Gender and BAC: A Predictor of Risky Behavior Among College Students?

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Abstract

Risky behaviors related to alcohol consumption are a prevalent issue on college campuses, compelling universities across the nation to intervene. While excessive alcohol consumption has become common on campuses, it is associated with many negative consequences such as trouble with academics, relationships and the legal system (Park, 2004). College "binge drinking" has received significant attention; however, there has been less focus on the increasing levels of negative consequences resulting from alcohol consumption (Grant et al., 2005). Young adults who binge drink are more likely to partake in risk-taking, not because they desire to, but because they see no perceived risk at the time (Leigh, 1999). While there is a positive relationship between the number of risky behaviors and higher BAC (blood alcohol content), this correlation is reinforced when gender is accounted for. The purpose of the present study is to examine the consequences of alcohol consumption and if gender in conjunction with BAC accounts for the resulting number of risky behaviors. The sample consists of 200 undergraduate students at a midsized, Midwestern public university with an average age of 20.35 years. 54% of the participants were male and 46% female, the majority being white/Caucasian (92.5%). Many of the students came from middle to upper class backgrounds with 54.80% reporting an annual family income of $100,000 or greater. Data was collected through a survey, which requested information on the student's drinking behavior that evening and contact information via each student's email. After the initial survey the students were breathalyzed. Students then proceeded to a more extensive questionnaire, which assessed the effect of alcohol consumption on risky behavior. The study found that gender alone was not enough to predict the number risky behaviors occurring upon each session of alcohol consumption; however, gender in combination with BAL was effective in predicting number of risky behaviors.

Keywords: Gender, Risky behavior, BAL

1. Introduction

Underage drinking has proven to be extremely problematic, those aged 12-20 are responsible for 11% of all alcohol consumed in the United States and 90% of these individuals consume in the form of binge drinking (CDC, 2012). Underage college students drink alcohol less frequently than those who are of age, however when they do drink, it is in excess (Wechsler, 2010). This abuse of alcohol leads to a multitude of risky behaviors with unsafe sex, lack of contraception and illicit drug use being the most prominent across college campuses (CDC, 2012). The purpose of the present study is to examine the consequences of alcohol consumption and if gender in conjunction with BAC accounts for the resulting number of risky behaviors.

In a study investigating gender difference in risky behavior, men were more willing to engage in such behaviors, partially due to their sensation-seeking proclivities (Hirschberger et al., 2002). This inclination is related to an increased desire for thrill and diminished perception of associated risk. Relatedly, in examining the difference between alcohol related consequences among men and women, former research indicates that women are less likely

to have alcohol-related problems in addition to having a greater perceived risk when it comes to risky behaviors. While men are shown to be more likely to engage in sensation-seeking and aggressive behaviors, it is the women who tend to experience more negative long-term consequences such as alcohol-related illness (Nolen-Hoeksema, 2004). As a result of compositional differences, women experience the onset of effects due to increased BAC at a quicker rate than men. However, studies indicate that men are more prone to engage in binge drinking due to social pressures thus showing that they typically exhibit a greater BAC (Holmila, 2005). With this increased BAC comes an increased likelihood to engage in risk taking. Alcohol consumption in conjunction with risky behavior may lead to a multitude of issues such as increased probability of activities that may induce harm; potential injury, or alcohol itself causing damage to the body (Leigh, 1999).

  This study assesses if an individual's BAC, in concurrence with their gender, is significant enough to predict the number of risky behaviors engaged in during the time of the drinking event. Unlike other research studies with regard to gender and alcohol, the present study seeks to calculate the consequences of alcohol while accounting for these variables.

2. Methods

2.1 Participants

200 undergraduate students from a Midwestern public university participated in this study. There was an average age of 20.35 years old with a standard deviation of 1.48 years; 46% of the participants were female, the majority being white/Caucasian (92.5%). Many of the students came from middle to upper class backgrounds with 54.80% reporting an annual family income of $100,000 or greater. The average GPA of the population is 3.3.

2.2 Procedure

All procedures were approved by Miami University's IRB. During the initial interview, each participant was breathalyzed and asked to provide a school email for further contact in regard to a more extensive survey. The second survey assessed the effect of alcohol consumption on risky behavior.

2.3 Measures

YAACQ: The Young Adult Alcohol Consequences Questionnaire examines the consequences that come as a result of drinking by measuring 48 items. The questionnaire assesses 8 subcategories, which load on a single, high-order consequences factor. Response options are rated dichotomously to reveal whether or not the consequence has been experience over the designated period of time. Each response is scored, (no=0, yes=1) The different topics included: - social/interpersonal (female average: 1.29 female standard deviation: 1.34 male average: 1.57 male standard deviation: 1.75); academic/occupational (female average: .56 female standard deviation: 1.1 male average: .69 male standard deviation: 1.2); risky behavior (female average: 1.1 female standard deviation: 1.5 male average: 1.9 male standard deviation: 2.3); impaired control (female average: .99 female standard deviation: 1.3 male average: 1.2 male standard deviation: 1.6); poor self-care (female average: 3.2 female standard deviation: 1.7 male average: 3.2 male standard deviation: 1.7); diminished self-perception (female average: .66 female standard deviation: 1.1 male average: .73 male standard deviation: 1.2); blackout drinking (female average: 2.3 female standard deviation: 2.3 male average: 2.6 male standard deviation: 2.5); physiological dependence (female average: .25 female standard deviation: .57 male average: .39 male standard deviation: .79)

2.3.1 instrumentation

The Intoxilyzer® 400PA is an automatic breathalyzer that displays results in the matter of seconds. It is a factory calibrated breathalyzer and is considered part of the NHTSA (National Highway Traffic Safety Administration) Products List. This breathalyzer has the ability to disable when calibration is overdue, which ensures accuracy. This is a key feature that separates the Intoxilyzer® 400PA from all other breathalyzers. The Intoxilyzer® 400PA can operate in three modes- Precursory, Analyze, or Precursory/Analyze. For the purpose of this study, only the Analyze

mode was used. Intoxilyzer® 400PA comes standard with a 500 test memory bank. The memory bank helps to keep participants anonymous when analyzing the data (CMI Intoxilyzer® 400PA; CMI, Inc., Owensboro, KY).

3. Results

Drinking behaviors of the population: In a typical week, the population consumed at least one alcoholic beverage an average of 2.26 days with a standard deviation of 1.35. On a typical day when drinking, the population consumed an average of 4.92 drinks with a standard deviation of 3.11 average. The population's peak drinking event in the last 30 days consisted of an average of 8.61 drinks with a standard deviation of 5.01.

  The study found that gender alone was not enough to predict the number of risky behaviors occurring upon each session of alcohol consumption; however, gender in combination with blood-alcohol level was effective in predicting number of risky behaviors. In the multiple regression, the risky behavior scale of the YAACQ was predicted by BAL and gender. The regression significantly predicted the risky behavior scale, $F(2, 179) = 14.29$, $p < .001$, adjusted $R^2 = .13$. BAL was a significant predictor of risky behaviors ($\beta = .31$, $p < .001$). In addition, gender significantly predicted the risky behaviors consequences scale ($\beta = .18$, $p = .01$). (Cronbach's Alpha .944.)

4. Discussion

Although researchers have examined gender, BAL and its effect on risky behaviors, little has been done in the way of using these variables to predict the number of potential risky behaviors. If gender or BAL is isolated, there is still an impact on number of risky behaviors taken, however, accounting for both items in combination is indicative of a much stronger correlation. Since there seems to be a narrowing of the gap between male and female drinking habits, the present study indicates that significance between the sexes exists; it simply becomes more prominent when the BAL is accounted for. The data will be useful in the prediction and potential prevention of risk taking.

  This study answers the question, "What causes an individual do engage in risky behaviors?" The results are somewhat surprising in that gender alone is not a strong enough predictor. How much someone drank on an alcohol consumption occasion was a stronger predictor of subsequent risky behavior consequences than gender.

  No study is without limitations, some limitations to the present study include the sample size was ethnically homogenous, with almost 93% being Caucasian; self reported data was used for both the initial and follow up survey which is not always entirely reliable; 46% of the population was female thus yielding an unequal gender sample; the location for initial data collection was in a local bar district and may not necessarily account for all populations engaging in a drinking session.

5. Acknowledgments

6. References

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