a stratified random sample. The final sample consisted of students from 96 institutions of higher education (N = 17,821; 45.3% males, 54.7% females) and was weighted to ensure an accurate representation of the student population in the United States. **RESULTS:** We found there to be a broad range of problematic drinkers grouped together within the category "heavy drinking," which is defined by a single episode (five or more drinks on one occasion). The seriously problematic drinkers can be differentiated from those less problematic by the inclusion of frequency in the criteria. Comparing heavy drinkers with "heavy and frequent drinkers," we found rates of negative consequences to be almost three times higher for the heavy and frequent drinkers. In addition, the heavy and frequent drinkers account for nearly half of all negative consequences reported by all

drinkers. CONCLUSIONS: Greater specificity in classification is a necessary component of alcohol research and intervention.

**Read, J. P., Kahler, C. W., Strong, D. R., & Colder, C. R. (2006). Development and preliminary validation of the Young Adult Alcohol Consequences Questionnaire. *Journal of Studies on Alcohol*, 67(1), 169–177.**

OBJECTIVE: A substantial proportion of U.S. college students drink alcoholic beverages and report significant deleterious effects. The present study describes the development and initial validation of a measure designed to capture a broad range of alcohol-related consequences experienced by male and female college students. METHOD: College students (N=340, 176 women) completed a self-report questionnaire battery consisting of information about demographic characteristics, drinking behaviors, and drinking consequences. Drinking consequences were assessed with a composite measure based on the Drinker Inventory of Consequences, the Young Adult Alcohol Problem Screening Test (YAAPST) and items developed by the researchers. To assess concurrent validity, a subset of the total sample (n=126) also completed the Rutgers Alcohol Problem Index (RAPI). RESULTS: Confirmatory factor analyses supported an eight-factor solution (Social-Interpersonal Consequences, Impaired Control, Self-Perception, Self-Care, Risk Behaviors, Academic/Occupational Consequences, Physical Dependence, and Blackout Drinking), with all factors loading on a single, higher-order factor. YAACQ total scores correlated with alcohol quantity and frequency, and the RAPI. Gender comparisons suggest that the YAACQ assesses constructs of interest equally well for women and men. CONCLUSIONS: These results offer preliminary support for this measure. Research and clinical applications include the potential to predict future problems by specific type of consequence and to offer detailed feedback about drinking consequences to students as part of a preventive intervention. As such, the YAACQ may serve as an aid in both the description of and intervention for heavy drinking in college.

**Read, J. P., Merrill, J. E., Kahler, C. W., & Strong, D. R. (2007). Predicting functional outcomes among college drinkers: Reliability and predictive validity of the Young Adult Alcohol Consequences Questionnaire. *Addictive Behaviors*, 32(11), 2597–2610.**

Heavy drinking and associated consequences are widespread among U.S. college students. Recently, Read et al. (Read, J. P., Kahler, C. W., Strong, D., & Colder, C. R. (2006). Development and preliminary validation of the Young Adult Alcohol Consequences Questionnaire. *Journal of Studies on Alcohol*, 67, 169-178) developed the Young Adult Alcohol Consequences Questionnaire (YAACQ) to assess the broad range of consequences that may result from heavy drinking in the college milieu. In the present study, we sought to add to the psychometric validation of this measure by employing a prospective design to examine the test-retest reliability, concurrent validity, and predictive validity of the YAACQ. We also sought to examine the utility of the YAACQ administered early in the semester in the prediction of functional outcomes later in the semester, including the persistence of heavy drinking, and academic functioning. Ninety-two college students (48 females) completed a self-report assessment battery during the first weeks of the Fall semester, and approximately one week later. Additionally, 64 subjects (37 females) participated at an optional third time point at the end of the semester. Overall, the YAACQ demonstrated strong internal consistency, test-retest reliability, and concurrent and predictive validity. YAACQ scores also were predictive of both drinking frequency, and “binge” drinking frequency. YAACQ total scores at baseline were an early indicator of academic performance later in the semester, with greater number of total consequences experienced being negatively associated with end-of-semester grade point

average. Specific YAACQ subscale scores (Impaired Control, Dependence Symptoms, Blackout Drinking) showed unique prediction of persistent drinking and academic outcomes.

**Robertson, J. M., Benton, S. L., Newton, F. B., Downey, R. G., Marsh, P. A., Benton, S. A., Tseng, W. C., & Shin, K. H. (2006). K-State Problem Identification Rating Scales (K-PIRS) for college students. *Measurement and Evaluation in Counseling and Development, 39*(3), 141–160.**

The K-State Problem Identification Rating Scales, a new screening instrument for college counseling centers, gathers information about clients' presenting symptoms, functioning levels, and readiness to change. Three studies revealed 7 scales: Mood Difficulties, Learning Problems, Food Concerns, Interpersonal Conflicts, Career Uncertainties, Self-Harm Indicators, and Substance/Addiction Issues.

**Rosenbaum, A., Rabenhorst, M. M., Reddy, M. K., Fleming, M. T., & Howells, N. L. (2006). A comparison of methods for collecting self-report data on sensitive topics. *Violence and Victims, 21*(4), 461–471.**

Insufficient attention has been paid to whether disclosure rates of sensitive or stigmatizing information vary as a function of method of inquiry. Methods vary both in terms of the anonymity afforded the participant and the opportunity to make a connection with the researcher, both of which might affect participants' willingness to disclose such information. In this investigation, 215 undergraduate students were randomly assigned to complete identical questionnaires using one of the three most common methods of data collection (in-person interview, telephone interview, and paper-and-pencil questionnaire) or an automated telephonic data collection (ATDC) system. Questions on six topic areas of increasing social sensitivity (study habits, substance use, physical and sexual aggression, victimization and perpetration) were included. The results indicated that there were no differences in disclosure rates due to methods and no method by topic interaction, but the two telephonic methods both produced significantly higher participation rates than the two other methods. The results suggest that, at least for a college student sample, an automated telephonic system produces data comparable to that of more traditional methods, while offering greater convenience, economy, and participation.

**Westmaas, J., Moeller, S., & Woicik, P. B. (2007). Validation of a measure of college students' intoxicated behaviors: Associations with alcohol outcome expectancies, drinking motives, and personality. *Journal of American College Health, 55*(4), 227–237.**

**OBJECTIVE:** The authors aimed to develop a measure of college students' intoxicated behaviors and to validate the measure using scales assessing alcohol outcome expectancies, motives for drinking, and personality traits. **PARTICIPANTS AND METHOD SUMMARY:** The authors administered these measures and an inventory describing 50 intoxicated behaviors to 198 college students and conducted factor analysis on intoxicated behaviors. Logistic regression models examined relationships between intoxicated behavior dimensions and expectancies, motives, and personality traits. **RESULTS:** Self-reported behaviors during intoxication episodes were reducible to 3 basic dimensions that formed reliable and valid scales: social, antisocial, and emotionally labile intoxication. **CONCLUSIONS:** Researchers can use the Intoxicated Behaviors Inventory to evaluate the effectiveness of interventions targeting drinking or to identify college students at risk for problematic consequences of alcohol use. In addition, results point to the need for community

efforts to encourage more moderate drinking among college students.

**White, H. R., Morgan, T. J., Pugh, L. A., Celinska, K., Labouvie, E. W., & Pandina, R. J. (2006). Evaluating two brief substance-use interventions for mandated college students. *Journal of Studies on Alcohol, 67*(2), 309–317.**

**OBJECTIVE:** This study evaluated two brief personal feedback substance-use interventions for students mandated to the Rutgers University Alcohol and Other Drug Assistance Program for Students (ADAPS): (1) a brief motivational interview (BMI) intervention and (2) a written feedback-only (WF) intervention. A key question addressed by this study was whether there is a need for face-to-face feedback in the context of motivational interviewing to affect changes in substance-use behaviors or whether a written personal feedback profile is enough of an intervention to motivate students to change their substance use. **METHOD:** The sample consisted of 222 students who were mandated to ADAPS, were eligible for the study, and completed the 3-month follow-up assessment. Eligible students completed a baseline assessment from which a personal feedback profile was created. They were then randomly assigned to the BMI or WF condition. Students were followed 3 months later. **RESULTS:** Students in both interventions reduced their alcohol consumption, prevalence of cigarette and marijuana use, and problems related to alcohol and drug use between baseline and follow-up. There were no differences between the two intervention conditions in terms of any substance-use outcomes. **CONCLUSIONS:** The results suggest that, under these circumstances and with these students, assessment and WF students changed similarly to those who had an assessment and WF within the context of a BMI. Given the fact that the former is less costly in terms of time and personnel, written profiles may be found to be a cost-effective means of reducing alcohol and drug use and related problems among low- to moderate-risk mandated college students. More research is needed with mandated students to determine the efficacy of feedback interventions and to isolate the effects of interventions from the effects of being caught and being reprimanded to treatment.

**Zamboanga, B. L., Horton, N. J., Tyler, K. M. B., O’Riordan, S. S., Calvert, B. D., & McCollum, E. C. (2007). The utility of the audit in screening for drinking game involvement among female college students. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine, 40*(4), 359–361.**

Drinking games (DG) facilitate heavy alcohol consumption in a short period and are associated with negative experiences. We examined the utility of Alcohol Use Disorders Identification Test (AUDIT) cut-off scores to identify DG involvement. Findings indicated an AUDIT score of at least 5 is needed to identify gamers among students at a women’s college. Prevention implications are discussed.

See also:

Carey, K. B., Carey, M. P., Maisto, S. A., & Henson, J. M. (2006). Brief motivational interventions for heavy college drinkers: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 74*(5), 943–954.

DeJong, W., Schneider, S. K., Towvim, L. G., Murphy, M. J., Doerr, E. E., Simonsen, N. R., Mason, K. E., & Scribner, R. A. (2006). A multisite randomized trial of social norms marketing campaigns to reduce college student drinking. *Journal of Studies on Alcohol, 67*(6), 868–879.

Hernandez, D. V., Skewes, M. C., Resor, M. R., Villanueva, M. R., Hanson, B. S., & Blume, A. W. (2006). A pilot test of an alcohol skills training programme for Mexican American college students. *International Journal of Drug Policy, 17*(4), 320–328.

Juarez, P., Walters, S. T., Daugherty, M., & Radi, C. (2006). A randomized trial of motivational interviewing and feedback with heavy drinking college students. *Journal of Drug Education, 36*(3), 233–246.

Kress, V. E., Shepherd, J. B., Anderson, R. I., Petuch, A. J., Nolan, J. M., & Thiemke, D. (2006). Evaluation of the impact of a coeducational sexual assault prevention program on college students' rape myth attitudes. *Journal of College Counseling, 9*(2), 148–157.

Neighbors, C., Lewis, M. A., Bergstrom, R. L., & Larimer, M. E. (2006). Being controlled by normative influences: Self-determination as a moderator of a normative feedback alcohol intervention. *Health Psychology, 25*(5), 571–579.

Orchowski, L. M., Gidycz, C. A., & Raffle, H. (2008). Evaluation of a sexual assault risk reduction and self-defense program: A prospective analysis of a revised protocol. *Psychology of Women Quarterly, 32*(2), 204–218.

### **Prevention Planning**

*(Includes articles on campus task forces, community coalitions, community organizing, strategic planning, and needs assessment)*

**Austin, J. L., & Smith, J. E. (2008). Drinking for negative reinforcement: The semantic priming of alcohol concepts. *Addictive Behaviors, 33*(12), 1572–1580.**

Cognitive models of alcohol abuse posit that the context typically associated with alcohol use, such as negative affect, implicitly activates alcohol use cognitions, which in turn leads to alcohol consumption. We selected 40 undergraduate women based upon their alcohol use and reported anxiety sensitivity, and proposed that drinking for the purpose of negative reinforcement would predict increased semantic priming between anxiety and alcohol concepts. A lexical decision task compared the response latencies of alcohol targets preceded by anxiety words to those same targets preceded by neutral words (anxiety-alcohol priming). Level of anxiety sensitivity did not relate to anxiety-alcohol priming, but drinking following social conflict was associated with increased anxiety-alcohol priming. This study specifically suggests that the contextual antecedents to drinking behavior relate to the organization of semantic information about alcohol, and more generally supports cognitive models of substance abuse.

**Clapp, J. D., Johnson, M. B., Shillington, A. M., Lange, J. E., & Voas, R. B. (2008). Breath alcohol concentrations of college students in field settings: Seasonal, temporal, and contextual patterns, *Journal of Studies on Alcohol and Drugs, 69*(2), 323–331.**

Objective: Seasonality in alcohol consumption has implications for epidemiology and prevention. In this research we examined seasonal, temporal, and contextual variation in drinking among college students at a large West Coast university. Method: We used a field survey (across a 3-year period) to collect anonymous breath alcohol concentrations from students sampled randomly as they walked

on and near the campus on weekend nights. Results: After controlling for student demographics, we found that the breath alcohol concentration samples we collected during the spring and winter were significantly higher than those collected during the fall. Subsequent analyses indicated that this difference could be attributed to fewer students drinking in the fall rather than to students consuming smaller quantities of alcohol. Conclusions: Seasonal trends in college student drinking mirror seasonal trends demonstrated in the general population. This research may help guide future intervention or prevention efforts.

**Coll, J. E., Draves, P. R., & Major, M. E. (2008). An examination of underage drinking in a sample of private university students. *College Student Journal, 42*(4), 982–985.**

The present study provides further empirical support for the relationship between alcohol use and behavioral, academic, and health-related problems among underage college students. The intentional focus upon underage drinking in a small, private, religious university allows for pursuit of a clearer picture of the idiosyncratic forces involved in drinking among first-year college students. The results of this study suggest that the process through which drinking alcohol leads to problems may vary across gender. Results suggest gender differences in both the relationship between alcohol-related knowledge and use and the relationship between knowledge and problems.

**Jackson, K. M., & Sher, K. J. (2008). Comparison of longitudinal phenotypes based on alternate heavy drinking cut scores: A systematic comparison of trajectory approaches III. *Psychology of Addictive Behaviors, 22*(2), 198–209.**

The goal of the present study was to empirically determine the effect of employing different cut scores for frequency of heavy episodic drinking (HED; an often-used indicator of problematic alcohol involvement) within a longitudinal framework. Using data from a large prospective (9-wave) college student sample, the authors used latent class growth analyses to characterize developmental trajectories of HED based on alternate cut scores that varied in frequency of HED (defined by 5+ drinks per occasion), as well as to measure very heavy episodic drinking (12+ drinks per occasion). As cut score severity increased and base rates for HED correspondingly decreased, individuals were increasingly categorized into less severe classes. Concordance between trajectories ranged from small to moderate, with concordance using highly discrepant definitions of frequent HED being particularly low. HED trajectories based upon different cut scores were validated against a range of etiological and consequential correlates. No single cut score was superior to others in explaining variance in external validity indicators, suggesting that the choice of cut score should be based upon theoretical and clinical considerations. This study further extends the authors' prior work examining the effects of methodological factors that are critical to characterizing the developmental course of alcohol involvement.

**Karamitros, H., Minelli, M., & Schmidt, J. (2006). Selecting an alcohol and other drug prevention program in times of declining resources. *Journal of Alcohol and Drug Education, 50*(4), 25–34.**

This article reviews the most effective alcohol and other drug prevention programs used in higher education. As all campuses are unique, selection of programming depends on the campus setting and overall environment. Individually focused programs are generally divided into three major categories: (a) Educational/awareness approaches, (b) cognitive-behavioral approaches, and (c) motivational enhancement techniques. After careful review of the current practices in alcohol and

other drug prevention programs, the most effective programs appear to include a combination of techniques. These programs are specific enough to focus on the unique needs of students at individual campuses, but are general enough to be utilized on most campuses with small modifications. The individually focused programs showed varied degrees of success with cognitive-behavioral approaches ranked positively, while educational/awareness programs generally proved to be not as successful. For programs to be successful it takes a combination of individual and environmental strategies along with a consortium of students, campus and community leaders, business owners, and other stakeholders to work together toward this common goal.

**Lewis, M. A., Hove, M. C., Whiteside, U., Lee, C. M., Kirkeby, B. S., Oster-Aaland, L., Neighbors, C., & Larimer, M. E. (2008). Fitting in and feeling fine: Conformity and coping motives as mediators of the relationship between social anxiety and problematic drinking. *Psychology of Addictive Behaviors, 22*(1), 58–67.**

The present research was conducted to clarify the relationships among social anxiety, alcohol consumption, alcohol-related problems, and negative-reinforcement drinking motives among college students. Heavy drinking students (N = 316, 53.80% female) completed self-report measures of social anxiety, alcohol consumption, alcohol-related problems, and drinking motives. Findings indicated that students higher in social anxiety consumed less alcohol but experienced more negative consequences. Moreover, the relationship between social anxiety and negative consequences was mediated by coping and conformity drinking motives in addition to alcohol consumption. In the context of social anxiety, the current research demonstrates the importance of examining problematic drinking as distinct constructs: alcohol consumption and negative consequences. Findings are also discussed in terms of implications for interventions with socially anxious students.

**Meilman, P. W., & Hall, T. M. (2006). Aftermath of tragic events: The development and use of community support meetings on a university campus. *Journal of American College Health, 54*(6), 382–384.**

Colleges and universities need to be prepared to address the psychological impact of tragedies on their campuses. In this article, the author describes the development and successful implementation of campus postvention services in the aftermath of college student deaths by suicide as well as by natural and accidental causes. The program has been well received and has gone a long way toward helping the campus community come together and heal after these types of tragedies. College officials adapted the program to address issues related to troubling national and international events as well local incidents, such as suicide attempts and students' loss of housing through fires. The author provides specific instructions so that readers can replicate the program on their own campuses, and additional materials are available upon request.

**O'Connor, R. M., Farrow, S., & Colder, C. R. (2008). Clarifying the anxiety sensitivity and alcohol use relation: Considering alcohol expectancies as moderators. *Journal of Studies on Alcohol and Drugs, 69*(5), 765–772.**

OBJECTIVE: Empirical examinations of the relation between anxiety sensitivity (AS) and alcohol use have yielded inconsistent results, with some studies finding a positive association and other studies finding no association. The present study sought to clarify this relation by examining the moderational effects of alcohol expectancies (i.e., tension reduction, cognitive and behavioral impairment) on the AS-alcohol use association. Gender-specific pathways were also examined.

**METHOD:** Participants (N=158, 82 women) were alcohol nonabstaining college freshmen who completed a questionnaire battery including assessments of alcohol expectancies (four positive subscales: sociability, tension reduction, liquid courage, and sexuality; three negative subscales: cognitive and behavioral impairment, risk and aggression, and self-perception), AS, and alcohol use (past month). **RESULTS:** Regression analysis was used to test three-way AS x Gender x Alcohol Expectancy interaction terms predicting alcohol use. Only the tension reduction and cognitive and behavioral impairment subscales entered into significant ( $p < .05$ ) and marginally significant ( $p = .05$ ) interaction terms, respectively. The simple slopes suggested that, for men only, high AS was associated with heavy drinking but only when tension reduction expectancies were high and that high AS was associated with low levels of drinking when cognitive and behavioral impairment expectancies were high, but this was true only for women. **CONCLUSIONS:** These findings provide an explanation for why AS has been inconsistently linked to alcohol use in prior research and suggest that models of alcohol use incorporating AS should consider the role of moderators.

**Palombi, B. J. (2006). An alcohol treatment program for college students: Community model of inclusion in the university setting. *Professional Psychology: Research and Practice, 37*(6), 622–628.**

Students struggling with alcohol problems continue to be part of the college experience. A community model of inclusion consisting of the components of embeddedness, interdependence, intradependence, and evolution (CMEIIE) was used to conceptualize an alcohol treatment program that encourages campus agencies to share resources, training, and ideas. The use of CMEIIE allows universities flexibility to design their own community model of intervention that takes into account (a) current policies, programming, and services; (b) relationships between offices; (c) extensiveness of mental health services; (d) resources of local community agencies; and (e) continual evaluation of the effectiveness of their intervention programs.

**Rutledge, P. C., Park, A., & Sher, K. J. (2008). 21st birthday drinking: Extremely extreme. *Journal of Consulting and Clinical Psychology, 76*(3), 511–516.**

Despite public recognition of the hazards of 21st birthday drinking, there is little empirical information concerning its prevalence, severity, and risk factors. Data from a sample of 2,518 college students suggest that 21st birthday drinking poses an extreme danger: (a) 4 of every 5 participants (83%) reported drinking to celebrate, (b) birthday drinkers indicated high levels of consumption, (c) 12% of birthday drinkers (men and women) reported consuming 21 drinks, and (d) about half of birthday drinkers exceeded their prior maximum number of drinks. Current problematic alcohol involvement and its typical correlates strongly predicted both the occurrence and severity of 21st birthday drinking. It is imperative that investigators consider a variety of potential interventions to minimize the harm associated with this rite of passage.

**Voas, R. B., Johnson, M., Turrisi, R. J., Taylor, D., Honts, C. R., & Nelsen, L. (2008). Bringing alcohol on campus to raise money: Impact on student drinking and drinking problems. *Addiction, 103*(6), 940–950.**

**AIMS:** Universities are striving to raise funds, often attracting spectators by selling alcohol at campus events. This study evaluates the effect of a policy change on student drinking at a large western university that had historically banned alcohol on campus but transitioned to permitting the sale of alcohol in some of its facilities. **METHODS:** Surveys of student drinking and perceptions of

other students' drinking were conducted before, during and after the policy change at the transition university (TU) and compared to similar data from a control university (CU). Surveys of student drinking at on-campus and off-campus venues and observations of alcohol service practices were also conducted. RESULTS: The policy change at the TU was introduced cautiously, and sales to underage drinkers were relatively well controlled. Despite this, student drinking rose initially, then declined after 1 year. Perceptions of the amount of drinking by other students increased slightly, but there was no overall measurable increase in student drinking during the first 3 years of the new policy. CONCLUSIONS: The conservative TU policy-to sell alcohol only at select events and to control sales to minors-may have limited the impact of on-campus alcohol sales on student consumption. Although the study results did not find a stable increase in student drinking, they do not necessarily support the liberalization of campus alcohol policy, because the transition is still 'in progress' and the final outcome has not been evaluated.

**Walsh, J. A., & Braithwaite, J. (2008). Self-reported alcohol consumption and sexual behavior in males and females: Using the unmatched-count technique to examine reporting practices of socially sensitive subjects in a sample of university students. *Journal of Alcohol and Drug Education, 52*(2), 49–72.**

The article presents a study which compares the results of the traditional self-report survey technique and an alternative approach, the unmatched count technique (UCT) to examine the efficacy of the UCT as a preferred means of collecting base rate or aggregate level data on the sensitive subjects of excessive alcohol consumption and its negative effect on sexual decision making. This study employed large student sample from a Midwestern University in the U.S., in which randomly assigned students completed either traditional or UCT. The study addresses several shortcomings in the literature, contributes to the emergent empirical research employing the UCT, and casts a critical eye on prevailing base rates. Also discussed are policy implications and avenues for future research.

**White, H. R., Fleming, C. B., Kim, M. J., Catalano, R. F., & McMorris, B. J. (2008). Identifying two potential mechanisms for changes in alcohol use among college-attending and non-college-attending emerging adults. *Developmental Psychology, 44*(6), 1625–1639.**

This study tested whether pro-alcohol peer influences and prosocial involvement account for increases in drinking during the transition into emerging adulthood and whether these mechanisms differ depending on college attendance and/or moving away from home. The authors used structural equation modeling of prospective data from 825 young men and women. For 4 groups defined by college and residential status, more drinking in the spring of 12th grade predicted more pro-alcohol peer influences the following fall, and more pro-alcohol peer influences in the fall predicted increases in drinking the following spring. Going to college while living at home was a protective factor against increases in drinking and selection of pro-alcohol peer involvements. Prosocial involvement (measured by involvement in religious activities and volunteer work) was not significantly related to post-high school drinking except among college students living away from home. Prevention efforts should focus on (a) reducing opportunities for heavy drinking for college and noncollege emerging adults as they leave home and (b) increasing prosocial involvement among college students not living at home.

See also:

Martens, M. P., Dams-O'Connor, K., & Beck, N. C. (2006). A systematic review of college student-athlete drinking: Prevalence rates, sport-related factors, and interventions. *Journal of Substance Abuse Treatment, 31*(3), 305–316.

### **Prevention Theory**

*(Includes articles that review or test theories and approaches to AOD abuse prevention, such as public health models for prevention, environmental management, social-ecological theory, alcohol expectancies, and the transtheoretical model)*

**Abrams, D., Hothrow, T., Hulbert, L., & Frings, D. (2006). “Groupdrink”? The effect of alcohol on risk attraction among groups versus individuals. *Journal of Studies on Alcohol, 67*(4), 628–636.**

**OBJECTIVE:** The objective of the present study is to assess the impact of alcohol consumption on the risk orientation of people when they are in groups as opposed to alone. Alcohol is often consumed within social groups, but previous research has not distinguished whether particular group processes affect risk differently as a consequence of alcohol consumption. Three theory-based predictions are tested to see whether, after alcohol consumption, groups encourage or inhibit risk as a result of group polarization, deindividuation, or group monitoring. **METHOD:** Male participants (N=120; ages 18-28), recruited via opportunity sample from students at the University of Kent, were assigned as individuals or as members of four-person groups. They had their breath alcohol concentration analyzed to ensure they were alcohol free and then were asked to consume either a placebo or alcohol in amounts equivalent to the legal limit for driving in the United States and the United Kingdom (.08% blood alcohol concentration). Participants completed a risk-attraction task either alone or in a group. Each participant also completed an alcohol-expectancy questionnaire. **RESULTS:** Individuals found risky choices significantly more attractive after consuming alcohol. In contrast, members of groups showed no such increase. In alcohol but not placebo conditions, groups made their decisions more slowly than did individuals. **CONCLUSIONS:** The results are consistent with the group-monitoring hypothesis (i.e., that group members attend to each other and promote a greater level of systematic processing of the risks presented). Results indicate that with moderate social drinking, groups may provide an informal means of mutual regulation and monitoring that can offset some aspects of alcohol myopia.

**Auerbach, K. J., & Collins, L. M. (2006). A multidimensional developmental model of alcohol use during emerging adulthood. *Journal of Studies on Alcohol, 67*(6), 917–925.**

**OBJECTIVE:** Longitudinal analyses identified unique multidimensional classes of alcohol use and examined individuals' movement among these classes during emerging adulthood. **METHOD:** Latent transition analysis was used to identify a developmental model of alcohol use incorporating four aspects of use: use in the past year, frequency of use, quantity of use, and heavy episodic drinking. Participants were drawn from the Reducing Risk in Young Adult Transitions study (N = 1,143). Participants' alcohol use was assessed at mean ages of 18.5, 20.5, and 22.5 years. **RESULTS:** Through exploratory analysis, a five-class developmental model was identified as the best description of participants' alcohol use between ages 18.5 and 22.5 years. This model consisted of five multidimensional alcohol-use latent variables: no use, occasional low use, occasional high use, frequent high use, and frequent high use with heavy episodic drinking. Analyses provided information regarding the proportion of participants in each latent class in the model at each measurement occasion and patterns of participants' movement among latent classes during the observed age period. **CONCLUSIONS:** Although alcohol use increased overall for study

participants between ages 18.5 and 22.5, participants in lower-level alcohol-use latent classes were more likely to remain in low-level latent classes over time, and participants in moderate- and high-level latent classes were more likely to be in the frequent high use with heavy episodic drinking latent class over time. Implications for the prevention of heavy episodic drinking are discussed.

**Braun, R. J., Wilson, R. A., Pelesko, J. A., Buchanan, J. R., & Gleeson, J. P. (2006).** Applications of small-world network theory in alcohol epidemiology. *Journal of Studies on Alcohol, 67*(4), 591–599.

**OBJECTIVE:** This study develops a mathematical model of alcohol abuse in structured populations, such as communities and college campuses. The study employs a network model that has the capacity to incorporate a variety of forms of connectivity membership besides personal acquaintance, such as geographic proximity and common organizations. The model also incorporates a resilience dimension that indicates the susceptibility of each individual in a network to alcohol abuse. The model has the capacity to simulate the effect of moving alcohol abusers into networks of nonabusers, either as the result of treatment or membership in self-help organizations. **METHOD:** The study employs a small-world model. A cubic equation for each person (vertex on a graph) governs the evolution of an individual's state between 0 and 1 with regard to alcohol dependence, with 1 indicating absolute certainty of alcohol dependence. The simulations are dependent on initial conditions, the structure of the network, and the resilience distribution of the network. The simulations incorporate multiple realizations of social networks, showing the effect of different network structures. **RESULTS:** The model suggests that the prevalence of alcohol abuse can be minimized by treating a relatively small percentage of the study population. In the small populations that we studied, the critical point was 10% or less of the study population, but we emphasize that this is within the limitations and assumptions of this model. **CONCLUSIONS:** The use of a simple model that incorporates the influence of the social network neighbors in structured populations shows promise for helping to inform treatment and prevention policy.

**Broughton, E. A., & Molasso, W. R. (2006).** College drinking: Content analysis of 30 years of research. *Journal of College Student Development, 47*(6), 609–627.

Researchers applied a content analysis method to evaluate the 119 articles about college drinking that appeared in *Journal of College Student Development* and *NASPA Journal* during the past 30 years. The data revealed that a greater proportion of articles on college drinking appeared in the last decade (5.82%) than in the first decade (1.60%). Two thirds of the studies did not use a theoretical framework to guide the research. Of the 94 quantitative studies, only 10% were experimental, 60% used convenience samples, and 61% used locally developed survey instruments for a single institution. Seven recommendations about college drinking are identified for student affairs practitioners and scholars.

**Dierker, L. C., Vesel, F., Sledjeski, E. M., Costello, D., & Perrine, N. (2007).** Testing the dual pathway hypothesis to substance use in adolescence and young adulthood. *Drug and Alcohol Dependence, 87*(1), 83–93.

**Background:** We tested the dual pathway hypothesis to substance use which posits that substance use can develop via internalizing symptoms or deviant behaviors. **Method:** Using data from the Add Health study, we used latent class analysis to define subgroups based on patterns of substance use, and logistic regression procedures to evaluate the prospective association between symptoms of

depression, deviance, and the individual substance use patterns. Results: Groups representing similar patterns of substance use were identified in both adolescence and young adulthood. Some support for the dual pathway hypothesis was demonstrated. Deviance was prospectively associated with substance group assignment in both adolescence and young adulthood, while depression uniquely predicted assignment to the smoking group in young adulthood among females. Conclusions: Further testing of the dual pathway hypothesis should be built on diverse pattern-centered approaches able to explore the presence of population subgroups.

**Finley, L. (2006). Examining school searches as systemic violence. *Critical Criminology*, 14(2), 117–135.**

Although an individualistic conception of violence dominates in the U.S., academics are beginning to pay attention to more systemic forms of violence. Systemic violence is difficult to see, however, as it often becomes normalized. This type of violence is not necessarily intentional, but nonetheless has a detrimental affect. The impact of systemic violence may be emotional as well as physical. This work examines three types of school searches as forms of violence against students. Use of metal detectors, drug tests, and strip searches are connected to the literature on systemic violence. The article demonstrates that, in addition to being ineffective means of preventing and addressing school violence and student drug use, these measures harm students, teachers, and society at large. Alternatives to these punitive approaches, framed by peacemaking and humanistic perspectives, are presented.

**Ham, L. S., & Hope, D. A. (2006). Incorporating social anxiety into a model of college problem drinking: Replication and extension. *Psychology of Addictive Behaviors*, 20(3), 348–355.**

Although research has found an association between social anxiety and alcohol use in noncollege samples, results have been mixed for college samples. College students face many novel social situations in which they may drink to reduce social anxiety. In the current study, the authors tested a model of college problem drinking, incorporating social anxiety and related psychosocial variables among 228 undergraduate volunteers. According to structural equation modeling (SEM) results, social anxiety was unrelated to alcohol use and was negatively related to drinking consequences. Perceived drinking norms mediated the social anxiety-alcohol use relation and was the variable most strongly associated with problem drinking. College students appear to be unique with respect to drinking and social anxiety. Although the notion of social anxiety alone as a risk factor for problem drinking was unsupported, additional research is necessary to determine whether there is a subset of socially anxious students who have high drinking norms and are in need of intervention.

**Hopthrow, T., Abrams, D., Frings, D., & Hulbert, L. G. (2007). Groupdrink: The effects of alcohol on intergroup competitiveness. *Psychology of Addictive Behaviors*, 21(2), 272–276.**

Alcohol is often consumed in group settings. The present article examines the effect of alcohol on intergroup competitiveness through the use of a prisoner's dilemma game. One hundred fifty-eight college students participated in the study, either individually or as a member of a 4-person experimental single-sex group. Participants consumed either alcohol (1.13 g ethanol/kg body weight) or a placebo. Results show no effect of alcohol on cooperative choice within individuals. However, groups were significantly less cooperative after consuming alcohol than they were after consuming a placebo. In addition, after consuming alcohol, groups were less cooperative than were individuals.

Results are discussed in terms of the way alcohol may affect focus of attention on group-level cues.

**Kashdan, T., Collins, R., & Elhai, J. (2006). Social anxiety and positive outcome expectancies on risk-taking behaviors. *Cognitive Therapy and Research*, 30(6), 749–761.**

We examined the hypothesis that under specific conditions, socially anxious individuals may be risk-prone as opposed to risk-averse in domains such as heavy drinking, illicit drug use, unsafe sexual practices, and aggression. A college-aged sample, predominantly women, completed a series of questionnaires on social anxiety and risk-taking behavioral intentions. Results of hierarchical regression analyses indicated that positive outcome expectancies moderated relationships between social anxiety and sexual risk-taking and aggression. Socially anxious individuals expecting desirable outcomes reported the greatest risk-taking behavioral intentions. Socially anxious individuals expecting less desirable outcomes reported the least risk-taking intentions. Social anxiety interaction effects were not accounted for by other anxiety and depressive symptoms. Data suggested that social anxiety was also positively related to illicit drug use. Although preliminary, these significant findings suggest that a subset of socially anxious individuals may engage in risky activities that likely serve the purpose of regulating emotions.

**Kassel, J. D., Wardle, M., & Roberts, J. E. (2007). Adult attachment security and college student substance use. *Addictive Behaviors*, 32(6), 1164–1176.**

Previous research has demonstrated strong links between quality of adult attachment styles and various forms of psychological distress. A burgeoning literature further points to a relationship between insecure attachment and drug use, particularly alcohol consumption. In the present study, we expanded upon the existing literature by examining the relationship between adult attachment style and use of cigarettes, alcohol, and marijuana in a sample of 212 college students. Moreover, based on our previous work [Hankin, B.L., Kassel, J.D., and Abela, J.R.Z. (2005). Adult attachment dimensions and specificity of emotional distress symptoms: prospective investigations of cognitive risk and interpersonal stress generation as mediating mechanisms. *Personality and Social Psychology Bulletin*, 31, 136-151.], we proposed a conceptual model positing that adult attachment style influences both frequency of drug use and stress-motivated drug use through its impact on dysfunctional attitudes and self-esteem. Initial correlational analyses indicated significant (positive) associations between anxious attachment (tapping neediness and fear of abandonment) and both drug use frequency and stress-motivated drug use. Simultaneous regression analyses revealed that, for drug use frequency, the influence of anxious attachment operated primarily through its effect on dysfunctional attitudes and self-esteem. Regarding drug use attributable to negative affect reduction, anxious attachment demonstrated direct, independent effects on both cigarette smoking and alcohol use. These findings highlight the potential importance of adult attachment styles as a risk factor for drug use among college students.

**Murphy, J. G., Correia, C. J., & Barnett, N. P. (2007). Behavioral economic approaches to reduce college student drinking. *Addictive Behaviors*, 32(11), 2573–2585.**

There is a need for novel, theory-based approaches to reduce heavy drinking on college campuses. Behavioral economics has guided basic laboratory research on drug administration for over 30 years and has recently been applied to human substance use in naturalistic and clinical settings. This paper provides an introduction to behavioral economics, reviews applications of behavioral economics to college student drinking, and describes prevention and intervention strategies that are consistent

with behavioral economic theory. Behavioral economic theory predicts that college students' decisions about drinking are related to the relative availability and price of alcohol, the relative availability and price of substance-free alternative activities, and the extent to which reinforcement from delayed substance-free outcomes is devalued relative to the immediate reinforcement associated with drinking. Measures of problem severity are based on resource allocation towards alcohol and the relative value of alcohol compared to other reinforcers. Policy and individual level prevention approaches that are consistent with behavioral economic theory are discussed, including strategies for increasing the behavioral and monetary price of alcohol, increasing engagement in rewarding alternatives to substance use, and counteracting student drinkers' tendency to overvalue immediate relative to delayed rewards.

**Lanza, S. T., & Collins, L. M. (2006). A mixture model of discontinuous development in heavy drinking from ages 18 to 30: The role of college enrollment. *Journal of Studies on Alcohol*, 67(4), 552–561.**

**OBJECTIVE:** The purpose of this study was to illustrate the use of latent class analysis to examine change in behavior over time. Patterns of heavy drinking from ages 18 to 30 were explored in a national sample; the relationship between college enrollment and pathways of heavy drinking, particularly those leading to adult heavy drinking, was explored. **METHOD:** Latent class analysis for repeated measures is used to estimate common pathways through a stage-sequential process. Common patterns of development in a categorical variable (presence or absence of heavy drinking) are estimated and college enrollment is a grouping variable. Data were from the National Longitudinal Survey of Youth (N=1,265). **RESULTS:** Eight patterns of heavy drinking were identified: no heavy drinking (53.7%); young adulthood only (3.7%); young adulthood and adulthood (3.7%); college age only (2.6%); college age, young adulthood, and adulthood (8.7%); high school and college age (4.4%); high school, college age, and young adulthood (6.3%); and persistent heavy drinking (16.9%). **CONCLUSIONS:** We found no evidence that prevalence of heavy drinking for those enrolled in college exceeds the prevalence for those not enrolled at any of the four developmental periods studied. In fact, there is some evidence that being enrolled in college appears to be a protective factor for young adult and adult heavy drinking. College-enrolled individuals more often show a pattern characterized by heavy drinking during college ages only, with no heavy drinking prior to and after the college years, whereas nonenrolled individuals not drinking heavily during high school or college ages are at increased risk for adult heavy drinking.

**Lewis, T. F. (2006). Discriminating among levels of college student drinking through an Eriksonian theoretical framework. *Journal of Addictions & Offender Counseling*, 27(1), 28–45.**

Identity development is a critical period that extends into adulthood. Based on E. H. Erikson's (1968) theory, this study explored how identity statuses best separate heavy- from light-drinking college students. Exploring identity status can assist students in making healthier behavior choices.

**Manwell, L. B., Pfeifer, J., & Stauffacher, E. A. (2006). An interdisciplinary faculty development model for the prevention and treatment of alcohol use disorders. *Alcoholism: Clinical and Experimental Research*, 30(8), 1393–1399.**

**BACKGROUND:** The skills of faculty working in health fields are inadequate to meet the needs of those adversely affected by alcohol. This project was designed to increase the teaching, clinical, and

research activities of faculty from multiple disciplines at the university level. **METHODS:** The faculty development model included two 2-day skills-based courses held 6 months apart, precourse and postcourse evaluations, active mentoring, and development of a specific work plan for each participant. The educational model utilized skills-based courses previously developed for full-time clinical/teaching medical faculty with limited time and resources. **RESULTS:** A total of 153 participants at 6 locations completed the courses; 131 completed the 6-month follow-up interview. Sixty-four designed teaching, clinical, or research projects during the 6-month period between the first and second courses. Precourse versus postcourse clinical scores from standardized patient encounters showed highly significant improvements in screening, brief intervention, and motivational interviewing skills ( $p < 0.001$ ). At the 6-month follow-up interview, 61% of the participants reported teaching on alcohol, tobacco, or drug problems; 49% reported clinical activities in this area; 36% reported conducting research; 10% had submitted manuscripts for publication; 12% had submitted grant applications; and 32% percent had sought additional AODA training. Participants gave high scores to all components of the faculty development model; 81% would repeat the training and 98% would recommend the program to colleagues. **CONCLUSIONS:** This cost-effective faculty development program can serve as a model to increase educational programs on substance abuse at public universities, increase faculty research activities in the alcohol area, and increase clinical programs in university hospitals.

**Near, J. A., & Martin, B. J. (2007). Expanding course goals beyond disciplinary boundaries: Physiology education in an undergraduate course on psychoactive drugs. *Advances in Physiology Education*, 31(2), 161–166.**

The topic of psychoactive drugs is one of inherent interest to college students. We used this insight to design and implement a multidisciplinary undergraduate course with psychoactive drugs as the central theme. The Medical Science of Psychoactive Drugs examines the biological mechanisms underlying all major effects of psychoactive drugs, including the effects on the brain and other organs and tissues. Physiological principles, molecular mechanisms, and genetic factors involved in drug-induced therapeutic and adverse effects are emphasized. The course is open to undergraduate students at all levels and carries no prerequisites, and enrollment is limited to approximately 50 students. Major teaching modes include lecture, short homework papers on topics related to the previous class meeting, small-group discussions at several points during each class, and whole class discussions. Because of the diversity of students' knowledge of basic science, we employ a variety of methods designed to help students grasp the necessary scientific concepts. Our methods are intended to be inquiry based and highly interactive. Our goals are 1) to foster the development of an organized knowledge base about psychoactive drugs that will have practical applicability in the daily lives of the students; 2) to promote the rational application of this knowledge in thinking about current medical, social, legal, and ethical issues involving psychoactive drugs; and 3) to cultivate science literacy, critical thinking, and communication skills among students.

**Neighbors, C., Walters, S. T., Lee, C. M., Vader, A. M., Vehige, T., Szigethy, T., & DeJong, W. (2007). Event-specific prevention: Addressing college student drinking during known windows of risk. *Addictive Behaviors*, 32(11), 2667–2680.**

The unique drinking patterns of college students call for Event-Specific Prevention (ESP) strategies that address college student drinking associated with peak times and events. Despite limited research evaluating ESP, many college campuses are currently implementing programming for specific events. The present paper provides a review of existing literature related to ESP and offers practical

guidance for research and practice. The prevention typology proposed by DeJong and Langford [DeJong, W. & Langford, L. M. (2002). A typology for campus-based alcohol prevention: Moving toward environmental management strategies. *Journal of Studies on Alcohol*, 140-147.] provides a framework for strategic planning, suggesting that programs and policies should address problems at the individual, group, institution, community, state, and society level, and that these interventions should focus on knowledge change, environmental change, health protection, and intervention and treatment services. From this typology, specific examples are provided for comprehensive program planning related to orientation/beginning of school year, homecoming, 21st birthday celebrations, spring break, and graduation. In addition, the University of Connecticut's efforts to address problems resulting from its annual Spring Weekend are described as an illustration of how advance planning by campus and community partners can produce a successful ESP effort.

**Osborn, C. J., Thombs, D. L., & Olds, R. S. (2007). Reconceptualizing research on undergraduate alcohol use: The need for student engagement. *Evaluation & the Health Professions*, 30(2), 118–137.**

Community-based participatory research (CBPR) is presented as an unrecognized and urgently needed approach for addressing the persistent public health concern of college student drinking in the United States. A major contention of this article is that the lack of progress in reducing alcohol-related harm among college students during the past several decades has been the research community's failure to effectively engage and collaborate with undergraduates on shared concerns. The challenges of addressing college student drinking are reviewed, distinctive features of CBPR are described, and suggestions are provided for adopting CBPR as a more viable approach than those offered by traditional campus strategies.

**Palfai, T. P. (2006). College student alcohol use in context: The utility of goal constructs. *Psychology of Addictive Behaviors*, 20(2), 143–144.**

Alcohol use occurs in the context of multiple goals that college students develop, pursue, and modify in their transition to adulthood. Consequently, the assessment of goal constructs provides a valuable tool for understanding the developmental context of college drinking. Conceptualizing student alcohol misuse in terms of its effects on valued goals has a number of advantages for understanding personality risk and protective factors, clarifying the contributions of social and environmental influences, and developing motivation-based interventions.

**Pardo, Y., Aguilar, R. I., Molinuevo, B., & Torrubia, R. (2007). Alcohol use as a behavioural sign of disinhibition: Evidence from J.A. Gray's model of personality. *Addictive Behaviors*, 32(10), 2398–2403.**

Based on Gray's Reinforcement Sensitivity Theory, the influence of behavioural disinhibition upon alcohol consumption was studied. A sample of undergraduates answered different questionnaires related to the Behavioural Inhibition System and Behavioural Activation System. In relation to alcohol use, three aspects of alcohol consumption were assessed: frequency, quantity of alcohol intake and the age at first drink. From a series of correlation and regression analyses, we found that both high scores on BAS-related scales and low scores on those scales related to the BIS were jointly associated with current alcohol-taking habits. Additionally, the Sensitivity to Reward (SR) scale (BAS) was negatively correlated with, and a predictor of, the onset age of alcohol use. We conclude by proposing that research on alcohol use can benefit from this well-grounded theory of the

neuropsychology of individual differences.

**Patock-Peckham, J. A., & Morgan-Lopez, A. A. (2007). College drinking behaviors: Mediational links between parenting styles, parental bonds, depression, and alcohol problems. *Psychology of Addictive Behaviors, 21*(3), 297–306.**

Mediational links between parenting styles (authoritative, authoritarian, permissive), parental bond (positive, negative), depression, alcohol use and abuse were tested. A 2-group, multiple-indicator, multiple-cause structural equation model with 441 (216 female, 225 male) college students was examined. In general, a poor parental bond with one's father was highly predictive of depression, a well-known predictor of alcohol abuse and related problems for both genders. In contrast, a positive parental bond with one's father significantly mediated the positive effects of authoritative fathering on depression, which then decreased alcohol use problems for both genders. For women, a negative parental bond with one's father significantly mediated the effect of having an authoritarian father on depression, which increased alcohol use problems. These findings suggest that parental influences on pathways to alcohol abuse through depression (primarily through fathers for both genders) are distinct from pathways stemming from poor impulse control (with influences primarily from the same-sex parents for both genders).

**Payne, A. A., & Salotti, S. (2007). A comparative analysis of social learning and social control theories in the prediction of college crime. *Deviant Behavior, 28*(6), 553–573.**

This research examines the comparative ability of social control and social learning theories to predict crime on a college campus. Data were obtained from self-report surveys from the first wave of a longitudinal study at a liberal arts college in the Mid-Atlantic region. Results from correlation and regression analyses indicate that both social control and social learning components are related to crime and drug use, with the greatest amount of variance explained by models that include elements of both theories. Issues such as the temporal ordering of peer and individual delinquency and the similarity between belief and definitions are discussed.

**Ricketts, M. L., & Higgins, G. E. (2007). A preliminary study of the factors that influence college student perceptions of the nonmedical use of prescription drugs: Criminal justice versus noncriminal justice students. *Criminal Justice Studies, 20*(4), 407–422.**

There are continuing efforts to include student perception research in the field of criminal justice and criminology; few studies have addressed the nonmedical use of prescription drugs. Using data from 389 students enrolled at a Southeastern university, this study compares the perceptions of the nonmedical use of prescription drugs between criminal justice and noncriminal justice majors. The findings from this study indicate that no specific measure or factor consistently influences college student perceptions. However, when examining the role of self-control, we found that for two drugs (opiates and stimulants), low self-control had an important influence on the perceptions of nonmajors.

**Schoenmakers, T., Wiers, R. W., Jones, B. T., Bruce, G., & Jansen, A. T. M. (2007). Attentional re-training decreases attentional bias in heavy drinkers without generalization. *Addiction, 102*(3), 399–405.**

Aims: To examine whether alcohol-related attentional bias (AB) can be reduced by training heavy

drinkers to attend to soft drinks as an alternative to alcohol. Diminishing AB is important because AB has been suggested to be a significant factor in the development, maintenance and relapse of addictive behaviours. AB was trained in a clinically relevant design, and we studied the generalization of this training. Design, participants and intervention: We assigned randomly 106 heavy drinking male college and university students to the attentional re-training (AR; modified visual-probe task) or control condition (standard visual-probe task). Setting Laboratory at Maastricht University. Measurements: We measured the effects of AR on the visual-probe task with stimuli that were presented in the AR and with new stimuli, and on an alternative measure of AB, the flicker paradigm. We further measured effects on craving and preference for either an alcohol beverage or a soft drink. Findings: After AR, participants had learned to avoid alcohol stimuli and had developed an AB for soft drinks. This effect was restricted to stimuli used in the AR. The flicker task, where AB for alcohol was found in both the AR and control groups, was not affected by the AR. No effect was found on craving and the preference task. Conclusions: Although heavy drinkers can learn to attend selectively to an alternative category for alcohol, a single AR is not sufficient to decrease symptoms of problem drinking.

**Schuckit, M. A., Smith, T. L., & Chacko, Y. (2006). Evaluation of a depression-related model of alcohol problems in 430 probands from the San Diego prospective study. *Drug and Alcohol Dependence*, 82(3), 194–203.**

BACKGROUND: Some individuals might use alcohol to help cope with stress and feelings of depression. Studies of such depression or affect-related models have produced divergent results, which might reflect different definitions of affective disturbances, varying emphasis on excluding substance-induced depressions, and different approaches to defining family histories (FH). This paper describes a prospective study that evaluates a model of the role of depressive episodes in the development of alcohol-related problems, while controlling for substance-induced mood disorders. METHODS: Personal interviews were obtained 10 and 15 years after 430 Caucasian subjects entered a study of drinking but not alcohol-dependent 20-year olds. An AMOS Structural Equation Model (SEM) was used to evaluate the development of alcohol problems in the context of the FH of alcoholism and independent (i.e., not substance induced) depressive episodes, personal histories of independent depression, levels of stress, social support, drinking to cope with stress, expectations of the effects of alcohol, and peer drinking. RESULTS: The SEM explained 51% of the variance for the 15-year outcome, and demonstrated good fitness characteristics. The FH of mood disorders (FHdep) predicted depressive episodes through interactions with higher stress and an FH of alcoholism (FHalc), as well as in the context of lower social support. Depressive episodes contributed to the development of alcohol problems both directly and through drinking to cope. CONCLUSIONS: In this model when independent depressive syndromes developed in individuals with a FH of alcoholism, they modestly enhanced the risk for alcohol-related problems, but FHalc did not by itself increase the risk for independent depressions.

**Sugarman, D. E., & Carey, K. B. (2007). The relationship between drinking control strategies and college student alcohol use. *Psychology of Addictive Behaviors*, 21(3), 338–345.**

Interventions designed to reduce heavy drinking among college students often contain suggestions for drinking control strategies. However, little is known about the relationship between the use of these strategies and alcohol consumption. The authors developed a measure of drinking control strategies and investigated its psychometric properties in a sample of 250 college drinkers. Strategies

clustered into three factors: selective avoidance of heavy drinking activities and situations, strategies used while drinking, and alternatives to drinking. These three types of strategies were independently associated with alcohol use; however, the first and last types were negatively associated with alcohol consumption, whereas the second type was positively associated with alcohol use. The findings from this study suggest that the type of strategy recommended may be important when the goal is alcohol reduction.

See also:

Chen, M.-J., Paschall, M. J., & Grube, J. W. (2006). Motives for malt liquor consumption in a sample of community college students. *Addictive Behaviors, 31*(8), 1295–1307.

Correia, C. J., & Little, C. (2006). Use of a multiple-choice procedure with college student drinkers. *Psychology of Addictive Behaviors, 20*(4), 445–452.

Hernandez, D. V., Skewes, M. C., Resor, M. R., Villanueva, M. R., Hanson, B. S., & Blume, A. W. (2006). A pilot test of an alcohol skills training programme for Mexican American college students. *International Journal of Drug Policy, 17*(4), 320–328.

LaBrie, J. W., Tawalbeh, S., & Earleywine, M. (2006). Differentiating adjudicated from nonadjudicated freshmen men: The role of alcohol expectancies, tension, and concern about health. *Journal of College Student Development, 47*(5), 521–533.

Luthra, R., & Gidycz, C. A. (2006). Dating violence among college men and women: Evaluation of a theoretical model. *Journal of Interpersonal Violence, 21*(6), 717–731.

McCarthy, D. M., & Thompsen, D. M. (2006). Implicit and explicit measures of alcohol and smoking cognitions. *Psychology of Addictive Behaviors, 20*(4), 436–444.

Zamboanga, B. L. (2006). From the eyes of the beholder: Alcohol expectancies and valuations as predictors of hazardous drinking behaviors among female college students. *American Journal of Drug and Alcohol Abuse, 32*(4), 599–605.

Zamboanga, B. L., Horton, N. J., Leitkowski, L. K., & Wang, S. C. (2006). Do good things come to those who drink? A longitudinal investigation of drinking expectancies and hazardous alcohol use in female college athletes. *Journal of Adolescent Health, 39*(2), 229–236.

## **A COMPREHENSIVE APPROACH**

### **Environmental Management Strategies**

*(Includes articles that refer to a general environmental management approach)*

**Wechsler, H., & Nelson, T. F. (2008). What we have learned from the Harvard School of Public Health College Alcohol Study: Focusing attention on college student alcohol consumption and the environmental conditions that promote it. *Journal of Studies on Alcohol and Drugs, 69*(4), 481–490.**

The Harvard School of Public Health College Alcohol Study surveyed students at a nationally

representative sample of 4-year colleges in the United States four times between 1993 and 2001. More than 50,000 students at 120 colleges took part in the study. This article reviews what we have learned about college drinking and the implications for prevention: the need to focus on lower drink thresholds, the harms produced at this level of drinking for the drinkers, the secondhand effects experienced by other students and neighborhood residents, the continuing extent of the problem, and the role of the college alcohol environment in promoting heavy drinking by students. In particular, the roles of campus culture, alcohol control policies, enforcement of policies, access, availability, pricing, marketing, and special promotions of alcohol are highlighted.

### **Alcohol-Free Activities**

**Murphy, J. G., Barnett, N. P., & Colby, S. M. (2006).** Alcohol-related and alcohol-free activity participation and enjoyment among college students: A behavioral theories of choice analysis. *Experimental and Clinical Psychopharmacology*, *14*(3), 339–349.

College student alcohol abuse remains a significant public health problem, and there is a need for theory-driven and empirically based models to guide prevention efforts. Behavioral theories of choice assume that the decision to consume alcohol is influenced by the relative value of alcohol versus other available activities. In the present study, a sample of college student drinkers (N=108; 56% female, 44% male) who had previously completed a mandatory alcohol intervention completed a measure of alcohol-related and alcohol-free activity participation and enjoyment. The goals of the study were to examine the influence of drinking quantity and contextual variables on activity enjoyment and to identify enjoyable alcohol-free activities that take place on evenings when students might otherwise be drinking. Overall, students found alcohol-related activities more enjoyable than alcohol-free activities, and drinking quantity was positively related to enjoyment. However, alcohol-free activities such as watching movies, going to the theater or museums, going to bars or parties, hanging out with friends, eating at restaurants, and engaging in creative activity were generally as enjoyable as drinking. Alcohol-free activities that included peers or dates were more enjoyable than solitary activities. Men were less likely to engage in alcohol-free activities that included peers and reported less enjoyment related to alcohol-free activities than did women. Further research is required to identify procedures for increasing participation in alcohol-free activities and to determine whether increased alcohol-free activity participation results in decreased alcohol consumption.

See also:

Murphy, J. G., Barnett, N. P., Goldstein, A. L., & Colby, S. M. (2007). Gender moderates the relationship between substance-free activity enjoyment and alcohol use. *Psychology of Addictive Behaviors*, *21*(2), 261–265.

### **Normative Environment**

*(Includes articles on social norms theory, social norms marketing, and other strategies implemented with the goal of changing the normative environment; this section also includes articles that discuss social norms theories)*

**Benton, S. L., Downey, R. G., Glider, P. J., & Benton, S. A. (2008).** College students' norm perception predicts reported use of protective behavioral strategies for alcohol consumption. *Journal of Studies on Alcohol and Drugs*, *69*(6), 859–965.

OBJECTIVE: This study examined whether college students' descriptive norm perceptions of

protective behavioral drinking strategies explain variance in use of such strategies, controlling for covariates of students' gender, typical number of drinks, and negative drinking consequences. METHOD: Derivation ( $n = 7,960$ ; 55.2% women) and replication ( $n = 8,534$ ; 54.5% women) samples of undergraduate students completed the Campus Alcohol Survey in classroom settings. Students estimated how frequently other students used each of nine protective behavioral strategies (PBS) and how frequently they themselves used each strategy. RESULTS: All items assessing norm perception of PBS (NPPBS) had pattern matrix coefficients exceeding .50 on a single factor, and all contributed to the overall scale reliability (Cronbach's  $\alpha = .81$ ). Hierarchical regression analyses indicated NPPBS explained significant variance in PBS, controlling for covariates, and explained an additional 7% of variance ( $p < .001$ ). A Gender x Scale (PBS, NPPBS) repeated-measures analysis of variance revealed students believed peers used PBS less frequently than they themselves did ( $\eta^2(2) = .091$ ,  $p < .001$ ). Such social distancing was greater in women ( $\omega^2(\text{effect})(2) = .151$ ,  $p < .001$ ) than in men ( $\omega^2(\text{effect})(2) = .001$ ,  $p < .001$ ). CONCLUSIONS: Consistent with the principle of false uniqueness, whereby individuals regard their own positive characteristics as rare, college students-especially women-underestimate how frequently other students use PBS. Such norm misperception may enhance students' feelings of competence and self-esteem. The positive relationship between NPPBS and PBS indicates students with high NPPBS are more likely to use the strategies themselves.

**Broadwater, K., Curtin, L., Martz, D. M., & Zrull, M. C. (2006). College student drinking: Perception of the norm and behavioral intentions. *Addictive Behaviors, 31*(4), 632–640.**

Social norm campaigns assume that college students desire to increase their drinking, and may eventually do so, to match inflated perceptions of peer drinking. We assessed 171 college students on self-reported drinking, desired drinking and perception of peer drinking at baseline, and assessed 139 of those students one month later. Participants who believed their peers drank more than they were hypothesized to desire to increase their alcohol consumption to match the perceived norm. This hypothesis was not supported; however, 91% of participants believed their peers drank more than themselves. It was also hypothesized that participants who wished to drink more would drink more in the future. Participants who desired to increase their drinking did not report a significant change in drinking behavior one month later, but participants who initially desired to maintain or decrease their drinking reported significant decreases across the following month. College student overestimation of peer drinking and the college environment are discussed. Social norm campaigns should consider behavioral intentions, and the underlying assumptions of these campaigns should be further tested.

**Carey, K. B., Borsari, B., Carey, M. P., & Maisto, S. A. (2006). Patterns and importance of self-other differences in college drinking norms. *Psychology of Addictive Behaviors, 20*(4), 385–393.**

College students overestimate other students' drinking behavior (descriptive norms) and attitudes (injunctive norms). This study explored the effects of demographics, norm type, and reference group on the magnitude of self-other differences (SODs). Participants ( $N = 1,611$ ; 64% women) completed surveys assessing demographics, drinking patterns, and perceived norms. A subset of 122 students provided consumption data 1 month later to test predictors of changes in drinking. Overall, women and non-Greeks (Greek = member of fraternity or sorority) reported larger SODs for both norm types compared with men and Greeks. Heavier drinkers reported smaller SODs. Gender x Reference Group interactions revealed that women had larger SODs for reference groups

increasingly distal to them; for men, the largest SODs occur for close friends versus more distal groups. Larger SODs for descriptive norms predicted increases in drinking, consistent with social norms theory.

**Cho, H. (2006). Influences of norm proximity and norm types on binge and non-binge drinkers: Examining the under-examined aspects of social norms interventions on college campuses. *Journal of Substance Use, 11(6)*, 417–429.**

Aims: Social norms interventions for reducing excessive drinking on college campuses have reported mixed results. In an attempt to understand the inconsistencies, this study examined some of the under-examined aspects of the social norms approach. Design: A cross-sectional survey of undergraduate students at two large mid-western universities in the USA was conducted. Norm proximity (campus vs. friends' norms), norm types (descriptive vs. injunctive norms), and college drinker types (frequent binge drinkers, occasional binge drinkers, and non-binge drinkers) were differentiated. Findings: The influences of friends' norms are stronger than those of campus and those of descriptive norms are stronger than injunctive norms. Friends' descriptive norms influenced frequent and occasional binge drinkers' behavior most strongly, whereas the campus descriptive norm and self-efficacy influenced non-binge drinkers' behavior. Conclusions: Proximity and types of norms as well as types of college drinkers will need to be distinguished in the future design and evaluation of social norms interventions.

**DeJong, W., Schneider, S. K., Towvim, L. G., Murphy, M. J., Doerr, E. E., Simonsen, N. R., Mason, K. E., & Scribner, R. A. (2006). A multisite randomized trial of social norms marketing campaigns to reduce college student drinking. *Journal of Studies on Alcohol, 67(6)*, 868–879.**

Objective: An 18-site randomized trial was conducted to determine the effectiveness of social norms marketing (SNM) campaigns in reducing college student drinking. The SNM campaigns are intended to correct misperceptions of subjective drinking norms and thereby drive down alcohol consumption. Method: Institutions of higher education were randomly assigned to treatment and control groups. At the treatment group institutions, SNM campaigns delivered school-specific, data-driven messages through a mix of campus media venues. Cross-sectional student surveys were conducted by mail at baseline ( $n = 2,771$ ) and at posttest 3 years later ( $n = 2,939$ ). Hierarchical linear modeling was applied to examine multiple drinking outcomes, taking intraclass correlation into account. Results: Controlling for other predictors, having an SNM campaign was significantly associated with lower perceptions of student drinking levels and lower alcohol consumption, as measured by a composite drinking scale, recent maximum consumption, blood alcohol concentration for recent maximum consumption, drinks consumed when partying, and drinks consumed per week. A moderate mediating effect of normative perceptions on student drinking was demonstrated by an attenuation of the Experimental Group  $\times$  Time interaction, ranging from 16.4% to 39.5% across measures. Additional models that took into account the intensity of SNM campaign activity at the treatment institutions suggested that there was a dose-response relationship. Conclusions: This study is the most rigorous evaluation of SNM campaigns conducted to date. Analysis revealed that students attending institutions that implemented an SNM campaign had a lower relative risk of alcohol consumption than students attending control group institutions.

**Gilbertson, T. A. (2006). Alcohol-related incident guardianship and undergraduate college parties: Enhancing the social norms marketing approach. *Journal of Drug Education, 36(1)*,**

73–90.

This randomized experiment examines the effects of contextual information on undergraduate college student's levels of alcohol-related incident guardianship at college parties. The research is conceptualized using routine activities theory and the theory of planned behavior. The experiment examines attitudinal variations about heavy drinking differentiated by sex, athletic status, and location of the drinking event. The sex and athletic status variables produce statistically effects on the dependent variables, while location of the drinking event is not significant. The article concludes by discussing the importance of context as it pertains to the social norms marketing strategy utilized in much college alcohol programming, and suggests a more directed marketing approach.

**Green, C. A., Polen, M. R., Janoff, S. L., Castleton, D. K., & Perrin, N. A. (2007). "Not getting tanked": Definitions of moderate drinking and their health implications. *Drug and Alcohol Dependence*, 86(2–3), 265–273.**

**BACKGROUND:** People encounter large amounts of sometimes-inconsistent information about risks and benefits of alcohol consumption, and about what constitutes "low-risk" or "moderate" drinking. **METHODS:** We used 150 in-depth interviews linked to questionnaire data to learn how people define moderate drinking and to describe the relationships between definitions, attitudes, and beliefs about moderate drinking and individuals' drinking patterns. **RESULTS:** People adhere to definitions of moderate alcohol consumption that could put them, or others, at risk for short- or long-term negative consequences of drinking. Definitions that confused increased tolerance of alcohol with moderate drinking, and those that defined moderate drinking by the absence of short-term negative consequences or ability to maintain control over drinking, ignore long-term risks of heavy consumption. Individuals with risky attitudes were also more likely to report at-risk drinking practices. **CONCLUSIONS:** Americans have complex beliefs about benefits and risks of alcohol consumption, and public health officials have not succeeded in conveying strong or clear messages about what constitutes low-risk drinking or about dose-response effects. Different (but more consistent) approaches to public education may be needed to increase knowledge about drinking-related risks. The prevalence of diverse norm-based definitions suggests that alternative normative information could help people reassess their own consumption.

**Kilmer, J. R., Walker, D. D., Lee, C. M., Palmer, R. S., Mallett, K. A., Fabiano, P., & Larimer, M. E. (2006). Misperceptions of college student marijuana use: Implications for prevention. *Journal of Studies on Alcohol*, 67(2), 277–281.**

**OBJECTIVE:** This study investigates the relationship between marijuana use, perceived norms of use by friends and students in general, and negative experiences or problems from alcohol and drug use. It was hypothesized that students would overestimate the marijuana use of students in general and that perceptions about the prevalence of marijuana use would be related to drug-related consequences. **METHOD:** In this study, 5,990 participants provided information on the perceptions and consequences of drug use via an online survey or via a paper-based survey. **RESULTS:** Although two thirds of participants reported no marijuana use, 98% of respondents incorrectly predicted that students in general use marijuana at least once per year. Perceptions of use by friends and students in general accounted for variance in drug use and related problems or experiences. **CONCLUSIONS:** Given the relationship between norm misperception and behavior with marijuana use, future research could explore the impact of targeting misperceived norms through prevention and intervention efforts.

**LaBrie, J. W., Hummer, J. F., Neighbors, C., & Pedersen, E. R. (2008). Live interactive group-specific normative feedback reduces misperceptions and drinking in college students: A randomized cluster trial. *Psychology of Addictive Behaviors, 22*(1), 141–148.**

This research evaluated the efficacy of a live and interactive group-specific normative feedback intervention designed to correct misperceptions of alcohol-related group norms and subsequently reduce drinking behavior. Campus organizations (N = 20) containing 1,162 college students were randomly assigned to intervention or assessment-only control conditions. Participants in the intervention condition attended an intervention during their organization's regular standing meeting. Data were gathered in vivo using computerized handheld keypads into which participants entered personal responses to a series of alcohol-related questions assessing perceptions of normative group behavior as well as actual individual behavior. These data were then immediately presented in graphical form to illustrate discrepancies between perceived and actual behavioral group norms. Results indicated that compared with the control group, the intervention group reduced drinking behavior and misperceptions of group norms at 1-month and 2-month follow-ups. Changes in perceived norms mediated the reductions in drinking. Results demonstrate the effectiveness of a novel, technologically advanced, group-based, brief alcohol intervention that can be implemented with entire groups at relatively low cost.

**Lederman, L. C., Stewart, L. P., & Russ, T. L. (2007). Addressing college drinking through curriculum infusion: A study of the use of experience-based learning in the communication classroom. *Communication Education, 56*(4), 476–494.**

This study examined whether the use of a norms-based simulation in a communication class can influence students' misperceptions about college drinking. Participants (N = 462) were enrolled in two undergraduate communication courses: one in which the simulation was used and another that served as a control. Results indicated that participating in the simulation resulted in a decrease in beliefs about college drinking myths; moreover, students' perceptions of social drinking norms were related to their actual drinking behaviors. Findings indicated that the campus atmosphere and social networks promoted alcohol consumption. Results support using a norms-based simulation to provide information about dangerous drinking behaviors while at the same time teaching relevant communication principles.

**Martens, M. P., Page, J. C., Mowry, E. S., Damann, K. M., Taylor, K. K., & Cimini, M. D. (2006). Differences between actual and perceived student norms: An examination of alcohol use, drug use, and sexual behavior. *Journal of American College Health, 54*(5), 295–300.**

Researchers in the social norms area have previously focused primarily on alcohol consumption, paying comparatively less attention to drug use and sexual behavior. The major purposes of this study were to (1) compare perceptions of peer norms in the areas of alcohol use, drug use, and sexual behavior with actual behavior and (2) determine if a relationship existed between a student's perceptions of normative behavior and a student's actual behavior. Participants were 833 college students at a large, public university in the Northeast. Study participants overestimated alcohol use, drug use, and sexual behavior among their peers. There was also a positive relationship between actual behavior and perceived peer norms, although the effect sizes for all behaviors were small to moderate. The authors provide further support for the tenets of social norms theory and suggest that social norms interventions are appropriate both campus-wide and to targeted high-risk groups.

**Martens, M. P., Rocha, T. L., Martine, J. L., & Serrao, H. F. (2008). Drinking motives and college students: Further examination of a four-factor model. *Journal of Counseling Psychology, 55*(2), 289–295.**

The purposes of this study were to examine the reliability and validity of a 4-factor model of the Drinking Motives Measure and to assess year in school and ethnic differences on different types of motives. Data were collected on 441 volunteer college students. Results indicated that fit indices for the 4-factor model were acceptable; fit indices were also better for the 4-factor model than they were for alternative models. Freshman students and students of color had higher scores on the Conformity motives subscale than senior and White students did, respectively. Additionally, differences in the correlation between Conformity motives and alcohol use existed based on year in school, such that the relationship was significantly smaller for freshmen than it was for other students.

**McCabe, S. E. (2008). Misperceptions of non-medical prescription drug use: A Web survey of college students. *Addictive Behaviors, 33*(5), 713–724.**

**OBJECTIVES:** This study compared undergraduate students' perceived versus actual prevalence rates of non-medical use of marijuana, prescription opioids and prescription stimulants. **METHODS:** In 2005, a randomly selected sample of 3639 college students self-administered a Web survey regarding their substance use behaviors and attitudes (68% response rate). **RESULTS:** The majority of undergraduate students overestimated the prevalence of non-medical use of prescription stimulants (70.2%) and prescription opioids (69.9%) and marijuana use (50.5%) among peers on their campus. The mean difference between perceived versus actual past-year use was considerably greater for non-medical use of prescription stimulants (mean difference=12.2, 95% CI=11.7-12.7) and prescription opioids (mean difference=8.8, 95% CI=8.3-9.2) than marijuana (mean difference=2.9, 95% CI=2.2-3.6). Multivariate regression analysis revealed overestimation of non-medical use of prescription drugs was significantly associated with gender and medical use of prescription drugs. **CONCLUSIONS:** The findings provided strong evidence of misperception of non-medical prescription drug use among college students. Future research and prevention efforts should assess the impact of correcting misperceived norms on reducing non-medical prescription drug use.

**Neighbors, C., Dillard, A. J., Lewis, M. A., Bergstrom, R. L., & Neil, T. A. (2006). Normative misperceptions and temporal precedence of perceived norms and drinking. *Journal of Studies on Alcohol, 67*(2), 290–299.**

**OBJECTIVE:** Previous research has shown that students overestimate the drinking of their peers, and that perceived norms are strongly associated with drinking behavior. Explanations for these findings have been based largely on cross-sectional data, precluding the ability to evaluate the stability of normative misperceptions or to disentangle the direction of influence between perceived norms and drinking. The present research was designed to evaluate (1) the stability of normative misperceptions and (2) temporal precedence of perceived norms and drinking. **METHOD:** Participants were college students (N = 164; 94 women) who completed assessments of perceived norms and reported behavior for drinking frequency and weekly quantity. Most participants (68%) completed the same measures again two months later. **RESULTS:** Results indicated large and stable overestimations of peer drinking for frequency and weekly quantity. Results also showed that for

weekly quantity, perceived norms predicted later drinking, but drinking also predicted later perceived norms. Results for frequency revealed perceived norms predicted later drinking, but drinking did not predict later perceived norms. CONCLUSIONS: These findings underscore the importance of longitudinal designs in evaluating normative influences on drinking. The present findings suggest that normative misperceptions are stable, at least over a relatively short time period. Findings support a mutual influence model of the relationship between perceived norms and drinking quantity but are more strongly associated with conformity explanations for the relationship between perceived norms and drinking frequency. Results are discussed in terms of implications for prevention interventions.

**Neighbors, C., Fossos, N., Woods, B. A., Fabiano, P., Sledge, M., & Frost, D. (2007). Social anxiety as a moderator of the relationship between perceived norms and drinking. *Journal of Studies on Alcohol, 68*(1), 91–96.**

ABSTRACT. Objective: College students overestimate the drinking of their peers, and the more they overestimate, the more they drink. The present research was designed to evaluate social anxiety as a moderator of the relationship between perceived norms and drinking among college men and women. Method: Participants included 1,217 first-year residence-hall students (62.8% women) who completed Web-based assessments of social anxiety, perceived norms, and self-reported drinking. Results: Results replicated previous research in that students overestimated the drinking of their peers ( $d = 0.75, p < .001$ ). Students who had higher social anxiety drank somewhat more but did not differ from students who had lower social anxiety on perceived norms. However, the relationship between perceived norms and drinking was stronger among students who had higher social anxiety ( $d = 0.92, p < .001$ ) relative to less socially anxious students ( $d = 0.02, p = NS$ ). Higher levels of social anxiety were associated with a stronger relationship between perceived norms and drinking for both men ( $d = 0.86, p < .001$ ) and women ( $d = 0.50, p < .001$ ) but stronger for men ( $d = 0.26, p < .001$ ). Conclusions: These results corroborate previous literature, which suggests that social factors are important determinants of drinking in this population and suggest that social anxiety is associated with susceptibility to peer influences on drinking. Additional work evaluating whether reductions in social anxiety may ameliorate the impact of perceived norms on drinking would be worthwhile.

**Neighbors, C., Geisner, I. M., & Lee, C. M. (2008). Perceived marijuana norms and social expectancies among entering college student marijuana users. *Psychology of Addictive Behaviors, 22*(3), 433–438.**

This research examined the relationships among perceived social norms, social outcome expectancies, and marijuana use and related consequences among entering college freshman marijuana users. Students ( $N = 312, 55\%$  female) completed online assessments of their marijuana use, related consequences, perceived norms, and social expectancies related to marijuana use. Results suggested that perceptions of friends' marijuana use were most strongly associated with marijuana use ( $d = 0.68$ ), in comparison with perceived injunctive norms ( $d = 0.30$ ) or expectancies ( $d = 0.19$ ), and that the perception that other students used marijuana more frequently was more strongly associated with use among students who also perceived other students as more approving of marijuana. In addition, the relationships between perceived descriptive and injunctive norms and marijuana use were stronger among students who reported more positive social marijuana expectancies. Descriptive norms and expectancies were both positively associated with marijuana-related consequences, but, at high levels of both of these variables, injunctive norms were negatively

associated with consequences. Results highlight the importance of distinguishing between descriptive and injunctive norms and between marijuana use and related consequences.

**Neighbors, C., Lee, C. M., Lewis, M. A., Fossos, N., & Larimer, M. E. (2007). Are social norms the best predictor of outcomes among heavy-drinking college students? *Journal of Studies on Alcohol and Drugs*, 68(4), 556–565.**

Objective: This research was designed to evaluate the relative contribution of social norms, demographics, drinking motives, and alcohol expectancies in predicting alcohol consumption and related problems among heavy-drinking college students. Method: Participants included 818 (57.6% women) first-year undergraduates who reported at least one heavy-drinking episode in the previous month. In addition to providing demographic information (gender and fraternity/sorority membership) participants completed Web-based assessments of social norms (perceived descriptive norms regarding typical student drinking, injunctive norms regarding friends' and parents' approval), motives (social, enhancement, coping, and conformity), and expectancies and evaluations of positive and negative alcohol effects. Results: Regression results indicated that descriptive and injunctive norms were among the best predictors of college student drinking. With respect to alcohol problems, results indicated that coping motives accounted for the largest proportion of unique variance. Finally, results revealed that alcohol consumption mediated the relationships between predictors and problems for social norms, whereas coping motives, negative expectancies, and evaluation of negative effects were directly associated with alcohol problems despite having relatively weak or null unique associations with consumption. Conclusions: The results of this study substantiate social norms as being among the best predictors of alcohol consumption in this population and suggest that drinking to cope is a better predictor of problems. The findings are discussed in terms of practical prevention and treatment implications.

**Neighbors, C., O'Connor, R. M., Lewis, M. A., Chawla, N., Lee, C. M., & Fossos, N. (2008). The relative impact of injunctive norms on college student drinking: The role of reference group. *Psychology of Addictive Behaviors*, 22(4), 576–581.**

This research evaluated the importance of reference groups in the relationships between injunctive norms and alcohol consumption for college student drinkers. First-year students (N = 811; 58% women) completed online assessments of their drinking behavior, as well as their perceptions of the approval (injunctive norms) and prevalence (descriptive norms) of drinking by others. Injunctive norms were evaluated with respect to typical students, typical same-sex students, friends, and parents. Descriptive norms were evaluated with respect to typical students and typical same-sex students. Results suggested that for injunctive norms, only perceptions of proximal reference groups (friends and parents) are positively associated with drinking behavior. However, when considered in the context of multiple referents and norms, injunctive norms for more distal groups (typical students/same-sex students) were negatively associated with personal drinking, whereas descriptive norms for distal referents remained positively associated with drinking. Results suggest that injunctive norms are more complex than descriptive norms and these complexities warrant important consideration in the development of intervention strategies.

**Neighbors, C., Oster-Aaland, L., Bergstrom, R. L., & Lewis, M. A. (2006). Event- and context-specific normative misperceptions and high-risk drinking: 21st birthday celebrations and football tailgating. *Journal of Studies on Alcohol*, 67(2), 282–289.**

**OBJECTIVE:** Negative alcohol-related consequences often occur during specific events and in specific contexts (e.g., 21st birthday celebrations and tailgating parties). A lack of available event- and context-specific interventions suggests the need to better understand factors associated with heavy drinking in these contexts, with an eye toward developing specific interventions. The purpose of this research was to lay the foundation for developing personalized normative feedback interventions for 21st birthday celebratory drinking and tailgating drinking by evaluating whether students overestimate norms in these specific contexts, as they do more generally. **METHOD:** Perceived descriptive norms and alcohol consumption were assessed at event- and context-specific levels in two studies. Study 1 included 119 students turning 21 years old who reported their 21st birthday drinking behavior and estimated the typical number of drinks consumed by students celebrating their 21st birthday. Study 2 included 140 undergraduates drawn from a stratified random sample who reported their behavior regarding drinking and tailgating and their perceived norms for typical drinking and tailgating behavior. **RESULTS:** Results from Study 1 revealed that students overestimated peer drinking during 21st birthday celebrations, and this overestimation was associated with heavier drinking on one's own 21st birthday. In Study 2, students underestimated the percentage of tailgaters who drank but overestimated typical consumption. Overestimation was consistently associated with heavier drinking during tailgating. **CONCLUSIONS:** Successful correction of general normative misperceptions has been shown to reduce drinking in other research. Documentation of normative misperceptions for specific events and contexts provided by these results represents an important step in developing event- and context-specific interventions utilizing specific normative feedback.

**Pedersen, E. R., & LaBrie, J. W. (2008). Normative misperceptions of drinking among college students: A look at the specific contexts of prepartying and drinking games. *Journal of Studies on Alcohol and Drugs*, 69(3), 406–411.**

**OBJECTIVE:** In the collegiate context, misperceptions of student drinking norms are among the most salient predictors of heavy drinking. Despite overall overestimations of peer alcohol use, misperceptions of context-specific behaviors have been infrequently studied. The present study examines students' perceptions of the high-risk behaviors of prepartying and drinking games and investigates the relationship between perceived and actual behaviors. **METHOD:** A sample of 524 college students completed an online assessment of actual and perceived alcohol use related to prepartying and drinking games. Quantity and frequency of overall drinking, prepartying, and drinking games were assessed for perceptions of all students at the university, as well as for male and female students separately. Questions also assessed participants' overall drinking, prepartying, and drinking game behaviors. **RESULTS:** Participants significantly overestimated the prepartying and drinking game behaviors of all students, male students, and female students at their university. For men, perceptions of same-sex prepartying quantity and drinking game frequency and quantity were associated with actual behavior. For women, perceptions of both same-sex and other-sex prepartying quantity were associated with actual behavior. **CONCLUSIONS:** These findings provide preliminary support for the association between context-specific perceived norms and actual prepartying and drinking game behaviors. Addressing these same-sex and opposite-sex norms during interventions may help students reduce their own engagement in these risky behaviors.

**Pedersen, E. R., LaBrie, J. W., & Lac, A. (2008). Assessment of perceived and actual alcohol norms in varying contexts: Exploring Social Impact Theory among college students. *Addictive Behaviors*, 33(4), 552–564.**

The social norms approach to college drinking suggests that students misperceive the drinking behavior and attitudes of their peers. While much is known about these misperceptions, research is sparse regarding the context in which perceived and actual norms are assessed. As social influence is pronounced in college, the principles of Social Impact Theory may contribute to differences between assessments performed individually and those completed when surrounded by members of one's salient reference group. The current study examines 284 members of campus organizations in two contexts (online and group) to determine if individuals endorse different responses to questions of perceived and actual drinking norms across contexts. All participants endorsed higher responses on questions of actual and perceived group behavior and of perceived group attitudes towards drinking during the group assessment. Men and students in Greek organizations may be more influenced by the proximity of their peers when presented with questions regarding perceived alcohol use. These results suggest that context of assessment needs to be considered when collecting self-report data from college students.

**Perkins, H. W., & Craig, D. W. (2006). A successful social norms campaign to reduce alcohol misuse among college student-athletes. *Journal of Studies on Alcohol*, 67(6), 880–889.**

**Objective:** This study examines the impact of a social norms intervention to reduce alcohol misuse among student-athletes. The intervention was designed to reduce harmful misperceptions of peer norms and, in turn, reduce personal risk. **Method:** A comprehensive set of interventions communicating accurate local norms regarding alcohol use targeted student-athletes at an undergraduate college. An anonymous survey of all student-athletes was conducted annually for 3 years (2001: n = 414, 86% response; 2002: n = 373, 85% response; and 2003: n = 353, 79% response). A pre/post comparison of student-athletes was conducted separately for new and ongoing athletes at each time point to isolate any general time period effects from intervention effects. A cross-sectional analysis of student-athletes with varying degrees of program exposure was also performed. **Results:** The intervention substantially reduced misperceptions of frequent alcohol consumption and high-quantity social drinking as the norm among student-athlete peers. During this same time period, frequent personal consumption, high-quantity consumption, high estimated peak blood alcohol concentrations during social drinking, and negative consequences all declined by 30% or more among ongoing student-athletes after program exposure. In contrast, no significant differences across time were seen for new student-athletes each year with low program exposure. Among student-athletes with the highest level of program exposure, indications of personal misuse were at least 50% less likely on each measure when compared with student-athletes with the lowest level of program exposure. **Conclusions:** This social norms intervention was highly effective in reducing alcohol misuse in this high-risk collegiate subpopulation by intensively delivering data-based messages about actual peer norms through multiple communication venues.

**Polonec, L. D., Major, A. M., & Atwood, L. E. (2006). Evaluating the believability and effectiveness of the social norms message “Most students drink 0 to 4 drinks when they party.” *Health Communication*, 20(1), 23–34.**

In an effort to reduce dangerous drinking levels among college students, university health educators have initiated social norms campaigns based on the rationale that students will be more likely to reduce their own drinking behaviors if they think that most students on campus are not heavy or binge drinkers. Within the framework of social comparisons theory, this study reports the findings of a survey of 277 college students and explores the correlates of accuracy and bias in students'

estimates of whether or not most other students think that binge drinking on campus is a problem and whether or not most other students believe the campaign message. The overwhelming majority (72.6%) of students did not believe the norms message that most students on campus drink “0 to 4” drinks when they party, and 52.7% reported drinking “5 or more” drinks in a sitting. The social norms campaign was effective in motivating 61% of the respondents to think about binge drinking as a problem. For the most part, group or social network norms were more influential on students’ own drinking behavior than were their estimates of the campus drinking norm. The findings also clarify that accuracy in estimating the campus social norm in and of itself does not necessarily lead to an increase or reduction in alcohol consumption. The social comparisons approach underscores the complex and social nature of human interaction and reinforces the need for the development of multiple approaches to alcohol education with messages that are designed to target the specific needs of students based on their orientations toward alcohol consumption.

**Reilly, D. W., & Wood, M. D. (2008). A randomized test of a small-group interactive social norms intervention. *Journal of American College Health, 57*(1), 53–60.**

Social norms interventions are a common approach to addressing the problem of college student drinking. An increasingly popular but not yet well-validated social-norms-based intervention consists of providing normative feedback to students in small groups. Objective, Participants, and Methods: In this study, the authors used a randomized design to test an interactive form of small-group social norms correction with 502 first-year students during September and October 2001. Because the unit of random assignment was at the level of the classroom, the authors used hierarchical linear modeling to estimate variability. They investigated whether small-group interactive social norms correction could influence alcohol perceptions and behaviors above and beyond a noninteractive social norms education approach. Results: Results indicate that the approach has a fairly substantial influence on student perceptions; however, the findings do not support an influence of interactive small-group social norms correction on measures of alcohol use behaviors. Conclusions: Given these findings, the use of interactive small-group social norms approach to influence student misperceptions may be considered as a primer for population-level preventive interventions.

**Scribner, R., Mason, K., Theall, K., Simonsen, N., Schneider, S. K., Towvim, L. G., & DeJong, W. (2008). The contextual role of alcohol outlet density in college drinking. *Journal of Studies on Alcohol and Drugs, 69*(1), 112–120.**

**OBJECTIVE:** The objective of the study is to examine the relationship between the physical availability of off-campus alcohol and drinking outcomes among college students. **METHOD:** A multilevel analysis of students ( $N = 17,051$ ) nested within college campuses ( $N = 32$ ) was conducted. Four problem-drinking-related outcomes (i.e., average number of drinks when partying, frequency of drunkenness in past 2 weeks, 30-day frequency of drinking, and greatest number of drinks in one sitting) along with individual level covariates of drinking were introduced at the student level. The physical availability of alcohol was assessed as the number of on-premise and off-premise alcohol outlets within 3 miles of campus per 1,000 students enrolled. **RESULTS:** Higher densities of on-premise alcohol outlets were strongly related to drinking outcomes even after controlling for individual predictors of college drinking. The association indicated that the campus means for the average number of drinks when partying and the number of drinking occasions in the past 30 days were, respectively, 1.13 drinks and 1.32 occasions greater when the outlet density was 2 SDs higher. **CONCLUSIONS:** Off-campus, on-premise outlet density is strongly associated with college-drinking outcomes. Given the limited number of modifiable factors that affect college

drinking, on-premise outlet density represents a potential modifiable means of addressing the problem.

**Sessa, F. M. (2007). Peer crowds in a commuter college sample: The relation between self-reported alcohol use and perceived peer crowd norms. *Journal of Psychology, 141*(3), 293–305.**

The author studied peer crowds on a college commuter campus and examined the relation between self-reported alcohol use and perceived peer crowd norms for alcohol use. College students (N = 271) completed questionnaires to determine their peer crowd affiliation and frequency and amount of alcohol use. The author assessed perceived peer-crowd affiliation norms with a series of vignettes describing the typical student that would be associated with each peer crowd. Analyses revealed identifiable peer crowds among college students that represent different patterns of alcohol use both in self-reported alcohol use among students in a peer crowd and in the perceived norms for alcohol use in each peer crowd. The author described the relation between self-reported use and the perceived use by members of one's peer crowd.

**Turner, J., Perkins, H. W., & Bauerle, J. (2008). Declining negative consequences related to alcohol misuse among students exposed to a social norms marketing intervention on a college campus. *Journal of American College Health, 57*(1), 85–94.**

Objective: The authors examined whether alcohol-related negative consequences decreased among students exposed to an intervention. Participants: Beginning in 1999, approximately 2,500 randomly selected undergraduates from a 4-year US university annually participated in a Web-based survey over 6 years. Methods: The educational intervention used social norms initiatives. Main outcome measures included recall of intervention, estimated blood alcohol content (eBAC) when drinking, and 10 negative consequences from alcohol within the past year. Results: First-year students recalling exposure had lower odds of negative consequences (odds ratio [OR] = 0.78, 95% confidence interval [CI] = 0.64-0.95) and of having an eBAC higher than .08 (OR = 0.76, 95% CI = 0.62-0.92). Over the 6 study years, the odds among all participants of experiencing (a) none of 10 alcohol consequences nearly doubled (OR = 2.13, 95% CI = 1.82-2.49) and (b) multiple consequences decreased by more than half (OR = 0.43, 95% CI = 0.36-0.50). Conclusions: These findings have important implications for US colleges and universities engaged in the reduction of harm associated with alcohol misuse.

See also:

Benton, S. L., Downey, R. G., Glider, P. S., Benton, S. A., Shin, K., Newton, D. W., Arck, W., & Price, A. (2006). Predicting negative drinking consequences: Examining descriptive norm perception. *Journal of Studies on Alcohol, 67*(3), 399–405.

Crawford, L. A., & Novak, K. B. (2006). Alcohol abuse as a rite of passage: The effect of beliefs about alcohol and the college experience on undergraduates' drinking behaviors. *Journal of Drug Education, 36*(3), 193–212.

Gorsline, D., Holl, A., Pearson, J. C., & Child, J. T. (2006). It's more than drinking, drugs, and sex: College student perceptions of family problems. *College Student Journal, 40*(4), 802–807.

Lewis, M. A., & Neighbors, C. (2006). Social norms approaches using descriptive drinking norms education: A review of the research on personalized normative feedback. *Journal of American College Health, 54*(4), 213–218.

Lewis, M. A., & Neighbors, C. (2006). Who is the typical college student? Implications for personalized normative feedback interventions. *Addictive Behaviors, 31*(11), 2120–2126.

Martens, M. P., Dams-O'Connor, K., Duffy-Paiement, C., & Gibson, J. T. (2006). Perceived alcohol use among friends and alcohol consumption among college athletes. *Psychology of Addictive Behaviors, 20*(2), 178–184.

Neighbors, C., Lewis, M. A., Bergstrom, R. L., & Larimer, M. E. (2006). Being controlled by normative influences: Self-determination as a moderator of a normative feedback alcohol intervention. *Health Psychology, 25*(5), 571–579.

Thombs, D. L., Olds, R. S., Osborn, C. J., Cassetday, S., Glavin, K., & Berkowitz, A. D. (2007). Outcomes of a technology-based social norms intervention to deter alcohol use in freshman residence halls. *Journal of American College Health, 55*(6), 325–332.

Turrisi, R., Mastroleo, N. R., Mallett, K. A., Larimer, M. E., & Kilmer, J. R. (2007). Examination of the mediational influences of peer norms, environmental influences, and parent communications on heavy drinking in athletes and nonathletes. *Psychology of Addictive Behaviors, 21*(4), 453–461.

### **Alcohol Availability**

**Jamison, J., & Myers, L. B. (2008). Peer-group and price influence students drinking along with planned behaviour. *Alcohol and Alcoholism (Oxford, Oxfordshire), 43*(4), 492–497.**

AIMS: To examine the theory of planned behaviour (TPB), as a framework for explaining binge drinking among young adults. METHODS: One hundred and seventy-eight students in a cross-sectional design study completed self-report questionnaires examining attitudes to drinking, intention to drink and drinking behaviour in university. Binge drinking was defined for females (and males) as consuming 'four (males-five) or more pints of beer/glasses of wine/measures of spirits' in a single session. RESULTS: Drinking alcohol was common; 39.6% of males and 35.9% of females reported binge drinking. The TPB explained 7% of the variance in intention to drink. Overall, 43% of the variance in intention, 83% of the variance in total weekly consumption and 44% of the variance in binge drinking was explained. The frequency of drinking and the drinking behaviour of friends significantly predicted intention to drink and binge drinking, respectively. Binge drinkers were influenced by peers and social-situational factors. Pressure to drink was greater for males; undergraduates were influenced by the size of the drinking group, 'special offer' prices, and the availability of alcohol. CONCLUSIONS: The TPB appeared to be a weak predictor of student drinking but this may be a result of how constructs were measured. With friends' drinking behaviour emerging as a significant predictor of alcohol consumption, interventions seeking to reduce excessive drinking should target the role of peers and the university environment in which drinking occurs.

**Zakocs, R. C., Tiwari, R., Vehige, T., & DeJong, W. (2008). Roles of organizers and champions in building campus-community prevention partnerships. *Journal of American***

*College Health*, 57(2), 233–241.

Objective: A campus-community partnership can be an effective vehicle for launching environmental strategies to prevent college alcohol-related problems. In this study, the authors' primary aim was identifying key factors that facilitate or impede colleges' efforts to build campus-community partnerships. Participants and Methods: From fall 2004 to summer 2006, administrators at five 4-year colleges participated in a multisite case study. Level of partnership development was the primary outcome. Results: Three interrelated factors facilitated higher-developed partnerships: college staff assigned to facilitate the partnerships who worked as community organizers, higher-level college administrators who served as aggressive champions, and community initiation of the partnership. The authors did not observe this trio of factors among the less-developed partnerships. A lack of administrative support made it more difficult for a champion to emerge, a college administrator who staunchly advocated for a campus-community partnership, and for those assigned to facilitate the partnership to carry out their work. Conclusions: Colleges should appoint higher-level administrators to serve as champions, while also ensuring that those assigned to facilitate a partnership can apply community organizing skills.

### Marketing and Promotion of Alcohol and Other Drugs

**Babor, T. F., Xuan, Z., & Proctor, D. (2008). Reliability of a rating procedure to monitor industry self-regulation codes governing alcohol advertising content. *Journal of Studies on Alcohol and Drugs*, 69(2), 235–242.**

OBJECTIVE: The purposes of this study were to develop reliable procedures to monitor the content of alcohol advertisements broadcast on television and in other media, and to detect violations of the content guidelines of the alcohol industry's self-regulation codes. METHOD: A set of rating-scale items was developed to measure the content guidelines of the 1997 version of the U.S. Beer Institute Code. Six focus groups were conducted with 60 college students to evaluate the face validity of the items and the feasibility of the procedure. A test-retest reliability study was then conducted with 74 participants, who rated five alcohol advertisements on two occasions separated by 1 week. RESULTS: Average correlations across all advertisements using three reliability statistics ( $r$ ,  $\rho$ , and  $\kappa$ ) were almost all statistically significant and the  $\kappa$ s were good for most items, which indicated high test-retest agreement. We also found high interrater reliabilities (intraclass correlations) among raters for item-level and guideline-level violations, indicating that regardless of the specific item, raters were consistent in their general evaluations of the advertisements. CONCLUSIONS: Naïve (untrained) raters can provide consistent (reliable) ratings of the main content guidelines proposed in the U.S. Beer Institute Code. The rating procedure may have future applications for monitoring compliance with industry self-regulation codes and for conducting research on the ways in which alcohol advertisements are perceived by young adults and other vulnerable populations.

**Czyzewska, M., & Ginsburg, H. J. (2007). Explicit and implicit effects of anti-tobacco and anti-marijuana TV advertisements. *Addictive Behaviors*, 32(1), 114–127.**

Effects of anti-tobacco and anti-marijuana TV advertisements on explicit (i.e., semantic differential ratings) and implicit (i.e. Implicit Association Test, IAT) attitudes toward tobacco and marijuana were compared. Two hundred twenty nine, 18- to 19-year-old U.S. college students were randomly assigned to anti-tobacco or anti-marijuana PSA viewing conditions. Participants completed a short

survey on attitudes to tobacco and marijuana. Afterwards they watched 15 PSAs embedded in a 15-min science program. At the end, all participants completed IAT for marijuana, IAT for tobacco and the assessment of explicit attitudes. Results of ANCOVA revealed a significant interaction between type of TV PSAs watched and implicit attitudes,  $F(1,223)=7.12$ ,  $p<0.01$  when controlling for preexisting attitudes to both substances; the implicit attitudes were more negative toward the substance that corresponded to the content of advertisements watched (i.e., anti-tobacco or anti-marijuana). However, analogical analysis on explicit measures showed that attitudes to marijuana became less negative among students that watched anti-marijuana ads than the group with anti-tobacco ads,  $F(1,222)=5.79$ ,  $p<0.02$ . The discussion focused on the practical and theoretical implications of the observed dissociation between implicit and explicit attitudes to marijuana after the exposure to anti-marijuana PSAs.

**Russell, D. W., & Russell, C. A. (2008). Embedded alcohol messages in television series: The interactive effect of warnings and audience connectedness on viewers' alcohol beliefs. *Journal of Studies on Alcohol and Drugs*, 69(3), 459–467.**

**OBJECTIVE:** This research investigates whether warning viewers about the presence of embedded messages in the content of a television episode affects viewers' drinking beliefs and whether audience connectedness moderates the warning's impact. **METHOD:** Two hundred fifty college students participated in a laboratory experiment approximating a real-life television viewing experience. They viewed an actual television series episode containing embedded alcohol messages, and their subsequent beliefs about alcohol consequences were measured. Experimental conditions differed based on a 2 (Connectedness Level: low vs high) x 2 (Timing of the Warning: before or after the episode) x 2 (Emphasis of Warning: advertising vs health message) design. Connectedness was measured, and the timing and emphasis of the warnings were manipulated. The design also included a control condition where there was no warning. **RESULTS:** The findings indicate that warning viewers about embedded messages in the content of a program can yield significant differences in viewers' beliefs about alcohol. However, the warning's impact differs depending on the viewers' level of connectedness to the program. In particular, in comparison with the no-warning control condition, the advertising prewarning produced lower positive beliefs about alcohol and its consequences but only for the low-connected viewers. Highly connected viewers were not affected by a warning emphasizing advertising messages embedded in the program, but a warning emphasizing health produced significantly higher negative beliefs about drinking than in the control condition. **CONCLUSIONS:** The presence of many positive portrayals of drinking and alcohol product placements in television series has led many to suggest ways to counter their influence. However, advocates of warnings should be conscious of their differential impact on high- and low-connected viewers.

### **Policy and Enforcement-Related Interventions**

**Fell, J. C., Fisher, D. A., Voas, R. B., Blackman, K., & Tippetts, A. S. (2008). The relationship of underage drinking laws to reductions in drinking drivers in fatal crashes in the United States. *Accident Analysis & Prevention*, 40(4), 1430–1440.**

**Abstract:** This study reports on an effort to evaluate and interrelate the existence and strength of two core laws and 14 expanded laws designed to (a) control the sales of alcohol, (b) prevent possession and consumption of alcohol, and (c) prevent alcohol impaired driving by youth aged 20 and younger. Our first analysis determined if the enactment of the possession and purchase laws

(the two core minimum legal drinking age laws) was associated with a reduction in the ratio of drinking to nondrinking drivers aged 20 and younger who were involved in fatal crashes controlling for as many variables as possible. The ANOVA results suggest that in the presence of numerous covariates, the possession and purchase laws account for an 11.2% ( $p = 0.041$ ) reduction in the ratio measure. Our second analysis determined whether the existence and strength of any of the 16 underage drinking laws was associated with a reduction in the percentage of drivers aged 20 and younger involved in fatal crashes who were drinking. In the regression analyses, making it illegal to use a false identification to purchase alcohol was significant. From state to state, a unit difference (increase) in the strength of the False ID Use law was associated with a 7.3% smaller outcome measure ( $p = 0.034$ ).

**Lavigne, A. M., Witt, C. F., Wood, M. D., Laforge, R., & DeJong, W. (2008). Predictors of college student support for alcohol control policies and stricter enforcement strategies. *American Journal of Drug and Alcohol Abuse*, 34(6), 749–759.**

Objectives: With alcohol-related problems remaining a concern on college campuses, prevention efforts are increasingly directed to addressing the environmental factors that encourage consumption. This study examined students' support for alcohol control policies, correlates of that support, and actual vs. perceived peer support. Methods: Telephone interviews were conducted with a random sample of 510 college students. We conducted a three-step hierarchical regression analysis to examine predictors of policy support. Levels of personal and perceived peer support for alcohol control policies were compared. Results: Findings revealed a high level of policy support among students, with variability in support by gender, alcohol consumption levels, and drinking and driving tendencies. Additionally, compared to the percentage of students who supported each policy, a smaller percentage thought other students were supportive. Conclusions: Results provide valuable insights to inform the development of media campaigns and other environmental management initiatives.

**Lenk, K. M., Toomey, T. L., & Erickson, D. J. (2006). Propensity of alcohol establishments to sell to obviously intoxicated patrons. *Alcoholism: Clinical and Experimental Research*, 30(7), 1194–1199.**

Background: Although it is illegal to sell alcohol to an individual who appears obviously intoxicated, several recent studies show that the propensity of these types of sales is high. Our study further assesses the propensity of alcohol establishments to sell alcohol to obviously intoxicated patrons. In addition to providing more recent data (2001) on pseudo-intoxicated purchase attempts at Midwestern on-premise establishments, our study examines the association between establishment policies/practices and the likelihood of sales to intoxicated patrons.

Method: We hired professional actors to feign intoxication while attempting to purchase alcohol (pseudo-intoxicated patrons) at 231 bars and restaurants, and we conducted a phone survey of owners/managers of each establishment. Our dependent variable was purchase attempt outcome (alcohol sold vs not sold). Our independent variables included policies/practices of establishments and characteristics of buyers/servers, establishments, and neighborhoods. Results: Pseudo-intoxicated patrons were able to purchase alcohol in 65% of their attempts. Multivariate analyses showed the following: (1) compared with establishments with beer- and/or wine-only licenses, establishments with full liquor licenses were less likely to sell to intoxicated patrons; (2) establishments with average length of employment among managers of at least 1 year were more likely to sell to obviously intoxicated patrons; and (3) establishments that held staff meetings at least

once a month were less likely to sell to obviously intoxicated patrons. Neighborhood characteristics were not associated with our outcome in multivariate analyses.

Conclusions: Our findings provide increased evidence of the need to address the illegal sale of alcohol to intoxicated patrons, particularly given that increased intoxication levels among patrons resulting from these types of sales can lead to alcohol-related problems.

**Liang, L., & Huang, J. (2008). Go out or stay in? The effects of zero tolerance laws on alcohol use and drinking and driving patterns among college students. *Health Economics, 17(11)*, 1261–1275.**

Zero tolerance laws make it illegal per se for anyone under age 21 to drive with any measurable amount of blood alcohol. Although a link has been established between zero tolerance laws and lower motor vehicle fatalities, research has not produced strong evidence on how zero tolerance laws influence individual alcohol use and drinking and driving behaviors. Using a unique data set and a difference-in-difference-in-difference-type research design, we are able to analyze a number of pathways through which zero tolerance laws can work among an important underage population, college students. We find that zero tolerance laws reduce drinking and driving among college students. Further analysis of our detailed alcohol use measures suggests that zero tolerance laws are particularly effective at reducing the probability of driving after drinking for those who reported drinking away from home.

**Martinez, J. A., Rutledge, P. C., & Sher, K. J. (2007). Fake ID ownership and heavy drinking in underage college students: Prospective findings. *Psychology of Addictive Behaviors, 21(2)*, 226–232.**

The authors examined the ownership of false identification (fake ID) for the purpose of obtaining alcohol and the relation of fake ID ownership to heavy drinking in a longitudinal sample of college students under 21 years of age. A sample of 3,720 undergraduates was assessed the summer prior to college entrance and during the 4 semesters comprising freshman and sophomore years. Regression analyses were used to estimate bidirectional relations between consumption and fake ID ownership. Sex, Greek membership, and prior drinking were controlled. Results showed that fake ID ownership increased over time (12.5% precollege to 32.2% fourth semester) and that Greek members were more likely than others to own fake IDs. Fake ID ownership predicted concurrent and next-semester heavy drinking with increasing strength over time. Also, the acquisition (onset) of fake ID ownership at each time point was predicted by previous-semester consumption. When traditional, robust risk factors of consumption are controlled, fake ID ownership meaningfully relates to heavy drinking in college. It thus presents a significant public health problem, addressable through training for alcohol servers and retailers, punitive measures toward fake ID owners, and other possible interventions.

**Newman, I. M., Shell, D. F., Major, L. J., & Workman, T. A. (2006). Use of policy, education, and enforcement to reduce binge drinking among university students: The NU Directions project. *International Journal of Drug Policy, 17(4)*, 339–349.**

This paper describes a programme, conducted over a 5-year period, that effectively reduced heavy drinking and alcohol-related harms among university students. The programme was organized around strategies to change the environment in which binge drinking occurred and involved input and cooperation from officials and students of the university, representatives from the city and the

neighborhood near the university, law enforcement, as well as public health and medical officials. In 1997, 62.5% of the university's approximately 16,000 undergraduate student population reported binge drinking. This rate had dropped to 47% in 2003. Similar reductions were found in both self-reported primary and secondary harms related to alcohol consumption.

**Ponicki, W. R., Gruenewald, P. J., & LaScala, E. A. (2007). Joint impacts of minimum legal drinking age and beer taxes on US youth traffic fatalities, 1975 to 2001. *Alcoholism: Clinical and Experimental Research*, 31(5), 804–813.**

**BACKGROUND:** There is a considerable body of prior research indicating that a number of public policies that limit alcohol availability affect youth traffic fatalities. These limitations can be economic (e.g., beverage taxation), physical (e.g., numbers or operating hours of alcohol outlets), or demographic (e.g., minimum legal drinking age). The estimated impacts of these policies differ widely across studies. A full-price theoretical approach suggests that people weigh the benefits of drinking against the sum of all the associated costs, including the price of the beverages themselves plus the difficulty of obtaining them and any additional risks of injury or punishment related to their use. This study tested one prediction of this model, namely that the impact from changing one availability-related cost depends on the level of other components of full cost. **METHODS:** The current analyses concentrate on 2 forms of limitations on availability that have been shown to affect youth traffic fatalities: minimum legal drinking age (MLDA) laws and beer taxes. The interdependence between the impacts of MLDA and taxes is investigated using a panel of 48 US states over the period 1975 to 2001. All age-group-specific models control for numerous other variables previously shown to affect vehicle fatalities, as well as fixed effects to account for unexplained cross-sectional and time-series variation. **RESULTS:** The analyses showed that raising either MLDA or beer taxes in isolation led to fewer youth traffic fatalities. As expected, a given change in MLDA causes a larger proportional change in fatalities when beer taxes are low than when they are high. **CONCLUSIONS:** These findings suggest that a community's expected benefit from a proposed limitation on alcohol availability depends on its current regulatory environment. Specifically, communities with relatively strong existing policies might expect smaller impacts than suggested by prior research, while places with weak current regulations might expect larger benefits from the same policy initiative.

**Saltz, R. F. (2007). How do college students view alcohol prevention policies? *Journal of Substance Use*, 12(6), 447–460.**

Despite research supporting comprehensive community prevention strategies, there has been relatively less done in the way of policy-orientated approaches to prevention on college campuses, in the face of powerful appeals to do so. Among the likely reasons for this state of affairs is that college administrations are cautious about adopting new alcohol policies because of a general belief that such policies are held in very low favor among the students themselves. The sense that most alcohol policies will be met with universal opposition is largely unexamined, however, and it is entirely possible that student attitudes regarding alcohol policies are worthy of investigation in themselves. The data reported here were collected via a mailed survey of a random sample of undergraduate students from the University of California. The questionnaire included a set of twenty alcohol problem prevention policies that were described as among those some college campuses have adopted or are thinking of adopting. Data were collected from 1648 students, with the sample comprising 33% Asians, 30% Whites, 14% multi-ethnic, 11% Hispanics, 5% African-Americans, and 6% other. In all cases, the students' approval is higher than their perception of their peers' level of

approval, particularly for “enforcement” policies. What we found was a universal tendency to underestimate support for prevention policies, particularly those with some “teeth” to them.

**Taylor, D. M., Johnson, M. B., Voas, R. B., & Turrisi, R. (2006). Demographic and academic trends in drinking patterns and alcohol-related problems on dry college campuses. *Journal of Alcohol and Drug Education*, 50(4), 35–54.**

Restricting alcohol consumption on campus is a measure often used by college administrators to prevent alcohol abuse and alcohol-related problems. The effect of dry campus policies on alcohol consumption and alcohol-related problems, however, remains poorly understood. This report will compare characteristics of two dry campuses with descriptions of general college drinking trends with respect to students’ demographic and social/academic characteristics. At two Western universities, 9,073 undergraduates aged 18 and older were surveyed between 2000 and 2004. Drinking and alcohol-related problems found on the dry campuses were similar to national trends on college campuses. Results suggest campus alcohol policies limit drinking on campus but do not prevent previously identified demographic and academic college drinking patterns.

**Toomey, T. L., Fabian, L. A., Erickson, D. J., Wagenaar, A. C., Fletcher, L., & Lenk, K. M. (2006). Influencing alcohol control policies and practices at community festivals. *Journal of Drug Education*, 36(1), 15–32.**

The goal of this study was to assess the feasibility and effectiveness of two interventions aimed at reducing alcohol-related risks at community festivals—a training program for festival planners and a community organizing campaign. We randomly selected four festivals for each intervention and had 24 comparison festivals. Our assessment included process evaluation to track and evaluate types of alcohol policies resulting from each of the interventions, pre and post telephone surveys of key festival planners and law enforcement agencies, and pre and post pseudo-underage and pseudo-intoxicated purchase attempts. Analyses showed that both interventions were feasible and were successful in influencing adoption of written policies and improving alcohol-related practices. However, neither intervention appeared to decrease propensity for illegal alcohol sales at these events, likely due, in part, to the short time frame of the interventions. Future research should assess effects of the interventions on alcohol-related problems and effects of enforcement interventions.

**Toomey, T. L., Lenk, K. M., & Wagenaar, A. C. (2007). Environmental policies to reduce college drinking: An update of research findings. *Journal of Studies on Alcohol and Drugs*, 68(2), 208–219.**

Objective: We provide an overview of environmental strategies that may reduce college drinking. The identified environmental strategies fall into three categories: (1) reducing alcohol use and related problems among underage college students, (2) reducing risky alcohol use and related problems among all college students, and (3) de-emphasizing the role of alcohol and creating positive expectations on campus. At the time of our 2002 review, few studies had assessed environmental policies and strategies in the context of college student alcohol use and related problems. The present article summarizes recent research on the effects of environmental policies and strategies affecting college students. Method: We updated our previous literature searches to identify peer-reviewed research studies evaluating the effects of environmental strategies on college and general populations. Results: We identified 110 new studies addressing environmental strategies published between 1999 and 2006. Thirty-six of these studies focused on the college population. The extant

research indicates that many environmental strategies are promising for reducing alcohol-related problems among the general population. Several recent studies suggest that these strategies, particularly combined strategies, also may be effective in decreasing alcohol-related problems among college populations. Conclusions: Further research is needed to continue expanding our understanding of environmental strategies to identify the most effective individual and combined strategies.

**Turrisi, R., Mallett, K. A., Mastroleo, N. R., & Larimer, M. E. (2006). Heavy drinking in college students: Who is at risk and what is being done about it? *Journal of General Psychology, 133*(4), 401–420.**

Problem drinking and related consequences are a major social issue plaguing college campuses across the United States. Each year, alcohol is responsible for fatalities, assaults, serious injuries, and arrests that occur among college students. The authors review and discuss the risk factors, drinking patterns, and consequences that are relevant to the general student population. In addition, the authors highlight individuals at an increased risk of experiencing alcohol-related problems, such as Greek-letter social organization members and student athletes. The authors also discuss the interventions that attempt to reduce risky drinking and related problems in these subgroups as well as the future directions for research.

See also:

Dams-O'Connor, K., Martin, J. L., & Martens, M. P. (2007). Social norms and alcohol consumption among intercollegiate athletes: The role of athlete and nonathlete reference groups. *Addictive Behaviors, 32*(11), 2657–2666.

LaBrie, J. W., Tawalbeh, S., Earleywine, M. (2006). Differentiating adjudicated from nonadjudicated freshmen men: The role of alcohol expectancies, tension, and concern about health. *Journal of College Student Development, 47*(5), 521–533.

### **Alcohol and Other Drug Abuse Prevention—Other Strategies**

**Baldwin, J. A., Johnson, R. M., Gotz, N. K., Wayment, H. A., & Elwell, K. (2006). Perspectives of college students and their primary health care providers on substance abuse screening and intervention. *Journal of American College Health, 55*(2), 115–119.**

The authors conducted a needs assessment among students and health-care providers of a southwestern university health center with the goal of developing health-care-provider training addressing substance-abuse screening and intervention. They collected data from focus groups of undergraduate students and structured interviews and questionnaires with health-care providers. They identified gaps in provider and student perspectives on the extent of substance abuse on campus and the perceived roles of health-care providers and patients in screening and conducting interventions for substance abuse. These findings suggest that training for college health-care providers regarding substance-abuse brief screening and intervention should emphasize confidentiality of student medical records, the importance of nonjudgmental attitudes toward students, and the role of the provider as one who is competent and appropriate to address substance abuse. Such training should also educate providers about the types of substances students are using.

**Barnett, N. P., Murphy, J. G., Colby, S. M., & Monti, P. M. (2007). Efficacy of counselor vs. computer-delivered intervention with mandated college students. *Addictive Behaviors, 32*(11), 2529–2548.**

The purpose of this study was to evaluate the efficacy of two brief interventions and the inclusion of a 1-month booster session with college students who were referred to attend alcohol education following an alcohol-related incident. Participants (N=225; 48.9% male) were randomly assigned to receive one session of a Brief Motivational Interview (BMI) or computer-delivered intervention (CDI) with the Alcohol 101 CD-ROM. Participants were also randomly assigned to booster/no booster. At 3-month follow up, participants in BMI reported greater help seeking and use of behavioral strategies to moderate drinking. At 12-month follow up, BMI participants were drinking more frequently and CDI participants were consuming a greater number of drinks per occasion than at baseline. Mediation analyses showed that the use of specific behavioral strategies mediated the effect of the BMI condition on drinking volume. There was no intervention effect on alcohol problems, and the booster condition did not significantly affect outcomes. Promoting specific behaviors in the context of in-person brief interventions may be a promising approach to reducing drinking volume among identified at-risk students.

**Bersamin, M., Paschall, M. J., Fearnow-Kenney, M., & Wyrick, D. (2007). Effectiveness of a Web-based alcohol-misuse and harm-prevention course among high- and low-risk students. *Journal of American College Health, 55*(4), 247–254.**

**OBJECTIVE:** In the current study, the authors assessed whether a new online alcohol-misuse prevention course (College Alc) is more effective at reducing alcohol use and related consequences among drinkers and nondrinkers. **PARTICIPANTS:** The authors compared incoming college freshmen who reported any past 30-day alcohol use before the beginning of the semester with those who did not. **METHOD SUMMARY:** The authors randomly assigned students who completed a precollege baseline survey to either complete a 3-hour noncredit version of College Alc or serve as members of a control group. The authors conducted a follow-up survey 3 months later. **RESULTS:** Findings indicated that among freshmen who were regular drinkers before college, College Alc appeared to reduce the frequency of heavy drinking, drunkenness, and negative alcohol-related consequences. Among freshmen who did not report any past-30-day alcohol use before college, College Alc did not appear to have any beneficial effects. **CONCLUSIONS:** Results suggest that College Alc may be an effective program for students with a history of alcohol use.

**Burck, A. M., Laux, J. M., Ritchie, M., & Baker, D. (2008). An examination of the Substance Abuse Subtle Screening Inventory-3 Correctional scale in a college student population. *Journal of Addictions & Offender Counseling, 29*(1), 49–61.**

In this study, the authors examined the Substance Abuse Subtle Screening Inventory-3 Correctional scale's sensitivity and specificity at detecting college students' illegal behaviors. Sensitivity was strong, but specificity was weak. Implications for counseling and suggestions for future research are included.

**Carey, K. B., Carey, M. P., Maisto, S. A., & Henson, J. M. (2006). Brief motivational interventions for heavy college drinkers: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 74*(5), 943–954.**

In this randomized controlled trial, the authors evaluated brief motivational interventions (BMIs) for at-risk college drinkers. Heavy drinking students (N = 509; 65% women, 35% men) were randomized into 1 of 6 intervention conditions formed by crossing the baseline Timeline Followback (TLFB) interview (present versus absent) and intervention type (basic BMI, BMI enhanced with a decisional balance module, or none). Assessments completed at baseline, 1, 6, and 12 months measured typical and risky drinking as well as drinking-related problems. Relative to controls, the TLFB interview reduced consumption but not problems at 1 month. The basic BMI improved all drinking outcomes beyond the effects of the TLFB interview at 1 month, whereas the enhanced BMI did not. Risk reduction achieved by brief interventions maintained throughout the follow-up year.

**Carey, K. B., Henson, J. M., Carey, M. P., & Maisto, S. A. (2007). Which heavy drinking college students benefit from a brief motivational intervention? *Journal of Consulting and Clinical Psychology, 75*(4), 663–669.**

Heavy drinking among college students is common and is often harmful. A previously reported randomized trial revealed that a brief motivational intervention (BMI) reduced the alcohol consumption of heavy drinking college students (K. B. Carey, M. P. Carey, S. A. Maisto, & J. M. Henson, 2006). For this study, the researchers conducted supplemental analyses of hypothesized predictors of change using the same sample (N = 495). Greater readiness to change, higher levels of self-regulation, and less engagement in social comparison all independently predicted reductions in drinking outcomes. Furthermore, self-regulation, social comparison, and future time perspective interacted with BMI and predicted drinks per week. As expected, greater self-regulation skills enhanced response to the BMI; the remaining interaction effects were unexpected. Overall, these findings suggest that BMIs produce relatively robust effects.

**Carey, K. B., Scott-Sheldon, L. A. J., Carey, M. P., & DeMartini, K. S. (2007). Individual-level interventions to reduce college student drinking: A meta-analytic review. *Addictive Behaviors, 32*(11), 2469–2494.**

In light of increasing numbers of controlled studies evaluating alcohol abuse prevention interventions for college drinkers, we conducted a meta-analysis to summarize the current status of the literature. The meta-analysis includes 62 studies, published between 1985 to early 2007, with 13750 participants and 98 intervention conditions. All studies were content coded for study descriptors, participant characteristics, and intervention components. We derived weighted mean effect sizes for alcohol interventions versus comparison conditions for consumption variables and alcohol-related problems, over four measurement intervals. Over follow-up intervals lasting up to 6 months, participants in risk reduction interventions drank significantly less relative to controls. Students receiving interventions also reported fewer alcohol-related problems over longer intervals. Moderator analyses suggest that individual, face-to-face interventions using motivational interviewing and personalized normative feedback predict greater reductions in alcohol-related problems. Implications for future research include attention to maintenance of effects, and developing more efficacious interventions for at-risk college drinkers.

**Cheong, J., Hall, N. M., & MacKinnon, D. P. (2006). Use of designated boat operators and designated drivers among college students. *Journal of Studies on Alcohol, 67*(4), 616–619.**

OBJECTIVE: Prior research has shown that designated drivers (DD) are widely used as a

preventive measure for driving under the influence. Despite the prevalence of alcohol involvement in boating accidents, much less is known about the use of a designated boat operator (DBO). The current study investigated the prevalence of DBO use in recreational boating and compared the characteristics of DD users and DBO users. **METHOD:** Several survey questionnaires were distributed to a group of undergraduate students at a large southwestern university for the purpose of investigating demographic characteristics, alcohol-use pattern, and other alcohol-related problem behaviors, such as driving and boating under the influence. **RESULTS:** Approximately 45% of the boaters reported they had drunk alcohol while boating, and approximately 70% had used a DBO in the most recent boating event. The DBO users were found to be similar to the DD users in terms of drinking pattern, age of drinking onset, and driving behaviors. **CONCLUSIONS:** High rates of alcohol use in recreational boating suggest the need for prevention strategies. Furthermore, future studies are needed to investigate the selection process of the DBOs and the differences between passengers and boat operators, which could shed light on strategies to prevent alcohol-involved boating injuries.

**Ehrlich, P. F., Haque, A., Swisher-McClure, S., & Helmkamp, J. (2006). Screening and brief intervention for alcohol problems in a university student health clinic. *Journal of American College Health, 54*(5), 279–287.**

The purposes of this study were (1) to determine whether a university student health center (SHC) is a feasible location to introduce a campus-based screening and brief intervention (SBI) program for alcohol and (2) to determine whether the patients seen in the SHC differ in terms of the prevalence and severity of alcohol-related problems compared with students reported by emergency department programs. The authors used motivational interview techniques to counsel subjects from a convenience sample of patients waiting for medical treatment in the SHC who had screened positive with the Alcohol Use Disorders Identification Test (AUDIT). The authors interviewed patients again after 3 months. Seventy-five percent of eligible students participated. Sixty percent screened positive and received an intervention. The authors contacted 66 students (51.2%) again after 3 months. Seventy-five percent of students interviewed again after 3 months reported that SBI was helpful, 92% found the information clear, and 90% thought that the SHC was a good place to learn this information.

**Geisner, I. M., Neighbors, C., Lee, C. M., & Larimer, M. E. (2007). Evaluating personal alcohol feedback as a selective prevention for college students with depressed mood. *Addictive Behaviors, 32*(12), 2776–2787.**

**Abstract:** Objective: This research evaluated a brief mailed intervention for alcohol use as an adjunct to a brief treatment for college students with depression symptoms. The intervention aimed to correct normative misperceptions and reduce students' drinking and related consequences. Method: One hundred seventy seven college students (70% Female) with elevated scores on the Beck Depression Inventory were randomly assigned to intervention or control group. Participants in the intervention were mailed feedback and information detailing their reported alcohol use, moderation strategies, and accurate normative information regarding student drinking. Results: Results indicated no main effects of the intervention on drinking or related problems but students receiving feedback showed significant reductions in their perception of drinking norms compared to the control group. Furthermore, students whose normative perceptions reduced showed significant reductions in total drinks per week and total alcohol related problems compared to those whose norms did not reduce. Conclusions: Results support the importance of correcting normative perceptions and provide

direction for selective prevention of alcohol use and related problems among college students with depressed mood.

**Hennessy, D. A., Lanni-Manley, E., & Maiorana, N. (2006).** The effects of Fatal Vision Goggles on drinking and driving intentions in college students. *Journal of Drug Education, 36(1)*, 59–72.

The present study was designed to examine the effectiveness of Fatal Vision Goggles in reducing intentions to drink and drive. Participants performed a field sobriety task and drove in a traffic simulator while wearing the goggles. A regression analysis was performed in order to predict changes in intentions to drink and drive, using typical drinking patterns, perceived likelihood of getting into a collision when drinking and driving, self efficacy, and driving independence as predictor variables. Results showed that drinking and driving intentions were reduced following the use of Fatal Vision Goggles among those that typically drink more during outings, among those that believe the likelihood of collisions when drinking and driving are greater, and among those less likely to drive to achieve independence and autonomy. These results indicate that Fatal Vision Goggles can be an effective tool in altering drinking and driving attitudes among drivers with specific attitudinal and personal characteristics.

**Juarez, P., Walters, S. T., Daugherty, M., & Radi, C. (2006).** A randomized trial of motivational interviewing and feedback with heavy drinking college students. *Journal of Drug Education, 36(3)*, 233–246.

Motivational interviewing (MI) is a brief intervention that has been shown to reduce heavy drinking among college students. Because all college studies of MI to date have included a personalized feedback report, it remains unclear which of the components is necessary to produce behavior change. This study evaluated the separate and collective effects of MI and feedback among 122 “binge” drinking college students. Participants were randomized to: 1) MI with feedback, 2) MI without feedback, 3) Mailed feedback only, 4) MI with mailed feedback, or 5) Assessment only control. At an eight-week follow-up, all groups reduced their consumption, peak BAC, consequences, and dependence symptoms. For females, there were reductions in consequences and dependence symptoms in groups that received feedback, as compared to groups that did not receive feedback. For females, there was an effect of the feedback on consequences and dependence symptoms, but was no overall effect of MI on any outcome measure.

**Kypri, K., Langley, J. D., Saunders, J. B., Cashell-Smith, M. L., & Herbison, P. (2008).** Randomized controlled trial of Web-based alcohol screening and brief intervention in primary care. *Archives of Internal Medicine, 168(5)*, 530–536.

**BACKGROUND:** There is compelling evidence supporting screening and brief intervention (SBI) for hazardous drinking, yet it remains underused in primary health care. Electronic (computer or Web-based) SBI (e-SBI) offers the prospects of ease and economy of access. We sought to determine whether e-SBI reduces hazardous drinking. **METHODS:** We conducted a randomized controlled trial in a university primary health care service. Participants were 975 students (age range, 17-29 years) screened using the Alcohol Use Disorders Identification Test (AUDIT). Of 599 students who scored in the hazardous or harmful range, 576 (300 of whom were women) consented to the trial and were randomized to receive an information pamphlet (control group), a Web-based motivational intervention (single-dose e-SBI group), or a Web-based motivational intervention with

further interventions 1 and 6 months later (multidose e-SBI group). RESULTS: Relative to the control group, the single-dose e-SBI group at 6 months reported a lower frequency of drinking (rate ratio [RR], 0.79; 95% confidence interval [CI], 0.68-0.94), less total consumption (RR, 0.77; 95% CI, 0.63-0.95), and fewer academic problems (RR, 0.76; 95% CI, 0.64-0.91). At 12 months, statistically significant differences in total consumption (RR, 0.77; 95% CI, 0.63-0.95 [equivalent to 3.5 standard drinks per week]) and in academic problems (RR, 0.80; 95% CI, 0.66-0.97) remained, and the AUDIT scores were 2.17 (95% CI, -1.10 to -3.24) points lower. Relative to the control group, the multidose e-SBI group at 6 months reported a lower frequency of drinking (RR, 0.85; 95% CI, 0.73-0.98), less total consumption (RR, 0.79; 95% CI, 0.64-0.97 [equivalent to 3.0 standard drinks per week]), reduced episodic heavy drinking (RR, 0.65; 95% CI, 0.45-0.93), and fewer academic problems (RR, 0.78; 95% CI, 0.65-0.93). At 12 months, statistically significant differences in academic problems remained (RR, 0.75; 95% CI, 0.62-0.90), while the AUDIT scores were 2.02 (95% CI, -0.97 to -3.10) points lower. CONCLUSIONS: Single-dose e-SBI reduces hazardous drinking, and the effect lasts 12 months. Additional sessions seem not to enhance the effect.

**LaBrie, J. W., Huchting, K., Tawalbeh, S., Pedersen, E. R., Thompson, A. D., Shelesky, K., Larimer, M., & Neighbors, C. (2008). A randomized motivational enhancement prevention group reduces drinking and alcohol consequences in first-year college women. *Psychology of Addictive Behaviors*, 22(1), 149–155.**

Alcohol consumption among college students has become an increasing problem that requires attention from college administrators, staff, and researchers. Despite the physiological differences between men and women, college women are drinking at increasingly risky rates, placing them at increased risk for negative consequences. The current study tested a group motivational enhancement approach to the prevention of heavy drinking among 1st-year college women. Using a randomized design, the authors assigned participants either to a group that received a single-session motivational enhancement intervention to reduce risky drinking that focused partly on women's specific reasons for drinking (n = 126) or to an assessment-only control group (n = 94). Results indicated that, relative to the control group participants, intervention participants drank fewer drinks per week, drank fewer drinks at peak consumption events, and had fewer alcohol-related consequences over a 10-week follow-up. Further, the intervention, which targeted women's reasons for drinking, was more effective in reducing consumption for participants with high social and enhancement motivations for drinking.

**LaBrie, J. W., Pedersen, E. R., Earleywine, M., & Olsen, H. (2006). Reducing heavy drinking in college males with the decisional balance: Analyzing an element of Motivational Interviewing. *Addictive Behaviors*, 31(2), 254–263.**

The decisional balance, a brief detailing of the advantages and disadvantages of behavior change, serves as a key component to interventions in Motivational Interviewing. The impact of this component alone is not well understood. Forty-seven men completed a Timeline Followback interview assessing alcohol consumption and unsafe sexual practices. They then completed a decisional balance, listing the Pros and Cons of decreasing their drinking, but not one for safer sex. One-month follow-up data showed that they had statistically significant and clinically meaningful increases in their motivation to alter drinking and decreases in the number of drinks that they intended to drink, the actual drinks consumed per month, the days per month that they drank, their maximum number of drinks consumed on one occasion, and their average number of drinks per occasion. They did not alter their sexual behavior or their motivation to increase safe sex behavior.

These results suggest that the decisional balance plays an important role in Motivational Interviewing and could serve as a quick and efficient intervention by itself.

**LaBrie, J. W., Thompson, A. D., Huchting, K., Lac, A., & Buckley, K. (2007). A group Motivational Interviewing intervention reduces drinking and alcohol-related negative consequences in adjudicated college women. *Addictive Behaviors, 32*(11), 2549–2562.**

College students who violate campus alcohol policies (adjudicated students) are at high risk for experiencing negative alcohol-related consequences and for undermining campus life. Further, college women may be especially at-risk due to differential intoxication effects and sexual consequences experienced mainly by female students. Research on interventions for adjudicated students, especially adjudicated females, has been limited. One hundred and fifteen college women who received a sanction for violating campus alcohol policies participated in the study. The two-hour group intervention focused on female-specific reasons for drinking and included decisional balance, goal setting and other exercises. Participants completed follow-up surveys for 12 weeks following the intervention and answered questions regarding alcohol consumption and alcohol-related negative consequences. Findings support the use of an MI-based intervention to reduce both alcohol consumption and consequences among adjudicated females. Specifically, alcohol use was reduced by 29.9% and negative consequences were reduced by 35.87% from pre-intervention to 3-month follow up. Further, the intervention appeared to successfully initiate change in the heaviest drinkers, as women who drank at risky levels reduced alcohol consumption to a greater extent than women who drank at moderate levels.

**Larimer, M. E., & Cronce, J. M. (2007). Identification, prevention, and treatment revisited: Individual-focused college drinking prevention strategies 1999–2006. *Addictive Behaviors, 32*(11), 2439–2468.**

This paper serves to update a prior review of the literature on individual-focused prevention and treatment approaches for college drinking [Larimer, M.E. & Cronce, J.M. (2002). Identification, prevention and treatment: A review of individual-focused strategies to reduce problematic alcohol consumption by college students. *Journal of Studies on Alcohol Suppl.* 14, 148-163.], and covers the period from late 1999 through 2006. No support was found for information/knowledge approaches alone, or for brief values clarification approaches alone or with other informational content. Evidence was found in support of skills-based interventions and motivational interventions that incorporated personalized feedback, with or without an in-person intervention. Normative re-education interventions received mixed support, though personalized normative feedback was associated with positive outcomes. Significant advances have been made over the past seven years with respect to mailed and computerized feedback interventions, and interventions with mandated students. Much of the research reviewed suffered from significant limitations, particularly small sample sizes, attrition, and lack of appropriate control groups. More research is needed to determine the best methods for disseminating such interventions on college campuses, as well as additional research on interventions with high-risk groups of students.

**Larimer, M. E., Lee, C. M., Kilmer, J. R., Fabiano, P. M., Stark, C. B., Geisner, I. M., Mallett, K. A., Lostutter, T. W., Cronce, J. M., Feeney, M., & Neighbors, C. (2007). Personalized mailed feedback for college drinking prevention: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 75*(2), 285–293.**

The current study was designed to evaluate the efficacy of a mailed feedback and tips intervention as a universal prevention strategy for college drinking. Participants (N = 1,488) were randomly assigned to feedback or assessment-only control conditions. Results indicated that the mailed feedback intervention had a preventive effect on drinking rates overall, with participants in the feedback condition consuming less alcohol at follow-up in comparison with controls. In addition, abstainers in the feedback condition were twice as likely to remain abstinent from alcohol at follow-up in comparison with control participants (odds ratio = 2.02), and feedback participants were significantly more likely to refrain from heavy episodic drinking (odds ratio = 1.43). Neither gender nor severity of baseline drinking moderated the efficacy of the intervention in these analyses, but more conservative analyses utilizing last-observation carryforward suggested women and abstainers benefited more from this prevention approach. Protective behaviors mediated intervention efficacy, with participants who received the intervention being more likely to use strategies such as setting limits and alternating alcohol with nonalcoholic beverages. Implications of these findings for universal prevention of college drinking are discussed.

**Lewis, M. A., & Neighbors, C. (2006). Social norms approaches using descriptive drinking norms education: A review of the research on personalized normative feedback. *Journal of American College Health, 54*(4), 213–218.**

College students have been shown to consistently overestimate the drinking of their peers. As a result, social norms approaches are effective in correcting these misperceived norms to reduce alcohol consumption and alcohol-related problems. In this review of literature, the authors critically evaluated the effectiveness of personalized normative feedback. In addition, the authors reviewed personalized normative feedback interventions and provided suggestions for increasing the efficacy of these interventions by making better use of salient referent group data.

**Lewis, M. A., & Neighbors, C. (2006). Who is the typical college student? Implications for personalized normative feedback interventions. *Addictive Behaviors, 31*(11), 2120–2126.**

Personalized normative feedback approaches focus on correcting overestimated peer drinking norms in order to reduce problematic drinking among college students. Generally, personalized normative feedback utilizes the “typical college student” as a normative referent. Prior research has found these interventions to be less effective for women and has suggested the implementation of the typical student referent as one possible explanation. The current research explored how the typical college student is perceived when estimating peer drinking norms. Participants included 182 (98 women, 84 men) students who reported consuming 5/4 or more drinks for men/women on at least one occasion in the previous month. Participants completed a battery of questionnaires on computers located in small private rooms assessing their drinking behavior, perceptions of “typical student” drinking behavior, and demographics of the perceived “typical college student.” Overall, the majority of students perceived the typical student to be male. More specifically, the vast majority of men and about half of women perceived the typical student as male when estimating drinking norms. These findings provide empirical corroboration for previous researchers’ suggestions that both men and women tend to think of the typical college student as male when estimating peer drinking norms. Results are discussed in terms of implications for personalized normative feedback interventions.

**Martens, M. P., Cimini, M. D., Barr, A. R., Rivero, E. M., Vellis, P. A., Desemone, G. A., & Horner, K. J. (2007). Implementing a screening and brief intervention for high-risk drinking**

**in university-based health and mental health care settings: Reductions in alcohol use and correlates of success. *Addictive Behaviors*, 32(11), 2563–2572.**

The purpose of this study was to assess the efficacy of a screening and brief intervention program for college students in a naturally occurring university-based primary health and mental health care setting. One-hundred seventy five students who met our screening criteria (>8 for men or >7 for women on the Alcohol Use Disorders Identification Test) enrolled in the project, and six-week follow-up data were collected from 120 (69%) of them. Results indicated that after receiving the intervention students reported decreased alcohol use, more accurate perceptions of other students' drinking, and increased use of protective behavioral strategies. Results also indicated that the individual-level changes in alcohol use were positively correlated with changes in the students' perceptions of drinking among their peers. Implications of the findings for clinicians, administrators, and researchers in the college drinking intervention and prevention field are discussed.

**McCabe, S. E. (2008). Screening for drug abuse among medical and nonmedical users of prescription drugs in a probability sample of college students. *Archives of Pediatrics & Adolescent Medicine*, 162(3), 225–231.**

**OBJECTIVES:** To determine the prevalence of medical and nonmedical use of 4 classes of prescription drugs (opioid, stimulant, sleeping, and sedative or anxiety) and to assess probable drug abuse among 4 mutually exclusive groups of medical and nonmedical use of prescription drugs. **DESIGN:** In 2005, a Web survey was self-administered by a probability sample of 3639 college students (68% response rate). **SETTING:** A large, Midwestern 4-year university. **PARTICIPANTS:** The sample had a mean age of 19.9 years, and respondents were 53.6% female, 67.4% white, 12.1% Asian, 6.0% African American, 4.2% Hispanic, and 10.2% other racial categories. **MAIN OUTCOME MEASURES:** Medical and nonmedical use of prescription drugs was measured. Probable drug abuse was assessed using a modified version of the Drug Abuse Screening Test, Short Form. **RESULTS:** A total of 40.1% of respondents reported no lifetime use of at least 1 of 4 classes of prescription drugs, 39.7% reported medical use only, 15.8% reported both medical and nonmedical use, and 4.4% reported nonmedical use only. The odds of a positive screening result for drug abuse were greater among medical and nonmedical users (adjusted odds ratio, 5.5; 95% confidence interval, 3.4-7.3) and nonmedical users only (adjusted odds ratio, 6.5; 95% confidence interval, 4.0-10.6) compared with nonusers. The odds of a positive screening result for drug abuse did not differ between medical users only and nonusers. **CONCLUSIONS:** Nonmedical users of prescription drugs are at heightened risk for drug abuse, whereas medical users without a history of nonmedical use are generally not at increased risk. Drug abuse screening should be routine for college students, especially among individuals with any history of nonmedical use of prescription drugs.

**McCambridge, J., Slym, R. L., & Strang, J. (2008). Randomized controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. *Addiction*, 103(11), 1809–1818.**

**AIM:** To test the effectiveness of motivational interviewing (MI) in comparison with drug information and advice in opportunistically securing reductions in drug-related risk among young cannabis users not seeking help. **DESIGN:** Randomized controlled trial. **SETTING:** Eleven London Further Education colleges. **PARTICIPANTS:** A total of 326 students aged 16-19 years who smoked cannabis weekly or more frequently. **INTERVENTIONS:** Participants were randomized to

a single-session intervention of MI or drug information and advice-giving. MEASUREMENTS: Cannabis use, cigarette smoking and alcohol consumption and harm outcomes were assessed after both 3 and 6 months. FINDINGS: No differences were found between MI and drug information and advice, although MI fidelity was not high. There were wide-ranging individual practitioner effects on observed outcomes and a practitioner-intervention interaction was detected in relation to cannabis cessation after 3 months. Change over time was more pronounced for cannabis use than for other drug use. CONCLUSIONS: Further study of the nature and consequences of MI fidelity, and individual practitioner effects more generally, is needed. Advice may be an effective brief intervention with young cannabis users in its own right and should be evaluated further in trials.

**Michael, K. D., Curtin, L., Kirkley, D. E., Jones, D. L., & Harris, R., Jr. (2006). Group-based motivational interviewing for alcohol use among college students: An exploratory study. *Professional Psychology: Research and Practice*, 37(6), 629–634.**

How can practicing psychologists help reduce excessive alcohol consumption among college students? Over 80% of college students consume alcohol, and a significant percentage drinks excessively with myriad problems. Brief interventions based on motivational interviewing (MI) have been identified for use with college populations. The authors randomly assigned 91 freshman students to a brief, classroom-based MI intervention or an assessment control condition. At the end of the semester, MI group participants reported fewer drinks per occasion and fewer episodes of intoxication compared to controls. A classroom-based, MI-style intervention might be an efficient, sustainable, and effective means of reducing heavy drinking among college students.

**Morgan, T. J., White, H. R., & Mun, E. Y. (2008). Changes in drinking before a mandated brief intervention with college students. *Journal of Studies on Alcohol and Drugs*, 69(2), 286–290.**

OBJECTIVE: Little is known about the effects of alcohol-related infractions and resulting reprimands for invoking behavioral change among mandated college students. The primary aim of this study was to assess the extent to which students significantly reduce their drinking between the time of an alcohol-related violation and the sanctioned intervention. METHOD: Data came from 175 (70% male) students mandated to the Rutgers University Alcohol and Other Drug Assistance Program for Students because of infractions of university rules about alcohol and drug use. At intake, students reported on their alcohol consumption for the 30 days before the violation and the 30 days before the intake assessment. RESULTS: Mandated students significantly reduced peak blood alcohol concentration (BAC) levels, total weekly drinks, and frequency of alcohol use after the violation before any intervention. Those students who had received a legal or medical referral (i.e., a serious infraction) reduced their alcohol consumption (BAC and total drinks) significantly more than those referred by residence hall advisors. CONCLUSIONS: The alcohol-related violation (including the event itself, getting caught, and/or getting mandated to an intervention) contributes to reductions in alcohol use for mandated college students. The finding that the seriousness of the infraction resulted in greater reductions in alcohol use suggests that the students' cognitive self-appraisal and affective response to the incident may be underlying mechanisms for their changes. Knowing if mandated students have already made significant changes in their drinking before intake would provide counselors with a valuable opportunity to identify and reinforce successful harm reduction strategies and could inform the type or intensity of intervention needed.

**Neighbors, C., Lewis, M. A., Bergstrom, R. L., & Larimer, M. E. (2006). Being controlled by**

**normative influences: Self-determination as a moderator of a normative feedback alcohol intervention.** *Health Psychology, 25(5), 571–579.*

The objectives of this research were to evaluate the efficacy of computer-delivered personalized normative feedback among heavy drinking college students and to evaluate controlled orientation as a moderator of intervention efficacy. Participants (N = 217) included primarily freshman and sophomore, heavy drinking students who were randomly assigned to receive or not to receive personalized normative feedback immediately following baseline assessment. Perceived norms, number of drinks per week, and alcohol-related problems were the main outcome measures. Controlled orientation was specified as a moderator. At 2-month follow-up, students who received normative feedback reported drinking fewer drinks per week than did students who did not receive feedback, and this reduction was mediated by changes in perceived norms. The intervention also reduced alcohol-related negative consequences among students who were higher in controlled orientation. These results provide further support for computer-delivered personalized normative feedback as an empirically supported brief intervention for heavy drinking college students, and they enhance the understanding of why and for whom normative feedback is effective.

**Palmer, R. S., Kilmer, J. R., & Larimer, M. E. (2006). If you feed them, will they come? The use of social marketing to increase interest in attending a college alcohol program.** *Journal of American College Health, 55(1), 47–52.*

The authors used social marketing to design and test advertisement components aimed at increasing students' interest in attending an alcohol program focused on reaching students who drink heavily, although the authors offered no such program. Participants were undergraduate students in introductory psychology courses (N = 551). Questionnaires included measures assessing demographic information, alcohol use and negative consequences, and interest in attending an alcohol program in response to exposure to 1 of 12 systematically varied advertisements. The authors found that approximately 20% of participants across all ad types indicated some level of interest in attending the alcohol program. Students who use alcohol reported more interest in attending when an informational message was used. Of the participants offered food, 41.9% indicated the food offered in the advertisement impacted their interest in attending. Results suggest market segmentation plays a role in developing effective advertisements to recruit different groups of students based on their reported drinking behavior.

**Rash, E. M. (2008). Clinicians' perspectives on motivational interviewing-based brief interventions in college health.** *Journal of American College Health, 57(3), 379–380.*

Brief interventions based on motivational interviewing (MI) are emerging as effective strategies for behavior change in college students. However, implementation of MI-based brief interventions may be challenging in the college health environment, and their practicality is controversial. The author explored college health clinicians' perspectives on the use of MI brief interventions in a college health study to reduce alcohol harms among high-risk college students. The author describes the challenges, benefits, and practicality of using this health promotion strategy in college health. Although MI-based brief interventions may be adapted and implemented and are beneficial in the college health setting, clinician education and further research is warranted.

**Saitz, R., Palfai, T. P., Freedner, N., Winter, M. R., Macdonald, A., Lu, J., Ozonoff, A., Rosenbloom, D. L., & DeJong, W. (2007). Screening and brief intervention online for college**

**students: The iHealth Study. *Alcohol and Alcoholism (Oxford, Oxfordshire)*, 42(1), 28–36.**

AIMS: To test the feasibility of online alcohol screening and brief intervention (BI) by comparing (i) two approaches to inviting all students to be screened, and (ii) a minimal versus a more extensive BI. METHODS: Freshmen students at one university were randomized to receive one of two types of email invitations to an online anonymous: (i) general health assessment, or (ii) alcohol-specific assessment. All were linked to the same alcohol screening survey. Those with unhealthy alcohol use (AUDIT  $\geq 8$ ) were randomly assigned to minimal or more extensive online alcohol BI. RESULTS: In both invitation groups (4008 students), 55% of students completed the online screening. Overall, 37% of men and 26% of women had unhealthy alcohol use. Compared to minimal BI, more extensive BI was associated with intention to seek help among men and with a greater increase in readiness to change among women. One month after BI, 75% of students completed another assessment, 33% of women and 15% of men with unhealthy alcohol use at baseline no longer had unhealthy alcohol use. There were no significant differences on drinking measures by BI randomization group. CONCLUSIONS: Over half of an entire freshman class of college students were reached by email and completed alcohol screening and brief intervention. Even an alcohol-specific invitation did not deter students. Although brief interventions that differed had some gender specific effects on readiness to change and intention, in general, unhealthy alcohol use decreased after brief intervention. Web screening and brief intervention show promise for addressing unhealthy alcohol use by college students.

**Taylor, J., James, L. M., Bobadilla, L., & Reeves, M. D. (2008). Screening for disinhibited disorder cases in a college population: Performance of the SMAST, DAST, SCID-II-Q, and PDQ-4. *Psychological Assessment*, 20(4), 351–360.**

Psychiatric disorders characterized by disinhibition—substance use disorders, antisocial personality disorder (PD), and borderline PD—represent a serious risk to the safety and health of college students. The ability of researchers and clinicians to identify students most at risk for disinhibited disorders associated with campus crime, violence, and self-harm depends on measures with strong evidence of diagnostic efficiency, yet data on the diagnostic efficiency of screening measures in college populations are lacking. The authors addressed this need by examining the diagnostic efficiency of commonly used screening measures for disinhibited disorders in a sample of 2,085 students, 79 of whom also completed diagnostic interviews. Results suggest that the diagnostic efficiency (e.g., sensitivity, specificity) of screening measures for substance use disorders and antisocial PD in college samples can be increased by making simple adjustments in screening cutoff criteria. Similar adjustments did not increase the diagnostic efficiency of the screening measure for borderline PD, and this suggested that certain screeners may best be aimed at ruling out disorders. This type of information offers users flexibility with which to tailor the screening threshold to serve different objectives.

**Tevyaw, T. O. L., Borsari, B., Colby, S. M., & Monti, P. M. (2007). Peer enhancement of a brief motivational intervention with mandated college students. *Psychology of Addictive Behaviors*, 21(1), 114–119.**

In this pilot study, the authors evaluated whether incorporating a peer in a brief motivational intervention would lead to significant reductions in alcohol use and problems in students mandated to receive treatment after violating campus alcohol policy. Thirty-six participant-peer dyads (66% male) were randomly assigned to receive either two 45-min sessions of an individual motivational

intervention (IMI, n = 18) or a peer-enhanced motivational intervention (PMI, n = 18). The IMI included exploration of motivation to change alcohol use, perceived positive and negative effects of drinking, personalized feedback, and goals for changing alcohol consumption and related behaviors. The PMI included all elements of the IMI plus the presence of a supportive peer of the participant during both sessions. Although both groups significantly reduced number of drinking days and heavy drinking days at 1-month follow-up, the magnitude of within-group reductions in alcohol use and problems was 3 times larger on average for the PMI group than for the IMI group, based on effect-size calculations. Peers and participants endorsed high satisfaction ratings on the PMI. Findings indicate the promise of including peers in brief motivational interventions for mandated students.

**Tollison, S. J., Lee, C. M., Neighbors, C., Neil, T. A., Olson, N. D., & Larimer, M. E. (2008). Questions and reflections: The use of motivational interviewing microskills in a peer-led brief alcohol intervention for college students. *Behavior Therapy, 39*(2), 183–194.**

The purpose of this study was to examine the association between peer facilitator adherence to motivational interviewing (MI) microskills and college student drinking behavior. First year students (N=67) took part in a Brief Alcohol Screening and Intervention for College Students (BASICS) led by peer facilitators trained in MI and BASICS. Participants were assessed pre- and 2 weeks post-intervention on contemplation to change, as well as, pre- and 3 months post- intervention on drinking quantity. Independent coders used the Motivational Interviewing Treatment Integrity scale (MITI, Moyers, Martin, Manuel, & Miller, 2003) to evaluate therapist MI adherence. Peer facilitators met beginning proficiency in MI on scores of empathy, the ratio of MI adherent behaviors to non-adherent behaviors and the ratio of open questions to total questions as defined by the MITI. Results indicated that a higher number of closed questions was related to less contemplation and a higher number of open questions was related to more contemplation post intervention. A higher number of simple reflections was associated with increased drinking at the 3 month assessment, however, complex reflections were found to attenuate the effect of simple reflections on changes in drinking. These findings highlight the importance of competent reflective listening skills and the need for continual training and supervision for peer facilitators.

**Wallenstein, G. V., Pigeon, S., Kopans, B., Jacobs, D. G., & Aseltine, R. (2007). Results of National Alcohol Screening Day: College demographics, clinical characteristics, and comparison with online screening. *Journal of American College Health, 55*(6), 341–350.**

Objective: The authors evaluated the efficacy of the 2002 college-based National Alcohol Screening Day (NASD) by determining: (1) the demographic and clinical characteristics of the participants that were screened and (2) the degree to which those scoring at hazardous drinking levels received clinical intervention or were referred for further assessment or treatment. Participants: Of 45,368 participants, 23,334 were screened and 14,598 received some form of clinical intervention, defined as advice or referral. Methods: The authors conducted nonparametric and univariate analyses to test for statistical differences in demographics, clinical-characteristics, and interventions-as a function of screening mode. Results: Nearly 34% of those screened in person had an AUDIT score of 8 or higher, indicating harmful or hazardous drinking. Of these, only 10% had ever undergone alcohol treatment. More than 58% of those screened online scored 8 or higher, and of this group, fewer than 6% had ever undergone alcohol treatment. Conclusions: These data suggest that the in-person event and the online interactive program associated with NASD are serving markedly different populations, particularly with regard to clinical indicators.

**Walters, S. T., Vader, A. M., & Harris, T. R. (2007). A controlled trial of web-based feedback for heavy drinking college students. *Prevention Science: The Official Journal of the Society for Prevention Research*, 8(1), 83–88.**

Abstract Objective: Alcohol consumption has been a growing concern at U.S. colleges, particularly among first-year students, who are at increased risk for problems. This study tested the efficacy of the “electronic Check-Up to Go” (e-CHUG), a commercially-available internet program, at reducing drinking among a group of at-risk college freshman. Method: The design was a randomized controlled trial: 106 freshmen students who reported heavy episodic drinking were randomly assigned to receive feedback or to assessment only. Assessment measures were completed at baseline, 8 weeks, and 16 weeks. Results: At 8 weeks, the feedback group showed a significant decrease in drinks per week and peak BAC over control. By 16 weeks, the control group also declined to a point where there were no differences between groups. Changes in normative drinking estimates mediated the effect of the intervention. An additional 245 abstainers and light drinkers who were also randomized to condition did not show any intervention effect. Conclusions: This study provides preliminary support for the efficacy of this intervention at reducing short-term drinking among at-risk students.

**Weitzel, J. A., Bernhardt, J. M., Usdan, S., Mays, D., & Glanz, K. (2007). Using wireless handheld computers and tailored text messaging to reduce negative consequences of drinking alcohol. *Journal of Studies on Alcohol and Drugs*, 68(4), 534–537.**

Objective: The purpose of this trial was to investigate the feasibility and short-term outcomes of a tailored intervention, delivered via text messages to wireless handheld computers, to reduce alcohol-related consequences among college students. Method: Forty college students were randomly assigned to one of two study groups. In the control group, participants used handheld computers to complete daily surveys about their drinking behavior and related variables. In the treatment group, participants used the handheld computers to complete daily surveys and to receive individually tailored messages on the units. The tailored messages addressed consequences of alcohol use and were tailored to respondents’ reported behavior, self-efficacy, and outcome expectancies regarding alcohol-related consequences. Results: All treatment group participants reported receiving messages on their handheld computers; most students were sent messages on 12-14 days. Controlling for baseline differences, participants in the treatment group reported drinking significantly fewer drinks per drinking day than participants in the control group during the study period. At follow-up, participants in the treatment group had lower expectancies that they would get in trouble as a result of alcohol consumption than did control group participants. Participants provided both positive and negative feedback about the messages. Conclusions: This study demonstrated the feasibility of delivering tailored messages via wireless handheld computers. Tailored messages about avoiding negative consequences of alcohol use delivered via handheld computers had small but positive effects on alcohol-related attitudes and behaviors. Future research should replicate these findings with a larger, more diverse sample, during a longer period, and with other audiences.

**Werch, C. E., Moore, M. J., Bian, H., DiClemente, C. C., Ames, S. C., Weiler, R. M., Thombs, D., Pokorny, S. B., & Huang, I. C. (2008). Efficacy of a brief image-based multiple-behavior intervention for college students. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, 36(2), 149–157.**

**BACKGROUND:** Epidemiologic data indicate most adolescents and adults experience multiple, simultaneous risk behaviors. **PURPOSE:** The purpose of this study is to examine the efficacy of a brief image-based multiple-behavior intervention (MBI) for college students. **METHODS:** A total of 303 college students were randomly assigned to: (1) a brief MBI or (2) a standard care control, with a 3-month postintervention follow-up. **RESULTS:** Omnibus treatment by time multivariate analysis of variance interactions were significant for three of six behavior groupings, with improvements for college students receiving the brief MBI on alcohol consumption behaviors,  $F(6, 261) = 2.73$ ,  $p = 0.01$ , marijuana-use behaviors,  $F(4, 278) = 3.18$ ,  $p = 0.01$ , and health-related quality of life,  $F(5, 277) = 2.80$ ,  $p = 0.02$ , but not cigarette use, exercise, and nutrition behaviors. Participants receiving the brief MBI also got more sleep,  $F(1, 281) = 9.49$ ,  $p = 0.00$ , than those in the standard care control. **CONCLUSIONS:** A brief image-based multiple-behavior intervention may be useful in influencing a number of critical health habits and health-related quality-of-life indicators of college students.

**White, H. R., Mun, E. Y., & Morgan, T. J. (2008). Do brief personalized feedback interventions work for mandated students or is it just getting caught that works? *Psychology of Addictive Behaviors*, 22(1), 107–116.**

Studies evaluating the efficacy of brief interventions with mandated college students have reported declines in drinking from baseline to short-term follow-up regardless of intervention condition. A key question is whether these observed changes are due to the intervention or to the incident and/or reprimand. This study evaluates a brief personalized feedback intervention (PFI) for students ( $N = 230$ ) who were referred to a student assistance program because of infractions of university rules regarding substance use to determine whether observed changes in substance use are attributable to the intervention. Half the students received immediate feedback (at baseline and after the 2-month follow-up), and half received delayed feedback (only after the 2-month follow-up). Students in both conditions generally reduced their drinking and alcohol-related problems from baseline to the 2-month follow-up and from the 2-month to the 7-month follow-up; however, there were no significant between-group differences at either follow-up. Therefore, it appears that the incident and/or reprimand are important instigators of mandated student change and that written PFIs do not enhance these effects on a short-term basis but may on a longer term basis.

**White, H. R., Mun, E. Y., Pugh, L., & Morgan, T. J. (2007). Long-term effects of brief substance use interventions for mandated college students: Sleeper effects of an in-person personal feedback intervention. *Alcoholism: Clinical and Experimental Research*, 31(8), 1380–1391.**

**BACKGROUND:** It is known that brief interventions for mandated college students decrease alcohol use and/or related problems in the short term. However, none of the existing studies has followed students' past 6 months. Therefore, we compared the long-term efficacy of 2 brief substance use feedback interventions for mandated college students. **METHODS:** We followed up mandated students ( $N=348$ ) who were randomly assigned to either a brief motivational interview (BMI;  $n=180$ ) or a written feedback-only (WF;  $n=168$ ) intervention at 4 months and 15 months postintervention. **RESULTS:** Long-term follow-up data revealed that students, at the aggregate level, decreased their peak blood alcohol concentration (BAC) levels, number of drinks per week, and number of alcohol-related problems at 15 months postintervention compared with their baseline levels. With the exception of peak BAC, the observed long-term reduction was mainly due to the positive change among students who received the BMI intervention. Students in the BMI intervention showed significantly lower levels of alcohol-related problems at 15 months than those

in the WF intervention. The BMI intervention more effectively reduced within-individual alcohol-related problems during the initial 4 months, and more successfully curbed the subsequent increase in alcohol use frequency and number of drinks per week during the 11 months between the 2 follow-up assessments. **CONCLUSIONS:** The results suggest that brief substance use interventions reduce the riskiest type of alcohol use (e.g., peak BAC) among mandated college students over the long term, and that sleeper effects of in-person personal feedback interventions (PFIs) exist. In-person PFIs in the context of a motivational interview may be more efficacious in the long term than written feedback-only interventions for mandated students. Future studies comparing interventions for college students should extend follow-up for longer periods of time.

**Wood, M. D., Capone, C., Laforge, R., Erickson, D. J., & Brand, N. H. (2007). Brief Motivational Intervention and Alcohol Expectancy Challenge with heavy drinking college students: A randomized factorial study. *Addictive Behaviors, 32*(11), 2509–2528.**

This study is the first reported test of the unique and combined effects of Brief Motivational Intervention (BMI) and Alcohol Expectancy Challenge (AEC) with heavy drinking college students. Three hundred and thirty-five participants were randomly assigned in a 2x2 factorial design to either: BMI, AEC, BMI and AEC, and assessment only conditions. Follow-ups occurred at 1, 3, and 6 months. Unconditional latent curve analyses suggested that alcohol use (Q-F), heavy episodic drinking, and alcohol problems were best modeled as quadratic effects. BMI produced significant decreases in Q-F, heavy drinking, and problems, while AEC produced significant decreases in Q-F and heavy drinking. There was no evidence of an additive effect of combining the interventions. Intervention effects decayed somewhat for BMI and completely for AEC over 6 months. Multi-group analyses suggested similar intervention effects for men and women. BMI effects on alcohol problems were mediated by perceived norms. These findings extend previous research with BMI and AEC but do not support their utility as a combined preventive intervention to reduce collegiate alcohol abuse.

**Zisseron, R. N., Palfai, T. P., & Saitz, R. (2007). “No-contact” interventions for unhealthy college drinking: Efficacy of alternatives to person-delivered intervention approaches. *Substance Abuse, 28*(4), 119–131.**

Despite the development of brief efficacious interventions, they are not reaching a large proportion of college students who continue to drink in a manner that puts them at risk for harm. Recent efforts have attempted to address this issue through the development of brief alcohol interventions that may be more broadly disseminated to college students. Researchers have adapted a variety of approaches to print and computer-based modalities that do not require direct real-time contact with an interventionist. The goal of this paper is to review the empirical evidence for the utility of these brief alcohol interventions that are delivered without direct real-time contact. A systematic review of this research suggests that “no-contact” interventions are feasible and may have efficacy. Further research is needed to understand the duration of these effects, mechanisms of change, moderators of outcome, and how to enhance the effectiveness of these approaches.

See also:

McCabe, S. E., Boyd, C. J., Cranford, J. A., Morales, M., & Slayden, J. (2006). A modified version of the Drug Abuse Screening Test among undergraduate students. *Journal of Substance Abuse Treatment, 31*(3), 297–303.

Schuckit, M. A., Smith, T. L., & Chacko, Y. (2006). Evaluation of a depression-related model of alcohol problems in 430 probands from the San Diego prospective study. *Drug and Alcohol Dependence*, *82*(3), 194–203.

White, H. R., Morgan, T. J., Pugh, L. A., Celinska, K., Labouvie, E. W., & Pandina, R. J. (2006). Evaluating two brief substance-use interventions for mandated college students. *Journal of Studies on Alcohol*, *67*(2), 309–317.

### **Alcohol and Other Drug Abuse Intervention and Treatment**

**Carroll, K. M., Easton, C. J., Nich, C., Hunkele, K. A., Neavins, T. M., Sinha, R., Ford, H. L., Vitolo, S. A., Doebbrick, C. A., & Rounsaville, B. J. (2006). The use of contingency management and motivational/skills-building therapy to treat young adults with marijuana dependence. *Journal of Consulting and Clinical Psychology*, *74*(5), 955–966.**

Marijuana-dependent young adults (N = 136), all referred by the criminal justice system, were randomized to 1 of 4 treatment conditions: a motivational/skills-building intervention (motivational enhancement therapy/cognitive-behavioral therapy; MET/CBT) plus incentives contingent on session attendance or submission of marijuana-free urine specimens (contingency management; CM), MET/CBT without CM, individual drug counseling (DC) plus CM, and DC without CM. There was a significant main effect of CM on treatment retention and marijuana-free urine specimens. Moreover, the combination of MET/CBT plus CM was significantly more effective than MET/CBT without CM or DC plus CM, which were in turn more effective than DC without CM for treatment attendance and percentage of marijuana-free urine specimens. Participants assigned to MET/CBT continued to reduce the frequency of their marijuana use through a 6-month follow-up.

**Cleveland, H. H., Harris, K. S., Baker, A. K., Herbert, R., & Dean, L. R. (2007). Characteristics of a collegiate recovery community: Maintaining recovery in an abstinence-hostile environment. *Journal of Substance Abuse Treatment*, *33*(1), 13–23.**

As adolescents have entered substance abuse treatment programs in greater numbers than ever before [Substance Abuse Mental Health Services Administration, 2004. Substance abuse treatment by primary substance of abuse. (<http://www.oas.samhsa.gov/dasis.htm#teds2>). Retrieved September 2004], increasing numbers of young adults are beginning college in 12-step recovery. Unfortunately, with social contexts organized around excessive alcohol consumption, colleges may be the most difficult place through which to control drinking behaviors, let alone remain abstinent. This study used data collected during 2004 and 2005 to describe members of the largest collegiate recovery community in the United States. Included in this study are the following: a description of the program that supports the community, the methods and measurements used to collect data, and results describing the substance use history and characteristics of the community members (N = 82). Collected at a large southwestern university, the data provide drug and alcohol counselors, treatment providers, school administrators, and researchers with the first description of a large collegiate recovery community.

**Dunleavy, V. O., & Campbell, K. (2006). The role of interpersonal influence as a college alcohol prevention strategy. *College Student Journal*, *40*(3), 654–663.**

The incorporation of a social skills prevention program that includes proactive intervention message strategies that students can use when they encounter dangerous alcohol-related situations in social settings is argued to be a valuable tool in reducing current problems associated with high risk drinking. The purpose of this study was to identify intervention strategies that college students used during two alcohol abuse situations. Results confirm prior research that college students use relatively similar strategies to accomplish common instrumental goals that prevent unhealthy outcomes. Implications highlight the propensity and potential success of using behavioral and negatively valenced strategies in alcohol abuse situations.

**Elliott, J. C., Carey, K. B., & Bolles, J. R. (2008). Computer-based interventions for college drinking: A qualitative review. *Addictive Behaviors, 33*(8), 994–1005.**

E-interventions, or electronically based interventions, have become increasingly popular in recent years. College alcohol use has been one area in which such interventions have been implemented and evaluated. The purpose of this paper is to review the seventeen randomized controlled trials that have been published as of August 2007. These studies compared the effectiveness of e-interventions with other commonly used techniques, reading materials, and assessment-only control conditions. Overall, findings provide some support for such programs, especially in comparison with assessment-only control conditions. In addition, possible moderators (e.g. baseline drinking patterns) and mediators (e.g. corrected drinking norms) have emerged. Limitations and areas for future research are discussed.

**Finfgeld-Connett, D. (2006). Web-based treatment for problem drinking. *Journal of Psychosocial Nursing and Mental Health Services, 44*(9), 20–27.**

Interest in Web-based interventions to curtail hazardous drinking has increased in recent years. Emerging research findings suggest that Web-based interventions may help reduce alcohol abuse, especially among college students and women. At the same time, it may be difficult for marginalized individuals and those in rural areas to access the Internet. Nurses are encouraged to help clients evaluate alcohol intervention Web sites to identify the best treatment options. Additional research is recommended to determine the efficacy of online alcohol treatment services.

**Lau-Barraco, C., & Dunn, M. E. (2008). Evaluation of a single-session expectancy challenge intervention to reduce alcohol use among college students. *Psychology of Addictive Behaviors, 22*(2), 168–175.**

In this study, the authors developed and evaluated a single-session experiential expectancy challenge (EC) intervention, seeking to reduce alcohol use by changing key positive expectancies among moderate to heavy drinking male and female college students. Participants (N=217) were randomly assigned to attend a 90- to 120-min EC session, CD-ROM alcohol education, or assessment only. Participants were assessed at pretest, posttest, and 1-month follow-up. Exposure to the EC intervention led to significant decreases in alcohol expectancies and subsequent alcohol consumption in both genders at follow-up. No significant changes were evident in either control condition. This study is the first to effectively decrease expectancies and drinking in college students with a single-session EC intervention. Further, although several studies have demonstrated the utility of the intervention with men, it is the first to do so with women. This study represents a critical step in the process of translating an innovative, theory-based intervention into a more practical format that makes it more accessible to those who seek effective drinking-reduction strategies for college

campuses.

**Lewis, M. A., & Neighbors, C. (2007). Optimizing personalized normative feedback: The use of gender-specific referents. *Journal of Studies on Alcohol and Drugs, 68*(2), 228–237.**

**OBJECTIVE:** Many brief interventions include personalized normative feedback (PNF) using gender-specific or gender-neutral referents. Several theories suggest that information pertaining to more socially proximal referents should have greater influence on one's behavior compared with more socially distal referents. The current research evaluated whether gender specificity of the normative referent employed in PNF related to intervention efficacy. **METHOD:** Following baseline assessment, 185 college students (45.2% women) were randomly assigned to one of three intervention conditions: gender-specific feedback, gender-neutral feedback, or assessment-only control. Immediately after completing measures of perceived norms, alcohol consumption, and gender identity, participants in the gender-neutral and gender-specific intervention conditions were provided with computerized information detailing their own drinking behavior, their perceptions of student drinking, and actual student drinking. **RESULTS:** After a 1-month follow-up, the results indicated that normative feedback was effective in changing perceived norms and reducing alcohol consumption for both intervention groups for women and men. The results provide support, however, for changes in perceived gender-specific norms as a mediator of the effects of normative feedback on reduced drinking behavior for women only. Additionally, gender-specific feedback was found to be more effective for women higher in gender identity, relative to the gender-neutral feedback. A post-assessment follow-up telephone survey administered to assess potential demand characteristics corroborated the intervention effects. **CONCLUSIONS:** Results extend previous research documenting efficacy of computer delivered PNF. Gender specificity and gender identity appear to be important elements to consider for PNF intervention efficacy for women.

**Misch, D. A. (2007). "Natural recovery" from alcohol abuse among college students. *Journal of American College Health, 55*(4), 215–218.**

As they progress through college, a significant number of students reduce their abusive alcohol consumption without formal interventions on the part of the university, other agencies, or counseling/mental health services. Such "natural recovery" may offer important clues as to both the etiology and reduction of alcohol abuse on campus. The author reviews factors hypothesized to play a significant role in facilitating natural recovery and offers suggestions about how such findings might be used to shape campus structures and activities so as to reduce excessive alcohol consumption by college students.

**Walker, S., & Cosden, M. (2007). Reliability of college student self-reported drinking behavior. *Journal of Substance Abuse Treatment, 33*(4), 405–409.**

**Abstract:** College students represent a unique population among substance users, with developmental needs and motivational factors different from those of other adults with substance abuse problems. As most college-based treatment programs focus on harm reduction, the reliability of self-reported substance use is critical to assessing treatment needs and outcomes. This study examined the reliability of students' self-reported alcohol consumption for the month prior to entering a treatment program at two points in time. It was hypothesized that: (a) students required to attend a drug and alcohol educational program would underreport their history of use when asked about it at intake (Time 1), relative to their self-report of use for the same historical timeframe after

attending the program (Time 2); and (b) students would describe these discrepancies as a function of feeling more or less concerned about the impact of their disclosure. Findings supported both hypotheses. Implications for an evaluation of student drinking behaviors are discussed.

**White, H. R. (2006). Reduction of alcohol-related harm on United States college campuses: The use of personal feedback interventions. *International Journal of Drug Policy, 17*(4), 310–319.**

This paper reviews research evaluating personalised feedback interventions (PFIs) for reducing the harms associated with alcohol abuse among US college students. PFIs provide students with feedback about their own alcohol use relative to college norms, as well as information about other aspects of their drinking behaviours, related problems and/or perceived risks. Studies conducted in the United States using randomised designs indicate that PFIs are efficacious for reducing various aspects of alcohol use and/or related negative consequences for both high-risk volunteer and mandated college students. To date, these studies have demonstrated that written-feedback-only PFIs are as efficacious as brief in-person PFIs, at least on a short-term duration. Therefore, college administrators should be encouraged to develop interventions to screen students and provide written personal feedback in order to reduce high-risk drinking patterns among college students. Web-based approaches might prove to be a very cost-effective strategy, although more research is needed to determine their efficacy, as well as what aspects of the feedback are the most effective.

**Wu, L.-T., Pilowsky, D. J., Schlenger, W. E., & Hasin, D. (2007). Alcohol use disorders and the use of treatment services among college-age young adults. *Psychiatric Services, 58*(2), 192–200.**

**OBJECTIVES:** This study examined the utilization of and the perceived need for alcohol treatment services among college-age young adults (18-22 years) according to their educational status: full-time college students, part-time college students, noncollege students (currently in school with the highest grade level below college), and nonstudents (N=11,337). This breakdown of young adults had not been addressed previously. **METHODS:** Secondary analyses were conducted on data from the 2002 National Survey on Drug Use and Health. **RESULTS:** Full-time college students (21%) were as likely to have an alcohol use disorder as nonstudents (19%), but were more likely than part-time college students (15%) and noncollege students (12%). Only 4% of full-time college students with an alcohol use disorder received any alcohol services in the past year. Of those with an alcohol use disorder who did not receive treatment services, only 2% of full-time college students, close to 1% of part-time college students, and approximately 3% of young adults who were not in college reported a perceived need for alcohol treatment. Full-time college students were less likely than noncollege students to receive treatment for alcohol use disorders. All young adults with an alcohol use disorder were very unlikely to perceive a need for alcohol treatment or counseling. **CONCLUSIONS:** College-age adults have a high prevalence of alcohol use disorders, yet they are very unlikely to receive alcohol treatment or early intervention services or to perceive a need for such services. Underutilization of alcohol-related services among college-age young adults deserves greater research attention.

See also:

Geisner, I. M., Neighbors, C., Lee, C. M., & Larimer, M. E. (2007). Evaluating personal alcohol feedback as a selective prevention for college students with depressed mood. *Addictive Behaviors*,

32(12), 2776–2787.

Haas, A., Koestner, B., Rosenberg, J., Moore, D., Garlow, S. J., Sedway, J., Nicholas, L., Hendin, H., Mann, J. J., & Nemeroff, C. B. (2008). An interactive Web-based method of outreach to college students at risk for suicide. *Journal of American College Health, 57*(1), 15–22.

LaBrie, J. W., Pedersen, E. R., Lamb, T. F., & Quinlan, T. (2007). A campus-based motivational enhancement group intervention reduces problematic drinking in freshmen male college students. *Addictive Behaviors, 32*(5), 889–901.

Lewis, M. A., Neighbors, C., Oster-Aaland, L., Kirkeby, B. S., & Larimer, M. E. (2007). Indicated prevention for incoming freshmen: Personalized normative feedback and high-risk drinking. *Addictive Behaviors, 32*(11), 2495–2508.

Manwell, L. B., Pfeifer, J., & Stauffacher, E. A. (2006). An interdisciplinary faculty development model for the prevention and treatment of alcohol use disorders. *Alcoholism: Clinical and Experimental Research, 30*(8), 1393–1399.

Palombi, B. J. (2006). An alcohol treatment program for college students: Community model of inclusion in the university setting. *Professional Psychology: Research and Practice, 37*(6), 622–628.

White, H. R., Morgan, T. J., Pugh, L. A., Celinska, K., Labouvie, E. W., & Pandina, R. J. (2006). Evaluating two brief substance-use interventions for mandated college students. *Journal of Studies on Alcohol, 67*(2), 309–317.

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