DEMOGRAPHIC CHARACTERISTICS ASSOCIATED WITH NON-CONSENSUAL SEX AMONG A NATIONAL SAMPLE OF STUDENTS: IMPLICATIONS FOR SCHOOL HEALTH EDUCATION.

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ABSTRACT

The *Purpose* of this study was to assess descriptive information concerning non-consensual sex, or rape, in relationship to demographic variables and problems related to alcohol among a national sample of students and a sub-sample of students enrolled in health classes in order to provide information for curriculum development for health educators. This paper is part of a long term study of college student drinking patterns and problems by the presenter (R. C. Engs) and David J. Hanson. *Methods*: *T*he *Student Alcohol Questionnaire* was administered to over 11,700 university students during the 1993-1994 academic year from 182 colleges and universities in every state. Of this sample 10,120 were drinkers and 5,926 students in the health classes sub-sample consumed alcohol at least once a year. *Results*: about 4% of those who drank had been involved I n non-consensual sex. Of all demographic variables among both samples, a significantly higher percent of students were involved in non-censual sexual activities if they consumed a large amount of alcohol. In addition a significant higher percent of those who had raped or been raped were at greater risk of experiencing personal, social, academic and legal problems associated with at risk or binge drinking. It was *Recommended* that health educators discuss the potential consequence of non-consensual sexual activities with their students. In addition recommendations of responsible drinking and choices concerning drinking also need to be given so students who chose to drink have some guidelines for safe drinking.

BACKGROUND

Several large national studies have been accomplished every year or so since the early 1980s of college student drinking patterns and problems. These include those by Engs and Hanson, by Gonzales and colleagues, and by Wechsler and associates. These and other surveys have established different parameters for measuring drinking patterns that have led to slightly different results. Most researchers, however, have focused upon problematic drinking behaviors. Some reports suggest that about 20 percent of students consume 5 or more drinks per sitting at least

once a week. Other reports suggest that approximately 40 percent of collegians consume this amount of alcohol at least once every two weeks. At some colleges this can be as high as two in five. These levels have been termed, "heavy," "at risk,"" or "binge" drinking. Studies have shown that these heavy drinkers are more likely to exhibit problem behaviors related to alcohol.

In the early 1990s, at risk, heavy or binge drinking began to be defined as the consumption of over 21 drinks per week for males and over 14 drinks per week for females. At risk drinking was more likely to be found among certain sub-groups of students, in particular males (Engs & Hanson 1989a).

In our society, men tend to view women as less sexually inhibited and more easily seducible when they are intoxicated. Women may also be less able to fend off unwanted sexual advances as they may experience reduced communication skills and coping responses. Also, intoxication can provide a rational for this unwanted sex. Males are more likely to feel sexually aroused and to respond to what they perceive as a sexual invitation. Some studies have found that college students who reported committing sexual assaults or being raped were intoxicated. (Abbey 1991; Muehlenhard and Linton 1987)

Health educators, in their basic health and other courses, generally discuss alcohol and the physical, academic, legal and social effect of irresponsible and risky drinking. In order to gain insight into behaviors related to drinking that might be associated with rape, a descriptive study of demographic characteristics and problems related to drinking and forced sexual activity would be of interest. Thus, the purpose of this study was to assess descriptive information concerning non-consensual sex in relation to demographic variables and problems related to alcohol among a national sample and a sub-sample of student enrolled in health classes in order to provide curriculum information for health educators to help reduce rape among youthful drinkers.

METHODS

The Sample

The sample is part of an ongoing study of drinking patterns and problems of students attending baccalaureate degree granting four-year colleges and universities from every state in the United States that was begun in 1982 by the presenter (Ruth C. Engs, Indiana University) and David J. Hanson, SUNY, Potsdam. Institutions were originally selected to form a "quota sample." Universities were chosen to be representative of all four-year institutions of higher education in terms of financial support (public or private) and size (over and under 10,000 student enrollments). For example, approximately 65% of students attend state supported schools in terms of financial control in the United States (Snyder, 1993). The same proportion of institutions, from each state, was randomly selected from a list of colleges and universities which had health, physical education or sociology departments. The department head was contacted about participation in the study. If an institution declined to participate, another institution with similar demographics in the same state was then asked to take part. Faculty teaching general courses who had a probably of students from every class level were asked to administer the *Student Alcohol Questionnaire* (SAQ) [Engs 1975] to students for in-class completion. The return rate for complete and usable questionnaires exceeded 97%. This "convenience sample" is

limited to students in classes from institutions where instructors were willing to distribute the questionnaire. The resulting sample included over 11,700 university students during the 1993-1994 academic year from 182 colleges and universities in every state. Of this total sample, 10,120 (87.5%) consumed alcohol during the preceding year. Among students in college health classes, 5,926 had consumed alcohol at least once during the past year. Any student who had consumed alcohol over past year was considered a "drinker."

The Instrument

The *Student Alcohol Questionnaire* (SAQ), was used to collect data (Engs 1975, 1977). The questionnaire includes various demographic items; six questions concerning quantity and frequency of wine, spirits and beer consumption; and 19 items regarding possible negative health/personal, social/academic, legal/violence or drinking/driving consequences resulting from alcohol consumption. For the 1993 data collection, the variable "force someone, or were forced to have sex" was added along with fraternity membership. The instrument has demonstrated internal consistency reliability of .79 for all items, excluding demographic factors. An updated reliability analysis (Engs & Hanson 1994) has demonstrated Spearman-Brown reliability coefficients of .84 for the Quantity/Frequency and .89 for the Problems Related to Drinking sub-scales. The values of Cronbach alpha reliability were .86 and .92 respectively, for these sub-scales.

Data Analyses

All calculations were accomplished on the Indiana University VAX computer using the SPSS program.

Mean number of drinks per week

Following a method developed by Lemmens et al. (1988) and adapted by Glicksman, Engs, Smyth (1989), the mean number of drinks consumed on a weekly basis was computed. For these Calculations, the instrument assessed the usual frequency and quantity of beer, wine and spirits consumed by students. The frequency and quantity response categories were assigned constant values.[1] To compute the total number of drinks consumed on a weekly basis, a mean score was calculated by multiplying the recoded quantity by the recoded frequency weight for each beverage type. These three numbers were then summed to give the total mean number of drinks consumed per week.

RESULTS

Of the total sample who had consumed alcohol at least once a year, about 4 percent reported

1 Loading values used to calculate mean number of drinks per week. For the usual frequency of drinking by each respondent: every day = 7.0; at least one a week but not daily = 3.5; at least once a month but not weekly = 0.5; more than once a year but not monthly = 0.12; one a year or less = 0.02; never =0. Values for number of drinks of beer, wine, distilled spirits: 7+ = 7.5; 5-6 = 5.5; 3-4 = 3.5; 1 - 2 = 1.5; < 1 = 0.5; 0 = 0.

being either a perpetrator or a victim of rape. Those who raped, or were raped, reported consuming significantly ($p < .001$) more alcohol (18.17) drinks per week than those who were neither perpetrators or victims (9.37). Inspection of Table 1 reveals that males who raped drank a mean of 24.7 drinks per week compared to 15.6 drinks a week for those did not rape ($p < .001$). Likewise females who were raped consumed 15.4 compared to 7.2 drinks per week of those not raped. In addition this higher mean drinks per week was found for all other demographic characteristics.

Inspection of Table 2 reveals that among the students attending personal health and other health classes, all health, academic, social, and legal problems related to alcohol consumption were significantly higher among those students who reported non-consensual sex within this sample.

CONCLUSIONS AND RECOMMENDATIONS

Although the results cannot be generalized to the universal population of university students as a whole in the United States from this convenient sample, based upon these and other research findings, several recommendations can be made in general concerning the health education curriculum in regards to alcohol education. As part of the alcohol education section in a basic health, drug and alcohol, or sexuality education course, students need to be made aware of the consequences of heavy drinking being associated with non-consensual sex. Not only are they at risk of sexually transmitted diseases, but women might be more at risk of becoming pregnant.

In the health education section concerning alcohol, the dangers of over consumption needs to be addressed. Based upon this study, males should be made aware that of this sample those who consume over 25 drinks per week and females over 15 per week, were more at risk for non-consensual sexual activities. This behavior could result in legal consequences for the males and personal consequences for the females. However, the curriculum needs to avoid just stressing negative results of alcohol as students often "turn a blind eye" to this type of educational message (Engs & Hanson 1988, 1989). The responsible and safer use of alcohol also needs to be stressed for those who chose to drink or may choose to drink in the future.

Models of Alcohol Education

Several alcohol education methods have been in use since the days of the Women's Christian Temperance Movement. Most have not been successful to prevent alcohol abuse or risky drinking among youth. These approaches have included the following (Engs 1979, 1980, 1981, 1991a).

> Abstinence model**.** One of the most common models of alcohol education is, "Don't do it." This model, which portrays alcohol as "bad" or "sinful" or "unhealthy" assumes that if you tell students not to drink for moral, religious, health, or other reasons, they will abstain. However, because we are a multi-cultured nation, this method has not been successful. Since most Americans (about 75%) do drink, the abstinence model, over time, has not proven successful. This was true a hundred years ago, during Prohibition,

and is true now (Engs 1991a). Telling people they can not do something when they feel that their freedom has been thwarted brings on reactance motivation and they are more likely to exhibit problematic behavior (Engs & Hanson 1988,1989)

Social-economic model**.** This model uses statistics concerning a variety of problems encountered when people drink irresponsibly, such as fatal automobile accidents, crime, and family problems related to alcohol abuse. The social-economic model of alcohol education has not been considered very effective as these problems continue.

Alcoholism approach. This approach seeks to establish alcohol as a disease. It is implied that if you drink at all, you will become an alcoholic. However, only 10 to 15% of all people who drink are alcoholics. This approach focuses on the negative physiological and psychological effects of the drug; little time or space is given to the positive effects of alcohol. The alcoholism approach is excellent for pointing out signs and symptoms of possible alcohol abuse, but does little to help an adolescents decide on methods of responsible drinking if they chooses to drink.

Alternative approach**.** The alternative approach to alcohol education offers up a variety of alternatives to drinking. Alternatives to drinking or drug taking can be successful in some cases as long as they are available. These alternatives are generally sports and recreational. One problem with the alternative approach is the fact that drinking is tied with recreational activities. Exercise has not been shown to be very effective in changing drinking patterns (Engs & Mulhall 1981; Hays & Tevis 1974).

Reduction of consumption model. It is assumed that if alcohol consumption is eliminated people will be less likely to drink. Although this is generally not in the realm of health education, the educator needs to have an awareness of this effort (Engs 1994)

Responsible drinking and choices concerning alcohol education**.** Alcohol has been consumed in many various cultures around the world since antiquity (Engs 1979, 1991,1991a, 1995). Drinking, like eating, or any social activity, has some guidelines to help the participant be responsible drinkers and get more enjoyment out of the activity. For example, gobbling down half a chocolate cake at a party would not be considered responsible eating or even polite in most cultures. The same goes for drinking. Responsible choices concerning drinking may mean not drinking, such as when a person is sick, taking medications or being the designated driver. Responsible drinking means that a person never has to feel sorry for what has happened when he/she was drinking.

Teaching responsible drinking and choices regarding alcohol use

The health educator needs to remember that, just because students learn factual information concerning alcohol, they will not necessarily change their drinking or other behavior. Over the years, several studies have indicated this (Engs 1976, 1977, 1978, 1981; Sine 1976). In addition, a change in attitudes does not necessarily change drinking patterns themselves. (Hanson 1974; Hurt & Martin 1974; Osmon 1974; Engs 1976). Furthermore, engaging students in alternatives

such as sports appears to have mixed results as far as responsible drinking is concerned (Hays & Tevis, 1977). Educational programming concerning responsible drinking and drinking choices, needs to include some definite factors. Suggested content in the area of alcohol education in schools or the community would include the following:

1. Objective factual information concerning both positive and negative effects of alcohol on physical, mental, and social health.

2. Objective factual information concerning the religious, medicinal, cultural, and personal reasons why individuals do and do not consume alcoholic beverages.

3. Methods for using and serving alcoholic beverages in a responsible manner.

4. Ideas and methods for responsible alternatives to drinking.

5. Responsible abstinence and the rights of the non-drinker.

6. Problem-solving skills, to cope with life by means other than alcohol and drugs.

7. The clarification of values concerning one's present or future drinking or non-drinking behavior.

To teach alcohol education in any setting, health educators must always be aware of their values and biases concerning drinking, so that information may be presented in as objective a manner as possible. Because the teaching young adults of responsible choices concerning alcohol are controversial in many communities, the support of the school administration and the community is crucial in public schools (Engs 1990). Even the most conservative community needs to be aware that the average onset of drinking outside the home occurs at thirteen years of age, that over 50% of all high school students drink once a month or more, and that alcohol abuse leading to crime, fatal automobile accidents, and other problems is highest among youth.

Administrative Concerns

On the university level, health education instructors generally have academic freedom to teach based upon research that they feel is best for a particular subject. However, in religious institutions sometimes there is more oversight on course content. On the secondary level and as with any subject matter in the public schools, steps must be taken to gain support for educational programming. The model for organizational work in public schools is as follows:

1. A group of interested parents and teachers forms a steering committee, which carries out a need study to determine specific local problems. The type and philosophy of the educational program is also discussed.

2. Out of this group, a curriculum committee is formed to develop the program.

3. Approval by the school board is obtained for a pilot project which is established in selected classes.

4. Next, an evaluation is done. If the pilot is shown not to be detrimental to students or to increase irresponsible behavior, the program is instituted in the total school system. (5) Frequent evaluations are necessary to determine the effect of the program (5, 8).

Basic information for students to avoid high risk drinking to prevent non-consensual sexual and other negative consequences related to drinking too much.

1. Know your limit "rule of thumb.*"* Research shows that most people if they drink no more than ONE drink an can avoid drunkenness and maintain control over their behavior.

2. Eat food while you drink. It is particularly good to eat high protein foods such as cheese and peanuts, which help to slow the absorption of alcohol into the circulatory system. Many cultures consume alcohol only with food to prevent various problems.

3. Sip your drink. If a person gulps a drink for the effect, the pleasure of drinking, namely tasting and smelling the various flavors, is lost. This is particularly true for wine. Gulping and chug-a- lug is not safe nor responsible alcohol consumption.

4. Accept a drink only when you really want one. At parties if someone is trying to force another drink on you, ask for a non-alcoholic beverage.

5. Cultivate taste. Choose quality rather than quantity. Learn the names of fine wines, whiskeys, and beers. Learn what beverage goes with what foods.

6. Skip a drink now and then. When at a party, have a nonalcoholic drink between the alcoholic one to keep your blood alcohol concentration down. Space your alcoholic drinks out to keep the desired blood alcohol concentration.

7. When drinking out, if you must drive home, have your drink with a meal, not afterwards. This allows time for the alcohol to be burned up and for it to be absorbed slowly into the circulatory system. Better yet, have a designated driver.

8. Beware of unfamiliar drinks. Such drinks as zombies and other fruit and rum drinks can be deceiving, as the alcohol is not always detectable, and it is difficult to space them out.

9. Make sure that drinking improves social relationships rather than impairs them. Serve alcohol as an adjunct to an activity rather than as the primary focus. Have a German night party rather than just getting together to drink beer.

10. Appoint a designated driver. Have someone available who will not be drinking and will drive all drinkers home. This is critical if the person has consumed more than one drink per hour.

11. Use alcohol carefully in connection with other drugs. This includes over-the-counter drugs such as sleeping pills and cold or cough medicines. Alcohol should be avoided while taking certain antibiotics, arthritic, anti-depressant, and many other prescription medications. Check with your physician or pharmacy before you drink while on any prescription drug.

12. Respect the rights of individuals who do not wish to drink. It is considered impolite to attempt to get people to drink who do not want to. They may abstain for religious or medical reasons, because they are recovering alcoholics, or they just may not like the taste and effect it has on them. Offer them a good quality non-alcoholic beverage.

13. Avoid drinking mixed drinks on an empty stomach on a hot day. This might produce hypoglycemia, which can cause dizziness, weakness, and mood change.

14. If you know that you will have to drive after consuming alcohol, limit your consumption to no more than one drink an hour. In reality many people who have a drink with a meal have no other option other than to drive home. Consuming NO MORE than one glass of wine, beer or mixed drink with a meal in a hour is generally safe for driving.

15. Upper limit of drinks for males is 21 and for females is 14 drinks per week. Most studies suggest that these limits are safe for health. In older individuals moderate drinking may help prevent against heart disease. This amount, of course, is spread out over a week's period. This means **for males no more than 2-3 drinks and for females 1-2 drinks per day preferably with meals**

In summary, both males and females who had been involved with non-censual sex in the overall sample and in the sub-sample health courses were considered at risk, heavy or binge drinkers consuming over 21 drinks for males and 14 drinks per week for females compared to those not involved in a rape situation. Health educators in personal health classes, alcohol education or sexuality courses need to make students aware of the risk of heavy drinking in addition to methods for the responsible and safe consumption of alcoholic beverages if they chose to drink at some point in their life.

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Table 1: T-test results of the mean drinks per week between forced and non-forced sex within various personal, academic and institutional variables among driners.

	Forced N=465 $\bar{X}$(sd)	Non-forced N=9642 $\bar{X}$(sd)
Personal:		
Sex		
Male	24.7(24.3)	15.6(16.9)*
Female	15.4(17.1)	7.2(10.3)*
Age		
< = 21	19.1(20.0)	10.6(14.0)*
> 21	18.1(24.1)	9.7(13.5)*
Religion		
Roman Catholic	22.6(20.7)	12.4(14.3)*
Jewish	18.7(27.7)	13.2(16.2)
Protestant (allows drinking)	18.1(19.0)	10.8(14.1)*
Protestant does not allow drinking)	15.2(22.0)	7.4(12.0)*
Race		
White	19.3(19.7)	11.3(14.1)*
Non-white	14.4(19.7)	4.8(10.1)*
Importance of Religion		
Very	15.9(24.2)	6.7(11.6)*
Not Very	16.9(14.4)	10.9(13.6)*
Academic:		
GPA		
4.0	36.3(37.6)	6.7(14.4)*
3.5	14.0(14.6)	8.8(12.9)*
3.0	17.3(23.6)	10.2(13.4)*
2.5	19.8(17.7)	12.2(14.2)*
2.0	22.5(21.3)	12.9(16.1)*
Less than 2.0	27.0(16.6)	15.4(19.1)
Fraternity Membership		
Yes	23.5(25.0)	15.7(16.0)*
No	17.1(18.4)	9.6(13.3)*

* $p < .001$ + $p < .05$

Table 1 Continued.

Institutional:		
School Type		
Public	17.6(19.3)	10.4(13.9)*
Private	25.5(26.1)	11.2(14.1)*
Size		
Less than 10,000	19.5(21.3)	10.7(14.4)*
Greater than 10,000	17.1(18.4)	10.2(12.8)*
Region		
North East	21.7(17.7)	13.2(14.7)*
North Central	20.4(22.4)	11.1(13.8)*
South	16.1(20.7)	9.1(13.7)*
West	14.8(19.6)	8.1(12.6)*
Community		
< 10,000	18.2(19.6)	11.2(14.3)*
10,000 - 500,000	22.1(25.0)	9.0(13.0)*
> 500,000	16.8(17.3)	9.0(13.0)

* p < .001 + p < .05

Table 2: Chi-Squarae results of the percent of personal health students who indicated they had experienced a problem related to drinking and non-consensual sex status in terms of health, academic, social, and legal problems realted to alcohol consumption

	Raped (N=313)	Not Raped (N=5604)
Health:		
Hangover	83.1	72.2*
Vomiting	68.1	52.3*
Thought might have drinking problem	19.8	7.9*
Consumed over 21 drinks per week	43.3	22.3*
Academic:		
Attended class after drinking	16.6	6.1*
Cut class after having several drinks	19.5	10.8*
Missed class because of hangover	46.0	26.2*
Got lower grade because of drinking too much	19.5	5.8*
Got in trouble with the school due to excessive drinking	8.0	1.9*
Social:		
Criticized by date because of drinking	29.5	13.7*
Played drinking game	81.5	71.1*
Got into fight after drinking	32.9	15.6*
Lost job due to excessive drinking	2.9	0.4*
Legal:		
Had trouble with the law because of drinking	13.4	6.6*

Table 2 continued

Damaged property after drinking	17.3	9.1*
Driven car after having several drinks	56.1	40.3*
Driven car when you knew that you had too much to drink	43.5	29.1*
Driven car while drinking	42.2	25.7*
Arrested for Driving While Intoxicated	3.5	1.1*

* p < .001 + p < .05

Tables and material from R.C. Engs, Indiana University, Bloomington and D. J. Hanson, SUNY, Potsdam, NY, studies from 1994 data collections.