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# Alcohol consumption and abuse among college students in the United States: Influences, consequences, and treatment

Elizabeth M. Fellows

*Eastern Illinois University*

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ALCOHOL CONSUMPTION AND ABUSE AMONG  
COLLEGE STUDENTS IN THE UNITED STATES:  
INFLUENCES, CONSEQUENCES,  
AND TREATMENT

FELLOWS

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Alcohol Consumption and Abuse Among College Students in the

United States: Influences, Consequences, and Treatment

(TITLE)

BY

Elizabeth M. Fellows

**THESIS**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF

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IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY  
CHARLESTON, ILLINOIS

1996

YEAR

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Alcohol Consumption and Abuse Among  
College Students in the United States:  
Influences, Consequences, and Treatment

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### Abstract

This paper reviews the literature on the pervasive issue of alcohol consumption by college students in the United States. Issues addressed include: influences on college student drinking; consequences of drinking and its relationship to problem behavior; assessment, education, and treatment of this problem; and directions for future research.

Studies have shown that many factors influence college students' alcohol consumption, such as personality type, stress and anxiety, and religious preference. However, four factors stand out as predominant influences: gender; sorority and fraternity membership; residence and living arrangement; and parental and peer influence.

Significant negative consequences of drinking too much are often suffered by college students. Hangovers, driving while intoxicated, and violent, aggressive acts such as rape are addressed. Problem behavior related to alcohol consumption such as drinking too much while participating in drinking games and taking other drugs while drinking are common.

Due to these issues, effective assessment, education, and treatment of problem drinking in college students is of critical importance. Assessment instruments such as the Alcohol Expectancy Questionnaire

and the Michigan Alcoholism Screening Test are often used to measure students' drinking behaviors. Most education and treatment programs have failed up to this point. Strategies that have shown positive results are discussed, as well as suggestions made by researchers to improve programming for college students.

Finally, the directions for future research are addressed. Replicating current studies, as well as implementing longitudinal analyses are suggested. Currently, the focus of attention is on improving existing education and treatment programs, as well as devising new and more effective ones.

## Introduction

Common knowledge suggests that alcohol consumption is an influential factor in the lives of most college students. Literature shows this is not a new problem (Engs, 1977; Goodale, 1986; Hanson, 1974; Straus & Bacon, 1953; Warner, 1970). Straus and Bacon (1953) were early investigators of the subject of college student alcohol consumption. Their work appeared to spark an increased interest in exploring attitudes and problems related to drinking during the college years, as well as the factors that influence student drinking.

Since the publication of their book Drinking in College in 1953, studies have consistently shown that 80-90% of college students consume alcohol at least once during their college years (Prendergast, 1994; Robinson, Gloria, Roth, & Schuetter, 1993; Saltz & Elandt, 1986; Wiggins & Wiggins, 1987). Not only do the majority of students consume alcohol at some time, many consume alcohol in large quantities (Adler & Rosenberg, 1995; Weschler, Davenport, Dowdall, Moeykens, & Castillo, 1994) and experience negative side effects such as hangovers, blackouts, arrests, and even accidental death (Adler & Rosenberg, 1994; Hanson & Engs, 1992).

The consumption of alcohol in college has been linked to everything from area of the country (Cage, 1993) to dressing up in costume for Halloween

(Miller, Jasper, & Hill, 1993). For example, Cage (1993) reported that college students in the Northeastern United States were found to consume 7.1 drinks per week on average, while college students in the Western United States averaged 2.9 drinks per week. Similarly, students in different areas of the country were reported to have different levels of tolerance for alcohol use. A study in Alabama (Globetti, Globetti, Brown, & Stem, 1992) obtained surprising results. While many studies related to college student alcohol consumption reported the tolerance and support of alcohol use by other students (Baer, Stacy, & Larimer, 1991; Bargman, 1992; Klein, 1992a), Globetti et al. (1992) found students in their survey to be generally intolerant of substance abuse, including alcohol. Almost half the students surveyed strongly disapproved of consuming 4-5 drinks every day, and 37% of those surveyed disapproved of consuming 1-2 drinks per day.

In focusing on college students, research shows that they have been found to drink more heavily than their noncollege peers (Eigen, 1991), and they are more likely to use alcohol in general (Crowley, 1991). Not only do college students drink more, their drinking patterns are often centered around dangerous activities (Bargman, 1992), especially activities such as drinking games (Nagoshi, Wood, Cote, & Abbit, 1994; Newman,

Crawford, & Nellis, 1991). According to Nagoshi et al. (1994), drinking games are often viewed as dangerous because of the likely potential to consume too much alcohol. The college student population is also targeted by promotions from alcohol companies and distributors (Eigen, 1991; Eigan & Quinlan, 1991).

Living in an environment conducive to drinking, as well as an environment that readily accepts and condones this practice, it is not surprising that perceptions of college students with regard to their own drinking are often distorted. For example, Burrell (1992) discovered that those students who drank frequently "showed little, if any concern for their own drinking behavior, but felt that alcohol presented several problems for their peers" (p. 107). Similarly, Baer and Carney (1991) found "students rated others as drinking more and having more alcohol-related problems than they themselves have" (p. 58).

Drinking norms are also often misperceived. Students see "everyone else" drinking, and perceive friends and members of their social groups as almost always drinking more than themselves (Baer et al., 1991). Agostinelli, Brown, and Miller (1995) conducted a study based on drinking norms. They found that students often overestimate how much their peers drink, and predicted that, when given feedback on their own drinking practices

relative to the actual norm, they would tend to change their drinking behaviors and move toward that norm. The results suggest that is exactly what happened in this study. When students were made aware of their misperception, they reported drinking less.

Many studies have been conducted in an attempt to predict drinking behavior in college students. Schall, Kemeny, and Maltzman (1991) examined dormitory residents and the differences in their drinking behavior in both the fall and spring semesters. They concluded that the best predictor of the amount of alcohol students consumed at the end of the spring semester was the amount they had consumed at the beginning of the fall semester. Other studies have found different factors to be involved in predicting drinking in college students. For example, Schall, Weede, and Maltzman (1991) found the best predictor for men was a lack of behavioral control measured by the Disinhibition subscale to the Sensation Seeking Scale (Zuckerman, 1979), and the reported personal, positive effects such as the use of alcohol to help cope with problems was the best predictor for women. On the other hand, Edmundson, Clifford, Serrins, and Wiley (1994) found that attitudes toward drinking, specifically, attitudes related to the quantity and frequency of alcohol consumption, was the single strongest predictor of drinking behavior in university students. The

findings of this study also suggest that drinking patterns of the father are related to student consumption, but that conclusive evidence of this was lacking.

Another aspect of college consumption that has commonly been addressed is the changes in drinking over the course of a student's college years. Klein (1994) discovered that while women's alcohol use decreased and attitudes about alcohol progressed toward an adult-like viewpoint, men were much different. Over the course of men's college careers, their drinking use and attitudes remained at similar levels from freshman to senior years. Furthermore, Wechsler, Isaac, Grodstein, and Sellers (1994) found that for both men and women, the use of alcohol by students during their first 2 years at school remained fairly constant. For example, the majority of those who drank during the first year continued to do so the second year. Similarly, students classified as binge drinkers their first year continued binge drinking their second year in college.

Other studies have also focused on overall college drinking changes over a period of time. For instance, Perkins (1992) looked at trends between 1979 and 1989, while Tryon (1992) compared the difference in alcohol use in 1983 and 1988. Along these lines, Hanson and Engs (1992) examined students' alcohol-related problems

between 1982 and 1991, and, in a more recent study, Schukit, Klein, Twitchell, and Springer (1994) examined increases in alcohol related problems for collegiate men over a 12-year period.

Conclusions reached by these researchers are mixed. Tryon (1992) found that overall, students showed greater abstinence in 1988 than in 1983. Similarly, Hanson and Engs (1992) found a significant decrease in the proportion of students who drank at least once a year. However, alcohol-related problems such as blackouts, binges, and cutting classes reportedly increased between 1980 and 1992 (Hanson & Engs, 1992; Schukit et al., 1994).

Taking into consideration the prevalence of college student alcohol consumption (Prendergast, 1994; Saltz & Elandt, 1986) and the problems related to this norm and acceptance of drinking (Laplace, Chermack, & Taylor, 1994), this subject warrants a summary of current findings, as well as a detailed investigation into what works and what does not work in helping college students become more alcohol-conscious.

While reviewing literature involving college student alcohol consumption, it became evident that this was an enormous task to undertake. Studies published between 1988 and 1995 numbered over 500. While some references reviewed date from before this time period, the



majority of the information was published between 1990 and 1995.

The topics that this review will address include:

- A) Influences on college student drinking, such as gender (Bailey, Carman, & Forsuland, 1991), sorority and fraternity membership (Goodwin, 1992), and anxiety and stress level (Stewart & Zeitlan, 1995).
- B) Consequences and correlates of alcohol use by college students, specifically, rape and violence (Abbey, 1991; Rivinus & Larimer, 1993) and hangovers (Hanson & Engs, 1992), and correlates such as drinking games (Newman et al., 1991) and use of other drugs (Werch, Ross, Anzalone, & Meers, 1994).
- C) Instruments used to assess consumption such as the Alcohol Expectancy Questionnaire (AEQ) (Brown, Christiansen, & Goldman, 1987), and educational and treatment programs that address the prevalent problem of college alcohol consumption (Look & Rapaport, 1991; Sadler & Scott, 1993).
- D) Conclusions about drinking that have been suggested up to 1995, as well as what areas warrant further research.

Although ethnic background and college student alcohol consumption in locations other than the United States are important issues addressed in the literature, they will not be discussed in this paper.

The goal of reviewing this topic is to address the pertinent issues in the literature related to drinking in college. It is hoped that, by examining the major influences, effects, and ways to treat this problem, college students, faculty, administrators, and counselors can gain knowledge about this, as well as devise strategies to assist higher education with the growing problem of college student alcohol abuse.

## Chapter I

### Influences on College Drinking

College students have been found to consume alcohol for a variety of reasons. For instance, Billingham, Parrillo, and Gross (1993) found students' self-reported motives to drink alcohol included drinking to get drunk, to feel good, to relieve boredom, or to relieve fatigue or tension. Similarly, Klein (1992b) discovered college students often endorsed statements such as "Drinking helps me relax," "I like to drink when I'm celebrating something special," and "Drinking just seems like the thing to do in many activities" (p. 18-19) to explain why they drink.

This chapter will address four of the major influences on college alcohol consumption, as well as examine other important influences on student drinking. The four main factors are: gender, sorority and fraternity affiliation, residence and living arrangement, and parental and peer influence. These influences can occur independently, but often, these factors are overlapping.

#### GENDER

Gender is the one variable that seemed to be addressed most often in studies. Even when gender was not the main focus of a study, it was often taken into account (Baer, Kivlahan, & Marlatt, 1995; Kalodner,

Delucia, & Ursprung, 1989; Kidorf, Sherman, Johnson, & Bigelow, 1995).

Exactly how do college men and women differ in their drinking behaviors? Even though there continue to be gender differences in drinking patterns, the male/female gap is reportedly decreasing as women's alcohol consumption has increased dramatically, while men's consumption has increased at a smaller rate (Engs & Hanson, 1990). Still, men tend to drink more often, consume larger quantities (Engs & Hanson, 1990; Gross, 1993; Maney, 1990), encounter more problems related to drinking (Carlucci, Genova, Rubackin, Rubackin, & Kayson, 1993; Curtis, Genaro, Roberts, & Kayson, 1990), and more frequently drive after drinking (Perkins, 1992).

There have been several explanations offered for these differences between men and women. For instance, since men usually weigh more, they can drink more than women without experiencing the same effects. Canterbury et al. (1990) found that body weight often explains the 1.3 drink difference between women to men.

Masculine stereotypes are also offered as a possible explanation. Landrine, Bardwell, and Dean (1988) predicted "that if both drinking beer and getting drunk are aspects of the male gender role and gender expectations for men, then subjects should attribute both beer drinking and getting drunk more often

to males than to females" (p. 705). Indeed, that is what they found, which may imply men drink more often than women partly because this behavior is a factor of the male gender role, or because people may expect them to drink more.

However, these are not the only differences to be found between genders. Even though both male and female college student drinkers often report consuming beer more often than wine and spirits (Wechsler & Isaac, 1991; Wiggins & Wiggins, 1987), Straus and Bacon (1953) and Becker and Kronus (1977) reported that wine and spirits were preferred among women, while Wechsler and Rohman (1981) found most men drink beer.

Another common gender difference is with whom men and women usually drink, as well as when drinking usually takes place for each. For example, women have been found to drink in mixed company most often, while men tend to drink with same-sex friends (Becker & Kronus, 1977; Straus & Bacon, 1953). Also, Straus and Bacon (1953) discovered college men are more likely to drink in a restaurant, tavern, or bar, while college women are more likely to drink in their own homes.

Factors such as age, expectations, and personality also contribute to gender differences in the consumption of alcohol in college. Liljestrang (1993) found men aged 21-25 consumed the most alcohol per week, whereas women

25 and older consumed more per week than other age groups.

What men and women expect when consuming alcohol was addressed by Thombs (1993). He found that both sexes displayed stonger expectancies when they were problem drinkers. Regardless of the status of "problem" or "nonproblem" drinker, women were found to be motivated to drink by expectancies of feeling better about themselves, stress reduction, and increased sociability. Men, on the other hand, were motivated by expectancies of euphoria and stress reduction only. In a related study, Kidorf et al. (1995) found "expectancies that alcohol increases social assertiveness" (p. 225) were true for male college drinkers, but not female college drinkers.

Personality, specifically, a sensation-seeking type of personality seems to influence gender differences in college alcohol consumption as well (Zuckerman, 1979). Those identified as "sensation-seekers" have been found to be more likely to take risks. Additionally, Beck, Thombs, Mahoney, and Fryer (1995) found this type of personality correlates with sex-seeking in men and emotional pain in women in relation to alcohol consumption.

#### **SORORITY AND FRATERNITY MEMBERSHIP**

Gender is only one of many factors influencing college student drinking. This section will address

another influential factor--Greek affiliation, or sorority and fraternity membership.

Many colleges and universities offer students opportunities for membership in a variety of fraternities and sororities. Although this provides a student with a large social network, one drawback is the often alcohol-enticing environment of the Greek community (Goodwin, 1992). At times, sorority and fraternity members experience even more pressure than other college students due to membership requirements (Canterbury et al. 1990). According to Goodwin (1989), "for some fraternity and sorority members, belonging to a 'Greek' organization also means adherence to more permissive attitudes toward alcohol use" (Lo & Globetti, 1995, p. 1313).

Goodwin (1992), Lichtenfeld and Kayson (1994) and Lo and Globetti (1993) found membership in fraternities and sororities facilitate and enhance alcohol use. It is important to note that although sorority and fraternity membership is an influence in consumption, it is not necessarily a cause of alcoholic drinking. "At colleges with no such organizations regular patterns of drinking continue..." (Goodwin, 1990, p. 93).

Why is membership in a Greek organization considered to be such a powerful influence? One explanation offered is that it is not so much the membership or environment, but that members who join are already pro-drinking

students (Lo & Globetti, 1995). Many students have prior notions about what Greek life is like, they expect high-drinking involvement, and therefore gravitate toward it.

The physical environment of sorority and fraternity houses, pledgship activities, and the overall acceptance of alcohol consumption also contribute to this strong influence on college students.

For instance, Kuh and Arnold (1993) found fraternity houses to display extensive alcohol memorabilia such as neon beer signs, posters, and shot glasses. They also found sorority members to find this acceptable and not out of the ordinary. Additionally, Kodman and Sturmak (1984) found two-thirds of fraternity chapters had bars in their houses. Previous research has shown alcohol consumption to be influenced by visual stimuli (Miller, Hersen, Eisler, Epstein, & Wooten, 1974), which can lead to the conclusion that this alcohol-oriented environment influences Greek members.

The pledging process of fraternities and sororities is part of the "culture of drinking" (Kuh & Arnold, 1993). Although pledging activities in some colleges are mandated to be alcohol-free (Eigen, 1991), often the pledging process is filled with activities centered around alcohol consumption (Kuh & Arnold, 1993). These factors (physical characteristics and pledging) relate to



sorority and fraternity members' overall acceptance of alcohol. In fraternities and sororities, alcohol is the "drug of choice" (p. 61), where 85% of social activities revolve around alcohol consumption, and 93% of Greek members drink at these functions (Goodwin, 1992).

Peer influence also impacts Greek membership and alcohol consumption. Although peer influence will be discussed in further detail later in this chapter, it is important to note that peer influence is a significant predictor of alcohol use (Martin & Hoffman, 1993). These researchers found "students who associated with more friends who were drinkers...tended to drink more than students who associated with fewer friends who were drinkers" (p. 209). This seems to perpetuate a pattern: sorority and fraternity members are usually associated with more friends who are drinkers, drink more than those who have fewer friends who are drinkers, and since they themselves drink, they often influence their friends to drink.

#### **RESIDENCE AND LIVING ARRANGEMENT**

The third factor influencing college alcohol consumption is the residence of the student. The types of residences studies have examined include: fraternity and sorority houses (Klein, 1992a; Martin & Hoffman, 1993), dormitories (Baer et al., 1995; Greiner, 1993),

off-campus apartments (Baer, 1994), and off-campus, living with parents (O'Hare, 1990).

Surprisingly, Schall, Weede, and Maltzman (1991) found that students' living arrangements did not influence alcohol consumption. However, other researchers have concluded that where a student lives is often associated with his/her alcohol use. For instance, Cooney and Nonnamaker (1992) found resident students (on and off campus living in close proximity to the school) drank more and "became intoxicated almost twice as many times as commuting students" (p. 400). Similarly, there are differences in alcohol consumption among resident students. Baer (1994) and Klein (1992b) found those living in Greek residences consumed more alcohol than those students living in dormitories. Further, Baer (1994) concluded those living in a sorority or fraternity residence consumed more than those living off-campus, while Klein (1992b) found fraternity residents consumed more than those living in on-campus apartments. It appears that not only membership in a fraternity or sorority can influence alcohol consumption, but that those who are members of a Greek organization and live in a Greek residence are doubly affected.

Interestingly, Barnes, Welte, and Dintcheff (1992) discovered that heavy drinking and alcohol problems are as likely to occur among noncollege students as college

students of the same age. Overall, no matter where a college student resides, he or she is likely to drink alcohol, but for the most part, those living in a fraternity or sorority residence have been found to be the most likely to consume alcohol (Baer, 1994; Greiner, 1993), and are more disposed to drinking-related problems (Globetti, Stem, Marasco, & Haworth-Hoepfner, 1988).

#### PARENTAL AND PEER INFLUENCE

People are influenced by those with whom they spend the most time, so it is a valid assumption that a college student's peers and parents are an important factor when discussing student alcohol consumption.

Studies have shown evidence of the influence of drinking by both parents and peers on college students. For example, Standing and Nicholson (1989) examined the drinking and smoking patterns of university students in relation to their parents and friends. They found that for the first two years in college, students' drinking was influenced by parents, but in the remaining years, influence shifted to friends. Similarly, Billingham, Post, and Gross (1993) found parental influence to be associated with college students' drinking practices when the students first entered college. These researchers found that the decrease in parental supervision was related to an increase in alcohol consumption for first-year college students.

One of the most striking findings of parental influence was from a survey conducted by Straus and Bacon (1953). Eighty-nine percent of student drinkers came from homes where parents consumed alcohol, and 54% of student abstainers came from homes where parents abstained from drinking. These figures exemplify the strong influence parents can have on their children.

Other studies found one parent to have the strongest link to their child's alcohol consumption in college. For instance, Gisske and Adams (1988), as well as Jung (1995) found a significant relationship between the drinking patterns of parents and students, specifically, the relationship between fathers and sons. Additionally, Edmundson et al. (1994) found the fathers' drinking patterns to be related to students' personal alcohol consumption.

In contrast, Haemmerlie, Steen, and Benedicto (1994) concluded that the strongest influential relationship to drinking was the mother-student relationship. Similarly, Dull (1992) found the major predictor of alcohol use in college freshmen to be related to maternal use.

As was discussed previously, peers are a strong influence on college student alcohol consumption as well. In the same study by Dull (1992), peers were found to be an influential factor--closely following the influence of the mother. Martin and Hoffman (1993) also found

evidence suggesting peers to be an influence on college student alcohol consumption.

Peer influence is considered significant throughout one's life, but is particularly powerful in adolescence (Dielman, Butchart, Shope, & Miller, 1991). Approval is sought from peers, and their actions are often copied in order to be accepted. This can become hazardous when college students (as well as others) misperceive the alcohol consumption of their friends and social group members. For instance, Goodwin (1989) found the more students perceived others in their house to be drinking, the more they drank. Similarly, "Perkins and Berkowitz (1986) concluded that most students misperceive their peer groups' norms regarding alcohol use as being more liberal than they actually are" (Martin & Hoffman, 1993, p. 209). Clearly, both a student's parents and peers influence his/her actions when it comes to alcohol consumption.

#### ADDITIONAL FACTORS

Along with the four major influences of gender, sorority and fraternity membership, residence, and parental and peer influence, other factors can figure prominently in the alcohol consumption of college students. These include personality type, expectations, and year in school, which were discussed previously. Additionally, anxiety and stress (Kalodner et al., 1989)

and religious preference play a role (Prendergast, 1994; Robinson et al., 1993).

### Anxiety and Stress

College students often report feeling overwhelmed by the pressures, stress, and anxiety associated with classes, outside employment, homework, and friends, as well as pressure related to family. Researchers have found alcohol consumption to be related to students' anxiety levels. For instance, Kalodner et al. (1989) conducted a study based on the Tension Reduction Theory (Cappell & Herman, 1972). This theory hypothesizes that "a) alcohol reduces tension, and b) people consume alcohol to benefit from its tension-reducing effects" (Kalodner et al., 1989, p. 649). They discovered students who classified themselves in the category of "high anxiety" consumed a significantly higher amount of alcohol than those who classified themselves in the "low anxiety" category.

Hittner (1985) also examined the Tension Reduction Theory. One conclusion reached in his study was that those who drank more expected greater tension reduction. It appears that students often drink large amounts to reduce anxiety, as well as to expect more relief from it when they do.

## Religion

Liljestrand (1993) reported that there are many college studies that include questions about religious affiliation, but few examine religion in relation to drinking. The current literature review appears to confirm this. Yet, a handful of studies produced interesting results. For instance, Perkins (1987) found "students who identified themselves as Protestant or Roman Catholic were one and a half to two times more likely than Jewish students to report some type of problem drinking" (p. 106). Similarly, Carlucci et al. (1993) found Catholics to report the most problem behaviors related to drinking, followed by Protestants and Jews.

It is important to point out that the students surveyed here identified themselves with a particular affiliation only, and were not questioned regarding their current religious practice. Perkins (1985, 1987) addressed this issue, and suggested that religion sets role model norms for drinking, which can be crucial for young people entering a relatively parental-free, new environment.

In contrast, a lack of religious commitment has been found to be a contributing factor to the problem of drinking on college campuses. This is exemplified in a study of university women in the South by Humphrey,

Leslie, and Brittain (1989). They found participants who regularly attended religious services were more likely to abstain from drinking than those who attended only occasionally. Since there is little information regarding affiliation and religious commitment, this is an area in need of further study (Liljestrand, 1993).

Various influences on the consumption of alcohol by college students have been discussed in this chapter. It can be concluded that these factors often work together, influencing or strengthening one another. For instance, a male fraternity member living in a fraternity house would be expected to be more likely to consume alcohol in greater quantities, more frequently, and to experience more alcohol-related problems than other college students.

Finally, with the focus of this chapter on reasons why students drink, it is important to mention why some college students do not drink. Klein (1990) reported the following reasons nondrinkers gave for not drinking: 1) "They do not drink because they like to stay in control of what they do" (86.8%), 2) "Not liking the way alcohol makes them feel (54.9%)", and 3) "Disliking the taste of alcohol (51.8%)" (p. 62).

Unfortunately, nondrinkers are a minority on college campuses, and drinking behaviors often lead to problems



for the user, as well as for others who come in contact with the drinker.

**Chapter II**  
**Consequences of Drinking**  
**and Associated Problem Behaviors**

Since college alcohol consumption is so prevalent, it is to be expected that there are consequences involved. Problems range from hangovers and vomiting to much more serious effects that often result when college students consume alcohol.

This chapter will address common consequences students frequently encounter after drinking, including rape, violence and aggression, and other various problems such as those associated with driving while intoxicated. Also of interest here is the correlation alcohol has with the problem behaviors of taking drugs and participating in drinking games.

**RAPE, VIOLENCE, AND AGGRESSION**

"Studies of sexual violence on campuses estimate that 75% of victims and victimizers had been using alcohol at the time of the rape or rape attempt" (Rivinus & Larimer, 1993, p. 86). Additionally, Koss (1990) reported that 75% of these perpetrators attributed their perception of victims' "seductive" behavior to their own alcohol use. These statistics clearly show that alcohol often plays a role in the crime of rape on college campuses.

Similarly, many studies have focused on the association of alcohol use and acquaintance or date rape. For example, Muelenhard and Linton (1987) found that 26% of men who admitted committing sexual assault on a date were intoxicated at the time. An additional 29% of the men in the study reported they were "mildly buzzed," which totals 55% who admitted being under the influence of alcohol when assaulting their victim.

Female victims of sexual assault were also discussed in Muelenhard and Linton's 1987 study. Fifty-three percent of the women who admitted to being sexually assaulted on a date were under the influence of alcohol at the time. In fact, Koss and Dinero (1989) concluded that alcohol use is one of the strongest predictors of the likelihood of a college woman being raped.

Abbey (1991) offered several explanations for the relationship between alcohol consumption and acquaintance rape. These include: the male perpetrator's "misperception of women's sexual intent" and "the use of alcohol to justify behavior", as well as the female victim's "diminished coping responses" and "poor sending and receiving of sexual cues" (p. 166).

Not only is rape a possible consequence of alcohol consumption by college students, but other forms of aggression are factors as well. Koss (1990) and Wechsler and Isaac (1992) found alcohol to be a substance commonly

associated with aggression and violence in college students. Perkins (1992) found similar consequences. He discovered negative effects such as "injury to others", "fighting", and "damage to property" (p. 461) to occur more often after the consumption of alcohol by students.

In a related study, Laplace et al. (1994) found aggression and aggressive, violent behaviors to be related to alcohol and experience with alcohol. Specifically, drinkers with less experience with alcohol were more prone to initiate aggressive acts and responded more aggressively when provoked than were those students with more experience with alcohol. This finding does not necessarily mean that those with more alcohol experience are "immune to the aggression-enhancing effects of alcohol intoxication" (p. 443), but it may suggest that those with more experience have learned to monitor their drinking and drinking-related behaviors.

Researchers have examined the relationship between violent and aggressive behavior and alcohol, and have presented the following conclusions:

- 1) Alcohol can disinhibit the nervous system and increase the likelihood of aggressive acts (Pihl & Peterson, 1993).
- 2) Alcohol often decreases emotional and physical pain sensitivity, which can increase violent responsiveness

(Pihl & Peterson, 1993).

3) Anxiety about punishment for a violent or aggressive act is decreased by alcohol consumption (Pihl & Peterson, 1993).

4) What one witnesses through parents, peers, or television in regard to alcohol-related aggressive acts can influence that person in a similar manner (Fagan, 1990).

Pihl and Peterson (1993) and Fagan (1990) did not single out college students in their studies, but the effects of alcohol in relation to violence and aggression is likely to apply to this population.

#### OTHER PROBLEMS

Rape, aggression, and violence constitute a large portion of the problems encountered by college student drinkers, but other consequences are common. For example, Greiner (1993) found the following in his survey of 1,147 Louisiana State University students: 52.9% had experienced a hangover due to drinking, 30.8% were "nauseated and vomited from drinking and drug use", 37% "drove a car after having several drinks or using drugs" (p. 114), and 25.7% drove a car after they knew they had drunk too much.

Other common consequences have been found as well. Gonzales (1991) and Engs and Hanson (1990) found cutting

classes due to drinking, being stopped or arrested for driving while intoxicated (DWI), losing a job, getting in trouble with the law, lowered grades, and criticism by others for drinking habits were problems experienced by college student drinkers.

Driving while intoxicated is one effect that carries with it more serious consequences than some of the other problems encountered such as hangovers or vomiting (Hanson & Engs, 1992). Those who drive after having too much to drink not only place their own lives in jeopardy, but they also risk harming, often fatally, their passengers or other drivers.

Along with drinking and driving, risky sexual activity due to drinking, though not as common, can be one of the most serious consequences in light of the fatal HIV virus and other sexually transmitted diseases. For instance, Desiderado and Crawford (1995) found "alcohol consumption both in frequency and quantity was significantly associated with the number of sexual partners respondents had over the past 11 weeks" (p. 62). Further, many reported either not using condoms at all, or being less likely to use them after they had consumed alcohol. This risky practice can lead to frightening consequences for the college drinker, as well as for others.

Other studies have addressed the problem of risky sexual activity, and found it to be a common consequence of drinking. For instance, Perkins (1992) found 50% of college students in his study to have engaged in unintended sexual activity at least once, with 24.5% reporting this on more than one occasion. Along these lines, Wechsler, Davenport, Dowdall, Moeykins, and Castillo (1994) found 20% of college drinkers had engaged in unplanned sexual activity, and 40% of binge drinkers had done so.

#### OTHER DRUGS

There are few studies that address the correlation between alcohol use and the use of other drugs, but it appears to be a factor adding to the list of problems related to drinking.

Although alcohol is the drug most commonly used on college campuses (Goodwin, 1993; Leibsohn, 1994), marijuana and cocaine are substances that are used and abused by college students as well. Additionally, Werch et al. (1994) found cigarette use to increase significantly when college students were in a stage where they had recently started using alcohol.

Other studies have examined the relationship between alcohol and drug use, and have found a correlation as well. For instance, Goodwin (1992) found that those

students who experience above-average side-effects from alcohol use often increase the use of marijuana or cocaine. It appears that if one drug poses problems for the students, they often try another one. In contrast, Alterman et al. (1990) concluded that, instead of discontinuing the use of one drug to use another, those who consumed alcohol often also consumed marijuana or cocaine.

### DRINKING GAMES

Games involving alcohol are a common occurrence for many college students. Douglas (1987) reported that this practice dates back to the Middle Ages for university students, and has been common on campuses for centuries. Even though this is a common practice with often serious repercussions, few studies have investigated drinking game participation of college students (Engs & Hanson, 1993).

However, two studies that have addressed drinking game participation by college students found numerous results that are important when looking at the consequences of drinking. One of these examined the role and function of drinking games (Newman et al., 1991).

The first aspect investigated was the types of drinking games commonly played, such as consumption and skill games. Consumption games require players to



"compete to see who can consume the most alcohol without showing any immediate signs of intoxication" (p. 172). Skill games involve physical skill, and those players with less skill are forced to drink. Both of these games are potentially dangerous to the student player, as they often intoxicate the person quickly.

The second aspect addressed by Newman et al. (1991) was the quantity of alcohol typically consumed. Students were often observed to drink one and a half 12-ounce cans of beer in 15 minutes--a short period of time, indicating rapid consumption by players.

Motives for participation in drinking games were also investigated. The most commonly reported motive was to get drunk quickly, with 92% of students in the study endorsing this. Further, three-quarters of those students reported their motives included playing in order to get someone else drunk. In addition to the motivation of getting drunk quickly or getting someone else drunk, 64% of the students in this study participated in these games "to socialize more easily with other students" (p. 172).

Nagoshi et al. (1994) also investigated this phenomenon. They too discovered a high frequency of drinking game-playing among college students, specifically, in freshmen and sophomores. Similar to

Newman et al. (1991), the participants most often endorsed motivations such as drinking to get drunk and to socialize. More importantly, Nagoshi et al. (1994) found that the participation in these games by students was associated with both positive and negative expectations about alcohol. While students were aware of the negative consequences such as nausea or social embarrassment, many saw the consequences as fun, or just part of the game. It is likely that this perception by college students makes the practice of drinking game participation even more dangerous.

Since drinking games promote heavy drinking, and so many students participate, this phenomenon clearly contributes to the consequences college students often face when they consume too much alcohol.

Because of the many factors influencing college students to drink alcohol, as well as the numerous problems encountered, it is crucial to address the educational and treatment programs on college campuses throughout the United States.

**Chapter III**  
**Assessment, Treatment, and Education**  
**for College Students**

With alcohol consumption among college students such a recognized activity with widely recognized negative consequences, many instruments have been devised to detect or predict problem drinking. Additionally, colleges and universities have implemented education programs and treatment strategies in hopes of ameliorating the problems students face because of their consumption practices.

In this chapter, two commonly used alcohol assessment instruments will be outlined: the Alcohol Expectancy Questionnaire (AEQ) (Brown et al., 1987) and the Michigan Alcoholism Screening Test (MAST) (Selzer, 1971); two of the most commonly employed treatment approaches will be discussed: raising the legal drinking age and designated driver programs; and finally, the various education and treatment programs utilized at colleges and universities, along with suggestions researchers give for implementing these programs will be examined.

**ASSESSMENT**

**AEQ**

The Alcohol Expectancy Questionnaire (AEQ) (Brown et al., 1987) is an assessment instrument often used in

studies investigating college student drinking. This instrument is a tool aiding researchers in predicting the expectancies adolescents and adults have about alcohol, specifically, "the degree to which individuals expect alcohol to produce a variety of general and specific effects" (Brown et al., 1987, p. 483). With better understanding of the expectancies college students have about alcohol, programs can better tailor alcohol education and treatment to students.

Corcoran and Segrist (1993), Kidorf et al. (1995), Mooney (1995), Mooney and Corcoran (1991), and Thombs (1993) used the AEQ in their research on college student drinking. In particular, Mooney (1995) and Thombs (1993) discovered important implications for helping college students.

Mooney (1995) found that gender differences come in to play when devising treatment. For instance, men are a population to target for gender-related risk behaviors, such as heavy alcohol consumption, as well as for stress management and tension reduction. On the other hand, it was found that women would benefit from interventions that focus on the identification and enhancement of acceptable alternatives to drinking.

Similarly, Thombs (1993) found men and women should be targeted differently in educational and treatment programs. He suggested efforts directed towards women

should emphasize "improving self-efficacy by providing support and encouragement" regarding drinking habits (p. 325). For men, exploring other leisure activities that do not involve alcohol are recommended. Interestingly, that is what Mooney (1995) recommended for women. It is important to emphasize that those students with alcohol-related problems who are seeking counseling should have individual treatment plans based on their needs as individuals (Thombs, 1993), but alcohol education and treatment programs aimed at the college population as a whole are not always required to be so tailored.

#### MAST

Along with the AEQ, the Michigan Alcoholism Screening Test (MAST) (Selzer, 1971) is a commonly used instrument in studies of the college population; most often, those studies addressing heavy drinking (Alterman et al., 1990) and alcoholism (Earleywine, 1993; Phillips & Heesacker, 1992). The MAST is used as a screening device where the negative consequences related to drinking are identified (Selzer, 1971). This device has been used when designing education and treatment programs for the college student population. By classifying students into the categories of "normal", "at risk", or "abuser" (Sadler & Scott, 1993, p. 63), administrators

and counselors can target their prevention and treatment programs to each or all of these groups.

Cronin (1991) designed a strategy using the MAST to help at-risk college students. By administering the MAST to students who were referred to the college's counseling center for an alcohol-related incident, he made the students aware of their own alcohol use. Cronin (1991) found that often, when students are referred for their drinking behaviors, they are already experiencing problems due to their abuse of alcohol, yet are quick to deny they have a problem with it. To keep from pushing students away, after receiving feedback on the MAST, Cronin (1991) suggests giving the students an opportunity to return for a follow-up session, but not to pressure them into it. Results have been positive, with 65% of students returning for a follow-up session.

#### OTHER INSTRUMENTS

The AEQ and the MAST are not the only assessment tools used with the college population. In addition, the Student Alcohol Questionnaire (SAQ) (Engs, 1975), the Inventory of Drinking Situations (IDS) (Annis, Graham, & Davis, 1987), the Student Drinking Questionnaire (SDQ) (Rozelle & Gonzales, 1979), and the Presley Adolescent Alcohol Scale (PAAS) (Presley & Karmos, 1994) are all assessment tools used to probe into students' drinking habits.

Hanson and Engs (1992) used the SAQ in their research on drinking problems that college students encounter. This was administered on four different occasions between 1982 and 1991, and was useful in identifying how the problems students encountered in relation to alcohol changed over that time period. For instance, problems such as getting a lower grade and getting in trouble with school administration because of drinking too much reportedly increased, while problems such as coming to class after drinking, and driving a car while drinking reportedly decreased.

Carey (1993) used the IDS as an assessment tool in her study on the situational factors related to heavy drinking in college students. She found the IDS to be "a promising assessment tool for identifying triggers of excessive drinking among at-risk college students" (p. 217). Further, Carey (1993) suggested the IDS be used by university counseling center personnel for clients suspected of heavy drinking, and by educators as a basis for discussion of the relationships between consumption and the situations in which it occurs.

#### RAISING THE LEGAL AGE

Even though all states now enforce the law stating one must be 21 years of age or older to purchase or consume alcohol, it is important to address whether this

tactic has made a difference in the population of college-age students.

Unfortunately, this strategy appears to have made little difference in the drinking patterns of students. For example, Perkins and Berkowitz (1989), Gonzales (1990), and Hughes and Dodder (1992) found that increasing the purchasing age to 21 had little effect on the overall drinking behavior of college students. In fact, Gordon and Minor (1992) found that those students who were directly affected by the law (i.e. 19 and 20 year-olds) increased their consumption. Similarly, Gonzales (1990) found that female students' drinking problems increased after the 21 year-old law was put into effect. From the evidence of these studies, not only has this law influenced college student alcohol consumers little, in some cases, the law has been found to produce negative results.

#### DESIGNATED DRIVER PROGRAMS

Designating a driver who will not drink alcohol is a popular prevention method employed at colleges and universities (Brigham, Meier, & Goodner, 1995; Glascoff, Knight, & Jenkins, 1994; Knight, Glascoff, & Rikard, 1993). It sounds like an effective idea--having one student in a group abstain from alcohol in order to drive home those who have been drinking.



Appointing a designated driver within the college population may itself be problematic. For instance, Knight et al. (1993) pinpointed some of the concerns associated with assigning a designated driver in their study on the perception of college students about being designated drivers. These included the designated driver not completely abstaining from alcohol and binge drinking of passengers. Glascoff et al. (1993) also found similar problems, as well as the concern of the driver often being required to provide caretaking activities, such as tending to sick or passed out passengers or controlling these intoxicated individuals.

The problems frequently encountered by designated drivers can serve as deterrents to performing this duty. Further, the possible loss of enjoyment of the occasion by abstaining may discourage some students. Shore, Gregory, and Tatlock (1991) discovered this was not true, however. They found the majority of students participating in a designated driver program enjoyed themselves even though they were not drinking alcohol. They also found problems similar to others previously mentioned, such as the designated driver not abstaining.

These studies point out that designated driver programs are more complicated than they first appear, and they require comprehensive and diligent efforts by those who design the programs, as well as by the students

themselves. Even though there are often quite a few problems encountered with these programs, the effort may play an extremely important role in saving lives on college campuses.

The following are recommendations that can be useful in making designated driver programs work at colleges and universities:

- 1) Plan the event beforehand, as well as have agreed-upon lengths of stay and destinations (Shore et al., 1991).
- 2) Designate the driver before leaving for the event (Shore et al., 1991).
- 3) Set rules and drinking limits for passengers (Glascoff et al., 1994).
- 4) Monitor passengers' drinking carefully while at the event (Glascoff et al., 1994).
- 5) Minimize risk to driving ability by limiting the number of passengers (Glascoff et al., 1994).
- 6) All those in the vehicle should live in close proximity to each other (Shore et al., 1991).

Obviously, these strategies will not always be possible (for example, some events will not be planned), but if college students are educated in the ways to best make a designated driver program succeed, the effectiveness of these programs should increase.

EDUCATION AND TREATMENT PROGRAMS EMPLOYED AT COLLEGES AND UNIVERSITIES

Up to this point, certain treatment strategies have been discussed, which, unfortunately, have not shown definitive results in reducing the problem of college student drinking. Significantly ameliorating the problems and consequences associated with drinking appears to be a goal out of reach at this time. In fact, some strategies, such as trying to teach responsible drinking have had counterproductive outcomes (Chapman, 1991). In this study, he found that the promotion of "responsible drinking" on college campuses did not take into consideration students who might be predisposed to alcoholism and not be able to drink responsibly. Similarly, increasing the knowledge college students have about alcohol and its effects appears to have helped little (Garvin, Alcorn, & Faulkner, 1990; Posavac, 1993).

With all the strategies that have either failed or shown only limited success, the question remains, what does work? There is no easy answer to that question. No single educational or treatment strategy has been found to consistently work. College populations have different characteristics, such as the type of students enrolled, the location of the college or university, and the alternatives to drinking that are available. Keeping that in mind, the remainder of this chapter focuses on

educational and treatment strategies that have worked for various colleges and universities, as well as suggestions offered by the researchers who found these tactics to work.

One strategy that shows promise involves increasing the role faculty play in campus efforts to reduce alcohol consumption. For example, Rapaport (1993) found both students and faculty members reported an expository English assignment requiring self-reflection on one's own alcohol use to be worthwhile. In this assignment, students in freshmen English classes were asked to "write a paper which clarifies your position about the role of alcohol in your life" (p. 379). This assignment encouraged students to think about their own alcohol use and the consequences they suffer from intoxication. Similarly, Rivinus and Larimer (1993) discussed a literature course given at Brown University where students are taught about the relationship between intoxicants and problematic behavior.

Along with integrating alcohol-related assignments into the college curriculum, Rapaport and Norton (1992) and the U.S. Department of Health and Human Services (1991) recommend the following for faculty:

- 1) Recognize signs of alcohol-related symptoms in students.
- 2) Know how and where students should be referred.

- 3) Announce alcohol educational events to students (for instance, National Collegiate Alcohol Awareness Week).
- 4) Refrain from commenting about all students drinking alcohol or coming to class hungover on certain days.
- 5) Develop, implement, and assign material related to alcohol consumption relevant to the course.

Colleges and universities have employed other strategies to help college students moderate their drinking. For instance, Adler and Rosenberg (1994) reported the success of a substance-free dormitory at the University of California at Berkeley. Other successful tactics include trained peer counselors (Tryon, 1992), and specific programs such as the First Offenders Program (Sadler & Scott, 1993) and the Alcohol Education Discipline Program (Look & Rapaport, 1991).

#### PROGRAM RECOMMENDATIONS

Researchers have offered specific recommendations to colleges and universities based on their respective studies. The recommendations from Kraft (1988) and Lammers and Ness (1990) will be highlighted here. The first contains basic points that are important for the success of alcohol abuse programming on campuses. The second examines recommendations and strategies for programming.

Basic points from Kraft (1988):

- 1) Consider the time required to implement alcohol

programs. Changes often require long periods of time to develop, and programs should shift in response to students' needs.

- 2) The goals of the program should be consistent with the educational objectives of the campus and community.
- 3) Programs should be approved and supported by the administration of the school.
- 4) Efforts at prevention should "build upon adequate and readily accessible treatment resources...for people with drinking problems" (p. 49).
- 5) The alcohol program should focus on specific situations that influence the drinker.
- 6) Target those in high-risk groups, such as first-year students, men, and students belonging to fraternities and sororities.
- 7) Aim to change the drinking behaviors of students by attracting them to "meet for a few sessions of effective alcohol education activities" (p. 49).

Recommendations from Lammers and Ness (1990):

- 1) The university should explore ways to make designated driver programs more effective, as well as take an active role in the creation of programs aimed at alleviating driving under the influence.
- 2) Develop intervention strategies for alcohol-related offenses, such as requiring students to participate in alcohol/drug education programs.

- 3) Promote peer and resident assistant training to help these individuals recognize signs of problem drinking in others.
- 4) Provide attractive alcohol-free activities and design messages reinforcing those students who choose not to drink.
- 5) Continually assess alcohol use of students by administering surveys every several years.
- 6) Programs should emphasize the consequences associated with drinking, especially the connection between alcohol and sexuality.
- 7) Organize support groups on campus such as Alcoholics Anonymous (AA).

It is clear that designing alcohol education and treatment programs on college campuses is not an easy task, and there is much trial and error in the process of discovering what works. The college years are a time of influencing and shaping young adults, and colleges and universities can play a major role in impacting the drinking practices and problems of college students.

See the Appendix for a list of references to college student alcohol education and treatment programming.

## Chapter IV

### Summary and Future Outlook

The previous three chapters of this paper have addressed the issues impacting college students in relation to alcohol consumption, the consequences and problems they frequently encounter because of this, and ways to assess, treat, and educate these students regarding alcohol.

There are many factors leading to and influencing the alcohol consumption of college students, such as their expectations about what alcohol will do for them or how it will make them feel (Martin & Hoffman, 1993), their personality type (mainly sensation-seeking) (Schall, Weede, & Maltzman, 1991), anxiety and stress level (Camatta & Nagoshi, 1995), and religious preference (Liljestrang, 1993). In addition to these factors, gender (Maney, 1990) sorority and fraternity membership (Goodwin, 1989), residence and living arrangement (Klein, 1992b), and parents and peers (Standing & Nicholson, 1989) appear to be the predominant influences on college students.

Researchers have made some firm conclusions regarding these four main factors. Specifically, men drink more than women (Engs & Hanson, 1990), membership in fraternities and sororities often facilitates and enhances alcohol use (Goodwin, 1992), those living in



sorority and fraternity residences are more likely to drink alcohol than those students living elsewhere (Baer, 1994), and parents and peers both influence alcohol consumption (Dull, 1992).

Along with specific factors influencing college students, there are consequences related to drinking that this population commonly experiences, such as violent and aggressive acts (Koss, 1990), missing classes and work (Engs & Hanson, 1990), and driving while intoxicated (Hanson & Engs, 1992). Taking drugs in conjunction with alcohol (Alterman et al., 1990), as well as participating in drinking games (Newman et al., 1991) are correlated with and add to these problems.

With high levels of alcohol consumption a common practice among college students, often carrying serious consequences, the assessment, education, and treatment of this problem is essential for colleges and universities. Assessment instruments such as the Alcohol Expectancy Questionnaire, the Michigan Alcoholism Screening Test, and the Student Alcohol Questionnaire are commonly used to assess the drinking practices of college students. Along with these tools, prevention, treatment and education strategies such as designated driver programs (Shore et al., 1991), and increased faculty involvement (Rapaport & Norton, 1992) are used on campuses.

For the most part, the majority of strategies employed at colleges and universities to reduce the problems associated with college student drinking have not shown consistent results. Because of this, researchers have offered specific recommendations to college and university administrators for designing the most effective programs possible.

Even with the tremendous amount of research on the subject of college student drinking in the United States, researchers suggest exploring certain areas more thoroughly.

One research strategy often suggested is the use of longitudinal research. Baer et al. (1995), Dana, Pratt, Kochis, and Andrews (1993), Perkins (1992), and Maney (1990) concluded that longitudinal studies would yield a more complete picture of college student drinking. For instance, Dana et al. (1993) suggested a longitudinal analysis of college students prior to and after college would give more insight into college student drinking patterns. Similarly, Baer et al. (1995) concluded that a longitudinal study "allows us to assess whether other life changes (changes in living situation, drop-out from college, or graduation) result in other marked changes in alcohol consumption and adjustment" (p. 61).

Although longitudinal studies are often suggested as a means of gathering more accurate information, they are

conducted much less frequently than other studies. The drawbacks of an extensive time period, cost, and loss of subjects over time are factors that keep the number of longitudinal studies at a minimum.

Another approach suggested by researchers (and much easier to implement than longitudinal analyses) is replication of previous research. When the results of a study are replicated by other researchers, it increases the likelihood that the results are reliable and valid. Maney (1990) suggested his study on predicting the use of alcohol by college students be replicated at other colleges and universities. Additionally, Globetti et al. (1992) found their conclusions regarding college students who were intolerant toward the use of alcohol warranted duplication at universities and colleges throughout the country.

There are additional specific areas where researchers are focusing their attention. These foci are: gender differences in relation to motivation for drinking (Bailey et al., 1991); gender differences in perception of risk associated with alcohol use (Spigner, Hawkins, & Loren, 1993); the impact of alcohol expectancies on student drinking (Johnson, 1994); and the role Greek associations play in college student drinking (Lo & Globetti, 1995).

Clearly, there are many areas requiring further investigation. The main focus of future studies, however, appears to be in the area of treatment and education. With the many problems encountered in programs such as the designated driver program, researchers should be investigating ways to make this program function in the most effective manner possible. Along with focusing attention on designated driver programs, researchers should be further investigating ways to change current policies that have failed, and follow documented recommendations by others, such as targeting at-risk college students.

Although the problems associated with college student drinking are not likely to disappear, efforts by researchers and college personnel can play an important role in greatly reducing the abuse of alcohol. Factors involved, influences, and correlates have been identified. Future research should focus on improving existing education and treatment programs, as well as constructing new and more effective programs.

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