This study examined attitudes and practices in two risk-taking areas of behavior while under the influence of alcohol—driving and sexuality—within important campus peer subcultures defined by class level and residency associations. Data were drawn from a research project to explore these and other related variables in a major northeastern University. Subjects (N=240), randomly selected from each of seven campus subpopulations (the four undergraduate levels, graduate students, faculty, and staff) were mailed survey questionnaires that assessed: (1) potentially predisposing risk factors, such as demographics, alcohol knowledge, peer usage and pressure, alcohol and drug availability, motivations for drinking, mood, and place of residence; (2) level of respondent's alcohol use; (3) type and frequency of respondent's drug use; and (4) high risk behavior associated with substance use, including driving under the influence and unprotected sexual intercourse. Results, summarized and tabulated, suggest that alcohol and drug use, and associated risk-taking behaviors, vary considerably with both age and social environment, suggesting the influence of campus peer subcultures. Thus it might be productive to concentrate prevention and intervention efforts on identified high-risk peer subcultures, involving peer leaders and peer counseling programs in efforts to modify peer group norms. (Nine references, 5 tables and 12 figures are included.) (TE)
DIFFERENTIAL SUBSTANCE USE PATTERNS
IN A UNIVERSITY COMMUNITY

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INTRODUCTION

For over two decades our universities have mirrored American society in reflecting increasing rates and changing patterns of substance use, abuse and related dysfunctions (Salz & Elandt, 1986; Johnston et al., 1986). Since the college years represent an especially important developmental period in decision making and identity formation, and since driving under the influence remains the leading cause of death in this age group (NHTSA, 1988), the need for timely and effective prevention and intervention programs with this population has been increasingly recognized (Anderson & Gadaleto, 1985). In addition, there is a growing concern regarding AIDS in the adolescent population (USPHS, 1988), and the association of substance use with injudicious and unprotected sexual activities among secondary and college students has therefore become an area in need of investigation.

Initially, universities reacted to student substance abuse with denial or punitive measures, but in recent years have attempted to approach the problem through a variety of educational, preventive, and treatment approaches. However, few programs are comprehensively developed and coordinated, or systematically address the unique needs and characteristics of the various campus subpopulations (Bloch & Ungerleider, 1988). In particular, high risk subpopulations need to be identified and programs developed which specifically target these groups and their areas of special risk.

Peer group norms and pressures are a well recognized factor in substance use and abuse (McLaughlin et al., 1985; Patterson et al., 1988). This paper examines attitudes and practices in two risk-taking areas of behavior under the influence of alcohol - driving and sexuality - within important campus peer subcultures defined by (1) class level, and (2) residency associations. The data was drawn from a research project designed to explore these and other related variables in a university community (Bloch & Ungerleider, 1988).

METHODOLOGY

SUBJECTS: 240 subjects were randomly selected from each of seven campus subpopulations (the four undergraduate levels, graduate students, faculty, and staff) of a major northeastern university. This disproportionate stratified sampling ensures sufficient representation of each subpopulation to permit statistically meaningful between-group comparisons.
PROCEDURE: Survey questionnaires were mailed to respondents several days before their return to campus from spring break. Participation in the study was voluntary. The response rates for undergraduates, graduate students, and faculty/staff were 62%, 47%, and 55%, respectively, for an overall response rate of 58%, totalling 971 responses. The questionnaire incorporated items measuring:

A. Potentially predisposing risk factors, including:

   (1) respondent demographics; (2) alcohol knowledge; (3) peer usage, acceptance, and pressure; (4) alcohol and drug availability; (5) motivations for drinking; (6) respondent mood; and (7) place of residence.

B. Level of respondent alcohol use, adapted from Engs’ Student Alcohol Questionnaire, yielding a quantity-frequency index (Engs & Hanson, 1985);

C. Type and frequency of respondent drug use;

D. High-risk behaviors associated with substance use, including DUI incidents and unprotected intercourse.

RESULTS

Although the methodology was cross-sectional, the striking differences in use patterns across different age groups suggest longitudinal trends. Faculty and staff data have been combined for purposes of comparison between age-peer categories. Most conspicuous were the following results:

1. Heavy drinking decreases steadily through the undergraduate years, from 13.7% among freshmen to 4.1% among seniors, and continues to decrease to 2.7% among graduate students and 1.2% among faculty/staff. Abstention also decreases, from 10.5% among freshmen to 1.7% among seniors. Correspondingly, there are substantial increases in the "light" and "moderate" drinking categories, suggesting progressive socialization of drinking behavior.

2. However, driving under the influence of alcohol (during past year) increases from 14.9% among freshmen to 24.6% among sophomores and remains at this approximate level throughout the rest of the university population. Since less than 1% report a DUI arrest, law enforcement consequences can be considered of negligible reinforcement value, and the rates do not appear to improve with chronological maturation.
3. Comparing undergraduate to graduate to faculty/staff populations, there is a marked increase in moderate drinking from 24% to 46% to 62% among males, and from 30% to 37% to 40% among females. A corresponding decrease in moderate/heavy and heavy drinking occurs among males, from 43% to 18% to 11%. Among females, there is a decrease in this category from undergraduate to graduate populations, 20% and 8%, respectively, but the faculty/staff level of 11% equals that of males. Among student groups the rates of moderate/heavy and heavy drinking for women are approximately half that of men.

4. There is a substantial increase in the rate of undergraduates who have used drugs following the freshman year, from approximately 1/2 to 2/3. Further, approximately 20% of these users report driving after drug use.

5. Peer culture emerges as a prominent factor. The two best predictors of alcohol use are close friend and acquaintance use levels, while lower use is correlated with negative reactions of close friends. Within the fraternity/sorority culture, 83% report moderate to heavy drinking levels and 75% report some use of drugs, while non-members report corresponding levels of 55% and 59%, respectively. While 25% of non-members living on campus report little or no alcohol use and 48% report no drug use, no residents of fraternity/sorority houses fell in this drinking category and only 23% abstain from drugs. Fraternity/sorority members also report significantly higher frequencies of alcohol-related risk taking.

6. Higher use levels also occur among students living off campus. Only 10% of these students report little or no alcohol use, and only 21% abstain from drugs compared with 48% of on-campus students; however, only 63% report the moderate to heavy alcohol use which characterizes 90% of fraternity/sorority house residents.

7. Another interesting finding reflects the association between alcohol use and sexuality. Approximately 25% of undergraduates report sexual activity during the past year after drinking which otherwise might not have occurred. This behavior is reported by only 9% and 6% of graduate student and faculty/staff respondents, respectively. Similarly, 9% of undergraduates report unprotected intercourse after drinking, which is reported by only 3-4% of older respondents. Approximately 50% of all respondents report otherwise unlikely sexual activity and 25% report unprotected intercourse after drinking at some time in their lives.

8. Drugs and alcohol (for the underaged) were reported easily obtainable by nearly all students, most easily by off-campus students. This is despite clearly defined campus policies prohibiting these practices.
Selected results are represented in Tables 1-5 and Figures 1-12. All differences other than the alcohol and drug availability measures were statistically significant at the .05 level unless denoted "n.s."

CONCLUSIONS

Alcohol and drug use, and associated risk-taking behaviors, vary considerably with both age and social environment, suggesting the influence of campus peer subcultures. These behaviors may play an important role in establishing peer group relationships and identifications, which are central developmental issues for undergraduates. Thus, it might be productive to concentrate prevention and intervention efforts on identified high-risk peer subcultures, involving peer leaders and peer counseling programs in efforts to modify peer group norms.

Driving under the influence increases following the freshman year and continues to occur at least once yearly among one in four students, and among 60-70% of the university community at some time in their lives. This appears to be an area in need of focused prevention efforts.

Alcohol-related sexual risk-taking is correlated with level of alcohol use in the undergraduate population and decreases with age following the sophomore year. This suggests that drinking for some may serve an anxiety reducing function in this crucial developmental area, with implications for targeting of public health prevention measures.

Fraternity/sorority membership is correlated with higher levels of alcohol use and with associated risk-taking behavior. Alcohol-specific prevention efforts might therefore be developed to target fraternal organizations. Also, drug use and risk-taking is greater among off-campus than on-campus students. This suggests that the younger students residing in dormitories need to receive better preparation for responsible practices before moving off campus in their junior and senior years.
REFERENCES


Table 1
Alcohol Use, Drug Use and Related Behaviors
by Age-Peer Group (Percentages)

<table>
<thead>
<tr>
<th></th>
<th>Freshmen</th>
<th>Sophomores</th>
<th>Juniors</th>
<th>Seniors</th>
<th>Graduate Students</th>
<th>Faculty/Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of alcohol use:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy</td>
<td>13.7</td>
<td>9.4</td>
<td>4.7</td>
<td>4.1</td>
<td>2.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Moderately heavy and heavy</td>
<td>37.2</td>
<td>35.6</td>
<td>26.0</td>
<td>24.8</td>
<td>14.2</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Drug use:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At least weekly</td>
<td>3.9</td>
<td>6.0</td>
<td>9.4</td>
<td>7.1</td>
<td>3.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Any use</td>
<td>46.1</td>
<td>66.4</td>
<td>61.4</td>
<td>68.0</td>
<td>53.1</td>
<td>42.6</td>
</tr>
<tr>
<td><strong>Alcohol-related high risk behavior at least once in past year (among population who drink):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driven after knowing had too much to drink</td>
<td>7.1</td>
<td>15.5</td>
<td>9.1</td>
<td>11.4</td>
<td>7.6</td>
<td>7.3</td>
</tr>
<tr>
<td>Driven after having several drinks</td>
<td>14.9</td>
<td>24.6</td>
<td>20.7</td>
<td>26.0</td>
<td>23.4</td>
<td>26.5</td>
</tr>
<tr>
<td><strong>Drug-related high risk behavior at least once in past year (among population who have used drugs):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taken drugs while driving</td>
<td>9.1</td>
<td>9.0</td>
<td>12.0</td>
<td>17.8</td>
<td>11.3</td>
<td>4.8</td>
</tr>
<tr>
<td>Driven a car after using drugs</td>
<td>19.7</td>
<td>21.3</td>
<td>17.3</td>
<td>23.4</td>
<td>11.3</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>Alcohol-related sexual behavior at least once in past year (among population who drink):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engaged in unprotected intercourse when otherwise might not have</td>
<td>7.1</td>
<td>12.0</td>
<td>7.5</td>
<td>9.0</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Sexually active when otherwise might not have been</td>
<td>21.3</td>
<td>32.4</td>
<td>27.5</td>
<td>18.0</td>
<td>9.4</td>
<td>5.7</td>
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</tbody>
</table>
Table 2
Sexual Behavior of Undergraduates Under Alcohol Influence by Level of Alcohol Use (Percentages)

<table>
<thead>
<tr>
<th>Level of Alcohol Use</th>
<th>Infrequent</th>
<th>Light</th>
<th>Moderate</th>
<th>Moderately Heavy</th>
<th>Heavy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexually active when otherwise might not have been:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least once in past year</td>
<td>6.5</td>
<td>16.3</td>
<td>26.0</td>
<td>37.7</td>
<td>45.8</td>
</tr>
<tr>
<td>in lifetime</td>
<td>20.8</td>
<td>40.6</td>
<td>50.9</td>
<td>59.1</td>
<td>64.6</td>
</tr>
<tr>
<td>Engaged in unprotected intercourse when otherwise might not have:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least once in past year</td>
<td>3.9</td>
<td>3.9</td>
<td>8.1</td>
<td>15.3</td>
<td>18.8</td>
</tr>
<tr>
<td>in lifetime</td>
<td>7.8</td>
<td>14.1</td>
<td>21.7</td>
<td>33.6</td>
<td>33.3</td>
</tr>
</tbody>
</table>

Table 3
Level of Alcohol Use by Fraternity/Sorority Membership (Percentages)

<table>
<thead>
<tr>
<th>Fraternity/Sorority</th>
<th>Fraternity/Sorority not living in house</th>
<th>Not Member of Fraternity/Sorority</th>
</tr>
</thead>
<tbody>
<tr>
<td>living in house</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy</td>
<td>22.6</td>
<td>13.0</td>
</tr>
<tr>
<td>Moderately heavy to heavy</td>
<td>64.5</td>
<td>41.3</td>
</tr>
</tbody>
</table>
Table 4
Risk Taking Under the Influence of Alcohol by Class Level and On or Off Campus Residency, and by Fraternity/Sorority Membership (Percentages*)

<table>
<thead>
<tr>
<th></th>
<th>Juniors, off campus</th>
<th>Seniors, off campus</th>
<th>Juniors, on campus</th>
<th>Seniors, on campus</th>
<th>Fraternity/Sorority member</th>
<th>not Fraternity/Sorority member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driven after having several drinks</td>
<td>73.4</td>
<td>68.4</td>
<td>37.7</td>
<td>38.4</td>
<td>38.2</td>
<td>20.0</td>
</tr>
<tr>
<td>Driven after knowing had too much to drink</td>
<td>60.0</td>
<td>55.8</td>
<td>31.1</td>
<td>23.3</td>
<td>23.7</td>
<td>9.5</td>
</tr>
<tr>
<td>Sexually active when otherwise might not have been</td>
<td>64.5</td>
<td>63.2</td>
<td>44.3</td>
<td>33.3</td>
<td>59.2</td>
<td>45.3</td>
</tr>
<tr>
<td>Engaged in unprotected intercourse when otherwise might not have</td>
<td>33.3</td>
<td>37.9</td>
<td>17.1</td>
<td>11.6</td>
<td>26.3</td>
<td>20.9</td>
</tr>
</tbody>
</table>

* among population who drink
Table 5
Use and Ease of Obtaining Alcohol and Drugs by Form of Housing (Percentages)

<table>
<thead>
<tr>
<th></th>
<th>living on campus</th>
<th>living off campus</th>
<th>living in Frat./Sor. house</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of obtaining alcohol (when underage):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very easy</td>
<td>61.0</td>
<td>81.5</td>
<td>77.3</td>
</tr>
<tr>
<td>very or fairly easy</td>
<td>92.9</td>
<td>92.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Ease of obtaining drugs:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very or fairly easy</td>
<td>60.6</td>
<td>70.6</td>
<td>61.3</td>
</tr>
<tr>
<td>somewhat difficult, but possible</td>
<td>13.2</td>
<td>15.0</td>
<td>12.9</td>
</tr>
<tr>
<td>Moderate-heavy to heavy alcohol use</td>
<td>28.2</td>
<td>31.6</td>
<td>64.5</td>
</tr>
<tr>
<td>Drug use:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>any</td>
<td>52.2</td>
<td>79.1</td>
<td>77.4</td>
</tr>
<tr>
<td>moderate to heavy,</td>
<td>10.8</td>
<td>27.2</td>
<td>23.6</td>
</tr>
</tbody>
</table>
Figure 1
Alcohol Use
by Age-Peer Group

Figure 2
Drug Use
by Age-Peer Group
Figure 3
Alcohol-Related High Risk Behavior at Least Once in Past Year

- Driven after knowing had too much to drink
- Driven after having several drinks

Freshmen  Sophomores  Juniors  Seniors  Grad. Students  Faculty/Staff

* among population who drink

Figure 4
Drug-Related High Risk Behavior at Least Once in Past Year

- Taken drugs while driving
- Driven a car after using drugs

Freshmen  Sophomores  Juniors  Seniors  Grad. Students  Faculty/Staff

* among population who have used drugs
Figure 5
Alcohol-Related Sexual Behavior at Least Once in Past Year

- Sexually active when otherwise might not have been
- Engaged in unprotected intercourse when otherwise might not have been

- among population who drink

Figure 6
Level of Alcohol Use by Fraternity/Sorority Membership

- Heavy
- Mod. heavy to heavy
Figure 7
Sexually Active When Otherwise Might Not Have Been by Alcohol Use

Figure 8
Engaged in Unprotected Intercourse When Otherwise Might Not Have by Alcohol Use
Figure 9
Risk Taking Under the Influence by Fraternity/Sorority Membership

- Driven after having several drinks (past year)
- Driven after knowing had too much to drink (past year)
- Sexually active when otherwise might not have been (past year)
- Unprotected intercourse when otherwise might not have (ever)

Figure 10
Risk Taking Under the Influence by On or Off Campus Residency

- Driven after having several drinks
- Driven after knowing had too much to drink
- Sexually active when otherwise might not have been
- Unprotected intercourse when otherwise might not have
Figure 11
Ease of Obtaining Alcohol
When Underage

- **very easy**
- **very or fairly easy**

Figure 12
Ease of Obtaining Drugs

- somewhat difficult, but possible
- don't know
- very or fairly easy