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WWU Lifestyles Project Follow-up: Patterns of Alcohol and Drug Consumption and Consequences among Western Washington University Students

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Executive Summary

In response to both internal and national findings and concerns, the first Western Washington University Lifestyles Project Survey of alcohol and drug usage among Western students was conducted in 1992 as part of the University's on-going effort (a) to investigate students' college experience both *in and out* of the classroom; (b) to enhance those experiences which lead to personal and academic success; and (c) to reduce risk factors jeopardizing student success. The 1995 WWU Lifestyles Project Survey follow-up has the same goals as its predecessor. Both surveys were administered to random samples of students across all years in school (freshmen through senior). Demographically, the 1995 survey cohort of 489 respondents mirrored the overall population of 1995 Western students by gender, ethnicity, and age.

In the 1992 report, researchers concluded that three patterns of alcohol use existed among Western students: 1) a sizable number reported no-to-low drinking patterns, with nearly a quarter reporting not drinking at all; 2) among *drinkers only*, about a third reported typical drinking patterns best described as moderate; and 3) also among *drinkers only*, patterns emerged that would be considered heavy drinking, with nearly a third of drinkers indicating they binged on typical occasions, and nearly two-thirds indicating they binged on peak occasions. For the most part, national findings were similar.

Generally, drinking patterns changed little between 1992 and 1995; however, there were some encouraging trends to note. For one, though students in 1995 did not report drinking any less frequently, they did appear to be drinking in lesser quantities than they were in 1992. For instance, the percentage of students who drank *seven or more* drinks on *typical* occasions fell 1.7% (from 16.3% in 1992 to 14.6% in 1995), while the percentage of students who drank *seven or more* drinks on *peak* occasions fell 6.8% (from 40.6% in 1992 to 33.8% in 1995). Furthermore, the percentage of students who drank *five or more* drinks on *peak* occasions fell 2.7%. Meanwhile, the percentage of students who had *five or more* drinks on *typical* occasions remained nearly the same (33.8% in 1992 vs. 34.1% in 1995).

These changes in the quantity of student drinking come at a time when the use of alcohol is beginning to see increases at the high school level. For instance, findings from Western's 1995 survey of in-coming freshmen (the CIRP survey) indicated that since 1994 there was an increase of 3.1% in the percentage of college-bound high school seniors indicating they had drank beer, as well as a 3.4% increase in the percentage indicating they had drank wine or liquor. Previously, trends had indicated a decline in the use of alcohol. Indeed, 1995 was the first year since 1981 that there were increases rather than decreases in the percentage of college-bound high school seniors indicating they had drank beer, wine, or liquor. For alcohol and drug abuse prevention programs, such trends might forebode even harder work ahead.

The 1995 Lifestyles Survey found that not as many students indicated experiencing a negative effect due to drinking--down 3.0% from 1992. Promising also was the higher percentage of students indicating that they had never driven after two, or after four drinks. However, even though fewer students in 1995 indicated experiencing no negative effects due to alcohol use, certain findings indicated that those who did experience negative effects may have had more negative experiences than students in 1992; for instance, the Rutgers Alcohol Problem Inventory (RAPI) mean, a measure of overall negative effects due to alcohol, was up slightly from 4.3 in 1992 to 4.5 in 1995.

It may be, however, that current survey students who experienced and possibly had slightly more negative effects due to alcohol use may continue, like they did in 1992, to be unable to recognize the negative effect alcohol may be having in their lives. Findings from the 1995 survey indicated that while only 3.1% of respondents indicated any likelihood of drinking impairing their ability to complete homework assignments, 18.1% indicated that they had experienced at least one incident where they were unable to study for a test or complete homework due to drinking. This percentage of difference of 15.0% was higher than the 12.4% discrepancy found for 1992 survey respondents. There is, in other words, some indication that students have a blind spot when it comes to their perception of how much alcohol may impair their academics.

Regarding drug usage, the most important finding that emerged was that more students in 1995 indicated they had used marijuana than in 1992. At this point, use remains relatively infrequent, with only 6.4% indicating they used marijuana more often than 2-3 times a month. Yet like alcohol use, there appears to be more acceptance of marijuana use than there has been in the past. Findings from Western's 1995 survey of in-coming freshmen indicated the highest percentage of freshmen since 1976 support the idea of legalizing marijuana (44.2% compared to the all-time low of 16.4% in 1989).

Regarding sexual activity, students continue to feel that they are not particularly at risk of either sexually transmitted diseases (STD's) or pregnancy. Well over forty percent of students indicated they never used condoms when they had sexual intercourse, and well over sixty percent did not use a condom during their most recent sexual intercourse. And while few students indicated that they had had unwanted sex, for those students who had, most were females. On those occasions when a student had unwanted sex, alcohol was involved about a third of the time.

Introduction

The April 14, 1995, edition of the Chronicle of Higher Education included a pull-out section entitled, "Too Many Colleges Are Still in Denial About Alcohol Abuse." The article pointed out that while some statistics indicated that Americans are generally drinking less, there was also no shortage of evidence indicating that alcohol abuse continues unabated on college campuses. No less than three recent national surveys found that about forty percent of college students binge drink.[1]

Western enjoys no local immunity. Figures for binge drinking at Western follow a similar pattern to those found nationally. Moreover, internal studies have suggested that heavy alcohol consumption and its consequences constitute a potential hazard to student success. From internal reports examining the experiences of students who left Western between 1986 and 1990, findings indicated that among students who did not persist to graduation, 40.8% reported that they had experienced the problem of "drinking and using drugs more than they wanted to."[2] The corresponding percentage of students endorsing this item who *did* graduate was 13.6%. These findings from a large institutional survey--although neither conclusive nor causal--suggest that at Western non-persisters are three times more likely than persisters to have unresolved issues regarding alcohol and drug use.[3]

In response to both internal and national findings and concerns, the first Lifestyles Project Survey of alcohol and drug usage was conducted in 1992 as part of Western's on-going effort (a) to investigate students' experience both *in and out* of the classroom; (b) to enhance those experiences which lead to personal and academic success; and (c) to reduce risk factors jeopardizing student success. In that report, researchers concluded that three patterns of alcohol use existed among Western students: 1) a sizable number reported no-to-low drinking patterns, with nearly a quarter reporting not drinking at all; 2) among *drinkers only*, about a third reported typical drinking patterns best described as moderate; and 3) also among *drinkers only*, patterns emerged that would be considered heavy drinking, with nearly a third of drinkers indicating they binged on typical occasions, and nearly two-thirds indicating they binged on peak occasions.[4]

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[1] The studies cited included: 1) A survey conducted for Harvard University's School of Public Health by Wechsler, Deutsch, and Dowdall, with findings published in the December 7, 1994, issue of the Journal of the American Medical Association; 2) a study done in 1993 by the Institute for Social Research of the University of Michigan; and 3) the study conducted from 1990 to 1992 data by the Core Institute at Southern Illinois University.

[2] Simpson, C., and Trimble, J. E. (1992). Institutional series of student surveys. Bellingham WA: Office of Institutional Assessment and Testing, Western Washington University. Unpublished manuscript

[3] Persisters are students who remain in college long enough to complete a degree program; non-persisters are students who stop-out, for whatever reasons, before completing a degree program.

[4] The 1992 Lifestyles Survey was a collaboration between the Office of Institutional Assessment and Testing, the Primary Prevention/Wellness Center, and Dr. G. Alan Marlatt, Director of the Addictive Behaviors Research Center at the University of Washington.

These findings from 1992 indicated, for the most part, that alcohol use at Western was relatively wide spread and potentially damaging to certain populations of students, including the following: (a) the substantial numbers of students reporting typical and peak incidence of binge drinking; (b) males reporting drinking to the point of potential alcohol poisoning; (c) women trying to keep pace with their male drinking companions in spite of reaching higher blood alcohol levels quicker; and (d) respondents whose perceived level of personal risk for negative academic outcomes was two to three times lower than the actual occurrence of these negative academically-related consequences.

Not only did the 1992 Lifestyles Survey provide invaluable information, it also focused discussions about and programs aimed at reducing the amount of alcohol abuse at Western. The 1995 Lifestyles Project Survey follow-up has the same goals as its predecessor. Findings gathered three years later should also supplement, deepen, and broaden 1992 findings.[5]

Demographics

As it was in 1992, the 1995 Lifestyles Survey utilized a random sample of Western students of all years in school (first year through fourth year). The final cohort consisted of 489 respondents. The ratio of males to females mirrored the ratio of males to females of Western's fall, 1995, undergraduate student body: 57.2% of survey respondents versus 55.2% of the student body were females; 42.8% of survey respondents versus 44.6% of the student body were male. This ratio was statistically much closer to the actual balance of males and females than the 1992 survey. As a result, weighting responses by gender--giving fractional more importance to male responses than female--was unnecessary.

Ethnicity ratios for survey respondents also reflected closely ethnicity ratios for Western's fall, 1995, undergraduate student body--though an omission on the 1995 survey form forced an extrapolation that was not required in the 1992 survey. While the choice "Pacific Islander" *was* available on the 1995 survey, the choice "Asian-American" was not. For 1995 findings, the percentage of respondents indicating "Pacific Islander" was 3.5% and the percentage of "Other" was 5.9%. For 1992 findings, the percentage of respondents indicating "Other" as their ethnicity was less than 2.0%. For 1995, the extrapolated finding for "Asian-American/Pacific Islander" was thus "Other" minus 2.0% added to the percentage of respondents indicating "Pacific Islander" as their ethnicity--in other words, 3.9% plus 3.5%--for a final extrapolated percentage of 7.4% indicating "Asian American/Pacific Islander" as their ethnicity. This figure was almost the exact ratio that existed for "Asian-American/Pacific Islander" in Western's undergraduate student body population for fall quarter, 1995. Though a compromise, it was felt to be a comfortable one.

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[5] Copies of the first survey report, WWU Lifestyles Project: Patterns of Alcohol and Drug Consumption and Consequences Among Western Washington University Students, is available through the Office of Institutional Assessment and Testing, Old Main 120, MS: 9010, x3080.

Though not to under-emphasize this mistake in the survey design, the fact of the matter is that, like the 1992 Lifestyles Survey report, no inter-ethnic comparisons will be made in 1995 anyway. There is simply too disproportionate a mix of ethnicities at Western to warrant such an analysis; in other words, there are far too many Euro-Americans and far too few ethnic-minorities.

The main body of the 1995 Lifestyles Survey report will, however, contain analyses of the data by gender and year in school (first year, second year, etc.), as was done in 1992's report. Also, to reflect Washington State drinking laws, two age categories were utilized for analyses--as they were in 1992--those under the age of 21, and those 21 years old and over. (See Table 1.)

Table 1: Lifestyles Survey Demographics of Undergraduates, 1992/1995 Compared

Item	WWU Fall 1995*	1992 Survey	1995 Survey
Gender			
Female	55.4	64.4	57.2
Male	44.6	35.6	42.8
Ethnicity[6]			
African-American	1.4	1.5	1.0
Asian-American/Pacific Islander	7.3	9.2	7.4
Euro-American	86.2	84.1	85.2
Hispanic-American	2.5	2.1	2.5
American Indian/Alaska Native	2.0	1.6	1.8
Age[7]			
20 or less	38.9	44.2	43.1
21 or over	60.2	55.8	56.6

*Percentage of full-time undergraduates enrolled at WWU in the Fall or 1995

Alcohol Use

Frequency of Consumption

Frequency: General Findings

Overall, 78.5% of 1995 Lifestyles Survey respondents indicated they had drank at least once in the month prior to taking the survey. In the 1992, 76.6% of respondents indicated they had drank at least once in the month prior to the survey. This change of less than 2.0% was not statistically significant, nor could it be viewed as any sort of trend--at least one more future survey would be needed for that. The percentage of 1995 respondents who drank 2-3 times a month or

[6]Asian-American/Pacific Islander percentage for 1995 extrapolated.
[7] Age for Western students taken from 1992 findings.

more was 60.7%; the percentage of 1992 respondents who drank 2-3 times a month or more was 59.8%--almost identical findings. Most students, in other words, favored moderation.

Unfortunately, when it comes to documenting the negative effects of alcohol on academic success, these findings may not tell the complete story. As it was reported in 1992, these surveys polled current students only; and as Simpson and Trimble (1992) found, students with the most serious alcohol problems often leave school before ever getting to the junior, or even sophomore year.[8]

Findings taken from a national report of alcohol and drug use allowed some degree of local/national comparison of drinking frequency, though *it should be noted that the most recent available national findings were for 1992.*[9] The national survey utilized the Core Alcohol and Drug Survey; the Lifestyles Survey used at Western also utilized many questions taken from the Core--though not always in exactly the same form. The Core survey was developed specifically for use in institutions of higher education under a federal grant from the Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE). The most recent national survey administrations were done between 1990 and 1992. Of the 104 FIPSE-funded institutions using the Core, 87 "met the criteria for both randomness and representativeness. Data on 45,059 students from these 87 institutions form(ed) the basis for most of the analysis in (the) report."[10]

When comparing drinking frequency, survey respondents at Western were somewhat more likely than survey respondents nationally to report that they did not drink at all (nationally in 1992 = 16.5%; at Western, 1992 = 23.4% and 1995 = 21.5%). Overall, findings seemed to suggest that Western respondents drank somewhat less frequently than national respondents. (See Table 2.)

Table 2: Comparison of Drinking **Frequency** of Western Lifestyles Survey and National Core Survey Results

		1992 USA	***1992 WWU***	**1995 WWU**
USA question	**WWU question**			
"never"	"not at all"	*16.5*	*23.4*	21.5
1-6 times per year	-	*20.1*		
once a month	once a month	*7.7*	*16.8*	17.8
twice per month	2-3 times a month	*13.6*	*29.0*	29.4
once per week	1-2 times a week	*22.8*	*22.3*	23.1
3 times per week	3-4 times a week	*15.2*	*6.3*	5.9
"more often"	"more often"	*4.0*	*2.2*	2.2

[8] Simpson, C., and Trimble, J.E. (1992). Institutional series of student surveys. Bellingham, WA: Office of Institutional Assessment and Testing, Western Washington University. Unpublished manuscript.
[9] Presley, C.A., Meilman, P.W., & Lyerla, R. (1995). Alcohol and Drugs on American College Campuses (Use, Consequences, and Perceptions of the Campus Environment) Volume II: 1990-92. The Core Institute Center for Alcohol and Drug Studies, Southern Illinois University at Carbondale, Carbondale, Illinois.
[10] Ibid. Pg 4.

Frequency: Year in School

As stated above, findings for the overall cohorts of Lifestyles Survey respondents in 1992 and 1995 saw little change for frequency of alcohol consumption. Slightly fewer indicated they did not drink at all; slightly more indicated they drank once a month. Somewhat more dramatic changes were noted when the findings were analyzed by year in school. For instance, in 1995 fewer frosh were abstaining from drinking, with ten percent less indicating they did not drink at all and nearly ten percent more indicating they drank once a month. At the higher frequencies of drinking, however, the percentages were lower: in 1995 fewer frosh indicated they drank 1-2 or 3-4 times a week than they had in 1992.

An insight into the reason for this trend may be found in Western's annual frosh survey (the Cooperative Institutional Research Program or CIRP Survey). CIRP findings indicated that first-time, in-coming frosh were less likely to have drunk alcohol before entering Western than they had been in the past. For instance, only 44.6% of frosh survey respondents from 1994 indicated they had drank beer, down from 75.2% in 1981. It may be that away from home for the first time, what these students held off on during high school they are ready to experiment with in college--thus the percentage of frosh abstaining from alcohol is down. On the other hand, their sense of experimentation may be tempered by the history of abstinence they bring with them from high school, thus they are less likely to drink at the higher frequency levels.

It may be also that the kind of frosh Western is attracting, those with increasingly higher pre-college academic achievement--i.e., higher high school gpa's and pre-college test scores--have a tendency for less alcohol use. CORE findings for college students indicate that students with higher gpa's use less alcohol than students with lower gpa's.[11]

Slight changes in drinking habits by year in school were noted for other classes, too; for instance: 1) more sophomores indicated they did not drink at all in 1995 than 1992; 2) more juniors indicated they drank 1-2 a week and fewer that they drank 3-4 times a week in 1995 than 1992; and 3) fewer seniors indicated they drank 2-3 times a month and more that they drank 1-2 a week in 1995 than 1992. (See Table 3.)

Table 3: "How often in the past month did you drink alcohol?"
Frequency of Alcohol Consumption by Year in School, 1992/1995 Compared

	Overall		1st Year		2nd Year		3rd Year		4th Year	
Item	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
not at all	23.4	21.5	**41.1**	**31.0**	25.7	29.7	24.0	22.5	15.7	14.2
once a month	16.8	17.8	**15.5**	**26.0**	17.6	13.5	17.8	15.8	15.4	17.5
2-3 times a month	29.0	29.4	24.6	29.0	28.0	25.7	27.3	28.3	33.7	28.3
1-2 a week	22.3	23.1	15.2	11.0	22.0	24.3	21.8	26.7	22.3	28.3
3-4 a week	6.3	5.9	2.6	3.0	5.5	6.8	6.9	2.5	7.8	7.5
more often	2.2	2.2	1.0	0.0	1.2	0.0	2.2	4.1	5.1	4.2

[11] Ibid. Pg. 122.

Frequency: Gender

Nearly eighty percent of male and female survey respondents indicated they drank at least once a month. Compared to 1992 findings, fewer students of either gender indicated they did not drink at all in 1995--though the change was not dramatic. As with 1992 findings, females were somewhat more likely to report drinking at the lower-use frequencies than males (2-3 times a month or less: females = 73.1%; males = 61.7%), while males were more likely to report drinking at the higher-use frequencies (1-2 a week or more: females = 26.8%; males = 38.5%). This pattern is consistent with national findings.[12] (See Table 4.)

Table 4: "How often in the past month did you drink alcohol?"
Frequency of Alcohol Consumption by Gender,
1992/1995 Compared

	Overall		Male		Female	
Item	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
not at all	23.4	21.0	22.7	22.9	24.0	19.6
once a month	16.8	17.7	11.6	14.9	20.9	19.6
2-3 times a month	29.0	29.7	26.4	23.9	31.2	33.9
1-2 a week	22.3	23.3	24.3	25.4	20.6	21.8
3-4 a week	6.3	6.0	11.1	9.5	2.6	3.6
more often	2.2	2.3	3.9	3.5	0.8	1.4

Other national findings indicated that the thirty-day prevalence of alcohol use (any drink within the past thirty days) by full-time college females was 72.4%, while for non-college females was 58.6%.[13] Among similar cohorts of *males* no such disparity was found. Full-time college females were also slightly more likely than non-college females to report thirty-day prevalence of *daily* use of alcohol, with 2.5% of college females and 1.9% of non-college females reporting daily use over the past thirty days. Although neither figure implies that females in college are more at risk for alcohol problems than females who are *not* in college, it does stand to reason that where more drinking is taking place, there is at least the *potential* for more alcohol-related problems among college-bound females.

Frequency: Legal and Illegal Drinking Ages

At Western, underage drinkers were much more likely than legal-aged drinkers to report not drinking at all, as well as somewhat more likely to report drinking once a month. Underage drinkers were about as equal to report drinking 2-3 times a month as legal-aged drinkers, while legal-aged drinkers were much more likely to report drinking 1-2 times a week, as well as more likely to report drinking 3-4 times a week, or more often. Apparently, being underage does have an effect on how often a student drinks. While many underage students do still drink, they drink less frequently than legal-aged drinkers. (See Table 5.)

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[12] Ibid. Pg. 15.

[13] Johnston, L.D., O'Malley, P.M., Bachman, J.G. (1993). National Survey Results on Drug Use from The Monitoring the Future Study, 1975-1992. Rockville, Maryland: National Institute on Drug Abuse, U.S. Department of Health and Human Services.

Table 5: "How often in the past month did you drink alcohol?"
Frequency of Alcohol Consumption by Age Category,
1992/1995 Compared

	Overall		20 or less		21 or over	
Item	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
not at all	23.4	21.3	32.6	31.3	17.0	13.7
once a month	16.8	17.8	16.8	20.4	16.9	15.9
2-3 times a month	29.0	29.5	27.2	28.0	29.8	30.7
1-2 a week	22.3	23.2	17.7	15.6	25.4	28.9
3-4 a week	6.3	5.9	5.2	4.7	7.3	6.9
more often	2.2	2.2	0.5	0.0	3.6	4.0

Interestingly, findings for legal/illegal drinking age were very different at Western than they were in the national Core survey. National trends indicated that legal versus illegal drinking age had no bearing whatsoever on how frequently a student drank. Percentages for all rates of frequency of drinking were nearly identical, regardless of whether a student was of drinking age or not. Why this may be is very much open to speculation. If there are any states left where under-21 year-olds can legally drink, they would be so scare as to have little or no effect on a national survey. One might ask if Washington's drinking age laws more strictly enforced? Or is there some peculiar climate at Western itself that encourages students to drink less frequently? Has the increasing propensity for abstinence from alcohol in Western frosh--as indicated in frosh survey (CIRP) data--had an effect? (See Table 6.)

Table 6: **Frequency** of Alcohol Consumption by
Age Category for **National Findings** Only

frequency of alcohol use	**under 21**	**21 or older**
never	16.1	16.8
once per year	8.4	6.7
6 times per year	12.1	12.8
once per month	7.5	7.9
twice per month	14.5	12.6
once per week	23.2	22.3
3 times per week	15.0	15.6
5 times per week	2.4	4.0
every day	0.7	1.2

Quantities of Alcohol Consumption Defined

Four measures of quantity of consumption of alcohol will be discussed: typical drinking, peak drinking, binge drinking, and drinking to the point of alcohol poisoning.[14] A **typical** quantity of alcohol is defined as the amount a student would drink on any given Friday or Saturday night during the month. This measure has been used in a number of research studies and is considered a valid indication of the amount of alcohol students *generally* drink. A **peak** quantity of alcohol, on the other hand, is defined as the "most" a student has consumed in the past month. This measure yields an indication of the *high range* amounts of alcohol students consume. Together, the two measures of quantity of consumption--typical and peak--produce a comprehensive profile of the amount of alcohol students drink.

Another measure of consumption frequently cited in the literature is **binge drinking**. Binge drinking is operationally defined as the consumption of *five or more drinks in one sitting*.[15] Binge drinking is of particular concern to colleges and universities because it is frequently associated with residence hall damage, sexual assault, poor academic performance, and missed classes.[16] Although drinking to the point of life-threatening alcohol poisoning differs among individuals based on height, weight, speed of consumption, drinking history, gender, etc., for the purpose of this study the threshold for **alcohol poisoning** will be considered drinking *7-8 drinks at one sitting*. Taking into account all the individual variables, drinking 7-8 drinks at one sitting generally will produce an average blood alcohol level of 0.15%-0.20%. Blood alcohol levels in that range begin to put the individual at risk for alcohol poisoning.

Alcohol Use: Typical Quantity

Typical Quantity: General Findings

In both 1992 and 1995, over a third of survey respondents reported *typically* consuming no alcohol at all during the previous month (1992 = 36.1%; 1995 = 35.5%), a higher percentage than there were respondents indicating none as their *frequency* of drinking. This is most likely due to the fact that when speaking of the *typical* amount a person drinks, respondents who drink infrequently probably view their typical amount of consumption as little or none.

For the remaining analyses of **typical quantity** drinking, only those survey respondents who reported *some* frequency of drinking were considered. In other words, approximately one-fifth of the sample, those who reported that they did not drink at all, were removed from the analysis. This was done so that the trends of *drinkers* could be assessed, since drinkers are the population that put themselves at potential risk of alcohol-related problems.

[14]Interpretation of findings that report the number of drinks consumed should be tempered by the fact that survey respondents were self-reporting; there was, in other words, no quantitative control over variables such as what individuals considered a "drink", nor any way of knowing if the reportees were keeping any kind of accurate count of the number of drinks they consumed.

[15]Presley, C.H. & Meilman, P.W. (1992). Alcohol and Drugs on American College Campuses: A Report to College Presidents. Carbondale, Illinois: Southern Illinois University. pg. 6.

[16]Ibid, Presley & Meilman (1992): pg. 5.

For those respondents who chose to drink, about a third each reported typically having 1-2 (33.8%), 3-4 (32.1%), or 5+ (34.1%) drinks. Overall, these figures vary only slightly from 1992: drinkers in 1995 were less likely to report drinking only 1-2 drinks, more likely to report drinking 3-4 drinks, and about as likely to report binge drinking (5+ drinks). Of more concern, since binge drinking *is* so frequently associated with abuses and excesses, is that about a third of all Western students choosing to drink continued to binge. On a more positive note, drinkers in 1995 were slightly less likely to report drinking 7+ drinks, the point at which a person places themselves in danger of alcohol poisoning.

Typical Quantity: Year in School

By year in school, first-year and fourth-year survey respondents were the *least likely* to report typical binge drinking, while second- and third-year survey respondents were the *most likely* to report binge drinking. The percentage of drinkers who drank to the point of potential alcohol poisoning was 14.6%. Again, second and third-year survey respondents were the most likely to report drinking to this self-endangering level of consumption on a given weekend night. (See Table 7.)

Table 7: "On a given Friday or Saturday night, how much alcohol do you typically consume?" **Typical** Alcohol Consumption by Year in School (**Drinkers Only**), 1992/1995 Compared

	Overall		1st Year		2nd Year		3rd Year		4th Year	
Item	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
1-2 drinks	38.2	33.8	34.5	30.2	31.9	18.6	35.6	37.5	42.5	32.5
3-4 drinks	28.0	32.1	33.6	28.3	28.9	34.9	25.6	33.8	30.6	36.3
5+ drinks (binge)	33.8	34.1	31.8	41.5	39.3	46.5	38.9	28.8	26.9	31.3
7+ drinks*	16.3	14.6	14.5	13.2	21.5	20.9	20.0	13.8	11.4	13.8

* Potential alcohol poisoning

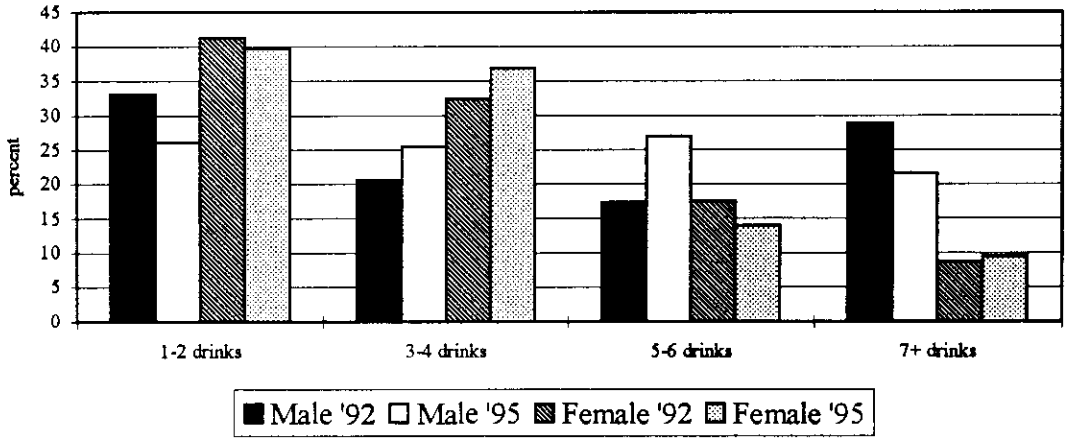
Typical Quantity: Gender

As it was reported in 1992, in 1995 both men and women reported binge drinking on a given weekend evening, though as quantities of consumption increased, males reported in higher percentages than females.[17] This finding parallels data reported in the Core Survey where binge drinking is more common among men than women, especially at the highest levels of consumption.[18] Moreover, this trend became even more pronounced among Western students; compared to 1992 findings, in 1995 fewer women reporting typically binge drinking, while more men reporting typically binge drinking. On a more positive note, in 1995 men were less likely to report typically drinking at the level of potential alcohol poisoning than they were in 1992. (See Figure 1.)

[17]Despite this finding, due to biological differences the relative risk to females students may be equal if not greater. The natural differences in fat distribution and hormonal levels, as well as the effects of birth control pills, contribute to the potential for females to reach higher blood alcohol levels than men--all other factors being equal (weight, number of drinks, rate of consumption). This finding paints an especially risky situation for females if they try to match the drinking rates of their male companions.

[18]Ibid, footnote #4, Presley, Meilman, & Lyerla (1995): pg. 18.

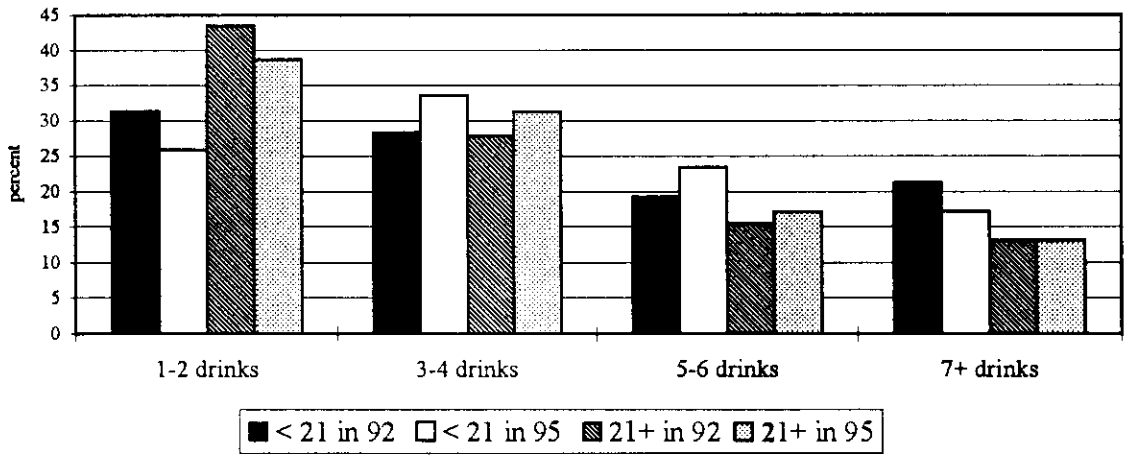
Figure 1: Typical Weekend Alcohol Consumption by Gender
1992 & 1995 Comparison (Drinkers Only)



Typical Quantity: Legal and Illegal Drinking Age

Typical weekend drinking patterns saw a similar trend when findings were analyzed by legal/illegal drinking age, especially for underage drinkers. There was slightly more drinking at the binge level, but slightly less drinking to the point of potential alcohol poisoning. As was indicated in 1992, underage drinkers were slightly more likely than legal age drinkers to both binge drink and drink to the point of potential alcohol poisoning. (See Figure 2.)

Figure 2: Typical Weekend Alcohol Consumption by Age Category
1992 & 1995 Comparison (Drinkers Only)



Alcohol Use: Peak Quantities

Peak Quantity: General Findings

On *peak* occasions of alcohol use, binge drinking was reported by 43.1% of 1995 survey respondents, nearly identical to the 43.9% reported in 1992. These figures are in relative accord with national findings, though direct comparisons are not possible because of the wording differences between the surveys. National findings indicated that 37.5% of all students reported at least one binge drinking episode in the "last two weeks," and males were more likely to report binge drinking episodes than females (48.0% of males reported at least one binge drinking episode compared to 30.2% of females). At Western, too, males binged more often than females, as will be discussed in greater detail below.

On a more positive note, the percentage of Western students reporting drinking to the point of alcohol poisoning on peak occasions fell from 31.3% in 1992 to 26.7% in 1995. Though not quite a five percentage point drop, any drop at all would be seen by those concerned with health and drinking issues as an encouraging sign.

For the remaining analyses of **peak quantity** drinking, only those survey respondents who reported *some* frequency of drinking were considered. In other words, approximately one-quarter of the sample, those who reported that they did not drink at all, were removed from the analysis. This was done so that the trends of *drinkers* could be assessed, since drinkers are the population that put themselves at potential risk of alcohol-related problems.

Peak Quantity: Year in School

In 1995, for those choosing to drink, first-year and fourth-year respondents were the most likely to report low alcohol consumption (1-2 drinks) on peak occasions (first-year = 27.5%; fourth-year = 23.5%). Second-year respondents were the most likely to report binge drinking on peak occasions (73.1%), as well as the most likely to report drinking to point of potential alcohol poisoning (51.9%).

Though overall findings still indicated a fairly high level of both binge drinking and drinking to the point of potential alcohol poisoning, both figures are down from 1992 findings (binge = 54.5% in 1995 versus 57.2% in 1992; potential alcohol poisoning = 33.8% in 1995 versus 40.6% in 1992). Moreover, except for second-year students, respondents in all class categories reported both less bingeing and less drinking to the point of potential alcohol poisoning. (See Table 8.)

Table 8: "Think of the occasion you drank the most this past month. How much did you drink?" **Peak** Alcohol Consumption by Year in School (**Drinkers Only**), 1992/1995 Compared

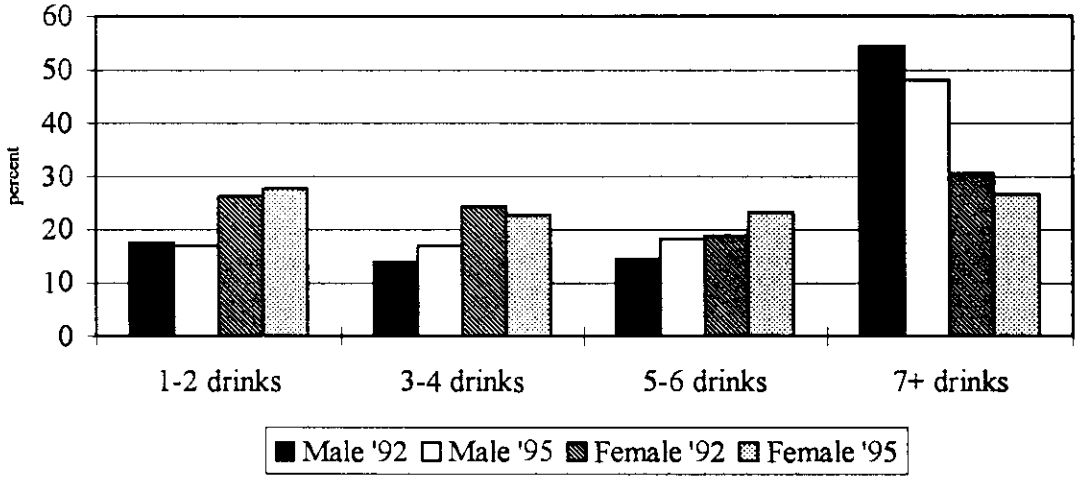
	Overall		1st Year		2nd Year		3rd Year		4th Year	
Item	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
1-2 drinks	21.9	23.7	22.8	27.5	19.8	17.3	19.0	21.5	25.0	23.5
3-4 drinks	19.6	20.5	19.6	20.3	18.5	9.6	18.7	22.6	19.3	24.5
5+ drinks (binge)	57.2	54.5	57.6	50.8	61.6	73.1	60.7	53.7	54.3	52.0
7+ drinks*	40.6	33.8	39.3	33.4	47.2	51.9	45.6	33.3	36.8	28.5

*Potential alcohol poisoning

Peak Quantity: Gender

When discussing peak quantities of alcohol consumption by gender, the same pattern existed in both 1992 and 1995. For those students who drank at all, females drank less while males drank more. In fact, in 1992 over half the male respondents reported drinking to the point of potential alcohol poisoning (54.3%). The good news from the 1995 survey was that the percentage of males and females reporting they drank to the point of potential alcohol poisoning on peak occasions fell. For males the percentage fell from 54.3% to 48.0%, and for females it fell from 30.5% to 26.6%. (See Figure 3.)

Figure 3: Peak Alcohol Consumption by Gender
1992 & 1995 Comparison (Drinkers Only)

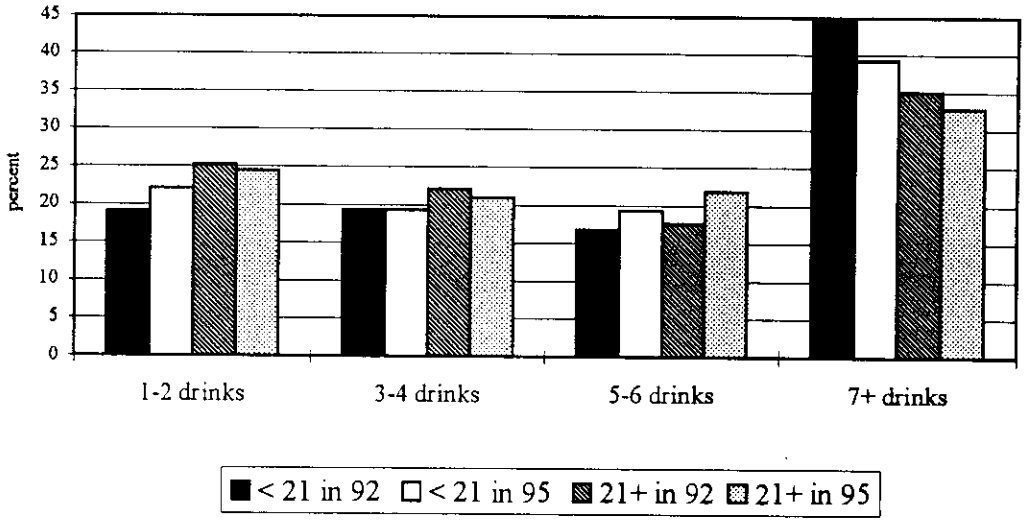


Peak Quantity: Legal and Illegal Drinking Ages

Analysis of peak quantity by legal and illegal drinking age category indicated a trend similar to the analysis found for gender: in both years, a substantial percentage of survey respondents drank heavily, but slightly less heavily in 1995 than in 1992. Outside of a higher percentage of under-aged respondents drinking to the point of potential alcohol poisoning on

peak occasions than legal-aged respondents, peak alcohol consumption was about the same regardless of age. (See Figure 4.)

Figure 4: Peak Alcohol Consumption by Age Category 1992 & 1995 Comparison (Drinkers Only)



Negative Effects Due to Alcohol Use

In order to quantify the occurrence of negative effects due to alcohol use, the Lifestyles Project Survey utilized the Rutgers Alcohol Problem Inventory (RAPI). The RAPI contains twenty-five items measuring the negative effects of alcohol use, ranging from hangovers, missed work or school, arguments with family or friends, driving under the influence, etc. Survey respondents were asked to indicate whether in the last six months they had experienced each incident.

Negative Effects of Alcohol Use: Occurrence

With regard to whether or not respondents had experienced negative effects from alcohol, 60.9% of the respondents had at least one alcohol-related negative consequence in the past six months. This figure is down from the 1992 survey finding of 63.9%. From the twenty-five prompts on the RAPI, the top ten events most likely to have occurred were chosen for discussion and presentation. The most common negative occurrence was driving "shortly after having more than 2 drinks." The more positive finding was that respondents in 1995 were less likely to report driving after drinking than respondents in 1992. (See Table 9.)

Table 9: "How many times has each happened to you during the past six months?"
Occurrence of Negative Effects Related to Alcohol, 1992/1995 Compared

	Never		1-2 times		3-5 times		6+ times	
Item	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
Drove short after having more than 2 drinks	**64.4**	**70.2**	**20.2**	**19.5**	**7.7**	**5.3**	**7.7**	**5.0**
Noticed a change in your personality	73.0	78.4	20.4	16.3	4.2	3.5	2.4	1.8
Neglected your responsibilities	73.7	72.8	20.1	20.0	4.3	4.3	1.8	2.9
Drove shortly after having more than 4 drinks	**79.2**	**85.8**	**12.6**	**8.9**	**3.5**	**2.7**	**4.7**	**2.6**
Missed a day or part of a day of school or work	80.4	81.9	14.5	13.4	3.9	2.5	1.2	2.2
Had a fight, argument or bad feelings w/friend	80.9	82.3	15.6	13.6	2.7	3.7	0.9	0.4
Caused shame or embarrassment to someone	81.1	84.6	16.5	13.7	1.6	1.1	0.9	0.6
Tried to cut down or quit drinking	82.5	85.5	14.1	9.9	2.3	3.1	1.2	1.4
Not able to do your homework or study for test	83.3	81.9	13.2	13.6	3.0	3.3	0.5	1.2
Passed out or fainted suddenly	86.5	91.4	10.8	7.5	1.9	1.0	0.8	0.0

Negative Effects of Alcohol Use: Severity

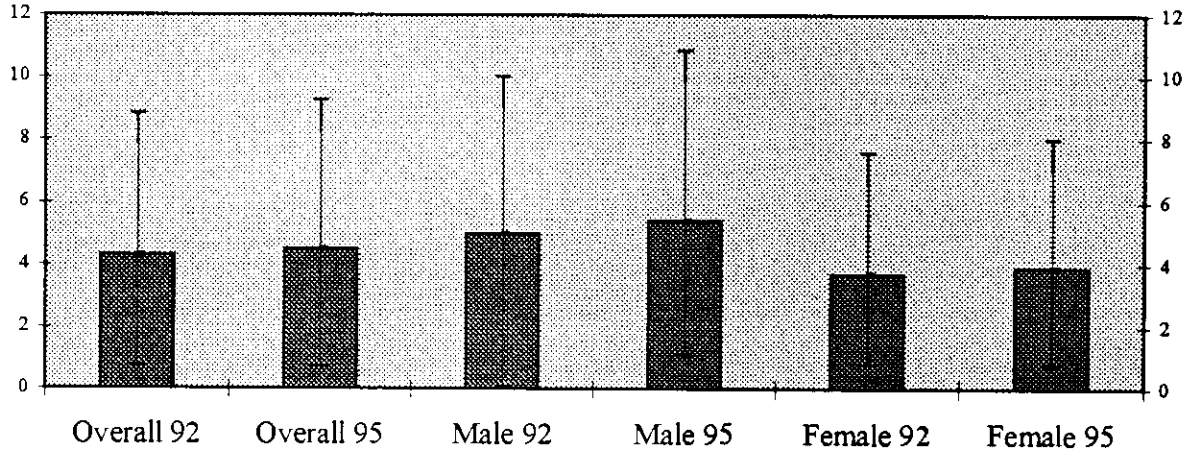
In order to measure severity of negative effects of alcohol use, each RAPI item asked survey respondents to indicate how often each negative effect has occurred in the past six months: never, 1-2 times, 3-5 times, 6-10 times, and over 10 times. This scale was then assigned a single digit numerical value: never = 0; 1-2 times =1; 3-5times = 2; 6-10 times = 3; and over 10 times = 4. Scores for each respondent were then tallied. For instance, a respondents might have indicated that one event occurred 2 times (a score of 1), another event five times (a score of 2), and one other event 12 times (a score of 4); thus, their overall score would be 1+2+4 = 7. Each respondent received a total RAPI score. These scores were tallied and divided by the number of respondents to create a mean, what this report is going to call a RAPI Mean. Notice that this RAPI Mean *does not present an exact number of incidents*; it is, rather, a synthesized figure used for comparison purposes. If, for instance, the RAPI Mean were to rise or drop dramatically over a given period of time, one could assume that survey respondents were experiencing an increasing or decreasing amount of negative effects due to alcohol use.[19]

The overall RAPI Mean for 1995 Lifestyles survey respondents was 4.5, up slightly from the 1992 figure of 4.3. For females in 1995 the RAPI Mean was 3.9, up from 3.7 in 1992. For males the RAPI Mean was 5.4, up from 5.0. With the changes being slight, this upward trend is no more than that--simply a trend with no statistical indication of anything more severe. The changes between 1992 and 1995 could be due only to chance. Nonetheless, it is a noteworthy trend, one that should be monitored. Moreover, the conclusion from 1992 that negative consequences due to alcohol use may be more prevalent among males than females remains true for 1995.

[19] Also included in the data presentation is the standard deviation of the RAPI Mean, to illustrate the wide range of scores.

Additionally, as was noted in the 1992, RAPI findings may be construed as particularly disturbing when looked at in the light of the correlations between RAPI Mean scores and alcohol-problem severity on other measures. For example, a RAPI Mean score of 5.0 or higher is often indicative of more troublesome alcohol problems, as it meets criteria for alcohol abuse as outlined in the Diagnostic and Statistical Manual of Mental Disorders III R, American Psychiatric Association, 1987. (See Figure 5.)

Figure 5: RAPI Mean and Standard Deviation
1992 & 1995 Comparison by Overall and Gender



Perceived Risks verses Actual Occurrences of Negative Alcohol Effects

In an attempt to understand students' *perceptions* of alcohol-based problems with actual *occurrences* of alcohol-based problems, two sets of findings were utilized. One set was based on the Assessment of Perceived Risks of Alcohol (APRA), which measures the personal perception of the likelihood of risks related to alcohol use while in college. The other set was based on the Rutgers Alcohol Problem Inventory (RAPI), which measures the number and severity of alcohol-related problem behaviors. Questions from these independently-developed instruments were included on the WWU Lifestyles survey. As separate instruments, not all the prompts matched up exactly, though enough did to warrant reporting them in a comparative fashion.

Here is what the two instruments measure: 1) the APRA score is the *percentage* of survey respondents indicating *any* likelihood of experiencing a given negative effect during the ensuing four years at the time of responding to the survey; and 2) the RAPI score is the *percentage* of respondents indicating even *one* occurrence of a given effect during the six months prior to taking the survey. As with the RAPI mean score, the percentages utilized offer a comparative tool, but not definitive findings as to the complexity or severity of each effect listed.

Caveats notwithstanding, the findings suggest some discrepancy between the perceived likelihood of the negative effects of alcohol use and the actual reported occurrences of them, with

the most pronounced discrepancy coming *in an area directly related to academics.* In 1995, while only 3.1% of respondents indicated any likelihood of drinking impairing their ability to complete homework assignments, 18.1% indicated that they had experienced at least one incident where they were unable to study for a test or complete homework due to drinking. The percentage difference of 15.0% was higher than the 12.4% discrepancy found for 1992 survey respondents. In other words, students appear to have a blind spot when it comes to how much alcohol may be impairing their academics. (See Table 10.)

Table 10: Perceived Risks verses Actual Occurrences of Negative Alcohol Effects, 1992/1995 Compared

		APRA		**RAPI**	
APRA: % indicating any likelihood of experiencing this effect in next four yrs.	**RAPI: % indicating even one occurrence of effect during the past six mos.**	*1992*	*1995*	**1992**	**1995**
Develop tolerance to alcohol	Felt that you needed more alcohol to get same effect	19.6	23.6	17.4	14.4
Miss class due to hangover	Missed a day or part of day of school	12.0	17.7	19.6	18.1
Attend class after drinking	Went to school high or drunk	3.1	5.1	7.2	7.6
Unable to complete assignments due to drinking	Not able to do homework or study for test	4.3	3.1	16.7	18.1
Cause shame or embarrassment	Caused shame or embarrassment	10.3	7.5	18.9	15.4
Develop drinking problem	Felt you had a drinking problem	3.1	3.7	10.6	8.4
Become an alcoholic	Felt dependent on alcohol	2.8	2.9	5.5	4.5

Motivation to Change Personal Drinking Habits

When survey respondents were asked if their drinking habits needed changing, their responses indicated some ambivalence--depending on how the question was asked. Addressing in issue in the affirmative, the question read: "As far as I'm concerned, my drinking does not need changing." Asked this way, most reponsdents *agreed* with the statement (82.9% in 1992; 84.6% in 1995). Addressing the issue in the negative, the question read: "I've been thinking that I might want to change my drinking habits." When addressed in the negative, fewer respondents *disagreed* (77.4% in 1992; 76.4% in 1995) than had agreed when the issue was addressed in the positive. To further complicate the issue of students' self-analysis of their drinking habits were these items: more respondents in 1995 than in 1992 indicated they had acknowledged that they had drinking problems, were working hard to change those habits, and wished they had more ideas on how to change those drinking habits. (See Table 11.)

Table 11: Assessment of Personal Drinking Habits, 1992/1995 Compared

	Agree		Undecided		Disagree	
Percentage of respondents agreeing with each statement.	**1992**	**1995**	**1992**	**1995**	**1992**	**1995**
As far as I'm concerned, my drinking does not need changing.	82.9	84.6	7.4	5.9	9.7	9.5
Been thinking that I might want to change my drinking habits.	12.8	13.7	9.8	9.9	77.4	76.4
I am really working hard to change my drinking habits.	3.0	4.9	4.8	6.6	92.2	88.6
Have problems with alcohol; really think I should work on it.	2.4	5.3	3.7	3.4	94.9	89.4
I wish I had more ideas on how to change my drinking habits.	3.2	4.3	6.7	5.3	90.1	90.5
I am actively working on changing my drinking habits.	4.6	7.2	4.2	4.2	91.1	88.6

Drug Use

While the use of cocaine, LSD, and other drugs remained at about the same level of usage as found in the 1992 report, the use of marijuana is up--from 25.4% in 1992 to 31.1% in 1995. On the other hand, regular usage remained low, with 24.8% reporting that they used marijuana 2-3 times or month or less. Use of cocaine remained negligible, with only 1.7% of respondents reporting any usage whatsoever, and most of that figure being less than once a month. Use of LSD was reported in slightly higher percentages than cocaine (6.8%); but again there was scant indication of any regular usage. (See Table 12.)

Table 12: Drug Use at Western, 1992/1995 Compared

	never		< one a mo.		once a mo.		2-3 x mo.		more often	
"During the past six months how often have you used:"	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**	**'92**	**'95**
Marijuana	74.6	68.9	13.7	14.1	3.2	3.5	4.0	7.2	4.5	6.4
Cocaine (crack)	97.7	98.3	2.0	1.4	-	-	-	-	0.2	-
LSD	92.2	93.2	6.1	6.2	0.6	0.2	0.9	0.4	0.2	0.4
Other	92.0	91.1	5.6	6.2	0.5	0.8	0.7	1.4	1.3	0.4

Alcohol/Drugs and Sex

"Sex under the influence" is a term designed to indicate the risks involved in the interaction between drinking and sexual activity. These risks take a number of forms. Studies on college students' sexual practices, for instance, indicate that students who might commit to protecting themselves and their partners while sober often will engage in unsafe, unprotected sex

when drinking.[20] Moreover, alcohol and drugs often play a part in the human error aspect of condom failure. Furthermore, the intersection between alcohol and sex is often the territory of unwanted or regretted sex, not the least of which is acquaintance or date rape.[21]

The WWU Lifestyles Survey contained several categories of questions designed to investigate the connection between alcohol, other drugs, and sexual activity among respondents. The following data summarizes the key findings from those questions.

Level of Sexual Activity

Overall, 65.5% of the 1995 survey respondents reported that they had sexual intercourse in the past six months. This figure was nearly identical to the 1992 finding of 66.5%. If survey respondents indicated that they had had sexual intercourse in the past six months, they were asked with how many different people. Less than a fifth, only 18.5%, indicated they had more than one partner, with males and females responding in about equal percentages (18.9% of females and 18.0% of males).[22]

Sex Under the Influence

Students were asked: "If you have had sexual intercourse over the past six months, on what percentage of those occasions were you drinking alcohol?" Over half of the respondents indicated they had never been drinking when they had sex (51.8%). This is a higher figure than found in the 1992 report (47.3%). Even fewer indicated they had been drinking on about half of the occasions (39.6%). When asked if they had used marijuana or other drugs on the occasions they had sex, most respondents indicated they had not (81.9%), though fewer than found in 1992

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[20]Butcher, A.H., Manning, T. & O'Neal, E.C. (1991). "HIV-Related Sexual Behaviors of College Students." Journal of the American College Health Association. 40 (3): 115-118.

Siegel, L. (1986). "AIDS: Relationship to Alcohol and Other Drugs." Journal of Substance Abuse Treatment. 3: 271-274.

Robertson, J.A. & Plant, M.A. (1988). Drug and Alcohol Dependence. 2: 75-78.

O'Leary, A., Goodhart, F., Jemmott, L.S. & Boccher-Lattimore, D. (1992). "Predictors of Safer Sex on the College Campus: A Social Cognitive Theory Analysis." Journal of the American College Health Association. 40 (6): 254-263.

[21]Koss, M.P., Gidicz, C.A. & Wisniewski, N. (1987). "The Scope of Rape: Incidence and Prevalence of Sexual Aggression and Victimization in a National Sample of Higher Education Students." Journal of Consulting and Clinical Psychology. 55 (2): 162-170.

Richardson, D.R. & Hammock, G.S. (1991). "Alcohol and Acquaintance Rape." In Parrot, A., & Bechhofer, L. (Eds), Acquaintance Rape: The Hidden Crime. John Wiley & Sons: New York. Pgs. 83-95.

Warshaw, R. (1988). I Never Call it Rape. Harper and Row: New York.

Adams, A. & Abarbanel, G. (1988). Sexual Assault on Campus: What Colleges Can Do. Rape Treatment Center: Santa Monica, CA.

[22]Although survey respondents were asked not to respond to the question about partners if they had already indicated they had not had sexual intercourse in the past six months, approximately 125 more respondents than should have answered the question anyway. Although survey designers try to make sure that directives are clear, it may be that the physical layout of this section of the survey confused some respondents. They may have forgotten the six month issue and been thinking about their most recent sexual partner.

(87.6%). A small percentage indicated they had used marijuana or other drugs on about half the occasions they had sex (14.3%).

Referring to the most *recent* occasion of sexual intercourse, 15.9% of respondents reported that they had been under the influence of alcohol, down from the 1992 finding of 16.4%. On the other hand, 4.8% indicated they had been under the influence of marijuana or other drugs, up from the 1992 finding of 3.3%.

Protected Sex/Perception of Risks

When asked about condom use during sexual intercourse over the past six months, 44.0% of survey respondents indicated that they never used them, up from the 1992 finding of 42.5%. Moreover, 18.7% of respondents indicated they used condoms less than half the time, and 28.3% couldn't remember if they'd used them or not--which probably means they did not. In other words, students don't seem to be using condoms with much regularity. Females, especially, seemed disinclined to condom use. Of those students indicating they had never used condoms, 61.5% were females and 38.5% were males. Moreover, when asked about their most *recent* occasion of sexual intercourse, 61.1% of respondents reported that they had *not* used a condom, down very slightly from the 1992 finding of 62.2%.

When asked to what extent they saw themselves at risk of HIV infection, 91.2% of respondents indicated they were "not at risk at all" or "at low risk," up from the 1992 figure of 89.5%. Percentages measuring perception of risk of HIV infection were about the same for male and female respondents. When asked to what extent they saw themselves or their partners at risk of pregnancy, 87.0% indicated they were "not at risk at all," or "at low risk," which was virtually identical to the 1992 figure of 87.2%. Again, percentages measuring perception of risk of pregnancy were about the same for male and female respondents.

Unwanted Sex

Students were asked: "In the past year have you had sexual intercourse with someone when you didn't really want to?" Of those reporting that they had (11.0%), 71.2% were female and 28.8% were male. When asked if they'd been consuming alcohol when the unwanted sexual intercourse occurred, 33.7% of females and 28.6% of males indicated that they had been drinking.

Students were also asked: "In the past year, have you had sexual intercourse with someone when the other person didn't really want to?" While only 2.8% of respondents indicated they'd forced sex on a partner, most often it was a male forcing sex on a female (76.9%), rather than a female forcing sex on a male (23.1%). When asked about alcohol consumption on those occasions when sex had been forced on another person, four respondents indicated they had been drinking, while six indicated the person upon whom the sex had been forced had been drinking.

Summary

Findings from the 1995 Lifestyles Project Survey indicated that although Western students were not drinking less frequently, they did appear to be drinking in lesser quantities than they were in 1992. The percentage of students who drank *seven or more* drinks on *typical* occasions fell 1.7%, while the percentage of students who drank *seven or more* drinks on *peak* occasions fell 6.8%. Moreover, the percentage of students who drank *five or more* drinks on *peak* occasions fell 2.7%. On the other hand, the percentage of students who had *five or more* drinks on *typical* occasions remained relatively stable, with a marginal increase of 0.3%.

What researchers don't know is where this increase in the 5-6 drink range on typical occasions came from: was it the pool of students who might have been drinking 3-4 drinks, or the pool of students who might have been drinking 7 drinks or more? Our educated guess is that decreases in the amount of alcohol consumed on typical occasions at the top and bottom of the scale caused increases of alcohol consumption in the middle of the scale. Thus, the increase at 3-4 drinks range probably came from the 1-2 drinks range, while the increase at the 5-6 drinks range probably came from the 7+ drinks range.

Not only were students drinking in somewhat lesser quantities, not as many indicated experiencing a negative effect due to drinking--down 3.0% between 1992 and 1995. There was also a higher percentage of students indicating that they had never driven after two, or after four drinks. However, even though fewer students in 1995 indicated experiencing no negative effects due to alcohol use, certain findings indicated that those who did experience negative effects may have had more negative experiences than those who experienced negative effects in 1992; for instance, the RAPI mean, a measure of overall negative effect, was up from 4.3 in 1992 to 4.5 in 1995.

It may be, however, that those students from the 1995 survey who experienced and possibly had slightly more negative effects due to alcohol use may continue, like they did, in 1992, to be unable to recognize the negative effect alcohol may be having in their lives. Findings from the 1995 survey indicated that while only 3.1% of respondents indicated any likelihood of drinking impairing their ability to complete homework assignments, 18.1% indicated that they had experienced at least one incident where they were unable to study for a test or complete homework due to drinking. This percentage of difference of 15.0% was higher than the 12.4% discrepancy found for 1992 survey respondents. There is, in other words, some strong indication that students have a blind spot when it comes to their perception of how much alcohol may impair their academics.

Regarding drug usage, the most important finding that emerged was that more students in 1995 indicated they had used marijuana than in 1992. At this point, use remains relatively infrequent, with only 6.4% indicating they used marijuana more often than 2-3 times a month. On the other hand, students were less likely to report having used cocaine or LSD in 1995 than in 1992.

Regarding sexual activity, students continue to feel that they are not particularly at risk of either sexually transmitted diseases (STD's) or pregnancy. Supporting this attitude was the finding that well over forty percent of students indicated they never used condoms when they had sexual intercourse, and that well over sixty percent did not use a condom during their most recent sexual intercourse. And though few students indicated that they had had unwanted sex, for those students who had, most were females. On those occasions when a students had unwanted sex, alcohol was involved about a third of the time.

Discussion

One of the most important aspects of the Lifestyles Survey is also one easy to overlook: that the survey is being done at all. Most higher education alcohol prevention programs are reactive and narrowly focused. They are event-based, responding to vandalism, drunken resident hall fracases, and the like as they happen, often mistaking the messages that such events send. In contrast, Western's alcohol prevention program is proactive and widely focused. It is data-based and data-driven. From surveys and studies, administrators and prevention specialists form profiles of drinkers and drinking patterns based on the slow, incremental assessment of large populations over time. These profiles are used to "market" accurate campus drinking patterns, patterns that demonstrate the typical student at Western does *not* abuse alcohol. Though an unusual approach, it is also the heart of Western's program, one that has already received national recognition. In 1995, the Primary Prevention and Wellness Center was chosen by the Harvard School of Public Health (based on a nomination by the U.S. Department of Education) as one of the five best higher education alcohol abuse programs in the nation.

There are reasons why the program has received positive attention. For instance: whereas the reactive approach to student alcohol abuse often misconstrues the situation as better or worse than it is--because counselors see only what they see--the proactive approach is based on real facts gathered through proven survey research methodologies. In the reactive system, students in trouble through alcohol may claim that "everybody is drinking." Prevention specialists at Western, however, can counter this allusion to the *imaginary peer*--the concept that students see in their minds a peer who drinks more than they themselves do.[23] Because Western's program is based on hard data, a prevention specialist at Western can indicate with the utmost confidence that most students at Western, if they drink at all, drink only in moderation.

This data-based approach may be especially needed in the foreseeable future. The guardedly encouraging changes noted in the quantity of student drinking at Western come at a time when the use of alcohol is beginning to see increases at the high school level. For instance, findings from Western's 1995 survey of in-coming freshmen (the CIRP survey) indicated that since 1994 there was an increase of 3.1% in the percentage of college-bound high school seniors indicating they had drank beer, as well as a 3.4% increase in the percentage indicating they had

[23] Students are convinced that their own drinking habits are moderate compared to those *others*. If they themselves are having seven drinks at a sitting, they are sure that on the other side of the room someone is having nine drinks. It is here, when the imaginary drinking habits become the habits students imagine to be the norm, that real damage can happen. Peer pressure standards become skewed as the few unduly influence the many.

drank wine or liquor. Previously, trends had indicated a decline in the use of alcohol. Indeed, 1995 was the first year since 1981 that there were increases rather than decreases in the percentage of college-bound high school seniors indicating they had drank beer, wine, or liquor. For alcohol and drug abuse prevention programs, such trends might forebode even harder work ahead.

Appendix A:

Confidence Intervals/Inter-item Reliabilities
for WWU Lifestyles Project Survey Instrument and Findings

Confidence Intervals/Inter-item Reliabilities for WWU Lifestyles Project Survey Instruments and Findings

Our own statistical analysis of the reliability of the Lifestyles Survey indicated that the most conservative calculation of sampling error is ± 4.4% across items. The use of .5 as p (proportion) gives the most conservative estimate of the standard deviation because of the properties of the normal distribution (more scores at 50% percentile makes distinction more difficult).

The confidence interval around the sampling error is also calculated to determine, with 95% assurance, where the error term lies. Thus, the sampling error at the 95% confidence interval is equal to ± 1.96(.02). This is the calculation of sampling error. Therefore, in the worst case, proportion of the population that is reported is ± 4.4% from the true score. ($1.96 \pm \sigma$.)

The two survey instruments utilized to form analysis of perceived versus actual negative event occurrences due to alcohol use also have been analyzed.

- Rutgers Alcohol Problem Inventory (RAPI)[1]:

This questionnaire contains an inventory of alcohol-related problem behaviors. The instrument has excellent internal reliability (alpha = .92), relates strongly to alcohol use, and has been validated with both clinical and non-clincal samples (White, et al., under review). The scale can be scored to reflect the number of problems and their overall severity.

- Assessment of Perceived Risks of Alcohol (APRA)[2]:

This sixteen-item questionnaire assesses the likelihood of consequences related to alcohol use. Many of the items were derived from alcohol-related consequences frequently reported by college students in previous studies and many reflected DSM-III-R diagnostic criteria for alcohol abuse and alcohol dependence. Survey items covered five domains: legal, health, academic, interpersonal, and intrapersonal. These domains represented specific manifestations of alcohol abuse and possible alcohol dependence. The instrument has high internal consistency (alpha = .93). The APRA also has a .7 test/retest reliability on the whole scale.

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[1] White, H.R., & Labouvie, E.W. (1989, in press). *Journal of Studies of Alcohol.* Vol. 50, pages 30-37.

[2] Duthie, D. A. (1991). *Perception of Personal Risk for Alcohol Problems as a Function of Family History, Consumption, and Etiologie Beliefs.* Unpublished Master's Thesis: University of Washington, Seattle, WA. Duthie, D.A., Baer, J.S. & Marlatt, G.A. (1991). *High-Risk Status and Personal Risk Perception for Alcohol Problems Among College Students.* Poster preseted at the 25th Annual Convention of the Association for the Advancement of Behavior Therapy, New York City, Nov. 21-24.