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# The Relationship between Alcohol Consumption and Academic Performance: Findings from the 1999 Lifestyles Survey

Patricia M. Fabiano

*Western Washington University*

Gary (Gary Russell) McKinney

*Western Washington University*

Kristoffer W. (Kristoffer Williams) Rhoads

*Western Washington University*

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# THE RELATIONSHIP BETWEEN ALCOHOL CONSUMPTION AND ACADEMIC PERFORMANCE: FINDINGS FROM THE 1999 LIFESTYLES SURVEY

Prepared by Patricia M. Fabiano, Gary R. McKinney, and Kristoffer Rhoads

## INTRODUCTION

The first Lifestyles Survey was conducted in 1992. The survey tracked patterns of alcohol and drug consumption and consequences among Western students. It was replicated in 1995, 1998, and, most recently, during spring quarter, 1999. This Focus report presents findings from that most recent survey.

## DEMOGRAPHICS

Altogether 347 completed and usable questionnaires were received from an initial cohort of 800 students. The 1999 cohort was 46.7% male and 53.3% female—slightly different from the 1998 cohort, which was 51.2% male and 48.9% female. The 1999 cohort were 29.1% under the age of 21, and 70.9% aged 21 or older—considerably different from the 1998 cohort, which was 40.8% under the age of 21, and 59.2% aged

21 or older. The 1999 cohort mostly lived off-campus, 82.7%, which again differed from the 1998 cohort, 61.8% of whom lived off-campus.

The findings in this Focus report are for drinkers only. Those survey participants indicating they *never* drank were removed from the analysis. This decision was made because the issues raised by the findings are specifically about the effect of alcohol on drinkers, the group targeted by alcohol abuse prevention programs.

## FINDINGS

A regression analysis of the 1999 Lifestyles Survey findings indicated that a significant predictor of Western GPA was the typical number of drinks a student consumes on a given weekend night ( $p = .001$ ,  $\beta = -.263$ ,  $R^2 = .07$ ). In other words, the more drinks reported on typical occasions, the lower the Western GPA. (See Table 1.)

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Table 1: Western GPA by alcohol use groups (typical number of drinks consumed on a given weekend)

1999		1998	
Use Group	GPA	Use Group	GPA
0 drinks	3.26	0 drinks	3.20
1-2 drinks	3.13	1-2 drinks	3.00
3-4 drinks	3.01	3-4 drinks	2.85
5-6 drinks	2.85	5-6 drinks	2.83
7+ drinks	2.86	7+ drinks	2.74

Included in the Lifestyles Survey Series was the Rutgers Alcohol Problem Inventory (RAPI), a measure of the number and severity of alcohol-related problem behaviors students may encounter. There were seventeen RAPI items on the survey, with issues ranging from missing school or work to driving shortly after consuming four drinks or more.

A regression analysis indicated that the total number of RAPI items reported was a significant predictor of Western GPA ( $\rho = .002$ ,  $\beta = -.199$ ,  $R^2 = .04$ ). In other words, the more often alcohol-related problem behaviors were reported, the lower a student's Western GPA became.

Researchers also created a synthesized figure from these RAPI items. This figure is referred to as the RAPI Mean. It was arrived at by adding the total number of RAPI items that survey respondents indicated they had experienced (even if only once), then dividing that number by the number of respondents.

The RAPI Mean was created to give some meaning to the implications of alcohol-related problem analysis. For example, a test of variance (anova) indicated a significant difference in RAPI Mean levels by alcohol use group. The more drinks a survey respondent had on typical occasions, the higher the RAPI Mean. The  $\text{Eta}^2$  for this effect was .42. This exceptionally strong result means that 42% of the variance in RAPI Mean can be explained by the amount of alcohol consumed. In other words, the findings bear out intuition: the more a student drinks (on a typical weekend night), the higher the number of negative effects due to alcohol will be experienced. (See Table 2.)

Table 2: RAPI Mean by alcohol use groups (typical number of drinks consumed on a given weekend)

1999		1998	
Use Group	RAPI Mean	Use Group	RAPI Mean
0 drinks	0.63	0 drinks	0.88
1-2 drinks	1.25	1-2 drinks	1.71
3-4 drinks	3.64	3-4 drinks	3.34
5-6 drinks	4.71	5-6 drinks	5.05
7+ drinks	7.82	7+ drinks	7.25

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Looking at specific RAPI issues, Western GPA was affected at statistically significant levels according to whether students had experienced the behavior or not. For instance, when looking at “not able to do homework or study for test,” the GPA of students who had *not* experienced the behavior was 3.12, compared to 2.88 for students who had experienced the behavior. The number of drinks consumed on typical occasions reported by those who had *not* experienced the behavior was two, compared to six by those who had. On peak occasions—the most number of drinks a student consumed at any one time over the month previous to the survey—the number of drinks consumed by those who had *not* experienced the behavior was five, compared to nine by those who had.

For each item, the same pattern emerged: those who had *not* experienced the behavior consumed less alcohol on typical and peak occasions than those who had; moreover, those who had *not* experienced the behavior had higher Western GPA’s than those who had. (See Table 3.)

Table 3: Comparison of Western GPA's and alcohol consumption levels between those students who experienced alcohol-related problem behaviors (RAPI items) and those who did not.

	Didn't Experience	Experienced	Sig.	Eta2
<b>Not able to do homework or study for test</b>				
Western GPA	3.12	2.88	.006	.03
Typical # of drinks	2	6	<.001	.21
Peak # of drinks	5	9	<.001	.21
<b>Went to school or work drunk</b>				
Western GPA	3.10	2.86	.028	.02
Typical # of drinks	3	6	<.001	.15
Peak # of drinks	5	10	<.001	.20
<b>Neglected your responsibilities</b>				
Western GPA	3.17	2.83	<.001	.09
Typical # of drinks	2	5	<.001	.14
Peak # of drinks	4	8	<.001	.18
<b>Missed a day (or part of a day) of school/work</b>				
Western GPA	3.10	2.90	.020	.02
Typical # of drinks	2	6	<.001	.21
Peak # of drinks	5	9	<.001	.23
<b>Passed out</b>				
Western GPA	3.12	2.90	.005	.03
Typical # of drinks	2	5	<.001	.13
Peak # of drinks	5	8	<.001	.16
<b>Drove shortly after 4 or more drinks</b>				
Western GPA	3.11	2.95	.047	.02
Typical # of drinks	2	6	<.001	.31
Peak # of drinks	4	9	<.001	.30

## CONCLUSIONS

Researchers also returned to 1998 Lifestyles Survey data and replicated the analysis completed on 1999 data. Findings indicated similar patterns. In 1998, students who drank in moderation on typical occasions had higher Western GPA's than those who drank more excessively on typical occasions. Students who drank more had a higher RAPI Mean (more instances of negative alcohol-related problems). And finally, students who had *not* experienced negative alcohol-related problems (as inventoried by the RAPI items) had higher Western GPA's than those who had.

These findings are interesting in that the 1998 cohort was demographically dissimilar in some ways to the 1999 cohort (see the comparison of demographics at the beginning). In other words, drinking in excess on typical occasions appears to be the issue, not whether a student lives on- or off-campus, or whether the student is under or over the legal drinking age. The findings appear to lead to a simple conclusion: there is a strong correlation between alcohol consumption and Western GPA. Students who drink less have higher GPA's; students who drink more have lower GPA's.



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Western Washington University, 516 High Street MS:9010, Bellingham, WA 98225

Phone: (360) 650-3409; FAX: (360) 650-6893; e-mail: garyr@cc.wvu.edu

Web page: <http://www.wvu.edu/~assess>

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