

### Research Article

# Drinking To Get Drunk Among Incoming Freshmen College Students

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#### **ABSTRACT**

Background: The consumption of alcohol is ubiquitous on many college and university campuses. For some freshmen students, drinking may even be considered a "right of passage." Purpose: This study examined college freshmen who intentionally drink alcohol to get drunk (DTGD). Methods: Survey data from 307 incoming freshmen college students living in freshmen residence halls who reported drinking alcohol in the last 30 days were analyzed. Results: The majority (76.9%) of these self-reported drinkers reported DTGD. Relative to other freshmen drinkers, those who reported DTGD were significantly more likely to have consumed alcohol before going out to a party or bar, participated in a drinking game, drank heavily on a non-school night but not on a school night, used liquor, used beer, combined alcohol and drugs, experienced a hangover, vomited, passed out, and/or blacked out. Discussion: The associations support DTGD as a measure of pre-meditated, controlled and intentional consumption of alcohol to reach a state of inebriation. Translation to Health Education Practice: Common intentional drunkenness as observed in this study population may have implications for college alcohol risk reduction programs.

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#### **BACKGROUND**

Binge drinking is a common measure of heavy alcohol use and is generally defined quantitatively as the consumption of five or more drinks in a row for males and four or more drinks in a row for females.<sup>1,2</sup> Heavy drinking, including binge drinking, has been cited as a major concern on college campuses.3-7 Healthy Campus 2010 objectives call for a reduction in the proportion of college students engaging in binge drinking during the past two weeks from 39% in 1998 to 20% in 2010.3 Recent survey results indicate that efforts to reduce binge drinking among college students have not been successful as highlighted by the current rate of binge drinking among college students being estimated at 39.5%.2,3,8

High rates of heavy drinking among college freshmen are particularly troublesome

given that the majority of college freshmen do not meet the legal minimum age requirement of 21 years for purchasing and publicly possessing alcohol. Thus, students that drink heavily risk legal ramifications in addition to the multitude of negative personal consequences<sup>2,9-12</sup> of heavy drinking. Because there has been no progress in reaching the national objectives regarding reductions in binge drinking in spite of attention paid and resources spent on heavy drinking by many federal agencies and colleges,<sup>2-3,9,13</sup> a better understanding of heavy drinking among college students is warranted.

An important research question regarding college student heavy drinking pertains to whether it is intentional and premeditated. Many prevention programs assume that heavy drinking is amenable to information and skills development that

helps students avoid being "swept up" in the social contexts of drinking for which they are unprepared. <sup>13-17</sup> This assumption may be inappropriate, however, as it remains to be determined whether heavy drinking among college students is the result of:

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(1) spontaneous, uncontrolled, unintentional drinking or (2) premeditated, controlled, and intentional drinking. Binge drinking, operationally defined quantitatively by the amount of alcohol consumed, serves as an alcohol use measure and does not address the intentionality of the drinking. We define "drinking to get drunk" (DTGD) for purposes of this study as pre-meditated, controlled and intentional consumption of alcohol to reach a state of inebriation. We conceptualize DTGD as a measure of intentional drinking to reach a desired state of being without specification of the amount of alcohol consumed.

Little is known about the prevalence of DTGD among college students. It is thought that many incoming freshmen may DTGD due to a number of positive expectancies related to alcohol consumption, including using alcohol as a social lubricant, to relieve boredom, as a reward for hard work and to minimize peer pressure. 18 There is evidence that many college students consider heavy drinking as a rite of passage that is integral to the college experience and accepted, or at least excused, in most college environments.<sup>19</sup> Furthermore, pre-college perception that heavy drinking is an important part of the college experience is a strong predictor of heavy alcohol use among incoming freshmen.20 Such studies suggest that some incoming freshmen DTGD rather than spontaneously get "caught up in the mood" of spontaneous, uncontrolled, unintentional drinking.

#### **PURPOSE**

This study explores DTGD among incoming freshmen college students living in residence halls located on one large mid-Atlantic public university campus who report recent alcohol use. This study specifically examines: (1) the prevalence of DTGD among these freshmen, and (2) whether DTGD among these freshmen is correlated with timing, locations, methods, amounts and consequences of alcohol use that indicate pre-meditated, controlled and intentional consumption of alcohol to reach a state of inebriation. It is hypothesized that

those freshmen who DTGD are more likely to: (1) drink in ways that promote heavy drinking - as part of a drinking game, before going out to a party or bar, (2) drink heavily on days that are not commonly followed by heavy class loads, such as non-school nights, (3) drink high proof alcohol, (4) combine alcohol with other drug use, and/or (5) experience negative outcomes associated with heavy drinking (e.g., have a hangover, vomit, pass out, memory loss). If these hypotheses are supported, these findings would tend to validate DTGD as a measure of premeditated drunkenness among incoming college students. High prevalence of DTGD would thus have important implications for the planning of educational interventions to reduce alcohol-related problems among incoming freshmen residence hall residents.

#### **METHODS**

This study was a sub-study of a larger National Institute of Alcohol Abuse and Alcoholism funded college alcohol problem prevention trial focusing on alcohol risk reduction among college students living in freshmen residence hall wings (single gender living units, with bedrooms connected to a shared hallway and bathroom, supervised by a resident advisor). The major goal of the parent study was to examine differences in weekly alcohol use and secondhand effects across conditions in a three-armed (singlegender, mixed-gender, control condition) Information Motivation Behavior theorybased intervention trial implemented in freshmen residence hall wings during the initial weeks of college.21 This study was approved by the University of Maryland Institutional Review Board (IRB). The IRB approved protocols involved protection of participants regarding self-reported and university administrative data.

In fall 2006, there were 1269 residents (634 males, 635 females) on 36 freshmen residence hall wings (18 male, 18 female). Of these students, only the 1155 incoming freshmen (572 males, 583 females) constituted the targeted sample for this sub-study. The data for this study was collected from a web-based survey administered as part of the

trial two months into the fall 2006 academic semester. Recruitment strategies included flyers hung on each wing and up to five personalized e-mails. Student participants were required to provide online consent prior to accessing the web-based survey. To increase the survey response rate, a paper survey that exactly mirrored the format and questions in the web-based survey was mailed to non-responders after three e-mail recruitment attempts for the on-line survey. The same consent and incentive policies applied to online and paper responses. Incentives included a \$10 bookstore coupon for completion and entry into a lottery to win another \$40 gift coupon at a local department store.

Of the incoming freshmen targeted for this study, 204 males and 295 females provided useable responses to the web-based survey. An additional two males and eight females provided useable paper survey responses administered to web survey nonrespondents. Web- and paper-based survey databases were merged resulting in 509 complete surveys (44.1% response rate). Relative to non-respondents, survey respondents were proportionately more likely to be female, 18 years of age, white/Caucasian, and Living-Learning (membership in a formally identified group of students who have similar academic interests and live on the same residence hall wing) members. The study sample included the 60.3% of the survey respondents who reported drinking any alcohol of any type except for religious purposes since beginning the semester (N =307; 125 males, 182 females).

The following elements describe the key study measures.

Drank to Get Drunk (DTGD) was measured using an item borrowed from the Thombs and Beck<sup>22</sup> Social Context scale. Students were asked to identify how often they drank to get drunk since arriving (on campus) for the fall 2006 semester. The coded response options were never = 0, seldom = 1, occasionally = 2, frequently = 3. The response options were recoded as ever and never for this study.

Personal Consequences included items



borrowed from the National Study of Living-Learning Programs instrument.<sup>23</sup> Students were asked "How often did you experience any of the following as a result of your own alcohol use since arriving (on campus) for the fall 2006 semester?" The items included in this study were 'experienced a hangover, 'became sick or vomited,' 'passed out,' and 'experienced memory loss or blackouts.' The coded response options were none = 0, 1 time = 1, 2 times = 2, 3 or more times = 3. The response options were recoded for this study as never = 0, 1 time = 1, 2 or more times = 2.

Social Context of Alcohol Use included items borrowed from the Thombs and Beck<sup>22</sup> Social Context scale. Students were asked the lead-in question "Since arriving (on campus) for the fall 2006 semester, how often have you drunk alcohol?" followed by the items "as part of a drinking game" and "before going out (i.e., to a party or bar)." The coded response options were never = 0, seldom = 1, occasionally = 2, frequently = 3. However, due to the frequency with which the responses were endorsed, the response options were re-coded high frequency = 2 (reported frequently), some frequency = 1(reported seldom or occasionally), and never = 0 (reported never).

Alcohol Consumption: Students were asked "During a typical week in the past 30 days, how many drinks did you consume on each day of the week?" The original response options were 0 = no drinks, 1 = one drink, 2 = two drinks, 3 = three drinks, 4 = fourdrinks, 5 = five or more drinks by day of the week (Monday through Sunday). Heavy drinking was coded yes (self-reported five or more drinks) and no (self-reported less than five drinks) for each day of the week. A review of drinking frequency by day of the week indicated that more alcohol was consumed on Thursday through Saturday than Sunday through Wednesday. This coincided with class schedules: Thursday's through Saturday's preceded days with relatively light class schedules (Friday's-Sunday's) at the study university. Sunday's through Wednesday's preceded days with relatively heavy class schedules (Monday's-Thursday's).

Assuming that much alcohol use occurs late in the day rather than early in the day, we labeled Sunday through Wednesday as "school-nights" and Thursday through Saturday as "non-school nights." This labeling was supported by a prior study in which focus groups of freshmen students often reported that college alcohol use was heavier on Thursday's through Saturday's because students perceived drinking on these days to not interfere with classes.24 Liquor use, beer use, wine use, and combined alcohol and drug use were also self-reported. Students were asked "How many days did you use the following substances over the past 30 days?" For liquor, beer, wine, and combined alcohol and drug use, original response options were 0 = none, 1 = 1-2 days, 2 = 3-5 days, 3 = 6-9days, 4 = 10-19 days, 5 = 20-29 days, and 6 = all 30 days. The liquor, beer, and wine response options were recoded with categories of 0 = none, 1 = 1-5 days, and 2 = 6 ormore days. Combined alcohol and drug use was recoded as 0 = none, 1 = > 1 days due to small frequencies.

Student Characteristics included student race/ethnicity (Hispanic/Latino, Asian/Pacific Islander, black/African American, Other/Mixed, white), age (17 years, 18 years, 19 years or older), gender (male, female), and living learning member (yes, no) were obtained from university records.

Study condition was an assigned variable based on the larger trial condition assignments<sup>21</sup> (Single gender condition [single gender educational workshops on alcohol problem prevention] = 1, mixed gender condition [mixed gender educational workshops on alcohol problem prevention] = 2, control group [usual education on alcohol problem prevention] = 9).

Data were analyzed using SAS version 9.1. Only students identified as "drinkers" (determined by alcohol use in the last 30 days) were included in the analysis. Descriptive Chi-square associations were used to examine prevalence rates and differences in student characteristics by DTGD status. Logistic Regression was used to examine the relationship between DTGD and each study correlate controlling for potential

covariates including student gender, age, ethnicity, living-learning status and intervention study condition.

#### **RESULTS**

The majority of incoming freshmen self-reporting recent alcohol use reported DTGD (N = 236, 76.9%). The characteristics of incoming freshmen drinkers who DTGD were compared to the characteristics of incoming freshmen drinkers that did not DTGD using Chi-square. DTGD was associated with: being white, non-Asian, participating in a drinking game, drinking before going to a party or bar, drinking five or more drinks on a non-school night, drinking liquor, drinking beer, combining alcohol with drugs, experiencing a hangover, vomiting, passing out, and experiencing memory loss or blackouts (Table 1).

Table 2 presents the adjusted odds ratios for the relationships between DTGD and alcohol-related behaviors controlling for students' other personal characteristics. Those incoming freshmen who DTGD were significantly more likely to have: participated in a drinking game (Odds Ratio [OR] increased with increased frequency of participation; some frequency = 8.76, high frequency 106.89), consumed alcohol before going to a party or bar (OR increased with increased frequency of participation; some frequency = 10.07, high frequency =  $\infty$ ), drank heavily on non-school nights (OR = 18.17, 95% Confidence Interval [C.I.] = 6.27-52.60, consumed liquor (OR increased with increased number of days; 1-5 days = 3.31, 6 or more days = 127.07), consumed beer (OR increased with increased number of days; 1-5 days = 3.23, 6 or more days = 53.07),consumed wine 1-5 days only (OR = 2.74, 95% C.I. = 1.32-5.69), combined alcohol and drugs (OR = 7.00, 95% C.I. = 1.61-30.43), experienced a hangover (OR increased with number of times; 1 time = 4.13, 2 or moretimes = 19.59), became sick or vomited (OR increased with number of times; 1 time = 4.27, 2 or more times = 11.65), passed out (OR increased with number of times; 1 time = 6.10, 2 or more times = 16.85), and experienced memory loss or blackouts (OR



Table 1. Prevalence of Personal Characteristics and Risk Factors by Drank to Get Drunk (DTGD) Frequency (Ever/Never) Among First Semester Freshmen College Students who Reported Alcohol Use in Previous 30 Days

| Disk Forebook   | Total Sample $(N = 307)$ | DTGD<br>(N = 236) | Did not DTGD<br>(N =71) |
|---|--------------------------|-------------------|-------------------------|
| Risk Factors  | %                        | %                 | %                       |
| Age   | 2.24                     |                   | <b>5</b> ( <b>5</b>     |
| 19 or older   | 3.26                     | 2.54              | 5.63                    |
| 18  | 70.36                    | 69.92             | 71.83                   |
| 17  | 26.38                    | 27.54             | 22.54                   |
| Race/Ethnicity  |                          |                   |                         |
| African American  | 4.23                     | 2.97              | 8.45*                   |
| Asian/PI  | 12.70                    | 10.17             | 21.13                   |
| Hispanic  | 7.49                     | 7.63              | 7.04                    |
| Other   | 6.19                     | 6.36              | 5.63                    |
| White   | 69.38                    | 72.88             | 57.75                   |
| Gender  |                          |                   |                         |
| Male  | 40.72                    | 42.8              | 33.8                    |
| Female  | 59.28                    | 57.2              | 66.2                    |
| Part of Living-Learning Community                           |                          |                   |                         |
| Yes   | 63.52                    | 62.71             | 66.20                   |
| No  | 36.48                    | 37.29             | 33.80                   |
| Study Condition   |                          |                   |                         |
| Single Gender   | 40.07                    | 33.05             | 30.99                   |
| Mixed Gender  | 27.36                    | 25.85             | 32.39                   |
| Control   | 32.57                    | 41.10             | 36.62                   |
| Participated in a Drinking Game                             |                          |                   |                         |
| High Frequency  | 18.57                    | 23.73             | 1.41**                  |
| Some Frequency  | 58.96                    | 64.83             | 39.44                   |
| Never   | 22.48                    | 11.44             | 59.15                   |
| Drank before Going to a Party or Bar                        |                          |                   |                         |
| High Frequency  | 21.90                    | 28.51             | 0.00**                  |
| Some Frequency  | 50.98                    | 57.45             | 29.58                   |
| Never   | 27.12                    | 14.04             | 70.42                   |
| Heavy Drinking on at Least One School Night (Sun-Wed)       |                          |                   |                         |
| Yes   | 2.29                     | 2.55              | 1.41                    |
| No  | 97.71                    | 97.45             | 98.59                   |
| Heavy Drinking on at Least One Non-School Night (Thurs-Sat) |                          |                   |                         |
| Yes   | 40.72                    | 51.27             | 5.63**                  |
| No  | 59.28                    | 48.73             | 94.37                   |
| Liquor Use  |                          |                   |                         |
| 6 or more days  | 30.36                    | 38.89             | 1.45**                  |
| 1-5 days  | 56.77                    | 53.42             | 68.12                   |
| None  | 12.87                    | 7.69              | 30.43                   |
| Beer Use  | . 2.0,                   |                   | 233                     |
| 6 or more days  | 30.26                    | 38.14             | 2.94**                  |
| 1-5 days  | 51.97                    | 51.27             | 54.41                   |
| None  | 17.76                    | 10.59             | 42.65                   |
| Wine Use  | 17.70                    | 10.57             | 12.03                   |
|   |                          |                   |                         |
| 6 or more days  | 2.03                     | 2.18              | 1.49                    |

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Table 1. Prevalence of Personal Characteristics and Risk Factors by Drank to Get Drunk (DTGD)
Frequency (Ever/Never) Among First Semester Freshmen College Students who Reported
Alcohol Use in Previous 30 Days (Con't)

| Risk Factors                         | Total Sample<br>( <i>N</i> = 307)<br>% | DTGD<br>(N = 236)<br>% | Did not DTGD<br>(N =71)<br>% |
|--------------------------------------|--|------------------------|------------------------------|
| 1-5 days                             | 29.05                                  | 32.31                  | 17.91                        |
| None                                 | 68.92                                  | 65.50                  | 80.60                        |
| Alcohol and Drug Use (combination)   | 00.72                                  | 05.50                  | 00.00                        |
| 1 or more days                       | 14.58                                  | 17.90                  | 3.03*                        |
| None                                 | 85.42                                  | 82.10                  | 96.97                        |
| Experienced Hangover                 | 03.12                                  | 02.10                  | 70.77                        |
| ≥ 2 Times                            | 30.20                                  | 37.50                  | 4.55**                       |
| 1 Time                               | 26.51                                  | 29.31                  | 16.67                        |
| Never                                | 43.29                                  | 33.19                  | 78.79                        |
| Became Sick or Vomited               |  |                        |                              |
| ≥ 2 Times                            | 17.11                                  | 21.12                  | 3.03**                       |
| 1 Time                               | 29.19                                  | 33.19                  | 15.15                        |
| Never                                | 53.69                                  | 45.69                  | 81.82                        |
| Passed Out                           |  |                        |                              |
| ≥ 2 Times                            | 13.76                                  | 17.24                  | 1.52**                       |
| 1 Time                               | 15.44                                  | 18.53                  | 4.55                         |
| Never                                | 70.81                                  | 64.22                  | 93.94                        |
| Experienced Memory Loss or Blackouts |  |                        |                              |
| ≥ 2 Times                            | 19.80                                  | 25.00                  | 1.52**                       |
| 1 Time                               | 20.47                                  | 24.57                  | 6.06                         |
| Never                                | 59.73                                  | 50.43                  | 92.42                        |

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increased with number of times; 1 time = 6.98, 2 or more times = 28.44) than those students who did not DTGD.

#### DISCUSSION

Among the incoming freshmen drinkers who comprised the study sample, DTGD was common; over three-quarters DTGD. The study findings indicated that the DTGD phenomenon was characterized by pre-meditated, controlled and intentional consumption of alcohol to reach a state of inebriation. Specifically, the study indicated the following among incoming freshmen drinkers. Those that DTGD were more likely to: drink in ways that promote heavy drinking (participate in drinking games and drink before going to a party or bar), drink heavily on days that were often not followed by heavy class loads (Thursday through Saturday but not Sunday through Wednesday), drink in ways that maximize inebriation effects (drink liquor and combine alcohol with drugs), and report effects indicating heavy inebriation (experience a hangover multiple times, vomit multiple times, pass out, and experience memory loss or blackouts). The associations with DTGD tend to validate it as a measure of intentional, controlled, consumption of alcohol meant to reach a state of inebriation.

Asking students the single question about how often they DTGD may identify students at high risk for alcohol-related outcomes. A previous study among college students asked a single question about DTGD; "In a typical week, how many days do you get drunk?," and found it was a stronger correlate of injury as a result of alcohol use than was the consumption quantity measure of binge drinking. <sup>25</sup> It has also been shown that students' self-reported amount and tim-

ing of alcohol consumed does not reliably indicate actual blood alcohol concentrations.26 Hence, students' intentions regarding drunkenness may more accurately capture their drinking related risk-taking than measures of consumption. For example, the DTGD measure in this study distinguished different types of heavy drinking. DTGD was associated with heavy drinking on "nonschool nights," specifically Thursday through Saturday when it was less likely to interfere with attending classes. This is consistent with the finding that alcohol problems are more evident on college campuses on non-school nights.27 DTGD was not associated with heavy drinking during the "school nights," specifically Sunday through Wednesday. Hence, heavy drinking on school nights may be unrelated to pre-meditated, controlled and intentional consumption of alcohol to reach a state of inebriation. Perhaps more



Table 2. Adjusted<sup>a</sup> Odds Ratios for Relationships between Drank to Get Drunk and Behavioral Risk Factors among Incoming Freshmen College Students who Reported Alcohol Use in Previous 30 Days (N=307)

| Characteristics/ Risk Factors                               | Total Sample<br>OR (95% Confidence Interval) |
|---|--|
| Participated in a Drinking Game                             |  |
| High Frequency  | 106.89 (13.42-862.81)                        |
| Some Frequency  | 8.76 (4.44-17.30)                            |
| Drank before Going to a Party or Bar                        |  |
| High Frequency  | >999.99 (<0.001->999.99)                     |
| Some Frequency  | 10.07 (5.08-19.95)                           |
| Heavy Drinking on at Least One School Night (Sun-Wed)       |  |
| Yes   | 2.54 (.27-23.53)                             |
| Heavy Drinking on at Least One Non-School Night (Thurs-Sat) |  |
| Yes   | 18.17 (6.27-52.60)                           |
| Liquor Use  |  |
| 6 or more days  | 127.07 (15.51->999.99)                       |
| 1-5 days  | 3.31 (1.52-7.20)                             |
| Beer Use  |  |
| 6 or more days  | 53.07 (11.14-252.79)                         |
| 1-5 days  | 3.23 (1.57-6.65)                             |
| Wine Use  |  |
| 6 or more days  | 1.92 (0.20-18.10)                            |
| 1-5 days  | 2.74 (1.32-5.69)                             |
| Alcohol and Drug Use (combination)                          | - 00 /4 /4 DO 4D                             |
| 1 or more days  | 7.00 (1.61-30.43)                            |
| Experienced Hangover  | 10 50 (5 77 (7 52)                           |
| > 2 Times   | 19.59 (5.77-66.53)                           |
| 1 Time  | 4.13 (1.96-8.72)                             |
| Became Sick or Vomited                                      | 11 /5 /2 /0 50 5/1                           |
| > 2 Times   | 11.65 (2.68-50.56)                           |
| 1 Time  | 4.27 (1.97-9.26)                             |
| Passed Out  | 1/ 0/ /2 10 120 20                           |
| > 2 Times   | 16.84 (2.18-130.30)                          |
| 1 Time  | 6.10 (1.77-20.98)                            |
| Experienced Memory Loss or Blackouts > 2 Times              | 20 44 /2 70 212 771                          |
| · - ·····-  | 28.44 (3.78-213.77)                          |
| 1 Time  | 6.98 (2.37-20.57)                            |

Note. "None", "No", or "Never" category was always used as the reference.

<sup>a</sup>OR determined in logistic regression with student gender, age, ethnicity, living-learning status (academic special interest group), and intervention study condition in the model.

attention should be given to examining why students drink than how much they drink.

Incoming freshmen may be particularly vulnerable to alcohol in the social environment because of their lack of experience in this environment and their desire to bond socially with other students. <sup>18,22,24,28</sup> One might expect; therefore, that their heavy drinking is naive and not premeditated.

This study suggests, however, that most incoming freshmen are quite aware and intentional about their heavy drinking. Their drinking appears targeted to meet maximal effect while avoiding interference with their schooling. The DTGD phenomenon presents challenges to college health educators and alcohol policy makers. It suggests that heavy drinking among freshmen residents

may not be reduced simply by information and skills-training to facilitate alcohol abstinence. <sup>13-16</sup> The study findings suggests that a state of drunkenness is desired by freshmen residents, and they are willing to take pre-meditated, controlled and intentional steps to consume alcohol to reach a state of inebriation. In fact, students who DTGD are more likely to experience what

might be considered "negative effects' of alcohol (hangovers, vomiting, passing out, memory loss) not just once, but multiple times. Clearly, approaches to reduce the problems associated with heavy drinking on college campuses, including second-hand effects, 10-12,29 might best be based on the premise that DTGD satisfies important needs for incoming freshmen. Identifying the underlying needs that are satisfied by intentional drunkenness is critical before new and safer ways of addressing DTGD can be developed by educators and policy makers to prevent college freshmen problems related to alcohol.

#### Limitations

This study is not without limitations. The use of a purposive sampling frame of incoming freshmen resulted in a non-random sample of all the study university's incoming freshmen. The response rate was low, and there were differences between respondents and non-respondents suggesting the sample may not be representative of all incoming freshmen. Generalizability of the study results is also limited by the use of incoming freshmen living only in residence halls on campus. Furthermore, the sample is from one Mid-Atlantic public university and may have limited generalizability to incoming freshmen at other universities. There was also a reliance on students' self-report data which could cause biases in variable measurement. Additionally, 'drinking to get drunk' was a term used in the study instrument that was left up to subjective definition by the survey respondents. Therefore, students may have interpreted the meaning of 'drunk' based on their own information and experiences. The variable must be interpreted as a personal, subjective measure of intention unrelated to an actual amount of alcohol or specifically defined state of inebriation. Finally, caution should be used when generalizing these findings beyond the incoming freshmen student sample of recent drinkers. This study sample is restricted to incoming freshmen because, among all college students, incoming freshmen are uniquely dealing with the college alcohol-related social environment for the first time. Hence, their intentions regarding alcohol use may be unique among all college students.

## TRANSLATION TO HEALTH EDUCATION PRACTICE

The finding from this study that 77% of the first-year freshmen alcohol users DTGD is noteworthy. Because DTGD seems so prevalent and is associated with negative consequences (e.g., hangover, memory loss and blackouts), this intention of college student drinkers needs more attention. This phenomenon of DTGD is supported by recent qualitative studies based on focus group discussions with college students. 18,24 Regardless of the reasoning behind the intentions for drunkenness, the phenomenon of DTGD is alarming given the multitude of negative effects that could result for the drinkers and others.3-7, 24 Therefore, health education programs aimed at reducing college student alcohol use should consider study of the DTGD phenomenon as a way to better understand students' motivations, and as a way to better plan effective alcohol risk-reduction programs.

Some alcohol harm reduction programs for minors emphasize safer alcohol use rather than total alcohol abstinence regardless of prevailing alcohol policies and laws that may ban alcohol use in the population of minors.<sup>17, 30-31</sup> The reason for this more "tolerant" approach is pragmatic; harm reduction may have more potential for success in reducing alcohol-related problems when compared to abstinence programs among some college populations. 14, 30 The findings of the current study lend support to advocacy of the harm reduction approach because so many of the incoming freshmen student drinkers DTGD. This study confirms that students who DTGD have pre-meditated, controlled and intentional motivations for consumption of alcohol to reach the desired state of inebriation. It does not seem likely that programs with an abstinence focus would be effective for such students who so deliberately consume alcohol. Rather, a more feasible approach may be to get those students who DTGD to change the timing, location, methods, and amounts they drink to make their drinking safer. Given DTGD is so prevalent among incoming freshmen, it is recommended that harm reduction education be implemented pre-matriculation and upon entry into college before college alcohol behaviors become habituated and less malleable.

In addition to health education efforts to address DTGD, other campus, policy and environmental influences may be implemented. For example, college campuses may institute Friday and Saturday morning classes as this may limit students' DTGD on Thursday and Friday nights.<sup>27</sup> Campus norms addressing the unacceptable nature of drunken behaviors combined with environmental efforts such as limited access to alcohol and alcohol free experiences may also be used to address the DTGD phenomenon.<sup>32</sup>

Future research should explore the reasons why students DTGD. Does this intentional drunkenness serve a needed social function for students as they enter college? Does it serve a developmental function that allows students to complete "adolescent" exploration and help them to understand and identify with the responsibilities of "adulthood"? 18,19,24 Much more research is needed to understand how students entering college can meet the needs that they attempt to satisfy through DTGD. This understanding may lead to approaches for helping students satisfy needs without DTGD and associated risks.

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