

# Residential Learning Communities Positively Affect College Binge Drinking

Aaron M. Brower

Chris M. Golde

Caitilyn Allen



*Recent surveys demonstrate that college students “binge drink” or engage in high-risk episodic drinking at high rates across the country. This drinking pattern has been associated with most of the serious health, legal, and academic problems faced by students and colleges. This study explored how living in a residential learning community affects drinking behaviors. Students living in three different residential learning communities at a large, midwestern public university were found to binge drink at significantly lower rates than did matched comparison groups who lived in another university residence hall. Further, learning community residents also suffered fewer prob-*

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*Aaron M. Brower is a professor in the School of Social Work and Integrated Liberal Studies at the University of Wisconsin-Madison, Chris M. Golde is a senior scholar at The Carnegie Foundation for the Advancement of Teaching, and Caitilyn Allen is an associate professor in plant pathology and women’s studies at the University of Wisconsin-Madison.*

*The authors gratefully acknowledge Cal Bergman, Marian Laines, Kay Reuter-Krohn, Scott Seyforth (U.W.-Madison Housing), and John Elliott (UW-Madison Office of Quality Improvement) for logistical support and constructive suggestions. This research was supported by a Matter of Degree grant from the Robert Wood Johnson Foundation (A. Brower, PI.).*

*lems arising from either their own drinking or that of others. We interpret these results as suggesting that new social norms—peer expectations about acceptable behavior—are created within the learning communities that positively affect binge drinking and its associated problems. These preliminary findings are promising indicators that student housing deliberately structured to promote community and academic involvement can reduce problem drinking behaviors, even when no explicit alcohol programming is involved.*

Episodic high-risk or “binge” drinking is reported to be rampant on many college campuses and is strongly associated with virtually all negative student behaviors, including interpersonal violence, poor academic performances, negative health outcomes, and death (Malloy, 1994; Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994; Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee, 1998). Traditional alcohol awareness and education programs, even those that are sophisticated in their message and presentation, have little effect on this problem (Wechsler, Kelley, Weitzman, SanGiovanni, & Seibring, 2000). This study explores the effects of living in a residential learning community (LC) on binge drinking and its consequent problems.

Describing the problematic drinking patterns of college students as “binge drinking”—defined as 5 drinks in one sitting for males and 4 drinks for females—is a source of some debate in the field (DeJong, 2000; Wechsler, 2000). Those in favor of the term claim that 5/4 drinks in one sitting is the threshold after which serious problems are likely to occur. Those who oppose it, and who favor the term “episodic high-risk drinking” to describe drinking large quantities of alcohol in a short amount of time, argue that 5/4 drinks is not an accurate threshold that leads to serious problems, and that the binge drinking definition itself does not take into account many factors that would affect the ability to metabolize alcohol (i.e., the length of time to consume 5 drinks, body weight, or whether one drinks on an empty stomach). While acknowledging its faults, we use the term “binge drinking” in this article because it remains the convenient and well-recognized shorthand for the college-drinking phenomenon studied (Wechsler & Nelson, 2001).

Education- and communication-based interventions have not proven successful in addressing binge drinking (Hingson, Berson, & Dowley, 1995). These types of interventions include the use of “negative” messages, such as informing students of the dangers of alcohol abuse and punishing alcohol use, as well as the use of “positive” messages, such as supporting abstinence or teaching how to drink in moderation. Instead, two strategies that have been productive focus on peer norms (Gomberg, Schneider, & DeJong, 2001; Perkins, Meilman, Leichtliter, Cashin, & Presley, 1999; Perkins, 1995) and on the enforcement of legal standards of behavior based on municipal ordinances (Wagenaar, Toomey, Murray, Short, Wolfson, & Jones-Webb, 1996).

Enforcing existing laws and ordinances—such as prosecuting underage drinking and enforcing occupancy capacities—is a straightforward and effective strategy to reduce binge drinking. Wagenaar et al. (1996) find that it is the consistency of enforcement that makes the difference: Students quickly learn which behaviors will and will not be tolerated by the local community. The social norms marketing approach is not quite as straightforward. This approach assumes that students overestimate the drinking rates of their peers, and then drink “up” to this overestimated norm. Then, if a marketing campaign is used to show students the actual drinking rates of their peers, students will no longer use their overestimation as their benchmark, and will drink at the more accurately perceived levels of their peers. A careful meta-analysis of social norms marketing approaches has not been done. However, the website of the National Social Norms Resource Center (<http://www.socialnorm.org/>) has compiled data from schools that have evaluated their own programs. These evaluations show that social norms marketing reduces the number of binge drinkers on a campus by an average of 26%.

Since the social norms marketing approach is based on the power of perceived peer norms to influence drinking, it does not directly change students’ environments so much as it reduces misperceptions of the environment. In contrast, residential LCs shape student behavior, in part, because they provide a *different* environment to its residents (Brower & Dettinger, 1998). Both approaches rely on the power of peer norms to shape behaviors. However, a residential LC *creates* an environment in which new behaviors and interactions flourish; the

social norms marketing approach helps students see more clearly the behavioral and interactional status quo.

As three faculty members working directly with the University of Wisconsin-Madison's residential LCs, we wondered if these communities exerted an influence on student drinking behavior. Certainly, anecdotal evidence suggested that it did. Three research questions guided our inquiry:

1. Do students living in LCs report different drinking behaviors, including when, where, why and how much they drank?
2. Do students living in LCs report different secondary effects from other students' drinking?
3. If such differences are found, how might these differences best be explained?

## Methods

Colleges and universities can create LCs that reflect specific institutional values and goals, and enhance particular aspects of students' experiences (Gabelnick, MacGregor, Matthews, & Smith, 1990; Gabelnick, Matthews, MacGregor, & Smith, 1992). The LCs used in this study match Brower and Dettinger's (1998) definition, where academic, social, and physical layout elements are woven together to guide program goals and objectives. These LCs were residentially based—they exist in three of the University of Wisconsin-Madison's residence halls—and were designed to unite students' academic and social lives by housing together students with similar interests or goals. To create common academic experiences, small classes and sections of large lecture classes were set aside specifically for residents of each LC. In addition, each community offered special programming such as guest speakers, interest groups, field trips, and opportunities to interact informally with faculty and academic staff. No special programming addressing student drinking was offered in these communities other than what is offered in all of the university residence halls (that is, an explanation of the university's alcohol violation rules).

A survey containing questions on a broad range of academic and social behaviors and attitudes was mailed to students in the middle of their second college semester as part of a large study to evaluate the effects of this institution's LCs on its residents. The survey's alcohol-related items were either adapted from the College Alcohol Survey (Wechsler et al., 1994) or were developed specifically for the larger study. The new items asked students to list locations at which they drank on campus and in the city, and asked them to list reasons why they drank or did not drink. Other portions of the survey examined academic self-efficacy (adapted from Pajares, 1996), life values (adapted from the Cooperative Institutional Research Program Freshman Survey, HERI/UCLA), expectations about college life (Brower, 1992, 1994), and the level of their high school involvement with academic and social extracurricular activities. The entire survey instrument was piloted in the previous academic year with a randomly selected sample of 50 students living in the university residence halls. Item wording and placement were refined based on the pilot data and student feedback. Students took approximately 20 minutes to complete the entire survey.

All survey respondents were first-year students, and all had come directly from high school the previous year. If they completed and returned their survey by a deadline date, respondents were entered into a lottery from which eight students received \$50 each. Budget constraints prevented us from doing any reminders or follow-up with nonrespondents. The University of Wisconsin-Madison is a research-oriented state institution with about 42,000 students, about 6,100 of who were freshmen in the year this study was conducted. Our binge drinking rates are among the highest in the nation (Wechsler, Dowdall, Maenner, Gledhill-Hoyt, & Lee, 1998).

For the larger study from which these results were drawn, we surveyed five populations: one each from the three residential LCs and two comparison groups drawn from a 1,200-student coed residence hall without any supplemental program. The surveyed groups and their response rates are described below:

- The Women in Science and Engineering Program (WISE) is a residential LC that houses 80 women who intended to major in science or engineering on two floors of an all-women residence hall

(Allen, 1999). All 60 first-year WISE women were surveyed, with 30 returning usable surveys.

- The Bradley Learning Community (BLC) housed 240 first-year men and women in their own building. 100 Bradley students were randomly selected to receive surveys; 44 returned usable surveys.
- The Chadbourne Residential College (CRC) housed in their own building 675 men and women at all academic levels, of whom about 400 are first-year students. From these first-year students, 100 were randomly selected to receive surveys, with 63 returning usable ones.
- 150 women from the comparison residence hall were selected as a matched comparison group for the WISE program. Like the WISE women surveyed, they were all first-year students who took both chemistry and math in their first semester, suggesting that they intended to major in science or engineering. Their high school grade point averages and ACT scores were similar to those of the WISE women. Seventy-eight of these women returned usable surveys.
- A random sample of 100 other first-year men and women living in the comparison residence hall were also selected to receive surveys. Of these, 47 returned usable surveys.

For the purposes of this study, students from WISE, BLC, and CRC were grouped together as LC students, while those in the two comparison groups were grouped together as non-LC students. Overall, 262 students responded to the survey, a 51.8% response rate. The response rate for the LC sample was 53% (N=137); the response rate for the comparison groups was 50% (N=125). Data were analyzed using SPSS for Windows; significance of pairwise comparisons (LC vs. non-LC) was determined by Chi-square analysis.

To help answer our third research question, and to mitigate the influence of a self-selection bias in the sample, two features were added to the study design. First, while the LCs were filled with more students selecting it first or second when compared to all of the university's residence halls, the comparison residence hall we used was itself selected because it was filled by the same proportion of students who

ranked it as their first or second choice. Second, in order to assess pre-college differences in drinking and extracurricular involvements, questions were asked in the survey about high school drinking behaviors, and the level of involvement in high school activities.

A total of 262 surveys were used in these analyses (137 LC students and 125 non-LC students). For questions that asked about college drinking habits, we excluded students who said they did not drink at all—their inclusion would have skewed results in favor of the LCs. Thus, for those questions asking students where they drank, why they drank, and the consequences resulting from their own drinking, we used surveys from 107 LC students and 113 non-LC students (excluding 30 LC and 12 non-LC students). The sample sizes in the Results Tables reflect which analyses included all students or only those who said they drank in college.

## Results

### Sample Description and Representativeness

Overall, the samples of LC and non-LC students adequately represented students on our campus. These samples only varied from the student population along one demographic feature: the survey response group was 75% women, reflecting in part the inclusion of the WISE students and their matched comparison sample. Additionally, a higher proportion of women returned surveys overall since they made up 57% of the sample from the coed groups even though these groups were drawn to include half men and half women. This compared to about 55% women in the overall student population.

The LC and non-LC samples were similar to each other. The majority of students in both groups were living in the residence hall of their first or second choice (95% for LC students and 87% for non-LC students—remember that the comparison hall was selected because of its popularity among students). Most students studied between 11 and 20 hours per week (true for 53% of the LC students and 57% of the non-LC students), with just over 25% of both groups reporting that they studied longer. The two groups did not differ in their self-reported involvement in high school activities: 92% of both the LC and non-

LC students reported being “somewhat or very involved” in high school activities.

However, the groups did differ from each other in their self-reported level of residence hall involvement and in their campus-wide involvement: More than twice as many LC students described themselves as “somewhat or very involved” in their residence hall activities (34.1% vs. 13.6%;  $p < .001$ ), more LC students participated in college community service or volunteer activities “often or very often” (23.2% vs. 14.4%;  $p < .05$ ), and more LC students participated in campus-wide student-sponsored or -led activities “often or very often” (18.2% vs. 9.6%;  $p < .01$ ). There are two possible, and not mutually exclusive, explanations for this: There are more “do-ers” among the LC students, and there is more encouragement and opportunity for co-curricular involvement in the LCs.

One additional difference between the samples of LC and non-LC students was the proportion identifying themselves as nondrinkers in college. A significantly greater proportion of LC students did not drink (22.1% vs. 9.7%;  $p < .01$ ). For this reason, as we described earlier, we excluded the nondrinkers from certain analyses. Nevertheless, we found no significant differences between the high school drinking patterns of the LC and non-LC students. Eighty-four percent of the LC students and 81% of the non-LC students said that their drinking changed upon coming to college, and 70% of the LC students and 66.1% of the non-LC students reported that they started drinking or started drinking much more when they came to college (Table 1). The absence of significant differences are important because they suggest that differences in college drinking behaviors found between the two groups are not simply a result of nondrinkers and moderate drinkers self-selecting into the LCs.

### Drinking Frequencies and Behaviors

Students living in LCs were significantly less likely to drink at all than those in the comparison group, with over twice as many LC students as non-LC students saying they had consumed alcohol only once or never since coming to college (22.1% vs. 9.7%;  $p < .01$ ). Not only were LC students less likely to drink, but they were also significantly less likely to binge drink: 37.7% of LC students reported bingeing

**Table 1**  
**Differences in Drinking Frequency and Location of**  
**Drinking between LC and non-LC Community Residents**

Survey Item	LC students (n = 137)	Non-LC students (n = 125)	X <sup>2</sup>	df
Has your drinking changed from high school to college?	84.4	80.8	.73	1
Did you start drinking, or start drinking significantly more, when you came to college?	70.0	66.1	.54	1
Have you consumed alcoholic beverages on more than one occasion since coming to college?	77.9	90.3	7.3**	1
Have you binged (5+ drinks in a row for men; 4+ for women) once or more in the last 2 weeks?	37.7	57.1	8.2**	1
When you drink, do you usually drink in someone else's room in your residence hall?	53.8 (n = 107)	69.6 (n = 113)	5.8**	1
When you drink, do you usually drink at a house party?	77.4 (n = 107)	83.0 (n = 113)	1.1	1
When you drink, do you usually drink in your own room?	48.1 (n = 107)	52.7 (n = 113)	.45	1
When you drink, do you usually drink in a fraternity or sorority?	37.7 (n = 107)	49.1 (n = 113)	2.9	1

*Note.* Values represent percentage of students answering yes.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

once or more in the past two weeks, while 57.1% of the non-LC students had binged once or more in the previous two weeks ( $p < .01$ ).

When students were asked where they drink, fewer LC students than non-LC students drank in someone else's room in their residence hall ( $p < .01$ ). Otherwise, where students lived did not influence where they drank. The location listed most often, by far, was to drink at a "house party" (at a party in another student's off-campus house or

apartment), with 80.3% of students who drank doing so at a house party. The next most frequent location for drinking was in someone else's room in their residence hall (61.9%), followed by drinking in their own room (50.5%) and drinking at a fraternity or sorority (43.6%).

We asked students why they drank when they did, asking them to check off reasons from a list. Table 2 shows that the LC students were less prone to drink as a reward for working hard ( $p < .01$ ). In other ways, however, all students reported drinking for the same reasons: to celebrate a special occasion (66.1%), to get drunk (54.6%), and when it was free or cheap (46.8%).

Overall, our students did not report drinking as a way to cope with negative feelings or situations: Only 20.2% reported drinking to get away from problems or troubles, and only 20.6% reported drinking if they had a bad day or got a bad grade.

We also asked students what influenced their decisions *not* to drink. LC students were more likely to refrain from drinking because of "peer pressure" ( $p < .01$ ), when it interfered with studying and exams ( $p < .05$ ), and if they had a date ( $p < .05$ ). These results suggest that non-drinking community norms exist within the LCs.

In other ways, the factors influencing students not to drink were similar for all students. Eighty-eight percent of all students did not drink when they thought it might interfere with studying or test performance. Furthermore, 58.7% of all students did not drink when they attended nonalcoholic events, 54.1% abstained from drinking when they socialized with others who did not drink, and 51.8% did not drink because of money concerns.

### Effects of Drinking

We asked students what happened to them as a result of their own drinking (so called "primary effects"; Wechsler, Moeykens, Davenport, Castillo, & Hansen, 1995) and that of others ("secondary effects"; Wechsler et al., 1995) during the four months preceding the survey. In general, the LC students suffered significantly fewer primary and secondary effects (Tables 3 and 4).

**Table 2**  
**Factors that Influence Why LC and non-LC Residents Drink**

Survey Item	LC students (n = 107)	Non-LC students (n = 113)	X <sup>2</sup>	df
I drink as a reward for working hard.	42.5	61.6	8.0**	1
I <u>don't</u> drink because of peer pressure.	7.5	0.09	6.1**	1
I <u>don't</u> drink if it interferes with studying or an exam.	92.5	83.9	3.8*	1
I <u>don't</u> drink if I have a date.	34.9	24.1	3.1*	1
I drink if it is a special occasion.	61.3	70.5	2.1	1
I drink to get drunk.	50.0	58.9	1.7	1
I drink if it is free or cheap.	41.5	51.8	2.3	1
I <u>don't</u> drink if I attend events where alcohol is not served.	61.3	56.3	.58	1
I <u>don't</u> drink when hanging out with people who <u>don't</u> drink.	57.5	50.9	.97	1
I <u>don't</u> drink because of money.	54.7	49.1	.69	1

*Note.* Values represent percentage of students answering yes.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 3 shows that LC students experienced the following primary effects less frequently than did non-LC students: miss or performed poorly in class ( $p < .05$ ), had a hangover ( $p < .01$ ), suffered memory loss or blackout ( $p < .05$ ), lost consciousness ( $p < .05$ ), or had been ashamed of their own behavior ( $p < .05$ ). The LC students, however, did report damaging property as a consequence of their drinking more than did the non-LC students ( $p < .01$ ).

Table 4 shows that the LC also reduced the secondary effects of binge drinking.

**Table 3**  
**The Effects of One's Own Drinking ("Primary Effects")**  
**for LC and non-LC Community Residents**

<b>Survey Item</b>	<b>LC students (n = 107)</b>	<b>Non-LC students (n = 113)</b>	<b>X<sup>2</sup></b>	<b>df</b>
I've missed or performed poorly in class.	22.6	36.6	5.1*	1
I've had a hangover.	55.7	72.3	6.6**	1
I've passed out or lost consciousness.	22.9	34.8	3.8*	1
I've had memory loss or have blacked out.	23.6	36.6	4.4*	1
I've damaged property.	8.5	0.9	7.2**	1
I've been ashamed of my own behavior.	33.0	45.0	3.3*	1

*Note.* The sample sizes reflect only those students who reported drinking in college. Values represent percentage of students answering yes.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

LC students were significantly less likely than non-LC students to have their studying or sleep disturbed because of drinking within the residence hall ( $p < .001$ ). Fewer LC students reported having to "babysit" friends who were drunk ( $p < .05$ ); fewer had been harassed or insulted ( $p < .05$ ); fewer had been affected by the behavior of guests who were drinking ( $p < .05$ ); and fewer had to deal with vomit in the hallways or bathrooms ( $p < .001$ ). In a finding with substantial safety implications, fewer than half as many LC students experienced unwanted sexual advances as a result of someone else's drinking ( $p < .001$ ).

These results create a profile that suggests that those living in an LC experienced secondary effects more similar to students from "low-binge" schools (schools with binge drinking rates in the lowest third in the national, as reported by Wechsler et al., 1998) than did students living in our other residence halls (who experienced secondary effects like those attending "high-binge" schools, or schools with binge drinking rates in the top third nationally).

**Table 4**  
**The Effects of Others' Drinking ("Secondary Effects")**  
**on LC and non-LC Community Residents**

Survey Item	LC students (n = 137)	Non-LC students (n = 125)	X <sup>2</sup>	df
I've been harassed, insulted, or humiliated.	27.6	38.7	3.4*	1
I've had to "babysit" or take care of another student.	57.9	72.5	5.7*	1
I've had my studying or sleep interrupted.	63.8	85.0	14.5***	1
I've experienced unwanted sexual advances.	15.9	36.1	13.2***	1
I've been inconvenienced by vomit in the hallways or bathroom.	42.5	83.35	43.8***	1
I've been affected by the behavior of guests who were drunk.	43.2	55.8	3.9*	1

*Note.* Values represent percentage of students answering yes.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

The secondary effects items listed in Table 5 are those that were significantly different between low- and high-binge schools in Wechsler's study. By examining these items for our students living in and not living in LCs, we found that the LC profile more closely resembles low-binge schools for each of these secondary effects except for interruptions in studying and sleeping. In short, the lower rates of drinking coupled with lower prevalence of primary and secondary effects make the LC residence halls better study environments, more pleasant, and safer for drinkers and nondrinkers alike.

## Discussion

Despite the high drinking rates on our campus, the peer culture that developed within our residential LCs significantly reduced both problem drinking behaviors and their associated consequences. LC students not only drank less, they also suffered fewer consequences from their own drinking and from the drinking of others. The LC culture

**Table 5**  
**Percent of Students who are Victims of Secondary Effects Compared to**  
**Results from Wechsler's High- vs. Low-Binge Schools**

<b>Survey Item</b>	<b>Students from High- Binge Schools</b>	<b>Students from Low- Binge Schools</b>	<b>LC students</b>	<b>Non-LC students</b>
Harassed, insulted or humiliated	36	21	27.6	38.7
Unwanted sexual advance	23	15	15.9	36.1
Serious argument or quarrel	23	14	15.7	21.7
Pushed, hit, or assaulted	11	6	8.7	9.2
Had property damaged	16	7	10.3	16.7
Had study/sleeping interrupted	71	43	63.8	85.0
Been a victim of sexual assault or date rape	1	0.6	0.8	2.5

*Note.* High- and low-binge schools were defined as having drinking rates in the top 1/3<sup>rd</sup> vs. bottom 1/3<sup>rd</sup> nationally (Wechsler, et al., 1998). All values represent percentage of students answering yes.

appeared to have such a protective effect, in fact, that it was as if those students living in them were attending universities where drinking rates were among the lowest one-third in the nation.

The LC students drank and did not drink for reasons different from the non-LC students: They did not drink to reward themselves for working hard. They were persuaded by peer pressure not to drink, and did not drink when they had dates. More of them did not drink when it interfered with their studying and exam performances.

One result was puzzling: The LC students reported more frequently that they damaged property as a result of their drinking. This was a puzzling result given that the Office of University Housing did not report that more damage was done in the LCs than in other residence

halls. University Housing records any property damage, large or small, on “incident cards” turned in by their student or professional staff. A frequency count of the year’s worth of incident cards found that less property damage was reported to have taken within the LCs than in their other halls.

It might have been the case that LC students did not, in fact, damage property in their own residence halls, but did so outside of them. We also did not ask students to report what they damaged, and so it might also have been the case that the LC students self-reported minor incidents that the non-LC students did not report (tearing down postings in the hallways, for instance). Finally, it might have been the case that the student and professional staff within Housing underreported these incidents in the LCs—maybe they wanted them to “look good” or did not want to get their residents in “official” trouble. We are planning to investigate this finding further in a subsequent study.

Overall, then, one might say that the effect of living in an LC is that students behaved towards each other and their residence hall more like they would towards a home than a hotel. Metaphorically, they did not strew their towels on the floor, assuming someone else would pick up after them. They acted towards one another more “neighborly” and less like coincidental and anonymous boarders.

These results are certainly promising; however, we wish to reiterate that we view them as preliminary. Survey response rates were marginally acceptable in this study, and along with the low total numbers in the samples themselves, statistical power is limited, as is the generalizability of the results. And while the survey developed for this study was itself based on well-researched instruments, it does need to be considered a new survey that will benefit from further refinement.

In addition, self-selection into the LCs remains a threat to the validity of the findings. To the extent that we were able to assess self-selection bias, the LC students did not differ from the non-LC students in ways that might have influenced these results. Most notably, LC and non-LC student did not differ in their self-reported high school drinking and in their levels of high school extracurricular and co-curricular involvements. But we were not able to measure all factors that might have made a difference. For instance, even though we asked students

about their high school activity levels, it is possible that the LC students were specifically looking to maintain this activity level in college. In fact, our institution advertises the LCs as places that support high student involvement, so it makes sense that they would attract students who want to become involved in the life of the residence hall.

At the same time, of course, it is not a given that students who are active and involved with each other will necessarily drink less or be more concerned about how their drinking affects others. Fraternities are an example of communities that foster both high student involvement and high rates of drinking (Wechsler, Kuh, & Davenport, 1996).

Despite our inability to rule out the effects of self-selection on these results, they do have face validity because they are consistent with other known prosocial and academic success outcomes of LCs (Alexander, Penberthy, McIntosh, & Denton, 1996; Allen, 1999; Brower & Dettinger, 1998). The results presented here are the first that relate LCs directly to college binge drinking. It is reasonable to assume that what is making a difference here is that the LCs promote a sense of community where drinking is not at the center of student-to-student interaction. These results will, of course, need to be replicated using a larger sample and with a design that addresses the self-selection bias in other ways.

Apart from the direct effect of the residential LCs on drinking behaviors, more general conclusions stood out from our data based on the reasons students gave for why they chose not to drink. First, over 88% of all students reported not drinking when they felt that it would interfere with their studying and exams. This is consistent with other studies that find enhanced academic expectations mediate binge drinking (Wechsler et al., 2000). Along these lines, the faculty senate at our own institution is considering increasing the number of courses offered on Fridays, hoping this will help students realize that the weekend does not begin on Thursday nights.

Celebrating a special occasion was the reason about two-thirds of our students gave for why they drank, and over half of them drank to reward themselves for hard work. Over half also drank simply to get drunk. But few students drank to escape problems or to cope with negative feelings or situations. These results suggest that our students

see drinking as recreation and celebration rather than as a crutch to carry them over rough spots, or as a reaction to stress in their lives.

Additionally, over half of all students reported not drinking when attending nonalcohol events and when they were out with others who did not drink. These results should provide encouragement for institutions that are developing alcohol-free programming and activities that actively interfere with drinking. Again, using our own institution as an example, our Student Union has begun to revive showing first-run and classic movies late at night on the weekends. They have also been working with dance clubs to promote college-student-only dance nights (because one complaint about alcohol-free campus events is that they become magnets for high school students). Local taverns have also begun experimenting with the promotion of events where, while not explicitly alcohol-free, by their nature moderate the amount of alcohol patrons consume. For example, campus pool halls find that their patrons do not over drink since one cannot play pool well when one is intoxicated. One restaurant has begun showing classic movies on a big-screen TV, and they have found that patrons interested in watching the movie will admonish other patrons themselves if they become too noisy.

Almost 52% of students said that they chose not to drink when money was a concern, while almost 47% chose to drink when it was free or cheap. These findings mirror research that finds that the amount college students drink is very sensitive to alcohol price (Chaloupka, Grossman, & Saffer, 1998). Based on the price-sensitivity research, our city's Alcohol License Review Board has been persuaded to propose local legislation banning drink specials.

One final general finding is worth noting: Over 80% of all students drink at house parties. From anecdotal information and campus police reports, house parties generate a lot of the problems that result from drinking. They should be a central concern for colleges and college communities. We could find no studies, however, that reported specifically on how an institution was addressing the drinking of its students at house parties.

One might be able to extrapolate from our results and apply them to house parties. That is, if students living in LCs drink less and treat

each other better because they care more for each other and respect their common space, then it is possible that negative effects of house parties might be mediated if the house party hosts cared more about how their party might effect their own neighbors. In fact, one of our University Health Service projects is working with the heavy student rental neighborhoods to enhance their sense of neighborhood and to decrease students' anonymity. At a neighborhood forum held last year, students reported that they were much less likely to let their house parties get out of control when they cared about what their neighbors thought. However, more careful study is required in this area.

## Conclusion

We observed a significant decrease in alcohol abuse and its associated problems among students in planned residential LCs. The factor that reduced problem drinking behaviors in our sample appeared to be the LC's "culture:" the peer norms and positive expectations about student-to-student interaction and responsibility that developed within the community for residents' behaviors, *even when there was no explicit programming to counter alcohol use or misuse*. In addition to social norms marketing and enforcement strategies, these results suggest a productive third strategy to address problem drinking in college.

Residential LCs help students feel connected to each other and to their institution without relying on drinking as the least common denominator. As planned communities, they create connections based on an institution's goals and values. In contrast, today's college students frequently complain that their lives are splintered into a classroom life and an out-of-class life. Especially at very large institutions, students often feel lonely and insignificant within the college or university, and may, in fact, only feel connected to the campus through a student culture that pits them against the "other" of the college administration and faculty (Horowitz, 1987). Coupled with the attractions of an active and well-publicized culture of alcohol abuse entrenched on many campuses, it is not surprising that students "bond" through drinking (Bruffee, 1999). In contrast, residential LCs invite students into a positive alternative culture that is socially satisfying, academically supportive, and one that encourages healthy decisions.

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