

Dr. Ruth C(lifford) Engs - Presentations, Publications & Research Data Collection.

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Engs, Ruth C. and David J. Hanson (1993). Drinking Games and Problems Related to Drinking Among Moderate and Heavy Drinkers. *Psychological Reports*, (73):115-120. [final draft of article is here]

DRINKING GAMES AND PROBLEMS RELATED TO DRINKING AMONG MODERATE AND HEAVY DRINKERS

Ruth C. Engs, Department of Applied Health Science, Indiana University and

David J. Hanson, Department of Sociology, State University College of New York

Abstract. The playing of drinking games, the quantity-frequency of alcohol consumption, and various problems related to drinking were assessed among a national sample of 3,830 alcohol consuming students from 58 American colleges and universities during the 1990-1991 academic year. Among Light-Moderate drinkers, a significantly higher proportion of students who had played a drinking game experienced 15 of 17 drinking-related problems. On the other hand, among Heavy drinkers there was little difference between game and nongame players. A higher percentage of game players had experienced five of the problems. Generally, for many problems, more than twice as many Heavy drinkers among both game and nongame players had exhibited the problem compared to more moderate drinkers. It was concluded that game playing appeared to increase problems related to alcohol primarily among more moderate drinkers whereas those who were heavy drinkers were exhibiting more problems regardless of their game-playing status. Education about the effect of game playing among students who are moderate drinkers should be addressed.

Drinking games have been part of youthful alcohol consumption throughout history. Ancient Greek youth played games at symposia as did Roman youth at banquets. Games played by these youth in which drinking was involved included poetry recitation, toasting, and riddles. The person who could not finish the riddle or story sometimes was made to drink another cup. Drinking games were also played among university students in the Middle Ages and have been a traditional part of university drinking for centuries (Douglas, 1987). Drinking games today include such items as "quarters" in which the person who successfully tosses a quarter into a beer mug designates someone to drink the beer. "Chug-a-lug" is a contest to see who can drink the most beer in a certain amount of time.

Although drinking games have long been part of collegiate life, few studies have investigated them. A survey by Douglas (1987) of 311 students at one eastern university reported that 81% of students had participated in a drinking game at some point in their lives. A higher incidence of drinking games among white students was also noted.

Crawford and Nellis (1991) conducted a telephone survey of 303 students at a Midwestern university. They found almost 40% of both male and female students had played a drinking game during the previous month.

1. This study was supported by funding from Indiana University and the State University of New York, Potsdam.

However, among freshmen, about 70% of the men and 75% of the women had played a drinking game during the same period. This suggests that drinking games may have been more popular among freshmen

than older students.

The results of a participant observation study by Newman, Crawford, and Nellis (1991) suggest that drinking games are a popular social activity that provides a focus for social interaction. While both male and female game players consumed more alcohol than did nongame players, this was particularly pronounced among women. The investigators also interviewed students and found that 73% of freshmen and 38% of other students had played a drinking game in the previous four weeks. Of these students 92% stated they had played drinking games to the point of intoxication. The authors state it is not clear whether game playing leads to heavier drinking or whether heavier drinkers are more likely to play games.

Drinking games appear to contribute to high-risk behavior including heavy drinking and problems associated with alcohol intoxication. Newman, et al. (1991) suggest that drinking games trivialize the dangers of heavy rapid consumption, glorify those who can "hold their liquor," reinforce peer pressures to drink heavily, generally encourage favorable attitudes toward the immoderate use of alcohol, and may lead to a diversity of negative consequences.

Although students drink for a variety of reasons (McCarty & Kaye, 1984), some reports have suggested heavy drinkers are more likely to exhibit problems related to alcohol (Williams, Kirkman-Liff, & Szivek, 1990; Wechsler & Isaac, 1992). However, no study of drinking games based on a national sample of college students and their effects upon moderate or heavy drinkers has been reported.

Because of the range of potential dangers drinking games may present, the main goal of this paper was to measure the effect of playing drinking games among both moderate and heavy drinkers upon problems related to drinking.

The null hypotheses tested in this cross-sectional study are that among Light-Moderate and among Heavy drinkers there is no significant difference between students who had and who had not played a drinking game for each of 17 problems related to drinking.

METHOD

Instrument

A precoded instrument, the Student Alcohol Questionnaire, was employed (Engs, 1975). Used by numerous researchers over the past 15 years, it includes demographic items, questions regarding the consumption of various alcoholic beverages, and items concerning behavior consequences of drinking.

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It has an internal reliability coefficient of .79. Instructions to the respondents explained the voluntary nature of participation as approved by the authors' institutional review boards.

Sample

Colleges were selected as part of a sample which represented all four-year institutions of higher education in the USA in terms of financial control, number of students enrolled, size of the community location, and demographic enrollment characteristics (Snyder, 1987). At each institution sociology or health/physical education faculty who taught survey-type classes which had a high probability of containing students from every academic major and class level were asked to distribute up to 75 questionnaires in each such class. The response rate exceeded 98%, and the resulting sample contained 4845 students from 58 colleges and universities. Because of its large size the sample had high power for detecting significant

differences.

Of the total sample, 3830 students were drinkers (consuming alcohol at least once during the previous 12 months). Among drinkers, 41% were male and 59% female; 91% white and 9% nonwhite; and 60% under and 40% over the age of 21 years.

Research Design and Calculations

The research design for this descriptive study was cross-sectional. The percentages of students playing drinking games who experienced each of the 17 problems related to drinking were calculated for both Light-Moderate and Heavy drinkers, as defined below.

Based upon a method developed by Engs (1977), a Quantity/Frequency level of drinking was calculated for each subject who was classified as a drinker. Two drinking categories were assessed. Light-Moderate Drinker included those drinking at least once a year but drinking no more than three to four drinks no more than once a week or drinking five or more drinks no more than once a month; Heavy Drinker referred to those drinking more than five drinks at any one sitting once a week or more.

The distribution of students in these two drinking categories for each of the 17 problems related to drinking who played a drinking game within the previous 12 months was subjected to chi-squared analysis.

RESULTS

Light-Moderate Drinkers

There were 2802 Light-Moderate drinkers in the sample. Among this group 66.0% had participated in a drinking game during the previous 12 months. For all but two of the problems related to drinking, a significantly ($p < .05$) higher percentage of game players compared to nongame players exhibited the problem (see Table 1).

Table 1. Chi-Squared Analysis Showing Percentage of Students Who Indicated They Had Experienced A Problem Related to Drinking and Their Drinking-game Status Among Both Light to Moderate (n=2802) and Heavy (n=1028) Drinkers During 1990-1991 Academic Year.

Problem	Type of Drinkers			
	Light to Moderate		Heavy	
	Yes n=1924	No n=878	Yes,n=962	No,n=66
Hangover	78.7	43.5**	95.5	89.4*
Nausea or vomited	54.1	20.8**	76.9	51.5**
Driven car after several drinks	39.1	22.0	69.3	73.4
Driven car when knew had too much too drink	27.1	12.4**	56.9	60.9
Driven while drinking	27.9	11.0**	58.4	51.6
Come to class after drinking	4.5	1.1**	16.1	12.5
Cut classes because of drinking	7.6	2.2**	23.8	13.6
Missed class because of a hangover	24.8	4.0**	57.5	30.3**
Arrested for DWI	.5	.5	3.5	3.1
Criticized by date	10.4	4.0**	24.1	14.1
Trouble with the law	4.5	.6**	18.8	9.4
Lost a job	.3	.0	1.4	1.6
Lower grade	4.3	1.1**	15.2	9.4
Trouble with school administration	1.4	.2*	6.3	4.7
Gotten into a fight	13.4	3.2**	36.4	9.1
Thought might have drinking problem	6.9	3.5**	20.4	25.0
Damaged property	7.0	.9**	25.6	6.1*

*p<.05. **p<.001.

The two cases for which there was no difference had percentages below 1% of students who had exhibited the behavior for either game or nongame players

Heavy Drinkers

There were 1028 Heavy drinkers in this sample. Of these students 93.6% had participated in a drinking game during the previous 12 months. There were only five problems related to drinking for which there were significant (p<.05) differences. A higher percentage of game players had exhibited the problem compared to the nongame players.

Inspection of Table 1 shows that for most of the problems related to drinking at least twice the

percentage of heavy drinkers exhibited the alcohol problem behavior than more moderate drinkers regardless of whether they were game players.

DISCUSSION

The null hypothesis that there would be no significant difference between game and nongame players for Light-Moderate drinkers was rejected for essentially all of the problem behaviors. Values of chi squared for two

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items ("arrested for DWI" and "losing a job because of drinking") are not reliable because the number of respondents involved is small (<1%). It appears that for Light-Moderate drinkers who, for the most part, exhibit few problems related to alcohol consumption, playing a drinking game significantly increased their probability of having drinking-related problems. Over twice the percentage of these drinkers had exhibited most of the alcohol abuse problems if they had played a drinking game.

For heavy drinkers, the null hypothesis was accepted for all but five behaviors, namely, hangovers, vomiting, missed class because of hangover, gotten into a fight, and damaged property as a consequence of drinking games. It appears that for these heavy drinkers playing a drinking game does not contribute to a higher percentage of students exhibiting most problems. This may be because a high percentage of heavy drinkers, as a whole, are already exhibiting most of the consequences of abusive drinking whether they play a game or not. In the case of the five items on which there were significant difference, it appears that game playing may contribute to more hangovers and their sequela such as nausea and vomiting and missing class. Increased fights due to game playing could lead to property damage.

The findings of this study are subject to several limitations. As in other self-report surveys, reporting and recall bias may have influenced the results of this descriptive cross-sectional study; however, reports have indicated that adolescents generally report alcohol use accurately and that the heaviest drinkers are the ones most likely to under-report their actual consumption (Reinisch, Bell, & Erickson, 1991). It is possible that behaviors related to drinking may be under-reported, however, more research needs to be done to evaluate this.

CONCLUSION

Because game playing appears to be associated with increased problematic behaviors related to alcohol consumption, it is recommended that campus alcohol education programs focus upon dangers of drinking games and pay more attention to this potentially dangerous part-time. "Just say, No" educational efforts, found on many American campuses today as part of the federally mandated "Drug Free Schools and Campuses Act," are unlikely to be effective. For students who may choose to drink, information concerning techniques for more moderate and safer drinking practices might be more useful.

Alternative games and activities which do not involve the rapid consumption of alcohol need to be encouraged. Finally, it is recommended that further research be conducted on the effect of drinking games on other dimensions of student-life including socialization, self-esteem, and grades.

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