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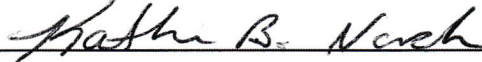## Honors Thesis Certification

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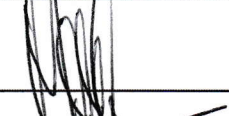
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Undergraduate Students' Perception of the Consequences of Alcohol Consumption

A Thesis

Presented to the Department of Sociology and Criminology

College of Liberal Arts and Sciences

and

The Honors Program

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In Partial Fulfillment

Of the Requirements for Graduation Honors

Elaine Giglio

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ABSTRACT

Due to the high-risk outcomes of college drinking, much attention and research has focused on the issues of binge drinking, alcohol overconsumption, and the experience of adverse consequences due to drinking on college campuses. Yet, little research has been conducted regarding how college students perceive the consequences of drinking alcohol. This descriptive study examines students' perceptions of a number of potential alcohol consequences (e.g., having a hangover, being ticketed or arrested, missing class or an assignment, or getting into a physical fight) and the extent to which they view them as motivators or deterrents to future drinking. An online survey was administered to 324 undergraduates from Butler University to examine these ideas. The survey measured participants' perception of drinking consequences, social motivations to drink, friends' support of drinking, alcohol use, and experience of drinking consequences. Survey findings revealed students with strong social motivations to drink and with strong support from friends to drink are more likely to perceive drinking consequences as motivators. Further, the survey demonstrated that students with positive perceptions of drinking consequences have higher levels of alcohol consumption than students who perceive alcohol consequences more negatively. The results from this study have the potential to benefit college administrators and researchers working to deter risky drinking and its potential adverse effects for college students.

LITERATURE REVIEW

Much research has been conducted regarding alcohol consumption within the undergraduate environment in hopes of understanding trends, motives, consequences, and solutions to the negative and dangerous experiences correlated with alcohol use. According to the annual Indiana College Substance Use Survey, 80% of undergraduates attending Indiana colleges and universities in 2014 reported drinking alcohol in the past year (King and Mikyoung 2014). Other studies reveal higher rates of drinking. A study by Park (2004) revealed that 90% of study participants had consumed alcohol in the past month. Furthermore, studies find binge drinking, defined as four or more drinks in one sitting for females and five or more drinks for males, to be relatively common on college campuses. The percentage of students engaging in binge drinking ranges from 44% to 59.6% (Wechsler 1996 and King and Mikyoung 2014).

Due to the prevalence of drinking within the collegiate environment, much research is concerned with the effects of the substance on college students' lives. A recent survey of Indiana college students examined 16 alcohol consequences and found that the most common was having a hangover (59.8%), followed by feeling bad/guilty about drinking (26.3%), and blacking out (26.2%). While only 10% of undergraduates reported getting hurt or injured due to their drinking (King and Mikyoung 2014), Ragsdale et al. (2012) revealed that this likelihood is almost four times greater for binge drinking undergraduates.

In addition to these drinking consequences, high levels of alcohol consumption have been found to affect the academic performance of students. Alcohol consumption is correlated with GPA across class standings (Singleton and Wolfson 2009 and Singleton 2007). Long's (2012) study showed that the more alcohol consumed by students, the lower the cumulative GPA of students. Another study found that while there was no direct effect on college students' test-

taking performance the morning after being intoxicated, these students had more negative mood scores (Howland et al 2010).

Howland et al. (2010) suggested that the observed mood disturbance following intoxication was likely the result of sleep disturbances due to alcohol consumption. This argument is consistent with the findings from a study by Singleton and Wolfson (2009). They found that poor sleep schedules (e.g., later sleep-wake patterns, greater delay between weekday and weeknight bedtimes) are associated with the volume of alcohol consumed. Additionally, a study by Kenny et al. (2013) revealed that poor sleep quality is strongly related to alcohol consumption and the experience of negative alcohol consequences.

Greek affiliation is another factor that has been given much attention in studies on college alcohol use and its associated consequences, as there is a strong correlation between Greek membership and drinking (Wechsler 1996). There is evidence that many of the adverse effects of alcohol use are experienced at higher levels for college students with Greek life affiliations. Specifically, Ragsdale et al. (2012) revealed that fraternity bingers were significantly more likely to engage in physical fights and drive under the influence of alcohol than non-Greek male bingers. Sorority bingers, on the other hand, were found to be significantly more likely to be injured, drive under the influence of alcohol, be sexually victimized, and to engage in unwanted sex than non-Greek female bingers.

Given the negative potential consequences of drinking, researchers and administers have worked to develop strategies to decrease high levels of drinking and the likelihood of students experiencing such consequences. Many of these strategies work under the assumption that these consequences are negative. For example, a number of programs have sought to decrease drinking through educating students about the potential negative outcomes in hopes that this will deter

heavy alcohol use and thus reduce negative outcomes. In a study on the use of Protective

Behavioral Strategies (PBS), Soule, Barnett, and Moorhouse (2015) found a disconnect between

this deterrence program and negative drinking consequences. Soule et al. suggested that other

factors may be more strongly affecting college students' decision to drink alcohol and experience

drinking consequences. Only a few studies deeply examine this assumption of drinking

consequences being negative and ask how students truly perceive drinking consequences. Clapp

and McDonnell (2000) revealed the importance of measuring perception by finding that

perceived extent of alcohol promotion and perceived normative alcohol use predict a greater

likelihood of alcohol use. While this study does not examine how students perceive drinking and

its associated problems, it does reveal that perception is linked to drinking behavior and must be

analyzed in order to better understand trends in college drinking. Further, Brown, Christiansen,

and Goldman (1987) used the Alcohol Expectancy Questionnaire to reveal a relationship

between alcohol expectancies and current alcohol consumption. These findings are consistent

with the underlying assumptions of symbolic interactionism theory.

According to the symbolic interactionist perspective, people behave based on their

perceptions. Humans create meanings through their experiences and interactions with others and

then act based on these meanings they have formed (Appelrouth 2011). If those meanings are

perceived as positive, then that behavior will likely occur, yet if those meanings are perceived as

negative then the behavior is less likely to occur. In the context of symbolic interactionism, one's

drinking behavior is the product of one's perception of drinking. Thus, a positive or negative

meaning attached to drinking will affect students' decision to drink alcohol. This theory provides

a basis for understanding the impact of perception on drinking behavior. Symbolic interactionism

may provide an understanding of why students choose to drink alcohol and experience negative

drinking consequences.

More recently, researchers working under this theory have begun to realize the

significance of perception and examine students' perceptions of alcohol consequences. Workman

(2001) sought to understand the meanings attached to drinking and its potential consequences

through interviewing fraternity members. The interviews revealed respect, entertainment, social

bonds, their praise for physicality, and more positive meanings attached to drinking and its

consequences. The data concluded "that those within the culture have constructed a set of

meanings surrounding excessive drinking that frame it as a positive, functional, and necessary

activity" (Workman 2001:442). While this study is only applicable to college males in

fraternities, it does reveal that some students hold positive perceptions of alcohol consequences.

Further, Neighbors et al. (2007) demonstrated that some students favorably evaluated negative

effects of drinking and these favorable evaluations were positively related to experiencing

alcohol problems. This reveals that some "'negative' effects may not be perceived as negative to

all students but may be viewed as desirable states or outcomes for some" (Neighbors et al.

2007:8). These are a few examples of studies which demonstrate that drinking consequences may

not be perceived negatively by all college students and therefore, may not act as a deterrent.

In addition to viewing negative consequences such as being hungover and getting into a

fight as potentially positive, some drinking consequences are positive, such as "forgot my

worries", "felt more sexy", and "had better ideas" (Park 2004:313-314). Park (2004) analyzed

not just students' experience of positive and negative consequences, but how students perceive

them. In this study, students evaluated positive consequences to a higher degree of positivity than

negative consequences were evaluated to be negative. Students were also more likely to drink

after experiencing positive alcohol consequences, than they were likely to be more cautious after experiencing negative alcohol consequences. Thus, positive alcohol consequences appear to be more significant and powerful in controlling students' drinking behavior than negative alcohol consequences. A study by Fairlie et al. (2016) confirmed these findings by revealing that students rated positive consequences more favorably than negative consequences were rated negatively. Additionally, the experience of positive consequences predicted more favorable evaluations of those consequences and a more favorable evaluation of drinking overall as being "more worth it" (560). Having a more favorable evaluation of drinking also predicted a higher likelihood of next-day drinking. These studies suggest that because students' attributions of drinking are mostly positive, this may perpetuate further drinking.

Furthermore, Merrill, Subbaraman, and Barnett (2016) revealed that negative consequences were rated less aversely by students when positive consequences were experienced and when positive consequences were rated more positively than usual. This demonstrates that the good outcomes of drinking tend to alleviate the bad outcomes of drinking. Students that reported drinking more also reported drinking consequences to be less negative. Students most recent drinking experiences affected their evaluation of drinking consequences more than their overall drinking behavior. Mallet et al. (2011) revealed that first-year college students with positive attitudes about drinking consequences were more willing to and did experience more drinking consequences. While students with negative attitudes towards drinking consequences were less willing to and experienced less drinking consequences. These studies provide evidence of the link between students' perception of drinking consequences and their drinking behavior. In addition to presuming how students perceive drinking consequences, often studies fail to take

into account how students' environment, particularly how students' close friends foster these perceptions.

Delving deeper into how students' drinking perceptions, the symbolic interactionist theory suggests that students' experiences and interactions with others may be shaping their perception. Researchers have begun to study how students' social environment affects their drinking. Several studies provide evidence of the link between social motivations and college drinking, demonstrating that the large majority of alcohol consumption within undergraduates occurs at a social level. Research by Murphy and McDevitt-Murphy (2005) yielded high levels of social satisfaction due to consuming alcohol. The Lee at al. (2011) survey of first-year college students demonstrated that the most experienced positive or negative consequences of drinking were fun/social consequences. The King and Mikyoung (2014) survey revealed 84.8% consumed alcohol 'to have a good time with friends', 61.1% 'to relax or relieve tension', 56.5% 'because it tastes good', and 42.5% 'to feel good', as well as lower frequencies for 11 other motives. Further a survey of heavy-drinking college students by Kenny et al. (2013) revealed that social and enhancement motives to drink significantly predicted greater alcohol use. Thus, social motivations and social consequences are strong influences on college students' drinking behavior.

Strong social motivations to drink alcohol in college can even outweigh students' experience of negative drinking consequences. Soule, Barnett, and Moorhouse's (2015) study of protective behavioral strategies (PBS) deterrence program failed to reduce negative drinking consequences. This suggests students' motivations to drink alcohol are stronger than the experience of negative drinking consequences. Merrill, Wardell, and Read (2014) conducted a study of college students over a two-year period revealing strong, direct relationships between

enhancement methods and eight consequences of alcohol consumption (impaired control, diminished self-perception, poor self-care, social/interpersonal, blackout drinking, risky behaviors, academic/occupational, physiological dependence). This demonstrates that drinking motives can lead directly to various consequences.

Consistent with this, Mallet et al. (2011) revealed that as friends' approval decreased, so did participants' willingness to experience the alcohol consequence. This demonstrates the power of students' social environment on their decision to drink alcohol and experience consequences of drinking. Neighbors et al. (2007) revealed that social norms were among the best predictors of college student drinking. Additionally, Perkins, Haines, and Rice (2005) demonstrated that students' perception of the drinking norm at their college was the strongest predictor of their own drinking. Students' perception of the drinking norm was stronger than the actual norm that existed at students' colleges. Some studies have analyzed this gap in what students socially expect to occur when drinking and what actually occurs. Clapp and McDonnell (2000), by demonstrating the significance of students' perception of drinking, argues that "correcting misperceptions might be a viable approach" to alcohol prevention strategies (25). Perkins, Haines, and Rice (2005) found students had a dramatically different perception of their college drinking norm that what actually existed. Further, schools that created program information to correct this perception had a lessened likelihood of experiencing negative drinking consequences. On the other hand, colleges that failed to provide program information on the misperceptions of drinking had a higher likelihood of experiencing negative drinking consequences.

Study Purpose

Given that college students' perceptions of alcohol consequences are likely to impact their levels of alcohol consumption and the likelihood of experiencing such consequences, it is important to understand these perceptions and the factors that impact these perceptions. This study asks and seeks to answer how students perceive drinking consequence, if they are motivators or deterrents, and how their social environment influences these perceptions. Due to the strong association between perception and drinking demonstrated by previous studies, it is hypothesized that students that have positive perceptions of drinking consequences will have higher levels of alcohol consumption than students who perceive alcohol consequences more negatively. Further, due to the strong social influence on drinking and drinking perceptions demonstrated in previous studies, it is expected that students with strong social motivations to drink and/or with strong support from friends to drink will be more likely to perceive drinking consequences as motivators.

METHODS

Participants

Surveys were distributed electronically via Survey Monkey to undergraduate students at Butler University, a small, private university in Indianapolis, Indiana. Students from various groups, such as classes and student organizations were asked to volunteer to take the online survey. Students in classes either took the survey via an email link during class time or in their free time. Students involved in organizations, such as Greek houses, student government boards, clubs, and the university honors program, were emailed the survey link and asked to participate during their free time. All survey participants were presented with a study information page before beginning the survey. This page included information about the survey, confidentiality,

and researcher contact information. Participants were asked to read this study information page and click "next" in order to demonstrate informed consent. In addition, respondents were notified of the opportunity to win an incentive for their participation. Participants were only eligible for the incentive if they chose to submit their email address using a separate link available upon completion of the survey. This procedure ensured that participants' responses would remain anonymous. The incentive provided for participation was a $5 Starbucks gift cards. These were given to six participants whose email addresses were randomly drawn.

The study sample consisted of 324 students of which 18.3% were male and 81.7% were female. They ranged in age from 18 to 23 with a mean age of 19.6 years. Of these participants, 90.1% identified as white, followed by 3.7% Asian, 2.8% black, 2.2% Hispanic/Latino, and 1.2% other. 39.5% of the participants were first-year students, 21.9% were sophomores, 19.1% were juniors, 18.8% were seniors, and 0.6% identified as other class standings. Further, 61.4% of the respondents currently belonged to a social sorority or fraternity.

Measures

Independent variable: student perceptions of drinking consequences

Students were asked about their personal perceptions of experiencing 17 different consequences of drinking alcohol. Fifteen of these consequences were derived from the 16 consequences studied in the "Indiana College Substance Use Survey" (King, et al 2014). These consequences included a wide range of consequences ranging from having a hangover or blacking out to receiving a ticket, being arrested or being unable to stop drinking when you wanted to. Two consequences, to vomit and to become rude or obnoxious, were added from the Young Adult Alcohol Problems Screening Test (Mallet, et al 2011).

To measure students' general perceptions of these drinking consequences, four subcategories of perception were used in this study. First, students' general perception of each consequence of drinking was measured by having participants rank if they felt experiencing each consequence would be positive/negative, serious/unserious, worthwhile/not worthwhile, and favorable/not favorable using a five-point scale. For example, one question asked "how positive or negative would it be for you to experience each of the following consequences of drinking?" with the possible responses of "extremely positive, positive, neither positive nor negative, negative, or extremely negative."

The second subcategory of perception focused on students' willingness to experience drinking consequences. Participants ranked to what degree they would avoid experiencing each drinking consequence using a five-point scale ranging from definitely yes to definitely no. In a separate question, participants ranked on a four-point scale from extremely to not at all, participants ranked how willing they would be to experience each drinking consequence. Also included were questions asking students which consequences would make them stop drinking for a period of time. This subcategory of willingness was designed to measure if consequences would deter participants from drinking behavior.

The third subcategory of perception focused on the emotions related to experiencing each consequence. On a four-point scale, participants answered how upset, embarrassed, ashamed, and regretful experiencing each consequence would make them feel. The response options ranged from "extremely" to "not at all." This subcategory of emotional responses to consequences was designed to measure informal mechanisms of deterrence.

The fourth and final subcategory of perception of consequences measured if students believe their personal experience of consequences would deter them from further drinking

behavior. If participants reported experiencing a particular drinking consequence in the past three months, they were then asked if they intended to experience it and if the experience changed their drinking behavior using four-point scales (from definitely intended to definitely unintended and from "No, I continued my current drinking behavior" to "Yes, I stopped drinking all together").

Ten indexes were created to better understand students' perceptions of drinking. For each index, students' perception scores were summed to create a measure of their overall perception of alcohol consequences on the dimension in question. All measures were scored such that high values indicated the characteristic in question. Scores on the positivity index ranged from 17 to 53 (α = .848). Scores on the favorability index ranged from 17 to 53 (α = .915). Scores on the worthwhile index ranged from 26 to 65 (α = .783). The willingness index ranged from 17 to 68 (α = .908). The seriousness index ranged from 17 to 85 (α = .939). The shame index ranged from 17 to 68 (α = .914). The upset index ranged from 17 to 68 (α = .925). The embarrassment index ranged from 17 to 68 (α = .914). The regret index ranged from 17 and 68 (α = .914). The avoidance index ranged from 17 to 85 (α = .950).

Independent variable: friends' level of support of drinking

Friends' level of support of drinking and experiencing alcohol consequences were measured as participants' perceptions of their closest friends' response to drinking consequences. The survey asked students to indicate the extent to which they believed their friends would approve and encourage them to experience each consequence of drinking on a five-point scale with response options ranging from definitely yes to definitely no. Students were also asked how likely they would be to share their experience of each consequence of drinking with their friends. This question used a four-point scale with the responses of definitely, most likely, possibly, and

not at all. This section used 15 of the consequences of drinking from the previous section. Two consequences were excluded in this section of the survey because they discuss scenarios with participants' friends, therefore the consequences would already be apparent to participants' friends.

Three indexes of students' perceptions of their friends' support of drinking were created. The first was measured by summing students' responses to the how much their friends would approve of them experiencing each of the 17 drinking consequences. Scores on this measure ranged from 15 to 75, with high scores reflecting greater approval ($\alpha = .890$). Similarly, a measure of friends drinking encouragement was constructed by adding respondents' answers to how much their friends would encourage them to experience each drinking consequence. Scores on this index ranged from 15 to 75, with high scores indicating higher levels of encouragement ($\alpha = .905$). The third index was constructed by summing students' responses indicating whether or not they would share their experience of each alcohol consequence with their friends. The possible scores on this composite measure ranged from 15 to 60, with higher scores indicating a higher degree of sharing with their friends ($\alpha = .952$).

Independent variable: social motivations to drink alcohol

This study examined ten social motivations for consuming alcohol derived from a study by Cooper (1994). Cooper assessed 20 drinking motivations, divided into four categories: social, coping, enhancement, and conformity. However, only ten motivations from the social and conformity motivation categories were utilized in this study in order to best focus on the social motivations to consume alcohol. These motivations included: to have a good time with friends, to relax, to get drunk, to fit in with a group and because it tastes good. Participants noted on a

five-point scale (never, some of the time, half of the time, most of the time, and always) which of

these motives contributed to their personal choice to drink alcohol.

Two indexes of motivations to consume alcohol were created similar those used by

Kenney et al. (2013). The first index measured social drinking motives and was the sum of five

items, resulting in scores ranging from 5 to 25 (α = .910). The second index measured

conformity drinking motives and was the sum of five items, with resulting scores ranging from 5

to 25 (α = .870). All measures were scored such that high values indicated the characteristic in

question.

Dependent variable: drinking behavior

To measure participants' drinking behavior, participants were asked how much alcohol

they typically consumed in one sitting and during a week, as well as how many times during the

past month that they were drunk. Participants were also asked how frequently they personally

experienced each of the 17 drinking consequences. Participants reported if they experienced each

drinking consequence 0 times, 1 time, 2-3 times, 4-6 times, or more than 7 times within the past

three months.

Control variables

Several control variables are measured in this study, including gender, age, class

standing, and Greek membership as these variables have been found to be related to both alcohol

use and alcohol consequences among college students (King and Mikyoung 2014, Ragsdale et al.

2012; Wechsler 1996). The survey also asked participants to report their friends' consumption of

alcohol, responding to the statement "my friends drink a lot" by selecting one of four response

options which ranged from strongly disagree to strongly agree.

Data Analysis

The responses collected from the survey were compiled into an SPSS statistical analysis dataset. SPSS was used to examine students' perceptions of alcohol consequences and whether these perceptions vary by their motivations to drink and student characteristics.

RESULTS

Descriptive statistics for students' perceptions of the 17 drinking consequences examined in this study are presented in Table 1. An examination of the means for each, along with their standard deviation, allows for one to better understand students' perceptions of each drinking consequence. "To go to anyone for help to reduce your drinking" was reported to be the most positive drinking consequence, the most favorable drinking consequence, and the most encouraged consequence by students' friends. "To drive a car while intoxicated" was reported to be the most serious drinking consequence, as well as the most worthwhile drinking consequence. "To be ticketed or arrested" was reported to be the drinking consequence that would be most avoided, make students most upset, embarrassed, and ashamed, as well as the most regrettable drinking consequence. "To have a hangover" was reported by students to be the most approved drinking consequence by one's friends, the most likely drinking consequence that students would share with their friends, and the drinking consequence students would be most willing to experience.

There was consistency in students' perceptions across all 17 drinking consequences. Also, there were consequences that were perceived positively by multiple measures (positivity, worthwhileness, favorability, and willingness), as well as consequences that were perceived negatively by multiple measures (seriousness, avoidance, upset, embarrassment, shame, and regret). This demonstrates that certain drinking consequences are seen more positively while

others are seen more negatively. Further, the drinking consequences reported more positively were also the drinking consequences more likely to be supported by students' friends (friends' approval, friends' encouragement, and share with friends). This suggests that there may be a relationship between more positively perceived drinking consequences and students' social environment.

Table 2 provides frequencies for students' experience of each alcohol consequence, as well as if students intended to experience these consequences and if it altered their drinking behavior. "To have a hangover" was the most experienced drinking consequence, while "to be ticketed or arrested" and "to go to anyone for help to reduce your drinking" were the least experienced drinking consequences. "To get into a physical fight" and "to go to anyone for help to reduce your drinking" were the most intended drinking consequences, while "to have to see school authorities" was the least intended. "To be ticketed or arrested" was the consequence most likely to cause students to stop drinking all together. "To have to see school authorities" and "to go to anyone for help to reduce your drinking" were the consequences most likely to cause students to stop drinking for a period of time. "To be ticketed or arrested" was the most reported consequence that caused students to drink less. Overall, the experience of being ticketed or arrested demonstrated the most decrease in drinking behavior after experiencing it, followed by seeing school authorities and going to someone for help to reduce drinking. Also, "to become rude or obnoxious" was the most reported consequence that caused no change in students' drinking behavior.

Drinking consequences were reported to be unintentional much more than they were reported to be intentional, demonstrating that students are not seeking to experience most drinking consequences. However, there were two drinking consequences that were reported to be

more intended than unintended. They were getting into a physical fight and seeing someone to help reduce drinking. It is also important to note that for nine of the drinking consequences, 50% or more of the students did not change their drinking behavior after that experience. This demonstrates that regardless of students' perception or intention regarding drinking consequences, they are not decreasing their drinking behavior after the experience of drinking consequences.

Table 3 includes descriptive statistics and the measures of overall perceptions of alcohol consequences, as well as other key variables in the study. The mean for the avoidance index (74.00) and the mean for the seriousness index (70.21) were both very high, indicating that students, in general, want to avoid experiencing alcohol consequences and evaluated them as very serious. However, both indexes had relatively high standards of deviation, indicating a lot of variation in responses. The emotional indexes also yielded high means- upset index had a mean of 56.30, embarrassment index had a mean of 54.79, shame index had a mean of 55.65, and regret index had a mean of 56.99. Yet, the variation in these responses was also high. Additionally, the social motives and conformity motives scales were calculated. The social motives scale yielded a much higher mean (17.18) than the conformity motives scale (7.47). This demonstrates that students generally perceive all drinking consequences more adversely and seriously, rather than positively and worthwhile. In addition, students reported high levels of negative emotional perceptions of drinking consequences. However, this data does not look at how students' perceptions differ by individual drinking consequences. Lastly, the two motive scales illustrate noticeably lower conformity motives to drink alcohol and noticeably higher social motives to drink alcohol. This, in addition to the measures of students' friends support of drinking, tells us that students' social environment is significant in explaining drinking.

Three drinking scales- drinks in an average sitting, drinks in the past week, and drunkenness in the past month- were calculated and are also represented in Table 3. The mean number of drinks in sitting was 3.93, the mean number of drinks in an average week was 5.29, and the mean number of times being drunk in the past month was 3.42. Further, 75.63% of students reported drinking alcohol, which is consistent with current literature on college drinking.

In order to examine where student perceptions of drinking consequences differ across students, correlations between gender, class standing, Greek life affiliation, and friends' drinking and perception indexes were run. As shown in table 4, gender was significantly correlated with three measures of perception of drinking consequences. Males were more likely to evaluate drinking consequences positively and to report that their friends approve and encourage the experience of drinking consequences. The positivity of drinking consequences for males may have been attributed to the significant correlations of a few consequences: getting into a physical fight, having to see school authorities, getting hurt, and experiencing unwanted sexual attention. Also, males being significantly more likely to have their friends approve of drinking consequences may be due to a few particular consequences: getting into a physical fight, having to see school authorities, getting hurt, engaging in risky sexual behavior, and experiencing unwanted sexual attention. Lastly, the significant correlation between males' friends encouraging them to experience drinking consequences may be due to the following consequences: getting into a physical fight, getting hurt, engaging in risky sexual behavior, being unable to stop drinking when you wanted to, experiencing unwanted sexual attention, and going to anyone for help to reduce your drinking. In contrast, female participants did not follow this correlation pattern, thus females were not more likely to perceive drinking consequences in a specific way.

Class standing was not a significant predictor of any of the measures of perception of consequences. Greek affiliation was a significant predictor of only two measures of perception-willingness to experience drinking consequences and sharing the experience of drinking consequences with friends (see Table 4). The significant correlation between Greek life affiliation and willingness to experience consequences can be attributed to higher correlations between the following consequences: have a hangover, feel bad/guilty about your drinking, black out, and vomit. This relationship is important to note because it demonstrates the influence of students' social environment on their experience of drinking consequences.

Finally, the measure of how much students' friends drink was significantly correlated with all but one measure of perception (see Table 4). The more students' friends drink, the more likely they were to perceive consequences as positive, worthwhile, and favorable, more willing to experience them, more likely to have their friends approve and encourage experiencing them, and more likely to share the experience of them with their friends. Additionally, the more students' friends drink, the less likely they are to avoid experiencing consequences, as well as less likely they are to feel upset, embarrassed, ashamed, or regretful about experiencing consequences. Again, this points to the influence of students' social environment in shaping their perceptions of drinking consequences.

Table 5 represents the bivariate correlations between all 13 measures of perception, the two motive scales, and the three drinking measures. Significant correlations were found between many of these measures. Students who evaluated drinking consequences positively, were also likely to evaluate drinking consequences as favorable and worthwhile, and were willing to experience drinking consequences. Further, these students were less likely to evaluate drinking consequences as serious and to avoid experiencing them. Students who reported being highly

upset about potentially experiencing drinking consequences, also reported being highly

embarrassed, ashamed, and regretful about potentially experiencing drinking consequences.

The measures of friends' perception of drinking consequences demonstrated some

significant relationships between friends' approval of consequences, as well as friends'

encouragement of consequences and all measures of perception. However, the measure of

students sharing their experience of drinking consequences were their friends was not as strongly

related to the measures of perception. Students who reported being likely to share their

experience of drinking consequences with their friends, were also likely to have friends approve

of them experiencing drinking consequences. Also, students whose friends were likely to

approve of them experiencing drinking consequences, were likely to encourage them to

experience drinking consequences. These relationships demonstrate the importance of friends'

level of support for drinking consequences on how students perceive drinking consequences.

There was not a significant relationship between students who were likely to report social

motives to drink alcohol and students who were likely to report conformity motives to drink

alcohol. Social motives were significantly related to the measures of perception, while the

conformity motives were not. Further, social motives were significantly related to all three

measures of drinking, while conformity motives were not. This again illustrates the significance

of students' social environment in their perception of drinking consequences. All three drinking

measures (average of number of drinks in a sitting, average number of drinks in a week, and

number of times being drunk in the past month) were significantly related to all measures of

perception. The more students drank, the higher they reported drinking consequences to be

positive, worthwhile, and favorable, more willing they were to experience drinking

consequences, more likely to have their friends approve, more likely to have their friends

encourage, and likely to share with their friends their experience of drinking consequences. Thus, students' drinking behaviors are related to how they perceive drinking consequences. Lastly, all three drinking measures were significantly related to one another.

DISCUSSION

The primary purpose of this study was to examine students' perceptions of several potential alcohol consequences and the extent to which students view them as motivators or deterrents to future drinking. To begin with, this study demonstrates that overall students perceive drinking consequences to be adverse and serious. However, when analyzing individual drinking consequences, there is much more variance in students' perceptions. Certain drinking consequences are viewed positively, such as having a hangover, going to someone for help to reduce drinking, and getting into a physical fight. While other drinking consequences are viewed more negatively, such as getting ticketed or arrested and having to see school authorities. In addition to this, gender is important in understanding students' perceptions of drinking consequences. Gender was significantly correlated with positive perceptions, in that males were more likely to positively perceive drinking consequences across all measures of perception. Thus, a stronger understanding of how drinking consequences are perceived was found and it specifically revealed that these perceptions vary by individual drinking consequence and gender.

Furthermore, the study examined how students' social environment affected their perceptions of drinking. Social motivations to drink alcohol were high in this study, demonstrating that students feel inclined to drink because of their friends and surroundings. Further, social motives to drink were significantly correlated to students' perceptions of drinking. The more positively students perceived drinking consequences, the more supported they were by their friends to experience drinking consequences. Also, the more students' friends drink alcohol,

the more positively students perceive drinking consequences to be. Lastly, students affiliated with Greek life were significantly more likely to be willing to experience drinking consequences and share that experience with their friends. This clearly illustrates the relationship between students' perceptions and their social environment. Further, this confirms the study's first hypothesis- that students with strong social motivations to drink and with strong support from friends to drink will be more likely to perceive drinking consequences as positive and motivators to future drinking.

In addition to understanding how students perceive drinking consequences, this study examined how students' perception affects their drinking behavior. While certain drinking consequences were unintentional and caused students to decrease their drinking, others were not. Getting into a physical fight and seeing someone to help reduce drinking were more intended than not. For nine of the 17 drinking consequences examined, 50% or more of the students did not change their drinking behavior after experiencing that drinking consequence. This pattern demonstrates that not all drinking consequences are deterrents to further drinking. Students, despite their experience of drinking consequences, are often not decreasing their drinking. In addition to this finding, the more students drank alcohol, the more positively they perceived drinking consequences. This relationship demonstrates how students' perception affects their drinking behavior. This also confirms the study's second hypothesis- that students that have positive perceptions of drinking consequences will have higher levels of alcohol consumption than students who perceive alcohol consequences more negatively.

This study adds to the current literature on college drinking by providing a much more in depth understanding of how students perceive drinking consequences. It shows us that overall students may perceive drinking consequences to be adverse. Yet, when drinking consequences

are examined individually, we can see differences in how specific drinking consequences are perceived more positively. Further, these perceptions are viewed quite differently based on gender. The study also reveals how influential students' social environment is on their motivation to drink and perception of drinking consequences. Lastly, the study shows us that students perception affects their drinking behavior and positive perceptions correlate with higher levels of drinking.

The study reveals that certain drinking consequences are perceived more positively, are intentionally experienced, do not alter students' drinking behavior, and are socially supported by students' friends. These findings have the potential to benefit college administrators working to deter risky drinking and its potential adverse effects for college students. Students' perceptions may be stronger than the drinking consequence, making them motivated rather than deterred to drink more. Prevention programs must understand this pattern and shift their strategies to accommodate for the fact that the current deterrents are not effective and the issue may lie farther within students' perceptions rather than their behavior. Taking heed of these findings has the potential to improve the effectiveness of college drinking prevention programs.

One of the primary limitations of this study is that due to time restraints, there is no time order in the relationship between students' perceptions and their drinking behavior. This is not a longitudinal study, therefore the study does not reveal how students perceive a drinking consequence directly after experiencing it. Rather, this study asks students to reflect on the past three months and report if they experienced consequences, if they were intentional, and if they changed their drinking behavior because of this experience.

Another limitation is that the study does not account for spuriousness in the bivariate correlations between measures of perception, control variables, drinking motivations, and

drinking measures. This data must be analyzed more in depth in order to understand if these correlations are caused by any other factors. In addition to this, there were a disproportionate number of females in the sample. The perception patterns demonstrated by males would be stronger if there were more males in the sample. Despite this, significant correlations were still able to be found in males. Future research should seek a more representative sample of the undergraduate population. Another methodological limitation was high survey taking fatigue. Many participants did not complete the entirety of the survey. This caused certain measures at the end of the survey to have less of a response rate.

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APPENDIX

Table 1. Means (Standard Deviations) Student Perceptions of Individual Drinking Consequences[1]

	Positivity	Seriousness	Worthwhileness	Favorability	Avoidance	Willingness	Upset	Embarrassment	Shame	Regret	Friends' Approval	Friends' Encouragement	Share with Friends
To have a hangover	1.87 (.59)	2.87 (1.01)	3.63 (1.04)	1.87 (.62)	3.68 (1.12)	2.04 (.92)	2.26 (.97)	1.82 (1.03)	1.89 (1.06)	2.36 (1.01)	3.20 (.80)	2.63 (.99)	3.29 (.84)
To feel bad or guilty about your drinking	1.96 (.71)	3.41 (.96)	2.06 (.86)	1.77 (.64)	3.88 (1.07)	1.63 (.74)	2.75 (.89)	2.50 (1.03)	2.72 (.97)	2.87 (.97)	2.77 (.81)	2.32 (.89)	2.73 (.97)
To black out (Forget what you did/where you were)	1.42 (.73)	4.25 (.99)	1.62 (.93)	1.38 (.66)	4.35 (1.05)	1.42 (.76)	3.27 (.96)	3.17 (1.02)	3.22 (1.00)	3.35 (.92)	2.41 (1.08)	2.05 (1.08)	2.99 (1.02)
To get into a physical fight	1.33 (.62)	4.49 (.82)	4.52 (.76)	1.32 (.57)	4.56 (.84)	1.13 (.50)	3.60 (.73)	3.59 (.73)	3.59 (.73)	3.67 (.67)	1.70 (.87)	1.51 (.81)	2.77 (1.11)
To drive a car while intoxicated	1.10 (.35)	4.81 (.69)	4.81 (.56)	1.14 (.41)	4.77 (.69)	1.05 (.34)	3.82 (.53)	3.90 (.56)	3.88 (.40)	3.88 (.40)	1.25 (.58)	1.21 (.56)	2.30 (1.13)
To be ticketed or arrested	1.10 (.32)	4.80 (.66)	1.22 (.61)	1.16 (.42)	4.78 (.73)	1.03 (.27)	3.87 (.51)	3.89 (.41)	3.89 (.39)	3.90 (.39)	1.40 (.73)	1.24 (.61)	2.54 (1.18)
To have to see school authorities	1.22 (.46)	4.64 (.78)	1.31 (.66)	1.24 (.50)	4.72 (.77)	1.07 (.35)	3.78 (.60)	3.80 (.55)	3.79 (.52)	3.82 (.49)	1.56 (.80)	1.33 (.67)	2.57 (1.17)
To get hurt	1.58 (.66)	4.20 (.91)	1.63 (.78)	1.49 (.61)	4.45 (.88)	1.24 (.54)	3.38 (.80)	3.21 (.92)	3.24 (.95)	3.40 (.78)	1.85 (.85)	1.51 (.72)	2.87 (1.05)
To miss class or an assignment	1.79 (.63)	3.91 (.87)	1.86 (.78)	1.67 (.62)	4.18 (.93)	1.41 (.64)	3.05 (.85)	2.78 (1.09)	2.97 (.97)	3.12 (.86)	2.43 (.91)	2.08 (.99)	2.65 (1.02)
To engage in risky sexual behavior	1.48 (.70)	4.42 (.88)	1.54 (.79)	1.44 (.69)	4.44 (.92)	1.24 (.55)	3.47 (.82)	3.40 (.88)	3.46 (.83)	3.54 (.71)	1.86 (1.00)	1.72 (.97)	2.50 (1.06)
To have friends worry about your drinking/tell you to stop drinking	1.69 (.80)	4.20 (.86)	1.73 (.82)	1.58 (.69)	4.37 (.84)	1.26 (.55)	3.38 (.79)	3.38 (.86)	3.47 (.72)	3.42 (.76)	N/A	N/A	N/A
To create problems between you and your friends	1.44 (.56)	4.34 (.80)	1.60 (.77)	1.46 (.57)	4.44 (.80)	1.16 (.48)	3.50 (.71)	3.44 (.80)	3.47 (.74)	3.55 (.66)	N/A	N/A	N/A
To be unable to stop drinking when you wanted to	1.30 (.60)	4.57 (.77)	1.46 (.77)	1.36 (.59)	4.57 (.76)	1.14 (.49)	3.64 (.67)	3.58 (.75)	3.64 (.64)	3.63 (.65)	1.69 (.81)	1.61 (.83)	2.41 (1.08)
To experience unwanted sexual attention	1.51 (.72)	4.31 (.95)	1.58 (.84)	1.49 (.73)	4.36 (.96)	1.23 (.54)	3.43 (.84)	3.31 (.97)	3.32 (.94)	3.34 (.90)	1.92 (1.02)	1.74 (.93)	2.69 (1.07)
To go to anyone for help to reduce your drinking	2.38 (1.17)	4.02 (.92)	2.11 (1.15)	1.91 (1.02)	4.22 (.99)	1.43 (.81)	3.27 (.93)	3.28 (.94)	3.34 (.87)	3.26 (.95)	2.90 (1.34)	2.70 (1.39)	2.50 (1.09)
To vomit	1.86 (.74)	3.49 (1.11)	2.02 (.92)	1.76 (.70)	4.04 (1.10)	1.55 (.81)	2.91 (1.00)	2.85 (1.03)	2.75 (1.03)	2.92 (.98)	2.69 (.92)	2.30 (.96)	2.99 (.97)
To become rude or obnoxious	1.80 (.64)	3.56 (1.05)	1.93 (.83)	1.76 (.69)	4.09 (.97)	1.49 (.74)	2.94 (.94)	3.01 (.90)	3.00 (.93)	3.01 (.95)	2.17 (.88)	1.99 (.83)	2.67 (1.06)

[1] Sample sizes range from 275 to 324.

Table 2. Frequencies of Experiencing Alcohol Consequences in the Past Three Months, Intentions and Resulting Changes in Behavior (N=208-209)

	Number of Students that Experienced Alcohol Consequence	Percentage of Students that Experienced Alcohol Consequence	Percentage of Students that Intended to Experience Alcohol Consequence[2]		Percentage of Students that Changed their Drinking Behavior after Experiencing Alcohol Consequence			
			Intended	Unintended	Stopped Drinking All Together	Stopped for a Period of Time	Drank Less	No Change in Drinking
To have a hangover	140	67.0	10.8	54.3	0.0	14.4	24.5	61.2
To feel bad or guilty about your drinking	95	45.7	6.2	72.9	2.1	15.6	51.0	31.3
To black out (Forget what you did/where you were)	64	30.6	10.8	67.7	1.6	10.9	46.9	40.6
To get into a physical fight	4	1.9	50.0	25.0	25.0	0.0	25.0	50.0
To drive a car while intoxicated	9	4.3	0.0	77.7	11.1	11.1	33.3	44.4
To be ticketed or arrested	3	1.4	33.3	66.7	33.3	0.0	66.7	0.0
To have to see school authorities	7	3.4	0.0	87.5	12.5	25.0	37.5	25.0
To get hurt	31	14.9	12.9	80.6	6.5	3.2	19.4	71.0
To miss class or an assignment	39	18.7	7.7	74.4	2.5	2.5	27.5	67.5
To engage in risky sexual behavior	43	20.7	25.6	41.9	2.3	4.7	32.6	60.5
To have friends worry about your drinking/tell you to stop drinking	15	7.2	6.3	75.0	6.3	6.3	43.8	43.8
To create problems between you and your friends	34	16.3	2.9	85.3	2.9	14.7	29.4	52.9
To be unable to stop drinking when you wanted to	15	7.2	20.0	33.4	13.3	13.3	20.0	53.3
To experience unwanted sexual attention	51	24.4	9.8	51.0	2.0	2.0	24.0	72.0
To go to anyone for help to reduce your drinking	3	1.4	50.0	25.0	25.0	25.0	25.0	25.0
To vomit	85	40.9	4.6	77.9	1.2	14.0	36.0	48.8
To become rude or obnoxious	50	24.0	5.9	68.6	2.0	3.9	19.6	74.5

[2] The intended category includes those students who said, "definitely intended" or "intended" and the unintended category includes those students who said "unintended" or "definitely unintended." Percentages may not total to 100% because the middle category, "neither intended or unintended" is not displayed in the table.

Table 3. Overall Means of Drinking Consequence Perception, Social Motivations, and Drinking Behavior

	Mean	Standard Deviation	Range	N
Positivity Index	26.86	6.18	17-53	317
Seriousness Index	70.21	10.80	17-85	318
Worthwhile Index	36.59	6.63	26-65	317
Favorability Index	25.74	7.12	17-53	316
Avoidance Index	74.00	11.46	17-85	286
Willingness Index	22.47	6.54	26-65	287
Upset Index	56.30	9.30	17-68	287
Embarrassment Index	54.79	9.60	17-68	285
Shame Index	55.65	9.15	17-68	284
Regret Index	56.99	8.74	17-68	284
Friends' Approval Index	31.74	8.55	15-75	271
Friends' Encouragement Index	27.97	8.93	15-75	271
Share with Friends Index	40.42	12.31	15-60	273
Social Motives Index	17.18	4.94	5-25	205
Conformity Motives Index	7.47	3.43	5-25	208
Average Number of Drinks in a Sitting	3.93	2.71	0-20	208
Average Number of Drinks in a Week	5.29	6.14	0-50	207
Number of Times Drunk in Past Month	3.42	3.68	0-31	210

Table 4. Correlations between Perceptions of Drinking Consequences and Control Variables[3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Positivity Index	1.00																
2. Seriousness Index	-.48**	1.00															
3. Worthwhile Index	.61**	-.39**	1.00														
4. Favorability Index	.71**	-.45**	.69**	1.00													
5. Avoidance Index	-.46**	.32**	-.50**	-.54**	1.00												
6. Willingness Index	.34**	-.30**	.36**	.42**	-.31**	1.00											
7. Upset Index	-.60**	.42**	-.61**	-.59**	.53**	-.37**	1.00										
8. Embarrassment Index	-.70**	.48**	-.63**	-.69**	.60**	-.43**	.80**	1.00									
9. Shame Index	-.65**	.46**	-.61**	-.70**	.51**	-.45**	.74**	.86**	1.00								
10. Regret Index	-.66**	.45**	-.62**	-.72**	.52**	-.43**	.74**	.83**	.92**	1.00							
11. Friends' Approval Index	.49**	-.25**	.48**	.57**	-.46**	.27**	-.53**	-.63**	-.52**	-.54**	1.00						
12. Friends' Encouragement Index	.47**	-.28**	.47**	.61**	-.41**	.24**	-.51**	-.58**	-.50**	-.54**	.80**	1.00					
13. Share with Friends Index	.08	-.03	.12*	.08	-.09	.15*	-.12*	-.13*	-.14*	-.09	.17**	.12	1.00				
14. Gender (0=Male, 1=Female)	-.13**	.00	.01	-.10	.08	.03	.10	.09	.04	.07	-.15*	-.16*	.07	1.00			
15. Class Standing (1= First Year)	.058	-.11	.08	.11	-.02	.08	-.08	-.05	-.11	-.07	-.01	.01	-.10	-.09	1.00		
16. Greek Affiliation (0=No, 1=Affiliated)	.04	-.10	.07	.03	-.04	.14*	-.06	-.04	-.08	-.06	-.07	-.05	.19**	.19**	.03	1.00	
17. Friends Drink a Lot (1=No- 4=Yes)	.24**	-.11	.23**	.25**	-.15*	.15*	-.23**	-.33**	-.31**	-.30**	.44**	.36**	.28**	-.01	.01	.18**	1.00

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

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[3] Sample sizes range from 268 to 324.

Table 5. Correlations of Perception, Motivations, and Drinking[4]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Positivity Index	1.00																	
2. Seriousness Index	-.48**	1.00																
3. Worthwhile Index	.61**	-.39**	1.00															
4. Favorability Index	.71**	-.45**	.69**	1.00														
5. Avoidance Index	-.46**	.32**	-.50**	-.54**	1.00													
6. Willingness Index	.34**	-.30**	.36**	.42**	-.31**	1.00												
7. Upset Index	-.60**	.42**	-.61**	-.59**	.53**	-.37**	1.00											
8. Embarrassment Index	-.70**	.48**	-.63**	-.69**	.60**	-.43**	.80**	1.00										
9. Shame Index	-.65**	.46**	-.61**	-.70**	.51**	-.45**	.74**	.86**	1.00									
10. Regret Index	-.66**	.45**	-.62**	-.72**	.52**	-.43**	.74**	.83**	.92**	1.00								
11. Friends' Approval Index	.49**	-.25**	.48**	.57**	-.46**	.27**	-.53**	-.63**	-.52**	-.54**	1.00							
12. Friends' Encouragement Index	.47**	-.28**	.47**	.61**	-.41**	.24**	-.51**	-.58**	-.50**	-.54**	.80**	1.00						
13. Share with Friends Index	.08	-.03	.12*	.08	-.09	.15*	-.12*	-.13*	-.14*	-.09	.17**	.12	1.00					
14. Social Motives Index	.18*	-.09	.25**	.20**	-.17*	.38**	-.20**	-.28**	-.34**	-.33**	.12	.08	.28**	1.00				
15. Conformity Motives Index	.09	.02	.13	.13	-.05	.17*	-.10	.03	.06	-.02	.10	.13	.01	.09	1.00			
16. Average Number of Drinks in a Sitting	.32**	-.19*	.25**	.28**	-.22**	.20**	-.29**	-.31**	-.26**	-.27**	.21**	.26**	.19**	.42**	.06	1.00		
17. Average Number of Drinks in a Week	.38**	-.23**	.26**	.29**	-.30**	.28**	-.35**	-.40**	-.35**	-.36**	.33**	.26**	.22**	.40**	.10	.74**	1.00	
18. Number of Times Drunk in Past Month	.29**	-.20**	.25**	.24**	-.41**	.21**	-.43**	-.47**	-.23**	-.25**	.43**	.38**	.25**	.30**	.03	.57**	.76**	1.00

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

[4] Sample sizes range from 199 to 318.