

11-12-2014

## Perceptions and Practices of Student Binge Drinking: An Observational Study of Residential College Students

Samantha S. Clinkinbeard

*University of Nebraska at Omaha, [sclinkinbeard@unomaha.edu](mailto:sclinkinbeard@unomaha.edu)*

Michael A. Johnson

*University of Nebraska at Omaha*

Follow this and additional works at: <https://digitalcommons.unomaha.edu/criminaljusticefacpub>



Part of the [Criminology Commons](#)

Please take our feedback survey at: [https://unomaha.az1.qualtrics.com/jfe/form/SV\\_8cchtFmpDyGfBLE](https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE)

---

### Recommended Citation

Clinkinbeard, S.S. & Johnson, M.A. (2014). Perceptions and practices of student binge drinking: An observational study of residential college student. *Journal of Education*, 43(4). <https://doi.org/10.2190/DE.43.4.a>

This Article is brought to you for free and open access by the School of Criminology and Criminal Justice at DigitalCommons@UNO. It has been accepted for inclusion in Criminology and Criminal Justice Faculty Publications by an authorized administrator of DigitalCommons@UNO. For more information, please contact [unodigitalcommons@unomaha.edu](mailto:unodigitalcommons@unomaha.edu).

# PERCEPTIONS AND PRACTICES OF STUDENT BINGE DRINKING: AN OBSERVATIONAL STUDY OF RESIDENTIAL COLLEGE STUDENTS\*

SAMANTHA S. CLINKINBEARD, PH.D. MICHAEL A. JOHNSON, M.A.

*University of Nebraska at Omaha*

## **ABSTRACT**

Professionals have debated the use of the term binge drinking over the past couple of decades, yet little attention has been paid to college student perceptions. We explored how students at one university qualitatively defined binge drinking; whether their own definitions coincided with those adopted by researchers; and whether students' own definitions varied according to their behavior. The most common definition provided by students included a description of the consumption of a large, non-specific, amount of alcohol. Only half of the students who, by standard definition, participated in binge drinking in the previous 30 days actually identified their behavior as such. Finally, binge drinkers were more likely to define binge drinking in an extreme manner such that it results in vomiting or blacking out.

\*Partial funding for this research was provided by the LiveWise Coalition and the Strategic Prevention Framework State Incentive Grant.

The term binge drinking, generally defined as four or more drinks on one occasion for women or five or more for men, emerged in the 1990s as part of research conducted on college student drinking (Wechsler, Dowdall, Davenport, & Rimm, 1995; Wechsler & Isaac, 1992). Since that time, the United States has determined that binge drinking in college represents an important public health problem and has spent millions of dollars trying to control the problem (CDC, 2012; Wechsler, Lee, Kuo, Seilbring, Nelson, & Lee, 2002; Wechsler & Nelson, 2001). Although people of all ages, races, and genders participate in binge drinking, it is especially popular among college students. As a group, college students participate in binge drinking at higher rates than their same-age peers who are not in college (Johnston, O'Malley, Bachman, & Schulenberg, 2007). This is of special interest because those students who attend college were actually less likely than their peers to drink in high school, a pattern that reverses itself upon matriculation (Johnston et al., 2007; Johnston, O'Malley, Bachman, & Schulenberg, 2012). Further, campus life may be especially conducive to drinking as those students living on campus and those involved in Greek organizations are more likely than commuters and those not involved in fraternities or sororities to binge drink (Chaloupka & Wechsler, 1996; McCabe, Schulenberg, Johnston, O'Malley, Bachman, & Kloska, 2005). Despite significant financial investments in prevention and intervention, the level of binge drinking among college students has remained fairly stable over the last two decades, hovering around 40% from 1993 onward with a modest drop to about 36% in 2011 (Johnston et al., 2007, 2012; Wechsler et al., 2002).

The primary concerns surrounding binge drinking are the number and severity of different types of negative consequences often associated with the behavior. Persons who binge drink are more likely to use other types of drugs, more likely to be involved in alcohol-related crashes, and less likely to effectively practice safe sex (CDC, 2012; Hingson, 2010; Ingersoll, Ceperich, Nettleman, & Johnson, 2008; Jones, Oeltmann, Wilson, Brener, & Hill, 2001). Binge drinking in college has been negatively associated with sleep, academic performance, and retention (DeBerard, Spielmans, & Julka, 2004; Singleton Jr. & Wolfson, 2009). Most people who drive while impaired are binge drinkers, and campuses with large proportions of binge drinkers are highly likely to report other problems on campus (e.g., high rates of physical and sexual assault, property damage, and reports of disturbed sleeping or studying) (CDC, 2012; Wechsler, et al., 1995; Wechsler, Lee, Kuo, & Lee, 2000). Heavier drinkers are more likely to experience unwanted sexual contacts and rape (McCauley, Calhoun, & Gidycz, 2010; Palmer, McMahon, Rounsaville, & Ball, 2010). While as many as 75-85% of college students report having used at least some alcohol in the last year, many do not suffer negative consequences, instead the majority of alcohol-associated consequences reported on surveys of college students can be accounted for by binge drinkers (Bennett, Miller, & Woodall, 1999; Johnston et al., 2007, 2012; Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994).

Despite significant inquiry into binge drinking and its consequences in the last couple of decades, little research has focused specifically on how college students think about binge drinking. This is surprising given that social norms campaigns, focused solely on student perceptions, are among the most popular prevention approaches being used on college campuses (NIAAA, 2007). In general, social norms campaigns

are based on the premise that students tend to overestimate the extent to which other students drink and those misperceptions impact their own behavior (DeJong, 2010; Haines, 1996; Perkins, 2002). Although these campaigns do not necessarily attack binge drinking perceptions directly, we hypothesize that the term is recognized by college students and is part of the common vernacular surrounding alcohol use. Increasing our understanding about the ways students talk about and define alcohol use is important for continuing to improve campus prevention activities and techniques. Similar to the ways in which overestimating how much others are drinking can influence behavior, perceptions about what actually constitutes heavy or risky drinking (in this case binge drinking specifically) also may influence student behavior. In the current study we are interested in taking a closer look at the way college students qualitatively define binge drinking, how closely their definitions align (or not) with those of researchers and practitioners, and how their definitions may relate to their own drinking.

## **DEFINING BINGE DRINKING**

### **College Students**

Though the research into student definitions is limited, that which does exist suggests wide variation in student's perceptions of the binge drinking term. The handfuls of studies that have explored student perceptions of binge drinking include samples from the United States and Europe (Bonar, Young, Hoffmann, Gumber, Cummings, Pavlick, et al., 2012; Cooke, French, & Sniehotta, 2010; Gill & O'May, 2006; Wechsler & Kuo, 2000). These studies suggest that students tend to overestimate the number of drinks which constitute binge drinking and that students who participate in heavier drinking give more extreme estimates of what constitutes binge drinking (Bonar et al., 2012; Cooke et al., 2010; Wechsler & Kuo, 2000). Though most of the research has focused on the number of drinks students use to define binge drinking, those that have focused more on the content seem to find that students have a general sense that binge drinking involves a large amount of alcohol (Bonar et al., 2012; Cooke et al., 2010). Although we are still learning about how students define binge drinking, there has been considerable debate and discussion among researchers and practitioners regarding the definition of binge drinking.

### **Researchers, Practitioners, and the Media**

The term *binge drinking* has become widely used in research and prevention programming to refer to heavy drinking behaviors by college students. As *heavy drinking* is ambiguous, defining what "binge drinking" means has been a process surrounded by considerable debate (Cooke et al., 2010; DeJong, 2001). Much of that debate has revolved around tailoring the definition to capture drinkers who are at an increased risk for the health-related problems associated with heavy drinking (i.e., depression, risky sexual behavior, etc.), while avoiding a definition that is so broad it encompasses casual drinkers.

The term "binge drinking" was initially introduced in prevention literature by a study of Massachusetts colleges intended to describe college student alcohol use. Researchers linked the consumption of large amounts of alcohol on a single occasion

with an increased risk for negative health outcomes (Wechsler et al., 1995; Wechsler & Isaac, 1992). These studies identified five alcoholic beverages as a break point for the risk of negative health consequences (e.g., forgetting actions, unplanned sex, injury), and developed a definition for binge drinking that included men and women who consumed five or more drinks in a row. Researchers were quick to note gender differences owing to “women’s lower rates of gastric metabolism of alcohol,” leading to a new, separate standard for women (i.e., 4+ drinks in a row; Wechsler et al., 1995).

One issue of concern was that early definitions classified nearly half of college students as binge drinkers (Wechsler et al., 2000). A number of scholars argued that the early 5/4 definition was too broad in that it failed to differentiate youth who consumed alcohol over many hours versus those who consumed alcohol in a short period of time—the latter of whom researchers argued were at a much higher risk of health-related problems (Carey, 2001; DeJong, 2001). Further, some research found that a large percentage of students who consumed five or more drinks in a row over an extended period of time failed to reach blood alcohol concentrations (BACs) associated with mental and physical impairment (Lange & Voas, 2001; Perkins, DeJong, & Linkenbach, 2001). These findings and others led to further refinement of the definition to 5+/4+ alcoholic beverages within a 2-hour time period (Cooke et al., 2010; Cranford, McCabe, & Boyd, 2006).

At the same time researchers were debating the appropriate definition of binge drinking, the term itself was popularized in the broader media. Two investigations of newspaper mentions of binge drinking indicated that the term became much more common in the late 1990s, and its representation in this form of media stayed relatively stable through the first decade of the 21st century (Bonar & Rosenberg, 2010; Wechsler & Nelson, 2001). Beyond newspaper reporting, the term is often used on television and Internet reporting as well (Yanovitzky & Stryker, 2001). Representations of heavy or binge drinking are popular in Hollywood, and recent research suggests that social media may also be an outlet in which binge drinking is shared among friends (Hanewinkel, Sargent, Poelen, Scholte, Florek, Sweeting, et al., 2012; Reiner, Susanne, & James, 2007; Ridout, Campbell, & Ellis, 2012). Thus, even if students are not directly targeted by campus prevention campaigns they are likely to be getting some exposure to binge drinking definitions and perceptions via popular, news, and social media.

## **CURRENT STUDY**

The standard definition of binge drinking has been refined over the last couple of decades as researchers and practitioners have debated its definition and purpose. During the same timeframe, the term was popularized in the media and now has become part of the language of drinking. There is still much to learn about how students perceive and understand binge drinking (Segrist & Pettibone, 2009). Although a few studies have looked specifically at student definitions of binge drinking (Cooke et al., 2010; Wechsler & Kuo, 2000), most have either asked students to estimate the “number” of drinks that qualifies as binge drinking or to choose from a list. Understanding the different ways that students interpret and define binge drinking and whether or not they categorize their own behavior as such is important for prevention planning, especially when trying to design relevant messaging for college students.

In the current study, we address the following four questions:

1. Do students have a definition of binge drinking? Due to the widespread usage of the binge drinking terminology in the news, popular media, and on social networking sites, we expected that even without giving students a multiple choice option that they would be able to provide a definition of binge drinking.
2. How do students differ in their definitions of binge drinking? To what extent do students' own qualitative definitions coincide with the standard definition of binge drinking? For the purposes of this research, we used the 5/4 definition (i.e., 5+ alcoholic beverages for males or 4+ for females within a couple of hours) as the "standard" definition. Despite the criticisms over the past 2 decades, recent research suggests that this definition is still the most used by researchers and evaluators (Courtney & Polich, 2009; Cranford et al., 2006).
3. Do students identify, or categorize, their own behavior as binge drinking?
4. Are there individual differences in student definitions of binge drinking based on consumption of alcohol? We were interested in exploring whether those who participated in heavier drinking were more extreme in their definitions. We add to the previous literature in this area by asking students to provide qualitative definitions of binge drinking and to report whether or not their own behavior qualifies as binge drinking.

## **METHODS**

### **Data and Sample**

The data for this study were initially collected for the purposes of a contract evaluation related to the prevention/reduction of binge drinking on campus.<sup>1</sup> The data was collected at a medium-sized metropolitan university in a large Mid- western city. Enrollment at the university is approximately 15,000 students (82% undergraduate). Approximately 2,000 students live on campus in apartment-style dorms. The sampling frame was a listing of all residential suite numbers in each of four dormitories on campus. The sampling frame was divided into male and female lists so that the final sample could be stratified to ensure equal representation. Probability samples were drawn from each list using the random sample procedure in SPSS Version 20. Each suite contained approximately four students, all of whom were invited to participate, thus the final sample was a random cluster sample. Packets of four surveys, including a pre-labeled envelope and survey description sheet, were prepared for the students in each suite and then distributed in the spring by a group of student volunteers and resident assistants. Volunteers were instructed to briefly explain the purpose of the survey, tell residents that the survey was voluntary and confidential, and explain how to return the survey to the proctor or through university mail. The volunteers visited each suite up to three times until as many surveys were collected as possible. A pizza party was also held for

<sup>1</sup>It should be noted that although a variety of prevention activities were in place during data collection, the activities were not necessarily aimed at increasing knowledge of the 5/4 definition of binge drinking. In fact, the social norms/marketing-related messages utilized did not even use the term "binge" drinking.

respondents as an incentive for participation. The university's Institutional Review Board approved the study and all those invited had the option to decline participation. The response rate was approximately 46%.<sup>2</sup>

The sample includes 272 students (48.3% female), with ages ranging from 18 to 25 ( $M = 19.85$ ,  $SD = 1.38$ ).<sup>3</sup> The majority of respondents were under the legal drinking age of 21 (72.6%). Respondents were predominantly White/Caucasian (81%) followed by Asian (9%), Black/African American (5%), Native American (1%), Native Hawaiian or Pacific Islander (< 1%), Alaskan Native (< 1%), or other race (4%). Approximately 4% of the students reported they were of Hispanic or Latino ethnicity. A majority of the students were first (47%) and second year (28%) undergraduates and approximately 11% of the sample reported being in either a fraternity or a sorority. With the exception of being younger (i.e., on-campus residents are disproportionately freshman and sophomores), the demographics of the sample were very similar to the demographics of the larger student population.

## Measures

The survey instrument utilized in this study covered a wide range of topics including alcohol use and perceptions, self-control, social support, normative perceptions, and basic demographics. The items specific to this investigation were those that focused on definitions of binge drinking. Items for the survey were drawn from several standard survey instruments such as the American College Health Assessment and the Harvard Alcohol Study.<sup>4</sup>

### *Binge Drinking*

We approached the measure of binge drinking in several ways allowing us to make comparisons between different indicators. Each approach is detailed below. *Standard 5/4 binge definition:* Though there is some controversy surrounding the standard measure of binge drinking, we applied a definition that is supported by a number of federal agencies and is most often used on national surveys (Courtney & Polich, 2009; Wechsler & Kuo, 2000). Binge drinking was defined as consuming four or more alcoholic drinks in a row (i.e., within a couple of hours) for females and consuming five or more alcoholic drinks in a row for males. Specifically, students were asked: "During the past 30 days, on how many days did you have four or more alcoholic beverages in a row, that is, within a couple of hours?" The same question was repeated for five or more drinks. The first was used for the female standard and the second for

<sup>2</sup>A number of factors make it likely that the response rates were actually slightly higher than reported here. For example, some suites had fewer than four students and a few students were excluded from the sample because they were underage (state law requires students to be 19 in order to participate without parental consent). Since it is unknown how many surveys were not completed for these reasons, however, the response rates are not reflective.

<sup>3</sup>Three students were dropped from the final sample because they were in their late 20s or early 30s. We dropped the older students because we did not have enough to adequately represent this group and also because the majority of the research we have reviewed on college student binge drinking focuses on younger, traditional college students.

<sup>4</sup>Full survey available upon request from the corresponding author.

the male standard. Respondents were given seven options ranging from 0 days to daily usage. For the purposes of this study, we were primarily interested in whether, according to various definitions, students had binge drank in the last 30 days and thus this variable was subsequently coded (0 = no binge drinking past 30 days, 1 = binge drank on one or more occasions past 30 days).

*Student binge categorization:* In addition to exploring whether students had participated in drinking at the level of the 5/4 standard definition we were also interested in whether students actually categorized their own behavior as “binge drinking.” First, we asked students: “Would you consider yourself a binge drinker?” (0 = no, 1 = yes). Later in the same survey, we asked participants to report “How often in the last 30 days have you participated in binge drinking behaviors?” (0 = never, 1 = 1-2 times, 2 = 3-4 times, 3 = 5+ times). This variable was subsequently coded (0 = no binge drinking past 30 days, 1 = binge drank on one or more occasions past 30 days). It should be noted that for neither of the above questions were students provided with a definition of binge drinking, instead we were asking them to report their participation in binge drinking based on whatever definition they themselves held. This approach allowed us to see whether they defined their behavior in a fashion consistent with the definition adopted by practitioners and researchers.

*Student qualitative binge definition:* Previous studies exploring student perceptions of the definition of binge drinking have often given students a choice of definitions from which to choose or have asked students to provide a number (i.e., how many drinks is considered binge drinking). We asked students to give us their own qualitative definition of binge drinking. Specifically, students were asked the following: “Binge Drinking is a term often discussed in the media. If you were to describe what it means to binge drink, how would you describe it?” Two researchers coded answers independently.

All responses were compiled into a list and then examined for commonalities, differences, concepts, and themes (Kelle, 1997; Seidel & Kelle, 1995). Qualitative analysis began with the researchers using line-by-line coding of each response to uncover the key concepts which emerged from the data itself. For example, a response which indicated that binge drinking was “drinking enough to black out one night a week,” received codes for “blacking out” and “weekly heavy drinking.”

After the initial round of coding, all line-by-line codes were compared to determine what commonalities existed and then categorized into broader themes (e.g. “excessive drinking” or “drinking to get drunk”). All of the responses were then re-examined and coded into as many of the broader themes as possible. This round of coding was conducted separately by both researchers and resulted in complete agreement on 78% of cases, and partial agreement on 90% of cases.<sup>5</sup> The two researchers discussed discrepancies and reached ultimate agreement on 100% of the cases analyzed. The most popular coding categories with relevant examples are shown in Table 1.

<sup>5</sup>The coding scheme was such that definitions could fall into more than one category and thus partial agreement happened when coders agreed on some, but not all, categories for a particular case, whereas complete agreement meant that the coders agreed on all categories.





Table 1. Themes Represented in Student Definitions of Binge Drinking ( $n = 272$ )

Theme	<i>N</i> (%) mentioning this theme	Examples of quotes illustrating theme
Excessive drinking	100 (37%)	Drinking <i>a lot of alcohol</i> all at once
Heavy drinking within a short time period	65 (24%)	Drinking <i>large amounts</i> in a <i>short period of time</i> .
Drinking to get “drunk”	43 (16%)	Drinking with intent to <i>get drunk</i> .
Drinking with physical or cognitive consequences	41 (15%)	Drinking to the point of <i>throwing up or blacking out</i> .
Repeated or frequent drinking	29 (11%)	Drinking too much <i>everyday</i> .
Drinking heavily over an extended time period (clinical)	02 (01%)	Drinking for <i>long periods of time</i> .

**Note:** Coding categories were not mutually exclusive and thus a student’s definition could contain elements that allowed it to be categorized under more than one theme.

## Analysis

Presentation and comparison of descriptive statistics were the primary means of analysis used to explore the research questions of interest. Table 2 provides information about which binge drinking definitions and relevant indicators were utilized for each research question.

## RESULTS

### Do Students Have a Qualitative Definition of Binge Drinking?

The first step in evaluating the perception of binge drinking among college students was to determine if students could provide a definition for binge drinking. When asked to define “binge drinking,” 82% of students surveyed provided some form of a definition. Less than 3% of the students surveyed responded that they “did not know” what the term meant and approximately 15% of students left the question blank. This suggests that the majority of students recognize the term “binge drinking” and have formed their own definition.

### How Do Students Differ in Their Definitions of Binge Drinking? To What Extent Do Students’ Own Definitions Coincide with the Standard 5/4 Definition of Binge Drinking?

In order to answer the second research question, we examined the qualitative definitions provided by students. Table 1 provides descriptive statistics for the most common themes found among student definitions. Slightly over one-third (37%) of students generated definitions that fell under the category of *excessive drinking*, which



Table 2. Research Questions and Relevant Indicators

Research Question	Binge Measure	Survey Items Used	Analytic Indicators
Do students have a definition of binge drinking?	Student qualitative definition	"Binge Drinking is a term often discussed in the media. If you were to describe what it means to binge drink, how would you describe it?"	% of students who provided a definition.
How do students define binge drinking? To what extent do students' own definitions coincide with the standard 5/4 definition of binge drinking?	Student qualitative definition	"Binge Drinking is a term often discussed in the media. If you were to describe what it means to binge drink, how would you describe it?"	% of definitions in each qualitative category  % of qualitative definitions that have elements of the standard 5/4 definition (and/or other definitions in the literature)
Do students identify, or categorize, their own behavior as binge drinking? How does that compare to their behavior according to the standard 5/4 definition?	Standard 5/4 definition	"During the past 30 days, on how many days did you have <b>four/five</b> or more alcoholic beverages in a row, that is, within a couple of hours?" (females = four; males = five)	% who considered themselves binge drinkers  % who reported participating in binge drinking
	Student binge categorization	"Would you consider yourself a binge drinker?"  "How often in the last 30 days have you participated in binge drinking behaviors?"	Comparison (chi-square) of student binge categorizations to standard 5/4 definition (i.e., do those who are categorized as binge drinkers under standard 5/4 definition actually consider themselves to be binge drinkers?)
What is the relationship between students' own drinking behaviors and their qualitative definitions of binge drinking?	Standard 5/4 definition	"During the past 30 days, on how many days did you have <b>four/five</b> or more alcoholic beverages in a row, that is, within a couple of hours?" (females = four; males = five)	Comparison (chi-square) of the qualitative definitions generated by binge and non-binge drinkers (as characterized by the standard 5/4 definition)
	Student qualitative definition	"Binge Drinking is a term often discussed in the media. If you were to describe what it means to binge drink, how would you describe it?"	

meant that students defined binge drinking simply as “drinking a lot” or “drinking large amounts of alcohol.” Nearly a quarter (24%) of students defined binge drinking in a way that could be categorized as *heavy drinking in a short period of time*. This is the category that most closely matches the standard 5/4 definition of binge drinking, though clearly it only very “loosely” coincides. Although very few students (7.63%) actually identified a certain number of drinks or a specific period of time, these definitions meet the spirit of the standard 5/4 definition (too much alcohol over a short time period). The last three themes focused on unique aspects associated with heavy drinking.

Approximately 16% of students identified binge drinking as *drinking to get drunk* and 15% of students classified binge drinking as the type that results in some sort of *physical or cognitive consequence* (e.g., loss of motor function, blacking out, vomiting, etc.). Eleven percent of students surveyed identified binge drinking as *repeated or frequent drinking* behavior such as drinking “daily” or “often.” Finally, although it was not a popular category, for purposes of comparison to previous literature very few students (<1%) generated a description similar to the clinical definition of binge drinking (i.e., extended period of heavy drinking).

There was little overall difference in the themes across gender. Both males and females were most likely to simply define binge drinking as “drinking a lot.” Females were slightly more likely to use criteria that loosely mimicked the official definition, and males were more likely to utilize criteria such as “getting drunk” or “blacking out.” Yet, these differences were not significant and suggested that both males and females define binge drinking along the same overall themes.

### **Do Students Identify, or Categorize, Their Own Behavior as Binge Drinking?**

To address the third research question, we compared student reports of binge drinking (as they defined it themselves) to reports of consuming 5+/4+ drinks in a couple of hours in the past 30 days (standard 5/4 definition of binge drinking). Figure 1 shows the disparity between students who officially binge drink (consumed 5+/4+ alcoholic beverages in less than 2 hours), students who believe they have engaged in “binge drinking” at some point in the past month, and students who consider themselves “binge drinkers.” While 37% of the students sampled met the standard 5/4 definition of binge drinking at least once in the past 30 days, only 22% reported that they had participated in binge drinking, according to their own definition, which was significantly less than expected,  $\chi^2(1, N = 264) = 92.13, p = .00, V = 0.59$ . Further, only 9% of participants said yes when asked if they considered themselves a “binge drinker,” which again was significantly less than expected considering nearly 40% met the standard 5/4 definition of binge drinking,  $\chi^2(1, N = 266) = 27.70, p = .00, V = 0.32$ . Even when relying solely on students’ own definitions, discrepancies existed. That is, even if students admitted to having binge drank in the last 30 days, they didn’t necessarily consider themselves binge drinkers,  $\chi^2(1, N = 265) = 73.45, p = .00, V = .53$ . There were no significant differences by gender. Although the results discussed here are from data collected in 2012, the same questions had been asked on a survey administered in 2011 and the same pattern emerged in that data as well.

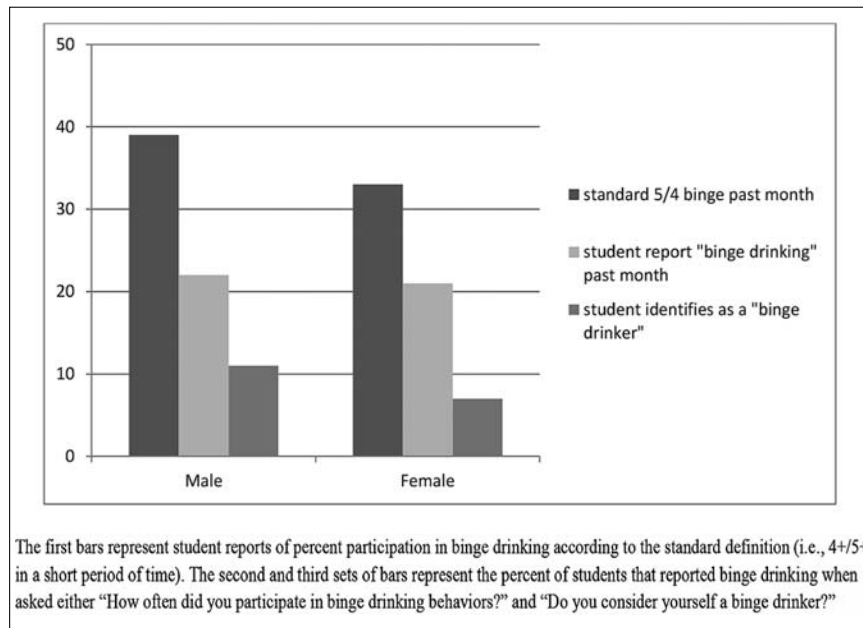


Figure 1. Reports of binge drinking for standard and self-definitions by gender.

### Are There Individual Differences in Students Definitions Based on Consumption of Alcohol?

As mentioned above, the majority of students do not identify themselves as "binge drinkers," even if they report engaging in binge drinking behaviors. To further understand this disconnect between behavior and perception, we evaluated how the qualitative definitions differed between students who met the standard 5/4 definition of binge drinking within the past 30 days and students who did not report behavior consistent with that definition. Particularly, we were interested in how one's own drinking behavior may shape their qualitative definition of binge drinking. Table 3 presents the major themes found within the student qualitative definitions of binge drinking broken down by whether students engaged in behaviors defined as "binge drinking" under the standard 5/4 definition.

In general, there were not major differences in the extent to which binge drinkers and non-binge drinkers (as defined by standard 5/4 definition) generated definitions involving the top five themes. Non-binge drinkers were slightly more likely to define binge drinking as excessive drinking, heavy drinking in a short period of time, drinking to get drunk, and repeated or frequent drinking, though none of these differences were significant. The only significant difference detected was that students who had reported consuming 5/4 drinks in a short period of time at least once in the past 30 days were more likely than non-binge drinkers to define binge drinking as a behavior that results in some form of physical or cognitive consequence (e.g., vomiting or passing out),  $\chi^2(1, N = 267) = 3.58, p = .05, V = .12$ .

Table 3. Student Definitions in Relation to Their Reported Drinking Behaviors

Definition Theme	Non-Binge Drinkers ( <i>n</i> = 171)	Binge Drinkers ( <i>n</i> = 98)
Excessive Drinking	35 (36%)	64 (38%)
Heavy drinking over a short period of time	44 (26%)	20 (20%)
Drinking to get drunk	30 (18%)	11 (11%)
Drinking with physical or cognitive consequences*	20 (12%)	20 (20%)
Repeated or frequent drinking	21 (12%)	8 (8%)

**Note:** Coding categories were not mutually exclusive and thus a student's definition could contain elements that allowed it to be categorized under more than one theme.

\* $p \leq .05$ .

## DISCUSSION

Binge drinking is a term that gained popularity among researchers in the 1990s and has since been popularized by the media and become part of the language surrounding the culture of drinking (Bonar & Rosenberg, 2010; Campo, Askelson, Mastin, & Slonske, 2009). Thus far, however, relatively little attention has been paid to student perceptions of heavy drinking, especially to their own definitions of binge drinking. In addressing student perceptions, we first asked whether students have a qualitative definition of binge drinking and found that, yes, most students (82%) had definitions and were able to provide one when surveyed. Although it is clear that students have qualitative definitions, a study by Bonar and colleagues (2012) indicated that there was not a clear consensus among students with regard to what influenced their own definitions. It may be that these definitions are a result of the combined effects of two decades of research, education, and media attention (both popular and news) surrounding binge drinking. Although the current study cannot speak to whether students know from where their definitions originate, it does provide evidence that the term binge drinking has gained at least a superficial level of awareness among college students in our sample.

The question of whether students' qualitative definitions match those of researchers and evaluators, however, is a more complex one. For the current study we adopted the standard 5/4 definition (i.e., 4 or more drinks for women or 5 or more drinks for men in a short period of time) for comparison purposes, as it is among the most commonly used (Courtney & Polich, 2009; Cranford et al., 2006). When asked to provide a qualitative definition, only a handful of students (7.63%) provided something that was very close to the 5/4 definition, meaning that they specified a certain number of drinks in a short timeframe. Although most students did not "quantify" their definitions, approximately 24% of students provided a definition that meshed with the spirit of the standard 5/4 definition in that they suggested binge drinking consisted of drinking a

large to moderate amount (usually unspecified amount) of alcohol in a short period of time. The most often cited definitions (37%) included a general description of non-specific “excessive” drinking which was similar to the most popular student-generated definition in the study by Bonar and colleagues (51% in their sample; 2012). Although our primary focus for comparison was the 5/4 definition, another common definition in the literature is the clinical definition which describes a binge as an extended period (e.g., 2+ days) of abusive drinking. It should be noted that only two students (< 1%) generated definitions that were, in spirit, consistent with this definition. So, even though historically this may be the more recognized definition among practitioners (DeJong, 2001; Schuckit, 1998), it is clearly not the most recognized definition among this student population.

In addition to asking students for their specific definitions of binge drinking, we also wanted to see if they identified their own behavior in a way that is consistent with the standard 5/4 definition of binge drinking. We found that although 37% of our sample met the standard 5/4 definition of binge drinking in the past month, only 22% reported binge drinking in the past month when asked directly (i.e., have you participated in binge drinking in the past month) and even fewer (9%) reported that they consider themselves to be binge drinkers. Focusing only on those participants that, by standard 5/4 definition, had participated in binge drinking in the past month we found that only 21% of them said they considered themselves binge drinkers and just over half (55%) said that they did indeed binge drink in the past month. This suggests that many students who are, in fact, binge drinking do not necessarily recognize their behavior as such. Further, heavier drinkers may be more likely to define binge drinking in such a way that their own behavior can be excluded from it (i.e., “It is worse than what I do”). Specifically, those that reported binge drinking in the past month were significantly more likely than non-binge drinkers to define binge drinking such that it required the experience of consequences like blacking out or vomiting.

### **Implications for Prevention and Future Research**

The findings of the current study may have a number of implications for prevention and future research. We focused on the term “binge drinking” here because it is a popular term both from an evaluation standpoint and in the sense that it is widespread in the media and likely to be known in some capacity to the general population (this was supported by our findings). It is possible, however, that our findings are specifically related to the negative connotations associated with the binge terminology. Future research is necessary to determine whether other labels (e.g., heavy or risky drinking) suffer from the same problems. It is also possible that the specific wording is less important than understanding what students consider to be healthy (vs. unhealthy) or risky (vs. safe) drinking or how they decide if they have had enough to drink. Regardless of what you call it, if students do not categorize themselves into that category then they are not likely to fully process prevention messages (Baker, Petty, & Gleicher, 1991). Thus, future research might focus not only on what students consider risky but also to what extent their own individual characteristics and behaviors influence their perceived risk. Our findings, along with previous research, do suggest that the students’ own drinking behaviors are related to their definitions.



These findings also suggest that social norms messaging campaigns might benefit from expanding their messages. Most social norms approaches focus on the idea that students overestimate the proportion of their peers who drink and how often or how much those peers drink (NIAAA, 2007). For example, a social norms message might read: 65% of students at Midwestern University had four or fewer drinks in the last 10 days. The purpose of such a message is to show students that the majority of their peers drink infrequently. In the current study, nearly half of those students who had participated in binge drinking in the last month failed to recognize their behavior as such. Thus, in addition to overestimating how much their peers drink, they may also underestimate the extent to which their own drinking is problematic and risky, assessments which may also be influenced by perceived norms (e.g., vomiting is a natural and expected consequence of partying). Thus, social norms campaigns might go beyond messages which focus on “how much” or “how often” to also include messages about “what type of drinking” is normal or focusing on qualitative descriptions of “healthy or moderate drinking.” It should be noted that the majority of students own definitions were not “quantified” and thus, messages which focus solely on how much others drink may not fit with the way they themselves conceive of or think about drinking.

Finally, although binge drinking research was popularized based on its association with college student drinking, other groups also participate. In fact, according to the Centers for Disease Control, adults over 50 years of age are the group that binge drinks most frequently (CDC, 2012). Future research should explore the perceived definitions and its relationship to behavior in other populations and age groups.

## **Limitations**

As with any study, there are limitations that must be noted. First, the results are only reflective of residential students at one university and were primarily representative of younger students (i.e., freshman and sophomores under the legal drinking age). We do note, however, that there were similarities between the definitions generated by our students and those generated by the students in the study conducted by Bonar and colleagues (Bonar et al., 2012). The students in that study were from another university and were generally older than those in our sample. Statistical power may have been an issue with regard to detecting group differences in definitions. Further, we dichotomized some of the variables in order to more easily compare different definitions though this practice may have further reduced statistical power. Future research might attempt to replicate using larger samples from multiple universities.

It should also be noted that a number of things could have influenced student definitions for which we could not account. First, although students were allowed to give their own definition of binge drinking (and were not provided with one), the survey did include a number of other questions about drinking and some of these could have primed them or contributed to their thoughts about the definition of binge drinking. Because so few students had a definition that was close to the standard 5/4 definition, however, it is unlikely that the earlier questions had much impact. Further, prevention

activities (e.g., social norms campaign, distribution of campus policies, etc.) were taking place on campus in both years of data collection and although the term “binge” was not used in any of the messaging, it is certainly possible that these activities had some impact on student perceptions of heavy or binge drinking. Finally, the nature of data collection could have influenced student definitions. As is common with cluster sample designs, students living in the same residential suites (i.e., same cluster) are likely to be more similar to each other than to other students on campus. Further, there was no way to know if students worked on the surveys in groups and thus gave similar answers.

## CONCLUSIONS

The majority of students provided a qualitative definition of binge drinking, suggesting that this specific terminology has reached at least a superficial level of awareness among this population. The most popular definitions included descriptions of the consumption of a large, non-specific, amount of alcohol. When we asked students to categorize their own behavior, just over half of the students who, by standard 5/4 definitions, participated in binge drinking in the previous 30 days actually identified that behavior as such. Finally, binge drinkers were more likely to define binge drinking in an extreme manner (e.g., results in vomiting or blacking out). The findings suggest that students overestimate what constitutes binge drinking and thus may participate in risky levels of drinking without recognizing it. It also suggests that most students do not “quantify” their definitions and thus social norms and prevention campaigns might want to consider including qualitative/descriptive messages in addition to the quantity-based messages that are already common. Future research should explore student perceptions of other terms such as “heavy” or “risky” drinking.

## REFERENCES

- Baker, S. M., Petty, R. E., & Gleicher, F. (1991). Persuasion theory and drug abuse prevention. *Health Communication, 3*(4), 193-203. doi: 10.1207/s15327027hc0304\_2
- Bennett, M. E., Miller, J. H., & Woodall, W. G. (1999). Drinking, binge drinking, and other drug use among southwestern undergraduates: Three-year trends. *American Journal of Drug & Alcohol Abuse, 25*(2), 331.
- Bonar, E. E., & Rosenberg, H. (2010). Popularity of “binge drinking” in the lay press: 1990-2009. *Journal of American College Health, 59*(2), 65-67. doi: 10.1080/07448481.2010.502206
- Bonar, E. E., Young, K. M., Hoffmann, E., Gumber, S., Cummings, J. P., Pavlick, M., et al. (2012). Quantitative and qualitative assessment of university students’ definitions of binge drinking. *Psychology of Addictive Behaviors, 26*(2), 187-193. doi: 10.1037/a0026440
- Campo, S., Askelson, N. M., Mastin, T., & Slonske, M. (2009). Using evidence-based research to redirect a conversation: Newspapers’ coverage of strategies to address college binge drinking. *Public Relations Review, 35*(4), 411-418. doi:

10.1016/j. pubrev.2009.05.013

- Carey, K. B. (2001). Understanding binge drinking: Introduction to the special issue. *Psychology of Addictive Behaviors, 15*(4), 283-286.
- Centers for Disease Control (CDC). (2012). *Binge drinking. Nationwide problems, local solutions*. Retrieved from <http://www.cdc.gov/vitalsigns/bingedrinking/>
- Chaloupka, F. J., & Wechsler, H. (1996). Binge drinking in college: The impact of price, availability, and alcohol control policies. *Contemporary Economic Policy, 14*(4), 112-124. doi: 10.1111/j.1465-7287.1996.tb00638.x
- Cooke, R., French, D. P., & Sniehotta, F. F. (2010). Wide variation in understanding about what constitutes "binge-drinking." *Drugs: Education, Prevention & Policy, 17*(6), 762-775. doi: 10.3109/09687630903246457
- Courtney, K. B., & Polich, J. (2009). Binge drinking in young adults: Data, definitions, and determinants. *Psychological Bulletin, 135*(1), 142-156. doi: 10.1037/a0014414
- Cranford, J. A., McCabe, S. E., & Boyd, C. J. (2006). A new measure of binge drinking: Prevalence and correlates in a probability sample of undergraduates. *Alcoholism: Clinical and Experimental Research, 30*(11), 1896-1905. doi: 10.1111/j.1530-0277.2006.00234.x
- DeBerard, M. S., Spielmans, G. I., & Julka, D. C. (2004). Predictors of academic achievement and retention among college freshmen: A longitudinal study. *College Student Journal, 38*(1), 66-80.
- DeJong, W. (2001). Finding common ground for effective campus-based prevention. *Psychology of Addictive Behaviors, 15*(4), 292-296. doi: 10.1037/0893-164x.15.4.292
- DeJong, W. (2010). Social norms marketing campaigns to reduce campus alcohol problems. *Health Communication, 25*(6-7), 615-616. doi: 10.1080/10410236.2010.496845
- Gill, J. S., & O'May, F. (2006). People seem confused about sensible drinking messages. *British Medical Journal, 332*, 302-303.
- Haines, M. P. (1996). *A social norms approach to preventing binge drinking at colleges and universities*. (ED/OPE/96-18). Education Development Center, Inc.
- Hanewinkel, R., Sargent, J. D., Poelen, E. A. P., Scholte, R., Florek, E., Sweeting, H., et al. (2012). Alcohol consumption in movies and adolescent binge drinking in 6 European countries. *Pediatrics, 129*(4), 709-720. doi: 10.1542/peds.2011-2809
- Hingson, R. W. (2010). Magnitude and prevention of college drinking and related problems. *Alcohol Research & Health, 33*(1/2), 45-54.
- Ingersoll, K. S., Ceperich, S. D., Nettleman, M. D., & Johnson, B. A. (2008). Risk drinking and contraception effectiveness among college women. *Psychology & Health, 23*(8), 965-981. doi: 10.1080/08870440701596569
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2007). *Monitoring the future national survey results on drug use, 1975-2006: Volume II, College students and adults ages 19-45*. (NIH Publication No. 07-6206). Bethesda, MD.
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2012). *Monitoring the future national survey results on drug use, 1975-2011: Volume II, College students and adults ages 19-50*. Ann Arbor, MI: Institute for Social Research, The

University of Michigan.

- Jones, S. E., Oeltmann, J., Wilson, T. W., Brener, N. D., & Hill, C. V. (2001). Binge drinking among undergraduate college students in the United States: Implications for other substance use. *Journal of American College Health, 50*(1), 33-38. doi: 10.1080/07448480109595709
- Kelle, U. (1997). *Computer-assisted analysis of qualitative data*. London, UK.: LSE Methodology Institute.
- Lange, J. E., & Voas, R. B. (2001). Defining binge drinking quantities through resulting blood alcohol concentrations. *Psychology of Addictive Behaviors, 15*(4), 310-316. doi: 10.1037/0893-164x.15.4.310
- McCabe, S. E., Schulenberg, J. E., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Kloska, D. D. (2005). Selection and socialization effects of fraternities and sororities on US college student substance use: A multi-cohort national longitudinal study. *Addiction, 100*(4), 512-524. doi: 10.1111/j.1360-0443.2005.01038.x
- McCauley, J. L., Calhoun, K. S., & Gidycz, C. A. (2010). Binge drinking and rape: A prospective examination of college women with a history of previous sexual victimization. *Journal of Interpersonal Violence, 25*(9), 1655-1668. doi: 10.1177/0886260509354580
- National Institute on Alcohol Abuse and Alcoholism (NIAAA). (2007). What colleges need to know. An update on college drinking research. In DHHS (Ed.). Bethesda, MD: National Institutes on Health.
- Palmer, R. S., McMahon, T. J., Rounsaville, B. J., & Ball, S. A. (2010). Coercive sexual experiences, protective behavioral strategies, alcohol expectancies and consumption among male and female college students. *Journal of Interpersonal Violence, 25*(9), 1563-1578. doi: 10.1177/0886260509354581
- Perkins, H. W. (2002). Social norms and the prevention of alcohol misuse in collegiate contexts. *Journal of Studies on Alcohol. Supplement, 63*, 164.
- Perkins, H. W., DeJong, W., & Linkenbach, J. (2001). Estimated blood alcohol levels reached by "binge" and "nonbinge" drinkers: A survey of young adults in Montana. *Psychology of Addictive Behaviors, 15*(4), 317-320. doi: 10.1037/0893-164x.15.4.317
- Reiner, H., Susanne, E. T., & James, D. S. (2007). Exposure to alcohol use in motion pictures and teen drinking in Germany. *International Journal of Epidemiology, 36*(5), 1068-1068.
- Ridout, B., Campbell, A., & Ellis, L. (2012). "Off your face(book)": Alcohol in online social identity construction and its relation to problem drinking in university students. *Drug & Alcohol Review, 31*(1), 20-26. doi: 10.1111/j.1465-3362.2010.00277.x
- Schuckit, M. (1998). Binge drinking: The five/four measure. The editor responds. *Journal of Studies on Alcohol, 59*, 123-124.
- Segrist, D. J., & Pettibone, J. C. (2009). Where's the bar? Perceptions of heavy and problem drinking among college students. *Journal of Alcohol and Drug Education, 53*(1), 35-53.
- Seidel, J., & Kelle, U. (1995). Different functions of coding in the analysis of textual data.

- In U. Kelle (Ed.), *Theory, methods, and practice*. London: Sage.
- Singleton Jr., R. A., & Wolfson, A. R. (2009). Alcohol consumption, sleep, and academic performance among college students. *Journal of Studies on Alcohol & Drugs*, 70(3), 355-363.
- Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. *Journal of the American Medical Association*, 272(21), 1672-1677. doi: 10.1001/jama.272.21.1672
- Wechsler, H., Dowdall, G. W., Davenport, A., & Rimm, E. B. (1995). A gender-specific measure of binge drinking among college students. *American Journal of Public Health*, 85(7), 982-985.
- Wechsler, H., & Isaac, N. (1992). "Binge" drinkers at Massachusetts colleges. *Journal of the American Medical Association*, 267(21), 2929.
- Wechsler, H., & Kuo, M. (2000). College students define binge drinking and estimate its prevalence: Results of a national survey. *Journal of American College Health*, 49(2), 57.
- Wechsler, H., Lee, J. E., Kuo, M., & Lee, H. (2000). College binge drinking in the 1990s: A continuing problem. *Journal of American College Health*, 48(5), 199.
- Wechsler, H., Lee, J. E., Kuo, M., Seibring, M., Nelson, T. F., & Lee, H. (2002). Trends in college binge drinking during a period of increased prevention efforts. *Journal of American College Health*, 50(5), 203.
- Wechsler, H., & Nelson, T. F. (2001). Binge drinking and the American college students: What's five drinks? *Psychology of Addictive Behaviors*, 15(4), 287-291. doi: 10.1037/0893-164x.15.4.287
- Yanovitzky, I., & Stryker, J. (2001). Mass media, social norms, and health promotion efforts: A longitudinal study of media effects on youth binge drinking. *Communication Research*, 28(2), 208-239. doi: 10.1177/009365001028002004

Direct reprint requests to: Samantha Clinkinbeard  
School of Criminology & Criminal Justice University of Nebraska at Omaha  
Omaha, NE 68182  
e-mail: sclinkinbeard@unomaha.edu