2005

DRUG USE AND LIFESTYLE AT A NEBRASKA TWO-YEAR COLLEGE

Bruce J. Stephen
Southeast Community College, bstephen@mac.com

Sarah M. Linsenmeyer
Southeast Community College

Steven M. McGuire
Southeast Community College

DRUG USE AND LIFESTYLE

AT A NEBRASKA TWO-YEAR COLLEGE

Bruce J. Stephen[1], **Sarah M. Linsenmeyer**, and **Steven M. McGuire**

Academic Education Division
Southeast Community College
8800 O Street
Lincoln, NE 68520
bstephen@southeast.edu

[1]Author for correspondence.

ABSTRACT

This study records drug use and lifestyle among students at a Midwestern community college. The study provides the first set of data on the levels of drug use at this college and makes some comparisons to drug use levels found in other studies. Alcohol was found to have the highest percentage of student use, 84%, with 41% using at least weekly. Forty-nine percent of students reported using marijuana making it the second most popular drug. Weekly use of marijuana was reported by 11% of students. The levels of use for most drugs were similar to those reported at other colleges though some differences exist. Lifestyle parameters with some relationship to the level of drug use include level of sexual activity and failure of a class. A more complex relationship, age and living situation, appears to influence the level of alcohol use. The positive correlation between increased drug use and increased sexual activity found in other studies were found in this study as well.

† † †

The prevalence of drug use among college students may reflect trends that relate to student lifestyle, student success and overall health issues. Thus many studies have looked at drug use among students in college (Johnston et al. 2003, Meilman et al. 1990, Pope et al. 1981, 1990, 2001; reviews include O'Malley and Johnston 2002, and Prendergast 1994). To our knowledge, however, no studies have focused exclusively on students at a 2-year or community college. As enrollment in community colleges rise (Pedersen 2002) we must account for these students when considering college drug use levels. The primary focus of this study is to provide a set of data on the levels of drug use at this college for use in future comparisons with this college and with other community colleges. In addition this study attempts to fill another gap, since the last drug use study done exclusively at a Nebraska college was published in 1972 (Martin and Fuenning 1972). We also report on several student lifestyle parameters that appear to have a relationship to drug use.

Community colleges are a mix of traditional college students, technical degree-bound students and non-traditional students (over 25 years of age). Due to this more varied student population, one might expect student drug use at a community college to differ when compared to a traditional 4-year college. Drug availability between colleges likely varies as will the financial ability to obtain drugs. Similarities will suggest that these factors do not have much influence on drug use trends.

In order to make some comparisons to another college we rely on the most recent report of a long-term analysis of drug use and lifestyle among Harvard University students (Pope et al. 2001). Adolescent (Johnston et al. 2002) and nationwide college student data (Johnston et al. 2003) are compared as well.

MATERIALS AND METHODS

Survey distribution and collection

Questionnaires were handed out to students of Southeast Community College, Lincoln, Nebraska, throughout one week during the beginning of the winter term 2003. Of the 500 questionnaires distributed 248 were returned of which eleven were thrown out due to incompleteness for a total of 237. This number represented approximately 5% of the student population.

Southeast Community College has no Institutional Review Board (IRB), but the college administration approved the survey. An IRB is meant to safeguard the welfare of study participants. This study was conducted via a questionnaire and thus no physical intervention or any physical risk to the study participants

Table 1. Drug use as reported by college students at Southeast Community College.   Values are percentage of users out of 237 study participants.

Drug	Ever use in past year	Single or no	Monthly	Weekly
Alcohol	84	15	69	42
Marijuana	49	29	9	11
Opioids (including Heroin)	11	10	0.8	None
Cocaine	12	10	1	None
Ecstasy	9	6	1	None
Amphetamine	11	11	0.4	0.4
LSD	11	10	0.8	None
Any illicitdrug use	52	29	10	14
Any illicit drug use (excluding marijuana)	28	22	4	0.4

was involved. In addition, measures were taken to insure privacy and confidentially in this study. To maintain anonymity names were not included and the surveys were not marked. Completed surveys were returned into a locked-box. Informed consent was provided before subjects opted to participate in the study, which was entirely voluntary.

Survey questions

Respondents were asked the following direct questions: age, gender, years in college, current job status, living situation, GPA, class failures in past year, political affiliation, parents educational level, sexual preference, whether they have visited a psychiatrist, Rave attendance, if they smoke cigarettes and whether they believe smoking marijuana should be legalized.

Respondents were asked to rank the following: level of sexual activity, amount of drug use by friends, stress level and physical health. The sexual activity in this survey concerns number of partners (range from none to multiple partners).

Frequency of drug use by respondents was a ranked scale as follows: never used, single use, used but not in last year, monthly use, weekly use, and use several times a week. Drugs included were: alcohol, marijuana, heroin, cocaine, opium, barbiturates, LSD (lysergic acid diethylamide), ecstasy, PCP (phencyclidine), amphetamine, ketamine, and steroids. Finally students were asked to write in any illicit drug they

had used that was not included on the survey.

Statistical analyses

Non-parametric statistical analyses were used to compare most survey data in the form of lifestyle parameter vs. level of drug use. Kendall's correlation (coefficient of rank) was used to show the degree of relationship between ordinal variables. Contingency tables were used to compare the categorical data of nonusers vs. users. Other categorical data were compared with Komogorov-Smirnov tests when two groups existed or Kruskal-Wallace if multiple groups were analyzed. A nonparametric two-way analysis on living situation and age vs. alcohol use was done using Friedman's test.

Statistical analyses were performed using Stata 6.0 (Stata Corp. 2000) with the exception of the Friedman's test, which was performed using Statview 5.01 (SAS Institute Inc. 1998). No statistical analyses were performed on drug use parameters if the number of users was fewer than twenty (<10% of survey respondents).

RESULTS

The mean age of respondents was 23.8, range 18–50, most having been in college for 2 years with a range of 1–5 years. There were 101 male respondents and 136 females. Average reported GPA of respondents was 3.0 with a range of 1.5–4.0. Approximately 35% of
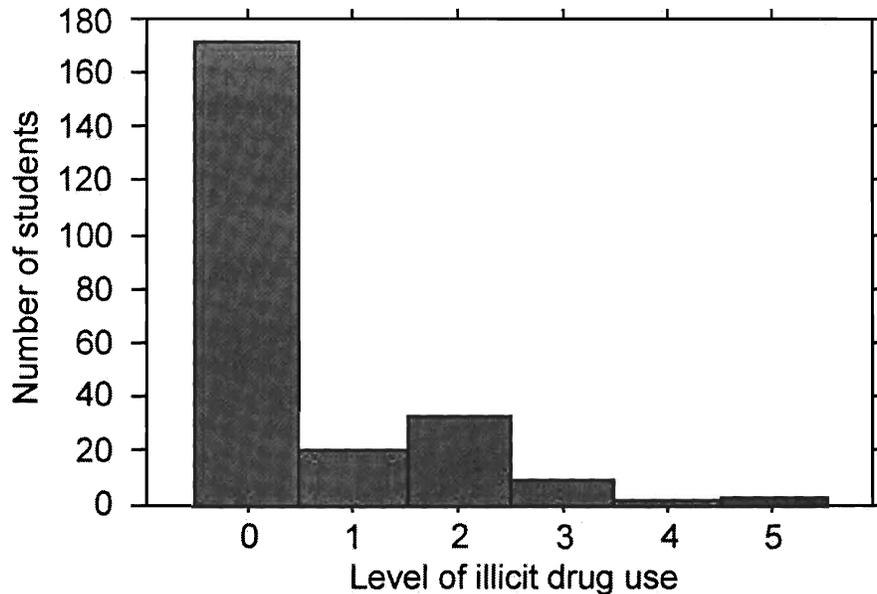
Figure 1. Illicit drug use (excluding marijuana) found among SCC students. Ordinate shows the number of students reporting use. Abscissa shows drug use levels from 0–5. (0) is no use, (1) is single use, (2) used but not in past year, (3) monthly use, (4) weekly use, and (5), many uses a week.

female respondents and 29% of male respondents reported that they smoke cigarettes.

Alcohol is the most heavily used drug with 84% of respondents having used and 41% using at least weekly. Marijuana was the second most popular drug with 49% reporting some lifetime use and 11% reporting use weekly. LSD, amphetamine, heroin and cocaine had lifetime use levels close to 10%. Reported lifetime use of all other drugs on this survey was less than 5% as follows: barbiturates 4%, steroids 2%, ketamine 2%, and PCP 0.8%. Very few students reported heavy use (at least weekly) of drugs other than alcohol and marijuana. These data are summarized in Table 1 as overall percentage of students reporting use. In the write-in space on the survey students did not report use of any additional drugs.

The amount of drug use by males and females was not found to be significantly different. Past studies have often compared percentage value differences even when not found to be significant (Johnston et al. 2002, 2003), and for that reason the greatest differences between the sexes are reported here. Females report higher alcohol use (78% males to 88% females) but males were higher in weekly use (48% males to 38% females). Females also showed higher levels of single marijuana use (31% females to 26% males) while males topped the weekly use of marijuana with 14% (females 10%). Use of ecstasy was higher in males (10% males to 8% females) while amphetamine use was higher in females (14% females to 8% males).

The number of users of illicit drugs (excluding marijuana) is shown in Fig. 1. The figure illustrates the number of uses at each level of use. Comparing years in college to years of first drug use 14 students (6%) were found to have first used illicit drugs while in college.

Relationships

A significant positive relationship ($p < 0.05$) exists between the level of sexual activity and the level of drug use (Fig. 2). The degree of relationship was similar for both sexes based on probability values and best-fit lines when analyzed as parametric data. No significant relationship was found between age and the level of drug use or age and the level of sexual activity. A significant relationship between drug use and class failure did not exist, though the probability value is suggestively close ($p = 0.06$).

Dual Relationships

Although no age-related relationship was found, a more complex relationship between age, living situation and drug use was found to be significant ($p < 0.05$). Specifically, younger students living with friends showed higher levels of alcohol consumption.

DISCUSSION

Alcohol use was found to be much higher than any other drug. This was expected, alcohol being the most accepted and easiest to obtain drug. Marijuana follows as the second most used drug with 49% reporting some
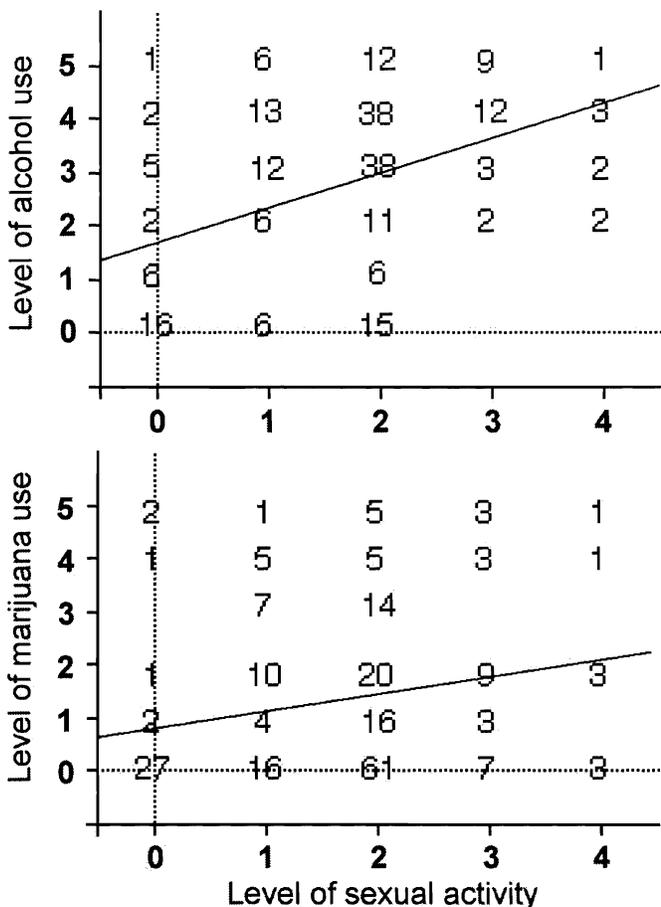
Figure 2. Relationship between level of alcohol use (top graph) and marijuana use (bottom graph) and the level of sexual activity. All axes values are nominal data higher numbers indicating higher use/activity. Ordinate shows the drug use level (alcohol or marijuana) and abscissa shows level of sexual activity. Drug use level ranges from 0–5. (0), is no use, (1), is single use (2), used but not in past year (3), monthly use (4), weekly use and (5), many uses a week. Sexual activity ranged from 0–4; (0) none,(1) not currently active, (2) activity with single partner, (3) activity with several partners, (4), activity with many partners. Numbers within graph indicate the number of students in that category.

Gender differences

Percentage differences that existed between sexes in some drug use categories, though not statistically different, may still indicate actual trends. If so some aspects are of concern, for example, males when active in drinking or smoking marijuana generally go beyond the more moderate use shown by females. This would seem to put males at a higher risk of developing abuse problems with these drugs. While the use of ecstasy was higher in males, the use of amphetamine was higher in females. We speculate that the higher amphetamine use in females is due to attempts to use them for weight loss.

Users vs. nonusers

The questionnaire was similar to those used by Pope et al. (Pope et al. 2001) and comparisons between that study and the current study are instructive. Pope compared lifestyle of nonusers to users. To compare the current study with Pope (Pope et al. 2001) we did the same type of analysis. We do feel, however, that by grouping students into non-use and use over simplifies the data particularly, because an individual that has tried a drug, even once, is placed into the user category. Several relationships between level of drug use and lifestyle parameters are outlined below. Most of the lifestyle parameters showed no significant relationship to drug use.

A significant relationship between drug use and class failure was not readily apparent as found by other researchers (Pope et al. 2001), though the probability value is suggestively close ($p = 0.06$). A larger sample may have shown a significant relationship.

Sexual activity

A positive relationship between sexual activity and alcohol use level as well as sexual activity and the level of marijuana use were found in this study (Fig. 2). The surveys at Harvard (Pope et al. 1981, 1990, 2001) have shown that heterosexual activity distinguished users from nonusers, drug users being more sexually active. Though on the surface the similarity between these two colleges may indicate the same trend, it is possible that student age had an effect on the results. The average age of students in this study was nearly 24 and the eldest study participant was 50. Still, no significant relationship between age and the level of drug use or age and the level of sexual activity was found.

The positive relationship between drug use and sexually activity is of concern due to the prevalence of HIV and other sexually transmitted diseases and the likelihood of risky sexual behavior due to impaired judgment (Mondanaro 1987). Much concern lies with injected drugs due to the associated HIV risk

level of use. The level of any use of cocaine, opioids, ecstasy, LSD and amphetamine ranged from 9–12%. Very few students reported heavy use (at least weekly) and most of those reporting using an illicit drug were not current users or had only tried the drug once. Figure 1 illustrates illicit drug use levels excluding marijuana. This graph is typical of the illicit drugs reported on in this study. Most students have not used illicit drugs with decreasing numbers of students as the level of drug use increases. Recording the level of drug use and not just noting whether students have ever used a drug will reveal better information on drug use and abuse among college students.

(Mondanaro 1987), though marijuana and alcohol use is still a concern for other reasons; specifically, use is concurrent with acquiring new sex partners (Niccolai et al. 2004). In turn, with a new sexual partner comes more uncertainty about that partner's sexual history and the associated risks.

Dual relationships

The relationship between age, living situation and level of drug use shows that younger students living on their own are more likely to be heavy users. This is particularly evident with alcohol use. This may make these students more liable to drug abuse and dependence.

Overall comparison of colleges and adolescents

Overall levels of drug use in a 4-year college and a 2-year colleges are similar and both are simialar to use among adolescents. In comparing Southeast Community College students to Harvard University students one may expect that any differences in drug use levels would show up in a comparison between these two widely divergent schools. Though the student population is more varied at a community college, the same variation does not seem to apply to student drug use.

Where comparison can be made, the percentages of users in most drug use categories are similar to those in a study at Harvard (Pope et al. 2001) and similar to those in an adolescent study (Johnston et al. 2002) and nationwide data (Johnston et al. 2003). Weekly alcohol use is only comparable between two schools, Harvard at 42% and SCC with 41% reporting that level of use. Marijuana was found to be higher in the nationwide study with 57% having used, other studies are more alike (Harvard 45%, adolescents 48%, SCC 49%). The nationwide study also indicated the highest level of cocaine use with 14%. Harvard students indicated 7% cocaine usage, while SCC levels of 12% are more similar to the nationwide data. With the exception of alcohol, the levels of drug use found in the current study were higher than in a study at another Nebraska college (Martin and Fuenning 1972). The percentage of students reporting any alcohol use was similar in the 1972 study (85%) and the current study (84%). Many comparisons to the 1972 study were not possible, however, since the study didn't include questions about many illicit drugs. For example questions concerning use of such drugs as ecstasy, and cocaine were not included in the 1972 survey.

Due to its increasing use among college students (Cuoma et al. 1994, Strote at al. 2002, Walters et al. 2002) ecstasy has become a drug of concern and is one drug, along with other club drugs, that showed some regional differences in the national data (Johnston et al. 2003). Ecstasy use reported by SCC students was similar to but slightly lower than overall nationwide data and similar to midwest regional data (nationwide 11%, midwest 8%, SCC 9%). Ecstasy use at Harvard (Pope et al. 2001) was also similar at 10%.

When does drug use begin?

Do most students begin using in college? The similarity to adolescent data (Johnston et al. 2002) suggest otherwise. When considering age of first illicit drug use and years in college our data suggest otherwise as well. Only 14 students (6%) reported first time illicit drug use while in college.

Use and non-use

Before quickly categorizing drug use levels into use and non-use categories, we must consider a more comprehensive picture. As mentioned earlier any use of a drug constituted including it in the overall percentage of use. Consider ecstasy use for example. Few students, reported current ecstasy use, and most (over 50% of those reporting use) had only used the drug once or had not used in the past year. Heavy use of any drug other than alcohol and marijuana was low. The overall picture of the level of drug use other than alcohol and marijuana is illustrated in Fig. 1.

Study limitations

The methods used in this study have limitations. Due to the volunteer survey method the sampling is not random and thus bias may exist. Similar biases exist in other campus surveys so the data are best used for comparisons to other such studies.

LITERATURE CITED

Cuomo M. J., P. G. Dyment, and V. M. Gammino. 1994. Increasing use of "Ecstasy" (MDMA) and other hallucinogens on a college campus. *Journal of American College Health* 42(6): 271–274.

Johnston, L. D., P. M. O'Malley, and J. G. Bachman. 2003. *Monitoring the Future: National Survey Results on Drug Use, 1975–2001. Volume II: College Students and Adults Ages 19–40.* (National Institute of Health Publication No. 02-5107). Bethesda, Maryland, National Institute on Drug Abuse.

———, ———, and ———. 2002. *Monitoring the Future: National Survey Results on Adolescent Drug Use: Overview of Key Findings.* (National Institute of Health Publication No. 03-5374). Bethesda, Maryland, National Institute on Drug Abuse: 61 pp.

Martin, G. L., and S. I. Fuenning. 1972. A survey of chemical substance use for one Nebraska campus. *Nebraska Medical Journal* 57: 129–132.

Meilman, P. W., M. S. Gaylor, J. H. Turco, and J. E. Stone. 1990. Drug use among college undergraduates: Current use and 10-year trends. *International Journal of the Addictions* 25(9): 1025–1036.

Mondanaro, J. 1987. Strategies for AIDS prevention: Motivating health behavior in drug dependent women. *Journal of Psychoactive Drugs* 19: 143–149.

Niccolai, L. M., K. A. Ethier, T. S. Kershaw, J. B. Lewis, C. S. Meade, and J. R. Ickovics. 2004. New sex partner acquisition and sexually transmitted disease risk among adolescent females. *Journal of Adolescent Health* 34(3): 216–223.

O'Malley, P. M., and L. D. Johnston. 2002. Epidemiology of alcohol and other drug use among American college students. *Journal of Studies on Alcohol*, Supplement, March(14): 23–39.

Pedersen, R. 2002. Enrollment spike seen across the country. *Community College Times*, American Association of Community Colleges. Retrieved from the internet 10 September, 2004: http://www.aacc.nche.edu

Pope, H. G., Jr., M. Ionescu-Pioggia, and K. W. Pope. 2001. Drug use and life style among college undergraduates: A 30-year longitudinal study. *American Journal of Psychiatry* 158(9): 1519–1521.

———, ———, H. G. Aizley, and D. K. Varma. 1990. Drug use and life style among college undergraduates in 1989: A comparison with 1969 and 1978. *American Journal of Psychiatry* 147(8): 998–1001.

———, ———, and J. O. Cole. 1981. Drug use and lifestyle among college undergraduates. Nine years later. *Archives of General Psychiatry* 38(5): 588–591.

Prendergast, M. L. 1994. Substance use and abuse among college students: A review of recent literature. *Journal of American College Health* 43(3): 99–113.

SAS Intitute Inc. 1998. Statview 5.01. Cary, North Carolina.

Stata Corp. 2000. Stata: Release 6.0. College Station, Texas.

Strote, J., J. E. Lee, and H. Wechsler. 2002. Increasing MDMA use among college students: Results of a national survey. *Journal of Adolescent Health* 30: 64–72.

Walters, S. T., B. D. Foy, and R. J. Castro. 2002. The agony of ecstasy: Responding to growing MDMA use among college students. *Journal of American College Health* 51(3): 139–141.