

Jul 30th, 9:45 AM - 10:45 AM

# A Comparative Analysis of Alcohol Consumption Pattern Among Global University Students

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Tse, Eliza C., "A Comparative Analysis of Alcohol Consumption Pattern Among Global University Students" (2011). *International CHRIE Conference-Refereed Track*. 10.

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A COMPARATIVE ANALYSIS OF ALCOHOL CONSUMPTION PATTERN  
AMONG GLOBAL UNIVERSITY STUDENTS

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Abstract

Most studies on alcohol consumption of college students are conducted in the US. Others are done comparing overseas Chinese with the Caucasian or among students from Mainland China. This is a comparative analysis of students in the US, Europe and Hong Kong to ascertain their consumption pattern of alcohol and the differences in perception on alcohol usage. Survey instrument was used to collect data for this study. Overall, US and European students are far more likely to consume alcoholic beverages in comparison to Hong Kong Chinese students. US and European students were more likely to consume alcoholic beverages as they progressed through each year of their University education.

Key words: alcohol consumption, university students, comparative analysis

Introduction

The consumption of alcohol is common in many cultures around the world, either as a part of daily meals, or during occasions of special significance. However, drinking in excess is not only harmful to health, but also creates severe problems in the workplace as well as in society (Tse & Jackson, 1990; Ramstedt, 2002). The prevalence of alcohol use and associated problems is higher in college populations than in the general public, especially among university students is more prevalent in Western societies like the USA and Europe. Studies show that among these young adults, alcohol consumption varies greatly in different countries and cultures, in different population groups with a country, and over time (Ahlstrom & Osterberg, 2004/05).

This is a concern because alcohol is a major contributor in the leading causes of accidental death in the United States for young adults, especially automobile accidents and personal injury (Johnston, O'Malley, & Bachman, 2000; Morawska & Oei, 2005; Wechsler & Kuo, 2003; Pyte, 2007; Czart, 2001; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002). The Congress passed the Drug Free Schools and Communities Act of 1986 and in 1989 to control incidents of sexual assaults, campus violence, personal injury and deaths caused by alcohol abuse (Presley, Meilman & Leichliter (2002). It is found that drinking behaviors of the younger generation when they become adults has important consequences for our society regarding their education, career success and family formation (Czart, 2001).

Similarly, binge drinking is also an important health and social issue in many nations in Europe. It is known as one of the heaviest drinking region in the world. European studies have correlated alcohol abuse with university students' poor academic or occupational performance, physical injuries or accidents (Hibell, Andersson, & Bjarnason, 1997). In UK, young binge drinkers (18-24 years old) are five times more likely to be involved in violent crime and seven times more likely to cause criminal damage. Alcohol related injury, disability, and deaths in young European people have increased alarmingly in recent years (Weber, 2001; Richardson and Budd, 2003). Alcohol consumption in Poland is characterized by a relatively low drinking frequency and a concentrated

consumption of large quantities when drinking does occur (Engs, Slawinska, & Hanson, 1991). On the other hand, Asian students and Chinese communities are found to consume much less alcohol (Ahlstrom & Osterberg, 2004/05). It is noted that drinking is not a prevalent problem among university students in Hong Kong even though the legal drinking age is 18 years old.

Alcohol consumption by college students in the States and Europe remain an enormous social problem. Yet, the etiology and course of drinking problems for college students remain poorly understood. By understanding how alcohol and other drug use fits in young people's lives, and specifically how it is embedded in their numerous developmental transitions, we can have a stronger foundation for understanding etiology and for effecting positive change (Schulenberg & Maggs, 2002). A review of literature indicates that there is limited study carried out in comparing US, Europe and Asian students in regard to their alcohol usage. The primary purposes of this research are: 1) to explore the antecedents and consequences of alcohol consumption behavior between students of hospitality management in the US, Hong Kong and Europe, 2) to identify impact of cultural differences among the groups in the sample from a cultural perspective, and 3) to suggest options to manage what is perceived to be a major social concern in both the western and eastern context.

## Review of Literature

### Antecedents that affect alcohol consumption behavior in college

A host of factors (including gender, country of origin, year of study, GPA and whether they lived on campus or not, living settings, alcohol-related expectancies, personal history of conduct problems, and family history of alcoholism) have impact on whether the students drink or not and their drinking behaviors. These variables are hypothesized as important predictors of alcohol abuse and associated consequences.

*Social cognitive and psychological variables.* Moreover, social cognitive models of alcohol use have emerged as robust predictors of adolescent and young adult, especially college students, drinking (Kuther & Timoshin (2003). In the United States, alcohol use and heavy drinking are culturally embedded in the experience of adolescence and the transition to young adulthood in general and in the college experience in particular. America faces an epidemic of underage drinking that starts in elementary and middle schools and intensifies on college campuses (Czart, 2001; Cristol, 2002). College drinking may be a rational choice based on their assessment of the potential positive and negative consequences. Student drinking is found to connect to academic, social, and even criminal problems, as detailed by the Harvard College Alcohol Studies in the 1990s. Perceived social support has been considered a protective factor against drinking. Williams, Powell, & Wechsler (2003) investigate the effect of drinking on college students' educational achievement and found that alcohol use by college students reduces time spent studying and subsequently leads to a lower GPA. The later the age students first use alcohol, the more likely they are to have a better GPA.

*Gender issues.* Shim & Maggs (2005) examined college students' drinking behaviors from a consumer behavioral perspective. Results indicated that personal values can serve as significant predictors of the attitudes college students have toward alcohol use, which in turn can predict intentions to drink. Intentions to drink are strongly related to actual alcohol consumption, and that gender-related attitudes and alcohol use during the past month influences intentions to drink. Binge drinking may have roots in high school activities and family history, including gender and race, and also has implications for academic performance. Lu, Engs, & Hanson (1997) examine if the differences between males and females regarding alcohol consumption are also found among university students in China. There is difference in male and female drinking: Males were more likely to consume alcohol and to do so with greater frequency and in greater quantity, they have more problems related to alcohol compared to female students.

*Hypothesis 1: Gender matters in Hong Kong rather than Western societies, concerning the students' drinking behavior. That is, less female drink than male in Hong Kong while as many female as male drink in Western societies.*

*Parents and peers* serve as important indicators of social norms because they model motives for, attitudes about, and behavioral habits of drinking (Johnston, et al., 2000). While peers and the environment play an influential part in the amount a new student drinks, a student's personal family history contributes to drinking habits as well. Religious beliefs, whether or not they are the first person from their family to attend college, and whether or not a student's parents are divorced all have an impact on drinking habits as well.

*Hypothesis 2: Family member drinker has an impact on student drinking behavior so that when their family member drinks, students are more likely to drink.*

*Hypothesis 3: Students are influenced more by their peers than by their families, in drinking.*

Despite the importance of social cognitive variables, psychosocial constructs have also been shown to predict alcohol use. Drinking has been associated positively with measures of depressive symptomatology, and associated negatively with measures of assertiveness. Baer (2002) examined individual factors causing the variability in alcohol consumption among college students. Alcohol consumption varies as a function of identity development. Identity development has a regulating role over alcohol consumption. In Europe, young people in Mediterranean countries differ from those in the northwest European countries use alcohol consumptions to articulate their own identity in one of two ways: either to rebel or to innovate (i.e. beverage choice or context of drinking, etc.) (Engels and Knibbe (2000). The findings of Weisgram, Holleqaue, Lund, & Wheeler-Anderson (2005) were consistent with the earlier reported findings that there was an inverse linear relationship between identity, status, sophistication, and level of alcohol consumption for first-year college students (Williams, 2005).

*Conducive campus environment.* On the other hand, individual characteristics are not always the best predictors of safe and responsible drinking patterns. Environmental factors such as campus level access to alcohol play a decisive role in determining drinking levels among college students (Czart, 2001). Studies on possible explanations for the high rate of heavy drinking on most U.S. college campuses (Baer, et al., 1995; Harper, 2005) indicate that the amount student's drink is contingent on their age, where they live, and with whom they associate at school. This is especially true of first year college students, more so when those students live in residence halls or become members of the Greek system (Baer, Kivlahan, & Mariatt, 1995; Schulenberg & Maggs, 2002). American college campuses have some what unusual living settings (such as dormitories, fraternities, and sororities) that may contribute uniquely to the development of alcohol-related problems (Czart, 2001; Presley, et al. (2002). Heavy drinkers hold attitudes more accepting of heavy drinking.

In addition to individual culture that differs, there are some other external environmental variables that may influence drinking in different universities. These environmental factors include community availability, pricing, server density that affects student drinking behavior. Identifying institutional variables such as size, public control and gender or racial makeup has provided an aggregated list of potential predictors (Presley, et al., 2002). Chaloupka (1993) found that increases in alcohol beverage prices would lead to substantial reductions both into the frequency of youth alcohol consumption and in heavy drinking among the young.

*Drinking motives/purpose:* Drinking motives have been examined as a way of understanding different needs that alcohol might fulfill. The three general types of drinking motives quoted by college students are drinking for social purposes or social camaraderie, drinking for emotional escape or relief or tension reduction (Baer, 2002), and mood enhancement (Cronin, 1997). The most common reasons given for alcohol use were social purposes and party or

celebration, followed by other reasons. Men were significantly more likely to consume alcohol for relaxation, excitement, and social reasons, while women tended to drink of celebration purpose and its good taste (Griffiths et al., 2006). Binge drinkers cited the following as important reasons for drinking: Drinking to get drunk, Status associated with drinking, Culture of alcohol consumption on campus, and Peer pressure and academic stress.

*Hypothesis 4: People who advocate “drinking alcoholic beverage is a way to release stress” are more likely to drink for the purpose of relaxation.*

*Hypothesis 5: Alcoholism is a bigger social issue in Western societies than in Hong Kong.*

*Hypothesis 6: People would drink less if they are aware of the harm of drinking.*

#### Different Consumption Pattern between Asian and Caucasians

Drinking patterns between racial groups are mediated by culturally influenced social learning. To date there has been very little research examining the expectancy of reinforcement from drinking between different racial, cultural or ethnic groups (Ahlstrom and Osterberg, 2004/05). Some studies point out the results are culture-specific and that the extent to which alcohol use enhances the risk of social harm is mediated by the cultural context (Ramstedt, 2002). Past research on alcohol consumption patterns comparing Asian and Caucasians indicates that significant group differences exist. Akutsu, et al., (1989) found that Asians, including Chinese as a group, consumed significantly less alcohol than their Caucasian counterparts, and physiological reactivity and attitudes toward drinking rather than general cultural values were significant predictors of ethnic difference in drinking. Li (1994) found that in both ethnic groups of Canadian Chinese and Caucasian university students, cultural norms rather than physical symptoms were a significant predictor of alcohol consumption patterns. O’Hare (1995) examined differences in alcohol consumption and problem levels, the social context of drinking, and alcohol expectancies in white and Asian university students. These findings suggest that alcohol consumption behavior can be better understood by a social/psychological rather than a biomedical approach. To effect changes in alcohol assumption patterns, it is suggested that cultural interpretations of alcohol use should be examined.

*Alcohol Consumption in China:* The Chinese have long been recognized as a group that uses alcohol in moderation and those experiences very few drinking problems compared to North Americans and some Northern Europeans. As in most societies there is a relationship between parental and youth drinking, that is, adolescents’ drinking patterns tend to resemble their parents’ drinking patterns (Newman, 2002). On the other hand, most reports concerning Chinese drinking patterns have been based on those living outside of China. Studies of Chinese in China, Taiwan, Singapore, and the United States indicate that most consume alcohol in moderation, on special occasions, and where there are social controls on their drinking. Very few experience any drinking problems (Chi, Lubben, & Kitano, et al., 1989).

*Hong Kong situation:* Hong Kong is a small island with over 7 million people of population. There are 8 universities that are all publicly funded by the government. About half of the students live in the dorm, and most of them go home over the weekends. Moreover, some students have the drivers’ licenses, but 99% of them do not drive. The unique situation makes the mental state of the students in Hong Kong remain younger than their physical age. There many student societies and organizations, but none of them would involve alcohol in their gathering. Griffiths et al. (2006) examined the prevalence of alcohol and tobacco use of the incoming students of an university in Hong Kong. This is the motivation why this study was undertaken, to explore the differences in cultural perspective underlying causes of alcoholism in the college on campuses in Hong Kong, US and Europe.

#### Consequences of alcohol consumption

Students drink or not or become binge drink is associated with the aforementioned factors that affect their drinking behavior. Current alcohol prevention and intervention programs focus on education and tend to emphasize the negative consequences of drinking. However, it is suggested that college students are aware of the negative consequences of alcohol use, but drink in spite of this awareness, perhaps because the perceived positive consequences of drinking are viewed as outweighing the potential costs, the potential costs of drinking are discounted, and peer norms are perceived as supportive of drinking. Therefore, college students may perceive drinking as a means to an end, serving a constructive purpose (Shim and Maggs (2005). Social factors influence alcohol use among college students, who believe it is a rite of passage into adulthood. For example, drinking may serve a social function for college students, a way of bonding and socializing, which is supported by the finding that participants who perceived higher level of social support also reported higher levels of alcohol consumption.

## Methodology

*Survey instrument:* Based on the comprehensive literature review, a self-report questionnaire was developed to collect primary data for this study. The questionnaire was constructed in English and there was no need for translation since the primary medium of instruction at both institutions was in the English language. Information on demographic characteristics and alcohol consumption behavior patterns were obtained. Demographic data pertaining to gender and year in College were obtained for purposes of comparison. A pilot study was conducted that involved a research colleague in the area and a group of students were invited to fill out the survey in order to test the validity and reliability of the survey instrument. Their comments were incorporated in the revision and modifications of the instrument were made.

*Sample size and procedure:* The survey instrument was administered to three convenience samples of Hong Kong, US and European college students. The two researchers collected the data from their respective universities in Hong Kong and US, while the data from Europe was collected while one of the researchers was on sabbatical and taught in Austria. Although the samples constitute comparable homogeneous populations, the non-random nature of data collection suggests that the three samples cannot be considered to be nationally representative. Anonymity and confidentiality were assured to protect respondents and gather more reliable data.

A total of 523 University students completed the questionnaire, of which 308 were students at one University in Hong Kong, 110 were students at a University in the Great Lakes region of the US, and 105 from an international degree program of an Austrian university, where students consists of local and other European countries. Approximately 70% of the respondents in Hong Kong, 42% of the respondents in the US and 64% of the respondents in Europe were females. Frequency distributions, cross-tabs, independent samples t-tests and ANOVA were used to examine differences between the samples.

## Results

### Patterns of alcohol usage among ever drinkers and factors associated with ever drinking

Cross-tabulation with Pearson chi square tests revealed the following significant findings. Overall, a higher percentage of students from USA (80%) and European samples (88%) tend to consume alcohol beverages than those from Hong Kong (40%). European students are far more likely to consume alcoholic beverages in comparison to Hong Kong Chinese students (Chi Square 97.45,  $df = 2$ ,  $p < 0.001$ ). European students also consumed alcoholic beverages more often than their Chinese counterparts (Chi Square 100.45,  $df = 21$ ,  $p < 0.001$ ) in addition to consuming more alcohol on each occasion (Chi Square 55.97,  $df = 12$ ,  $p < 0.001$ ). European students in comparison to Hong Kong Chinese students were more likely to have had a hangover (Chi Square 78.67,  $df = 3$ ,  $p < 0.001$ ) and to experience hangovers more often (Chi Square 54.55,  $df = 9$ ,  $p < 0.001$ ). While there were no noticeable gender

differences, European students were more likely to consume alcoholic beverages as they progressed through each year of their University education (Chi Square 193.64,  $df = 6$ ,  $p < 0.001$ ).

Regarding the Hong Kong sample, this is lower than the findings that Griffiths et al. (2006) study. In their study, they reported 62% have ever drunk alcohol (drink less than 1-3 days a month), 1.4% were regular drinkers (drink 1-7 days a week), and 7% reported binge drinking (drink 5 drinks in a row in the past month). Among the three subsamples, on the average, Hong Kong students started their first drink of alcohol when they were 15.6 years, which is a bit older than their European counterparts at 14.8 years. The most common type of alcoholic beverage consumed was beer, followed by table wine, spirit and Chinese rice wine. Men were more likely to consume beer and spirits, while women were more likely to drink table wine.

We examine to see if the impact of factors (peer influence, family influence, whether they are closet drinker, their family drink or not, gender, year of study) on their frequency to drink (how often do you drink). Both the Hong Kong and European samples are influenced by their peers than by their families. However, in Hong Kong, the influence by their peers ( $M=3.91$ ) are higher than the European students (3.69); and by their family ( $M=3.61$ ) as compare to Europe ( $M=3.46$ ) in regard to drinking alcohol. This can be explained by the cultural perspective. Hong Kong students exhibit more of collectivism while European are more independent. This is also true for students that indicated that they had experienced a hangover before: 80% (Europe sample), 73% (USA sample) and 14% (Hong Kong). The majority of binge drinkers drank beer. Women were more likely to drink table wine, but less likely to drink beer.

#### Hypothesis testing

Logistic regression has been used to examine the hypotheses 1, 2, and 4 because the dependent variable “drink or not” (0 for “not drink” and 1 for “drink”) is binary rather than continuous; linear regression was used to test the hypothesis 6 because the dependent variable “drinking volume” is continuous; ANOVA has been adopted to test the hypotheses 3 and 5.

Hypothesis 1, arguing that gender’s role in drinking behavior is different in Hong Kong than Western countries, was supported. We conducted hierarchical regression analysis following the procedures recommended by Aiken and West (1991). In Model 1, we included only gender and origin (Hong Kong or Western) in the equation and in Model 2, we added the products of gender and origin and found this interaction term significant ( $B = 1.13$ ,  $p < .05$ ) (Table 1a). Specifically speaking, as showed in Table 1b, far more female in Hong Kong do not drink ( $N = 155$ ), compared with their western counterparts ( $N = 19$ ). It is found that Hong Kong female students do not drink normally, while in US and in Europe female and male students all drink.

Table 1a  
Role of Gender in drinking behavior

	Model 1		Model 2	
	B	S.E.	B	S.E.
Gender	-1.07**	.22	-2.53**	.65
E/W	2.02**	.23	0.16	.78
Gender*E/W			1.13*	.46

Notes: \* $p < .05$ ; \*\* $p < .01$ ;

E/W: East (Hong Kong)/Western

Table 1b  
Comparing gender in their drinking behavior

	Drink		Not Drink	
	HK	West	HK	West
Male	56	88	30	14
Female	65	91	155	19

Hypothesis 2 suggests that if their family members drink, people are more likely to consume alcoholic drink. This was also supported ( $B = .92, p < .01$ ), indicating that when there is a family drinker, people are more likely to drink ( $N = 149$ ) than not to drink ( $N = 62$ ) as showed in Table 2.

Table 2  
Impact of family on drinking behavior

	Drink	Not Drink
Family Drinker	149	62
No Family Drinker	152	158

Also supported was hypothesis 4 proposing that when people advocate drinking as a way to release stress, their primary purpose of drinking is relaxation. The logistic regression showed that this was true ( $B = .73, p < .01$ ).

ANOVA was used to examine the hypotheses 3 and 5, which were both supported ( $F = 23.80, p < .01$ ;  $F = 60.95, p < .01$ ). Specifically, students, in their drinking behaviors, are more likely to be influenced by their peers ( $M = 3.88$ ) than by their families ( $M = 3.59$ ).

Moreover, Western participants think that drinking is a bigger social issue in their society ( $M = 3.31$ ) than the Hong Kong participants do ( $M = 2.78$ ).

However, hypothesis 6, suggesting that drinking volume would reduce when people are aware of the negative influence of drinking, was not supported ( $B = .03, p > .05$ ). This showed that knowing the harm of drinking does not necessarily relate to how much people drink.

## Discussion and Conclusions

*Why are Chinese Less Likely to Consume Alcohol?* Alcohol is intimately intertwined in every aspect of Chinese culture. The Chinese have regarded alcohol as the representation of happiness and the embodiment of auspiciousness, a source of inspiration, for hospitality and an antidote for fatigue since prehistoric times. On the other hand, alcohol is regarded as one of the “Four Vices” or disasters. This double view of alcohol is reflected in China’s history. Early Chinese literature includes many references to alcohol. Dynasties appear to have fallen as a result of alcohol. This historical record suggests that at different times, government has acknowledged alcohol-related problems and have used policies to prevent these problems. The Chinese government today has chosen not to interfere with the traditional patterns of alcohol use. There are no laws regulating the purchase, consumption, or selling of alcohol. Instead today alcohol use appears to be controlled by culture, tradition, social pressure, and the economy.

Griffiths et al. (2006) found that university students indicated that the most common reasons that they drink were social purposes (59%) and party or celebration (54%), followed by its good taste (11%), euphoric or excited feeling (6%), good for health, and relaxation (5%). The observed low drinking rates in young Chinese people may be attributed to both genetic factors and social, political, and cultural influences. Socially and culturally, there are various conditions that act as protective factors against alcohol use. According to Newman (2002), Chinese may consume less alcohol than other ethnic groups for a variety of reasons:

- Chinese society is based on strong family bonding and family values and community norms effectively shape behavior.
- Both Confucian and Taoist philosophies emphasize moderation, a standard widely applied to alcohol use in China today. Light to moderate drinking is acceptable as a norm and good for health in Hong Kong and China, but not excessive drinking.
- Chinese are highly situation-centered, and therefore unlikely to exhibit reckless behavior in a social setting such as getting drunk.
- Chinese traditionally drink alcohol only when eating which decreases the rate of alcohol absorption. Traditionally, when drinking Chinese play games requiring cognitive and motor skills, especially at banquets. In order to win, one would try hard not to get drunk.
- Chinese do not typically frequent western style bars and solitary drinking is looked down upon.
- For many Chinese, economic conditions restrict the use of alcohol to special occasions.
- Physiological flushing response – the reddening of the upper body, especially the face – restricts alcohol use. Genetically, some Chinese people have inherited a protective genetic factor that slows down the removal of acetaldehyde during alcohol metabolism, thus making them susceptible to flushing. This may make people feel sick and stop them from drinking large amounts of alcohol (Wall & Ehlerts, 1995).

The majority of new students from Hong Kong continue to live at home, which may mean less frequent night social gatherings and heavy drinking. This might explain relatively higher rates amongst male students from the mainland. In the west, other factors have been shown to affect young adult drinking, such as the accessibility and price of alcohol, legal drinking age, and university policies concerning alcohol (Wechsler et al., 2000). However, these factors are unlikely to contribute to the observed low rate of alcohol use amongst university entrants in Hong Kong because alcohol is rather easily accessible and is low priced. Most students are also older than 18 years of age.

As China continues to open-up to the West these traditional and cultural constraints against alcohol abuse will be severely tested. The increasing consumption of alcohol is associated with the changing political and economic conditions and the opening of China to the West. The increased contact with the west has allowed the sharing of Western images of alcohol use and creates a special appeal that is cosmopolitan and western, especially for the young people. The development of brew pubs has attracted young people and increased competition has led to lower prices (Newman, 2002).

*The Complicated Challenge of Policy Development:* Student heavy drinking will continue to be a matter of concern for faculty, parents, administrators, and public health officials (Wolaver, 2002). If the trend in per capita alcohol consumption continues, alcohol-related problems are likely to increase and gain more attention. The effect of alcohol on drivers will become more noticeable when people can afford more automobiles. There will be a tendency for government to step in to reduce alcohol-related problems. The government is then likely to adopt alcohol control policies used in other countries to address similar problems. Alcohol use is an integral part of religion and it is an important part of Chinese medicine. It is a critical element in hospitality. It is important in cooking and as a part of the meal. It also plays a role in special celebrations and festivals. To adopt policies like those in the west: raising the price, restricting the hours of sale, restricting home manufacture, setting a minimum age for purchase and use, and restricting the place of sale could all potentially interfere with alcohol's role in religion, medicine, hospitality,

special celebrations, cooking and the rituals associated with meals. Policies that support the maintenance of traditional Chinese drinking practices will likely be well received. Newman (2002) suggested that policies to present and reduce alcohol-related risks and harm need to be in concept with the values and the traditions of the society. There is a need to understand Chinese local traditions and culture, and to encourage traditional indigenous controls.

*Alcohol Consumption Prevention programs:* The authors concluded that there is an urgent need for expanding prevention and treatment programs, to reduce alcohol-related harm among U.S., Europe and Hong Kong Chinese college students. Czart (2001)'s study provides empirical evidence for continued government intervention in the alcohol market. She found that higher drinking alcohol prices and taxes discourage drinking behavior among college students. College responses to this problem have varied, ranging from a complete ban of all alcohol on college property to a complete denial that the problem exists. The most popular actions included providing counseling and treatment services for students with abuse problems; conducting alcohol education targeted to freshmen; providing alcohol-free residences; employing a substance abuse official; restricting alcohol use at home athletic events; and conducting alcohol education targeted toward fraternity members, sorority members, or athletes. A majority of schools have established a task force to deal with substance abuse issues, restrict alcohol use at on-campus dances or concerts, or restrict alcohol at home tailgate events (Wechsler, Seibring, Liu, & Ahl, 2004).

One of the approaches is to normalize drinking as a healthy part of everyday living where drunkenness is not tolerated. It is based on European culture, where light drinking complements a social gathering, but is not the center of it. To use peer counseling, students have better rapport with people of the same age versus an older administrator. The best approaches seem to be the ones that are holistic in nature and have a chance of reaching a greater number of students. Because a student's age and place of residence play such a large role in binge drinking it would be important to implement policies that target these specific students (Harper, 2005).

Creyer, Kozup, & Burton (2002) examined the influence of warnings on binge and non-binge drinkers across United States and Australia. They suggested that new, potentially strong warnings such as "Alcohol is a Drug" should be considered as one possible replacement for the current U.S. warning labels. A more targeted communication approach aimed at changing attitudes and ultimately behavior of the binge-drinking segment may be most useful in impacting this group. Public service announcement campaigns that encourage responsible drinking behavior have achieved only moderate successes; consequently there is a great need for additional insight into the problem of binge drinking.

#### References:

- Abdullah, A.S. M. and Fielding, R. and Hedley, A.J. (2002). Patterns of cigarette smoking, alcohol use and other substance use among Chinese University students in Hong Kong, *The American Journal on Addictions*, 11, 235-246.
- Ahlstrom, S.K. and Osterberg, E.L. (2004/2005). International Perspectives on Adolescent and Young Adult Drinking, *Alcohol Research and Health*, 28 (4), 258-268.
- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Akutsu, P.D., Sue, S., Zane, N.W. and Nakamura, C.Y. (1989). Ethnic differences in alcohol consumption among Asians and Caucasians in the United States: An investigation of cultural and physiological factors, *Journal of Studies on Alcohol*, 50 (3), May, 261-267.
- Baer, J. S. (2002). Student Factors: Understanding Individual Variation in College Drinking, *Journal of Studies on Alcohol*, Supplement No. 14, 40-53.

- Bishop, D.I., Weisgram, E.S., Holleqaue, K.M., Lund, K.E., and Wheeler-Anderson, J.R. (2005). Identity development and alcohol consumption: Current and retrospective self-reports by college students. *Journal of Adolescence*, 28, 523-533.
- Chaloupka, F.J. (1993). Effects of price on alcohol-related problems. *Alcohol Health and Research World*, 17, 46-53.
- Chi, I., Lubben, J.E., and Kitano, H.H. (1989). Differences in drinking behavior among three Asian-American groups. *Journal of Study on Alcoholism*, 50 (1), 15-23.
- Clapp, J.D., Shillington, A.M., & Segars, L.B. (2000). Deconstructing contexts of binge drinking among college students. *American Journal of Drug and Alcohol Abuse*, 26, 139-154.
- Creyer, E. H., Kozup, J.C., and Burton, S. (2002). An experimental assessment of the effects of two alcoholic beverage health warnings across countries and binge-drinking status. *The Journal of Consumer Affairs*, winter, 36 (2), 171-202.
- Cristol, H. (2002). Teen drinking is on the rise. *The Futurist*, 36 (4), July/August, 14-15.
- Cronin, C. (1997). Reasons for drinking versus outcome expectancies in the prediction of college student drinking. *Substance Use Misuse*, 32, 1287-1311.
- Czart, C.U. (2001). *The impact of alcohol control policies on alcohol use and abuse among college students*, unpublished dissertation, University of Illinois at Chicago, Chicago, Illinois.
- Engs, R. C., Slawinska, J. B. and Hanson, D. J. (1991). The drinking patterns of American and Polish university students: a cross-national study. *Drug and Alcohol Dependence*, 27, 167-175.
- Griffiths, S. Lau, J.T.F., Chow, J.K.W., Lee, S.S., Kan, P. Y.M.Y. and Lee, S. (2006). Alcohol use among entrants to a Hong Kong university. *Alcohol and Alcoholism*, 41 (5), 560-565.
- Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein, A., and Wechsler, H. (2002). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24. *Journal of Studies on Alcohol*, 63, March, 136-144.
- Kuther, T. L. and Timoshin, A. (2003). A comparison of social cognitive and psychosocial predictors of alcohol use by college students. *Journal of College Student Development*, 44 (2), March/April, 143-154.
- Li, H.Z. (1994). Exploring factors influencing alcohol consumption patterns among Chinese and Caucasians. *Journal of Studies of Alcohol*, 55 (4), 427-433.
- Lu, A. Engs, R.C., and Hanson, D.J. (1997). The drinking behaviors of a sample of university students in Nanning, Guangxi Province, People's Republic of China. *Substance Use and Misuse*, 32 (4), 495-506.
- Newman, I. (2002). Cultural aspects of drinking patterns and alcohol controls in China, *The Globe, Global Alcohol Policy Alliance* (accessed October, 24, 2006). [http://www.ias.org.uk/publications/theglobe/02issue1/globe0201\\_p.18.html](http://www.ias.org.uk/publications/theglobe/02issue1/globe0201_p.18.html)
- O'Hare, T. (1995). Differences in Asian and white drinking: consumption level, drinking contexts, and expectancies. *Addict Behavior*, 20 (2), 261-266.

- Presley, C. A. and Meilman, P.W. and Leichliter, J.S. (2002). College factors that influence drinking. *Journal of Studies on Alcohol*, Supplement No. 14, 82-90.
- Ramstedt, M. (2002). Alcohol consumption and the experience of adverse consequences – a comparison of six European countries. *Contemporary Drug Problems*, 29 (3), 549-575.
- Schulenberg, J. E. and Maggs, J.L. (2002). A development perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol*, Supplement No. 14, 54-70.
- Shim, S. and Maggs, J. (2005). A cognitive and behavioral hierarchical decision-making model of college students' alcohol consumption. *Psychology and Marketing*, 22 (8), 649-668.
- Tse, E.C. and Jackson, G.A., (1990). Alcohol abuse in the workplace: Challenges and strategic implications for the hospitality industry. *Proceedings of 3rd Quality of Life/Marketing Conference*, 215-226.
- Wall, T.L. & Ehlerts, C.L. (1995). Genetic influences affecting alcohol use among Asians. *Alcohol Health and Research World*, 19, 184-190.
- Wechsler, H., Molnar, B.E., Davenport, A.E., & Baer, J.S. (1999). College alcohol use: A full or empty glass. *Journal of American College Health*, 247-252.
- Welchsler, H., Lee, J.E., & Kuo, M. et al., (2000). College binge drinking in the 1990s: A continuing problem. *Journal of American College Health*, 48, 199-211.
- Wechsler, H., and Kuo, M. (2003). Watering down the drinks: the moderating effect of college demographics on alcohol use of high-risk groups, *American Journal of Public Health*, 93 (11), 1929+.
- Wechsler, H., Seibring, M. Liu, I. and Ahl, M. (2004). Colleges respond to student binge drinking: Reducing student demand or limiting access. *Journal of American College Health*, 52 (4), 159-168.