

Examining Alcohol-Related Expectancies within College Class Standing

by

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Abstract

Alcohol is the most widely abused substance among America's youth (Department of Health and Human Services, 2007). A significant portion of alcohol abuse occurs in college. College is often symbolized by a tradition of drinking that is entrenched in every level of a student's environment. The purpose of this study was to examine alcohol expectancies of college students. This study compared alcohol expectancies between sophomore, junior, and senior students and how these expectancies vary across gender and ethnicity.

The participants of this study were selected from a large, research university in the southeastern United States that serves approximately 25,000 students. The participants consisted of 310 sophomore, junior, and senior students (103 males and 207 females) enrolled in physical activity and wellness courses in the fall 2011 and spring 2012 semesters. Expectancy and valuation were measured by using the Comprehensive Effects of Alcohol (CEOA) questionnaire. The instrument is comprised of 76 items and three demographic questions. The study investigated the relationship between class standing, gender, and ethnicity and alcohol expectancy and valuation.

A one-way multivariate analysis of variance was used for each of the three research questions. The MANOVA result revealed there is not a statistically significant effect of class

standing on expectancy and valuation. There is no relationship between class standing and expectancy and valuation. The MANOVA result revealed there is a statistically significant effect of gender on expectancy and valuation. Male and female college students have different alcohol expectancies and valuations. The MANOVA result revealed there is a statistically significant effect of ethnicity on expectancy and valuation. But there is something to note about the significance ethnicity has on expectancy and valuation. The variable “others” was created to combine the varying ethnicities (African-American, Hispanic/Latino, American-Indian, and Asian). If these ethnicities were separated, ethnicity would not have had an effect on expectancy and valuation. Combining these races into “others” provided a stronger result than separating each race individually.

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I would like to humbly thank God for providing me with the wisdom, guidance, and determination to achieve my dreams.

Phillippians 4:13 *I can do all things through Christ who strengthens me.*

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CHAPTER 1. INTRODUCTION

Alcohol is the most widely abused substance among America's youth (Department of Health and Human Services, 2007). A significant portion of alcohol abuse occurs in college. College is often symbolized by a tradition of drinking that is entrenched in every level of a student's environment. Approximately 1,825 college students between the ages of 18-24 die each year from alcohol-related injuries (Hingson, Heeren, Zakocs, Kopstein, Wechsler, 2009). Alcohol not only causes long-term consequences but also immediate consequences, such as driving under the influence, assault, rape, and academic consequences. Five hundred and ninety-nine thousand students between the ages of 18-24 are injured under the influence of alcohol (Hingson et al., 2009). Three million and three hundred sixty thousand students between the ages of 18-24 drove under the influence of alcohol in 2001 (Hingson et al., 2009). Approximately 25% of students report academic consequences due to drinking (i.e. missing class, doing poorly on exams/papers, receiving lower grades, etc.) (Engs, Diebold, Hansen, 1996). Lastly, more than 696,000 students between the ages of 18-24 report being assaulted by another student who is under the influence of alcohol (Hingson et al., 2009).

In addition, college drinking also has an effect on the economy. Underage drinking accounted for 22.5 billion dollars in the alcohol industry in 2001 (Foster, Vaughan, Foster, Califano, 2006). Collegiate alcohol abuse is detrimental not only to a student's health and academics but also poses a risk to society as a whole.

The Secretary of Health and Human Services, Honorable Michael O. Leavitt, issued a charge in the *Surgeon General's Call to Action to Prevent and Reduce Underage Drinking*. His message included some of the following:

This *Call to Action* is a reminder that underage drinking has serious social costs and often tragic personal consequences. More than that, this Call to Action demonstrates that each of us has the opportunity to prevent underage drinking. The *Call to Action* also offers a way forward through the collaborative effort of societal change involving parents, police officers, colleges, and communities. This type of societal change requires the discipline and determination to take small steps toward reducing underage drinking each day. Many of these efforts are already underway, but much more must be done. The time to act is now. (Department of Health and Human Services, 2007, p. iii-iv)

This charge prefaced the *Call to Action* urging parents, administrators, legislators, students, and society to make a difference regarding adolescent drinking. The *Call to Action* is one of many strategic plans aimed in reducing and preventing collegiate drinking.

Statement of the Problem

College drinking has garnered significant attention throughout the nation. An organization that served as the impetus to prevent and reduce college student drinking was the National Institute on Alcohol Abuse and Alcoholism (NIAAA) created in 1976 (National

Institute on Alcohol Abuse and Alcoholism, 2002). The NIAAA is a renowned institution that focuses on alcohol abuse from a global perspective. After releasing one report discussing college student drinking, NIAAA quickly realized the need for more research on the culture of college drinking. A task force was established to address college student drinking specifically. The product of that task force is *A Call to Action: Changing the Culture of Drinking at U.S. Colleges* (National Institute on Alcohol Abuse and Alcoholism, 2002). This report elaborates on drinking behaviors of college students as well as the consequences it has on drinkers and non-drinkers. The report serves to analyze and emphasize the consequences that a culture of college drinking has on university campuses nationwide. The former president of the University of Vermont states “underage drinking and excessive drinking have negative effects on everything we’re trying to do as a university. They compromise the educational environment, the safety of our students, the quality of life on campus, town/gown relationships, and our reputation” (Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism, 2002, p. 1). After three years of research and discussions, *A Call to Action* outlines a series of recommendations for universities, researchers, and the NIAAA. Because of this report, NIAAA has committed \$8 million dollars to address college drinking. They are also collaborating with college presidents to establish effective policies to reduce college drinking. Thus, this report is integral in understanding and analyzing the effects of college drinking for students and other stakeholders.

In addition to *A Call to Action: Changing the Culture of Drinking at U.S. Colleges*, there have also been legislative attempts to address underage drinking. One such act is the minimum legal drinking age (MLDA) of 1984. During the early 1970s, states began lowering the minimum legal drinking age to 18, 19, or 20. Research began suggesting that motor vehicle accidents involving teens increased significantly (Higher Education Center, 2010). Advocacy groups began

petitioning legislators to raise MLDA back to 21. This prompted the Uniform Drinking Age Act of 1984 (Higher Education Center, 2010). Nevertheless, MLDA brings about many debates. Some argue that maintaining the MLDA at 21 only causes legal-aged individuals to illegally provide alcohol to under age teens. Yet others argue that MLDA being set at 21 established an alcohol control policy. Thus, MLDA and campus prevention/reduction policies can help to effectively combat underage drinking on college campuses.

Another act that addresses college drinking is the Drug-Free Schools and Communities Act (DFSCA). DFSCA amends the Higher Education Act of 1965. The Act requires institutions of higher education that receive federal funding to establish a drug and alcohol abuse program. An institution must also inform both faculty and students in writing of the program (Higher Education Center, 2011). If an institution fails to comply with the Act, they may lose federal funding (Higher Education Center, 2011). Institutions must 1) annually notify each employee and student in writing of standards of conduct, 2) develop a sound method for distributing annual notification information to every student and staff member each year, 3) conduct a biennial review on the effectiveness of its alcohol and other drug (AOD) and sanction enforcement, and 4) maintain its biennial review material on file (Higher Education Center, 2011).

This Act signified significant progress of legislators taking a stance regarding college student drinking and emphasizing the institution's responsibility on curbing alcohol consumption on their campus. The message was clear: in order to continue receiving federal funding, an alcohol and drug abuse program had to be implemented and evaluated to ensure its effectiveness.

Therefore, many institutions have implemented drug and alcohol programs since the establishment of DFSCA. For example, a large, public research university in the southeastern

United States has developed extensive drug and alcohol programs. These programs fall into three categories: information/education/referral, self-help, and professional treatment. Specifically, the following are provided at this institution: employee assistance program, student counseling services, and the regional hospital's mental health center. In addition to these programs, the Code of Student Discipline prohibits students from illegal alcohol and/or drug use. Faculty must also adhere to the University's Drug Free-Campus and Workplace Policy Statement that details standards of conduct and disciplinary sanctions. This university has made sufficient progress to ensure a drug free campus at all times.

Thus, college drinking has been on the forefront of many legislative policies both at the state and federal level. Institutions have also taken preventive measures to address college drinking on their campuses. Collegiate alcohol drinking has not only been analyzed on a global level, but also on an individual level. For example, research has addressed individual motives for drinking, expectancies, contexts, familial history, and other topics that help identify drinking on a personal or individual level. One specific topic, alcohol expectancies, has been researched for several years to help address college student drinking. But although there is abundant research on college drinking, the research is mixed regarding alcohol expectancies of college students and their connection to college student drinking.

Purpose of the Study

The purpose of this study was to examine alcohol expectancies of college students. Students drink for various reasons. Drinking motives can be defined as “the need or psychological function that alcohol consumption fulfills and are typically assessed by responses of students to questionnaires about their reasons for drinking” (Baer, 2002, p. 45). Brennan et al.

(1986) identified two general types of drinking motives: drinking for social purposes and drinking for emotional escape. Once students engage in drinking in a social context, the student's expectancies or effects of alcohol vary from individual to individual. Thus, a connected concept to drinking motives is alcohol expectancies. Alcohol expectancies can be defined as "specific beliefs about the behavioral, emotional, and cognitive effects of alcohol" (Baer, 2002, p. 45).

This study compared alcohol expectancies between sophomore, junior, and senior students and how these expectancies vary across gender and ethnicity. Alcohol consumption can alter a student's behavioral, emotional, and cognitive actions that can result in positive or negative effects. Expectancies can also increase a student's use of alcohol and increase risks associated with alcohol. Understanding a student's alcohol expectancy is critical in comprehending college student drinking and attempting to curb alcohol abuse. This study provides a better understanding of the differences in alcohol expectancies between sophomore, junior, and senior students by gender and ethnicity.

Significance of the Study

The significance of the present study was to provide higher education administrators with information regarding alcohol expectancies and its relationship with class standing, gender, and ethnicity. Alcohol expectancies have been measured using the *Comprehensive Effects of Alcohol* (CEOA) questionnaire (Fromme, Stroot, & Kaplan, 1993). This study serves to expand the 1993 study by analyzing the different expectancies varied within college standing, gender, and ethnicity. In addition, the study was conducted using a different population in the southern region than the mid-Atlantic students that participated in the 1993 study.

Furthermore, alcohol expectancies can have positive and negative reinforcement on why students choose to drink and consequently abuse alcohol. Research suggests that expectancies decrease over time with prolonged, heavy alcohol use (Sher, Wood, Wood, & Raskin, 1996; Smith, Goldman, Greenbaum, & Christiansen, 1995). Therefore, understanding the various expectancies between students and how these expectancies differ between males/females and ethnicity is integral in trying to understand the risks associated with college drinking.

Research Questions

The following research questions were used in this study:

1. What is the relationship between class standing and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
2. What is the relationship between gender and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
3. What is the relationship between ethnicity and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Limitations

The first limitation is that this study was conducted in a large, public, research university. Students in this institution are predominantly Caucasian as they account for 81% of the student population. These institutional demographics may affect generalizing to diverse campuses or other institutions such as Masters Universities or Baccalaureate university granting institutions. Smaller, private, and/or diverse institutions can replicate this study to determine if there is a relationship between class standing, gender, and ethnicity at their institution. Second, this study

was conducted using only the *Comprehensive Effects of Alcohol* (CEOA) questionnaire. Further research can use other surveys or scales to measure alcohol expectancies. Furthermore, the sensitive nature of the research may impact the overall number of student responses. Lastly, the data gathered were self-reported by students.

Assumptions

The following assumptions were made in this study:

- A. The students involved in this study are representative of future enrollees at this institution in physical activity and wellness program.
- B. Sophomore, junior, and senior students are equally qualified to complete the survey instrument.
- C. Participants answered the survey honestly and consistently.
- D. Participants were able to identify and report their alcohol expectancies.
- E. Participants were able to report their class standing.

Definition of Terms

- Adolescent – young person who is developing into an adult
- Alcohol abuse – recurrent use of alcohol resulting in interference with work, school, or home
- Alcohol consumption – frequency (how often a person drinks) and quantity (how much a person drinks)
- Alcohol dependence – need for increased amounts of alcohol to achieve desired effect
- Alcohol expectancy – specific beliefs about the behavioral, emotional, and cognitive effects of alcohol

- Alcohol motives – need or psychological function that alcohol consumption fulfills
- AOD – alcohol and other drugs
- Binge drinking – consuming five or more drinks in a row for men; four or more drinks in a row for women
- Class standing – sophomore, junior, and senior students
- Expectancy – relationship between an event or object and a situation
- Expectancy valuations – desirability of an expected drinking outcome
- GPA – grade point average
- Hispanic/Latino – Mexican, Puerto Rican, Cuban, or other Central American and South American descent
- Party school – reputation for large availability of alcohol with minimal consequences
- Wet environment – alcohol is prominent and easily accessible

Organization of the Study

This study was divided into five chapters. The first chapter is an introduction of the study. Chapter 2 is a review of the literature related to college students' alcohol expectancies (motives for college student drinking, possible consequences of alcohol abuse, and alcohol expectancies). Chapter 3 includes a discussion of the methods employed to conduct the quantitative study. Chapter 4 describes the results of the study. Lastly, Chapter 5 incorporates a discussion of the results in relation to implications for higher education. Limitations and recommendations are also included.

CHAPTER 2. REVIEW OF LITERATURE

Introduction

Chapter 1 addressed the statement of the problem, the purpose of the study, the significance of the study, the research questions, the limitations and assumptions of the study, and the definition of terms. Chapter 2 reviews the literature which considered college students' motives for alcohol consumption, possible consequences associated with alcohol abuse and alcohol expectancies.

Purpose of the Study

The purpose of this study was to examine alcohol expectancies of college students. Students drink for various reasons. Drinking motives can be defined as “the need or psychological function that alcohol consumption fulfills and are typically assessed by responses of students to questionnaires about their reasons for drinking” (Baer, 2002, p. 45). Brennan et al. (1986) identified two general types of drinking motives: drinking for social purposes and drinking for emotional escape. Once students engage in drinking in a social context, the student's expectancies or effects of alcohol vary from individual to individual. Thus, a connected concept to drinking motives is alcohol expectancies. Alcohol expectancies can be defined as “specific beliefs about the behavioral, emotional, and cognitive effects of alcohol” (Baer, 2002, p. 45).

This study compared alcohol expectancies between sophomore, junior, and senior students and how these expectancies vary across gender and ethnicity. Alcohol consumption can alter a student's behavioral, emotional, and cognitive actions that can result in positive or

negative effects. Expectancies can also increase a student's use of alcohol and increase risks associated with alcohol. Understanding a student's alcohol expectancy is critical in comprehending college student drinking and attempting to curb alcohol abuse. This study provides a better understanding of the differences in alcohol expectancies between sophomore, junior, and senior students by gender and ethnicity.

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2. What is the relationship between gender and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
3. What is the relationship between ethnicity and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Motives for College Student Drinking

College students drink for a variety of reasons; such as celebrating, spending time with friends, unwind, relieve stress, etc. Drinking motives can be defined as “the psychological needs or functions that drinking provides” (Westmaas, Moeller, & Woicik, 2007, p. 228). Drinking motives can be the direct link between intent and actual behavior (Westmaas et al., 2007). It is important to understand college students' drinking motives in order to determine alcohol consumption and consequent alcohol-related problems (Cooper, Russell, Skinner, & Windle, 1992). Motives can be either positive or negative. Wills and Shiffman (1985) developed a model

hypothesizing that individuals use alcohol to reduce negative emotions or to enhance positive emotions. Therefore, alcohol can reduce or increase positive or negative emotions.

Cooper et al. (1992) developed a three-dimensional measure of drinking motives. The three measures were: coping (negative), social motives (positive), and to enhance positive affect (positive). The measure was equal across gender and race. Their results suggested that social and enhancement motives were associated with drinking in a social environment. On the other hand, coping motives were associated with drinking alone or with a partner. The study also suggests that individuals who drink in a social setting are likely to drink more heavily than those who drink to reduce negative emotions. These students were more likely to drink with same-sex friends and use drugs to enhance positive emotions. Nevertheless, students who drink alcohol to cope may become more dependent on alcohol and have less control of their drinking. In turn, these individuals may develop more self-destructive patterns of alcohol abuse and suffer more consequences.

In addition, Dowdall and Wechsler (2002) have identified several critical factors that contribute to drinking motives for college students. These factors are based on the individual level. These factors are: previous drinking history, age of first drink, high risk behavior, and social network. The social motive for college student drinking will now be discussed; followed by developmental, family history, situational, campus environment and abstinence.

Social

Abar and Maggs (2010) suggested that the most important reason adolescents drink is the need for social approval by their peers. College is a social environment symbolized with parties, gatherings, and mingling with friends. Typically, these gatherings include the consumption of

alcohol. Males predominantly drink in same-sex groups whereas females drink in mixed-groups or with a male drinker (Harford, Wechsler, & Rohman, 1983). Drinking for social reasons increases positive effects and increases the opportunity of having fun (Westmaas et al., 2007). Drinking in social settings also makes students friendlier and energetic (Westmaas et al., 2007). In essence, alcohol can be viewed as a social lubricant for many students (Westmaas et al., 2007).

Social or peer influence is a strong predictor of college-age alcohol use and abuse (Abar & Maggs, 2010). This is especially true for Latino students. Peer alcohol use has been consistently linked to alcohol use in Latino adolescents (Segura, Page, Neighbors, Nichols-Anderson, & Gillaspay, 2003). Specifically, 22% to 23% of Latino adolescent alcohol use is attributed to peers' alcohol use (Frauenglass, Routh, Pantin, & Mason, 1997; Walter, Vaughan, & Cohall, 1993). Dusenberry, Epstein, Botvin, and Diaz (1994) found that Latino adolescents were 23.3 times more likely to drink if their peers drank.

Thus, social or peer influence may lead to binge drinking. Binge drinking is defined as consuming "five or more drinks in a row for men and four or more drinks in a row for women within a 2-week period" (National Institute on Alcohol Abuse and Alcoholism, 2002, p. 5). Binge drinking increases the blood alcohol concentration (BAC) to 0.08 after consuming alcohol in a two-hour period (Higher Education Center, n.d.). Wechsler et al. (1994) estimated binge drinking will occur at the rate of 50% for college men and 39% for college women. Students most likely to binge drink are members of fraternities and sororities that live in fraternity and sorority housing, Whites, male students, and students that were binge drinkers in high school (Wechsler et al., 2000). Students least likely to binge drink are African-Americans and Asians, students 24 years and older, married students, and students that were not binge drinkers in high

school (Wechsler et al., 2000). Lastly, the breakdown by ethnicity for binge drinking is as follows: American Indian students (52.6%), Whites (50.2%), Hispanics (49.3%), Asian/Pacific Islander (33.7%), and African-American (23.3%) (The Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, 2008).

Binge drinking within the college student population is higher than any other age group in the United States (Quigley & Marlatt, 1996). Constant access to alcohol, high alcohol use among peers, less parental supervision, and being away from home all contribute to detrimental alcohol abuse (Carey, 1993, 1995; Dreer, Ronan, Ronan, & Dush, 2004; LaBrie, Hummer, & Pedersen, 2007). Nevertheless, students find drinking as part of the college socialization process (Dreer, Ronan, Ronan, & Dush, 2004) and engage in frequent alcohol consumption.

Another social motive to drink is social context. Social context refers to the “immediate situational, temporal, and motivational factors” (Beck, Arria, Caldeira, Vincent, O’Grady, & Wish, 2008, p. 421) which affect drinking. Beck et al. (2008) developed a social context scale identifying six different social contexts that influence drinking. These contexts include: social facilitation, peer acceptance, emotional pain, family drinking, sex seeking, and driving in motor vehicles. The above scale was used to conduct a study with 1,253 college students. The study concluded that the factor most relevant to distinguish problem drinkers from non-problem drinkers was social facilitation. In addition, common motivations for drinking in a social context were well-being, conviviality, and social interactions. A study conducted by Ichiyama and Kruse (1998) using the Beck et al. social context scale concluded that freshmen students that binge drink were more motivated to drink to gain acceptance from their peers. Thus, college drinking is, to a large extent, socially motivated. Another conclusion determined from the study yielded that freshmen binge drinkers were impulsive and thrill-seekers and these characteristics may

account for heavy drinking. Binge drinkers were also more motivated to drink in order to enhance their social interactions with peers. College students drink for many reasons that vary according to the situation or context.

Social motives also vary by gender. A study conducted by O'Callaghan & Callan (1992) concluded that males drink to relieve social pressures because males prefer to drink in groups of two or more males. In addition, drinking is more self-defining for men (Prentice & Miller, 1993). For example, some of the most common effects of drinking include feeling "powerful, unafraid, sociable, daring, tough, aggressive, and sexual" (Neighbors, Walker, & Larimer, 2003, p. 293). These characteristics are typically expected in men. Furthermore, Ichiyama and Kruse (1998) revealed that frequent male binge drinkers were more prone to use alcohol for sex-seeking. Thus, male binge drinkers are more likely to engage in high-risk sexual behaviors, such as unplanned and/or unprotected sex. In a study conducted by Edwards and Jones (2009), male participants revealed that they were expected to believe college represented "four years of freedom" (p. 217). Males are expected to party to assert their masculinity (Edwards & Jones, 2009).

On the other hand, females have different drinking motives and the rate of female binge drinkers is increasing (LaBrie, Hummer, & Pedersen, 2007). One reason females drink is to establish intimate relationships (Vince-Whitman & Cretella, 1999). This can result in negative consequences that would not occur for males (LaBrie, Hummer, & Pedersen, 2007). In a study conducted by LaBrie et al. (2007), some of the negative consequences females experienced were forced sexual intercourse and regrettable intercourse. But, the study also revealed that females would accept negative consequences if drinking provided intimate relationships, making friends, and social interactions. Furthermore, in a study by Smith & Berger (2010), they concluded that females cited merriment, meeting others, mating and men, mood management, and "being me"

as reasons for drinking. Females base their decision to drink on their attitude and preferences (Budd & Spencer, 1984).

Developmental

College represents a new developmental phase for students. College provides newfound freedom away from parents and home. This new environment is also marked by high consumption of alcohol (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002). Being that alcohol symbolizes a level of maturity (Sadava, 1995), students need to master appropriate alcohol consumption (Demb & Campbell, 2009). This may become quite a developmental task for students (Sadava, 1995). College student development can be simplified into two areas: psychosocial and cognitive. Each area will be discussed further.

The first developmental task for college students is psychosocial. This begins with students establishing an identity for themselves (Chickering & Reisser, 1993). Research suggests that identity development is related to lower levels of alcohol consumption (Bishop, Weisgram, & Hollique, 2005). Therefore, the closer a student gets to establish his or her identity, the less alcohol consumption occurs. Identity development also involves autonomy. This autonomy is tested by challenging authority (Chickering & Reisser, 1993). Students increase their risk-taking and sensation seeking which may lead to violence, unintentional injuries, risky sexual behavior, homicide, and suicide (Dahl, 2004). Research suggests that there is a relationship between alcohol and risk taking and the greater the perception of risk, the greater the alcohol consumption (Lewis, 2007). Although students are aware of the risks associated with alcohol, awareness is not enough to minimize drinking and they ultimately accept those risks (Lewis, 2007). Perceptions of risk are especially critical for women because the greater the perceived risk of harm or loss,

the more alcohol is consumed (Lewis, 2007). Therefore, alcohol use plays a role in challenging boundaries and developing self-autonomy.

Students also have to balance peer influence. Peer influence shows significant effects on alcohol consumption (Borsari & Carey, 2006). A student with a peer network containing many drinkers increases the chances of a student not graduating from college (Demb & Campbell, 2009). In addition to peer influence, students also have to balance emotions. Students often turn to alcohol to learn how to balance emotions (Schulenburg & Maggs, 2002). Students using alcohol to cope increases the likelihood of alcohol consumption (Demb & Campbell, 2009). Despite the psychosocial tasks that a student undergoes, becoming older and establishing competence causes a decrease in alcohol consumption. Life events, such as graduating from college, new job, and marriage all contribute to a student maturing and consuming less alcohol (Demb & Campbell, 2009).

College students also undergo cognitive development. A student's way of thinking begins to shift as they graduate from high school and enter college. Whereas alcohol is viewed as negative and prohibited in high school, students will begin to view alcohol positively in college (Schulenburg & Maggs, 2002). This is especially true for women. For example, if their peers are drinking alcohol, then they are more likely to consume alcohol to maintain the relationship (Gleason, 1994). In conclusion, students seem to struggle with alcohol use to establish their identity, autonomy, and maintain relationships but then control alcohol use as they grow older.

Family History

Families have a strong influence in a college student's life. Thus, family history is associated with first alcohol use (Windle & Zucker, 2010). Jackson, Sher, Gotham, and Wood

(2001) found that those students with a family history of alcohol abuse are more likely to abuse alcohol. Age of first drink is a predictor of later drinking behavior (Gonzalez, 1989; Humphrey & Friedman, 1986; Lewis, 2007; Thombs, 2000). Thus, adolescent drinking is significantly influenced by the drinking patterns of their parents (DeVore & Ginsburg, 2005; Dishion & McMahon, 1998; Windle, 1996). Parents setting positive examples for their adolescent may prevent early alcohol use.

Situational

Another motive for college student drinking is centered on an event or situation. Causes for celebrations on college campuses are tailgating (drinking before a sporting event), holidays, and special events (Woodyard & Hallam, 2010). Also, high levels of consumption occur during Thanksgiving, Christmas, New Year's Eve, and Spring Break (Woodyard & Hallam, 2010). Research suggests that celebratory events signify greater alcohol consumption by college students (Glindemann, Wiegand, & Geller, 2007). When consuming alcohol on celebratory days, students consume alcohol for longer periods of time and larger quantities (Woodyard & Hallam, 2010). Student sports fans report more incidents of drinking alcohol, binge drinking, heavy drinking, and alcohol-related problems (Nelson & Wechsler, 2003). Even students who are not sports fan report drinking more heavily on game days than on non-game days (Neal, Sugarman, Hustad, Caska, & Carey, 2005). Both home and away football games are associated with heavy alcohol consumption (Woodyard & Hallam, 2010). Heavy alcohol consumption is especially true for high-profile football games (Woodyard & Hallam, 2010). Thus, collegiate sports present a heavy drinking social environment.

Weekend drinking is also prevalent on college campuses. Weekends are associated with leisure and an increase in alcohol consumption (Fortenberry, Orr, Zimet, & Blythe, 1997). Research conducted by Maggs, Williams, and Lee (2011) studied alcohol drinking days. The study suggested that students drank more on weekends, specifically, Fridays and Saturdays (Maggs et al, 2011). Students were also more prone to drink excessively to the point of unconsciousness on weekends. Weekends signify heavy alcohol consumption for most college students.

Not only do students drink on the weekends, but the weekend is also a contributor to pre-gaming. Pre-gaming can also be referred to as pre-partying or pre-bar and occurs when students drink alcohol before a social gathering or event (Zamboanga, Schwartz, Ham, Borsari, & Van Tyne, 2010). Students typically consume multiple shots of liquor, beers, or other alcoholic beverages when pre-gaming. Overall, pre-gaming is the practice of consuming heavy alcohol at a fast pace (Pedersen & LaBrie, 2007). Approximately 75% of students pre-gamed at least once in the past month (Pedersen & LaBrie, 2007). But pre-partying does not preclude alcohol consumption for the remainder of the day/evening. The social gathering or event may involve the consumption of more alcohol (Pedersen & LaBrie, 2007). Therefore, some negative consequences of pre-gaming including drinking more than intended, physical and/or verbal confrontations, and unwanted sexual encounters (LaBrie & Pederson, 2008).

A motive for pre-gaming is availability of alcohol. Students are concerned with not being able to obtain alcohol once they arrive at the social event (Pedersen & LaBrie, 2007). Alcohol may be prohibited based on age, availability, or cost. Students pregame before an event to minimize the cost of consuming alcohol at the intended destination, such as a bar or club (Read, Merrill, & Bytschkow, 2010). In addition, students pregame because they are under the legal

drinking age and will not be served alcohol at the destination (Read, Merrill, & Bytschkow, 2010). Cost and legal age were the two primary reasons why students reported pregameing (Read, Merrill, & Bytschkow, 2010). But, Pedersen and LaBrie (2007) determined that students continue drinking at their destination despite age and cost. In some manner students are still obtaining alcohol and increasing their high intoxication levels. Subsequently, more than 60% of underage students (18-20) reported last obtaining alcohol from legal aged people (Brown, Matousek, & Radue (2009). Sources of illegal provision of alcohol include: legal-age friends, parents/siblings, false identification cards, and lenient underage drinking enforcement practices (Fabian, Toomey, Lenk, & Erickson, 2008). Availability of alcohol is a large impetus for pregameing practices.

Another social motive for pregameing is to ease the tension of meeting new people at the expected social gathering (Pedersen & LaBrie, 2007). Students begin the social interaction with their friends to alleviate the awkwardness of meeting new people. If a student expects that meeting new people would be easier, then they would be more likely to pregame (Zamboanga, Schwartz, Ham, Borsari, & Van Tyne, 2010). Therefore, both males and females use pregameing as social lubrication.

In addition, research suggests that there is no gender difference with pregameing. The data from the LaBrie and Pedersen (2008) study revealed that although men drink more often than women when pregameing, men and women consume similar amounts of alcohol during pregameing. Women were drinking more to fit in and be attractive to males. But, there is a concern in these drinking practices. Females metabolize alcohol differently than males. Women can achieve higher intoxication levels than men because of physiological differences (LaBrie & Pederson, 2008). These physiological differences include higher female body fat, less water to

dilute alcohol, less of the stomach enzyme that breaks down alcohol, and fluctuating hormones (Frezza, DiPadova, Pozzato, Terpin, Baraona, & Lieber, 1990). These physiological differences are areas of concern for women's pregame practices.

Campus environment

Campus environment is another motive for college student drinking. Alcohol has become a permanent figure in college life (Cooney & Nonnamaker, 1992). Average students are consuming about 4.5 drinks per week and approximately 20% of students consume alcohol three or more times per week (Presley, Derman, & Driscoll, 1994). There are various environmental factors that influence college drinking. Some of these factors include: membership in fraternities/sororities, athletics, size of institution, and location (National Institute on Alcohol Abuse and Alcoholism, 2002). Fraternities provide a substantial portion of alcohol to students (DeSimone, 2009). Research suggests that fraternity and sorority members drink more frequently and heavily than non-Greeks (Lo & Globetti, 1995, Werner and Greene, 1992; Alva, 1998; Cashin, Presley, & Meilman, 1998; Sher, Bartholow, & Nanda, 2001). Greeks are also more likely to drink and drive than non-Greeks (The National Center on Addiction and Substance Abuse at Columbia University, 2007). Drinking is embedded in the Greek system through its values, traditions, and culture (Kuh & Arnold, 1993). Greeks find alcohol use socially acceptable to establish friendships, conduct social activities, and establish sexuality (Cashin et al, 1998). Hence, Greek affiliation is related to alcohol abuse and is common in a socially-centered environment (Juth, Smyth, Thompson, & Nodes, 2010).

Another environmental factor that influences alcohol consumption on college campuses is the concept of alcohol being a rite of passage. Some adults believe that this rite of passage is a

phase and students would pass through this phase without great injury or harm (Jessor & Jessor, 1975). Thus, excessive drinking in college is deemed acceptable by many adults (National Institute on Alcohol Abuse and Alcoholism, 2002). Approximately 38% of college administrators name rite of passage as a significant barrier in effective alcohol prevention strategies on campus (The National Center on Addiction and Substance Abuse at Columbia University, 2007). This culture of excessive drinking is prevalent throughout campus and imbedded within students and adults. For example, peers reinforce excessive college drinking as being a part of college life (National Institute on Alcohol Abuse and Alcoholism, 2002). Alumni then reinforce this environment by drinking at sports and social events (National Institute of Alcohol Abuse and Alcoholism, 2002). And lastly, the community sells alcohol on or near campus and depends on college students for their financial success (National Institute on Alcohol Abuse and Alcoholism, 2002). As a result, college students are viewing alcohol being consumed by their peers and adults. This constant consumption ultimately alters students' perceptions and they perceive alcohol as being socially tolerated. This provides mixed-messages for students when told by administrators not to drink. Even if a student chooses to minimize or abstain from alcohol consumption, some college environments are powerful enough to influence almost everyone (Moos, 1976). The campus culture may negatively impact a student's perception of alcohol. Healthy People 2010 reports:

The perception that alcohol use is socially acceptable correlates with the fact that more than 80% of American youth consume alcohol before their 21st birthday, whereas the lack of social acceptance of other drugs correlates with comparatively lower rates of use. Similarly, widespread societal expectations that young persons will engage in binge

drinking may encourage this highly dangerous form of alcohol consumption. (USDHHS, 2000, p. 946)

Campus environment may also be affected by a wet environment. A wet environment is an area where alcohol is prominent and easily accessible (Edwards et al., 1995). High density of bars and clubs may attribute to heavier alcohol consumption (Wechsler, Lee, Hall, Wagenaar, & Lee, 2002). Wet environments provide ease of access to alcohol. Liquor stores also provide ease of access to college students (Wechsler, Lee, Hall, Wagenaar, & Lee, 2002). Alcohol outlets are typically found in areas near colleges (Wechsler, Lee, Hall, Wagenaar, & Lee, 2002). Therefore, higher alcohol outlets increase availability of alcohol and alcohol consumption (Wechsler, Lee, Hall, Wagenaar, & Lee, 2002).

Campus environment is also affected by the term party school. Schools known as party schools have a reputation for large availability of alcohol with minimal consequences (Sullivan & Risler, 2002). A study conducted by Wechsler (1996) concluded that students living at a party school are three times more likely to experience a problem related to another student's drinking. A party reputation may negatively affect both students and the institution's image.

Abstinence

Although the literature provides ample research on motives for college student drinking, there are students that choose to abstain from alcohol consumption. Approximately, 65.5% of students are abstaining from all alcohol use (The Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, 2008). Because abstinence is not a high concern for college administrators, there is limited literature on the reasons why students do not engage in alcohol consumption (Klein, 1990). Nevertheless, understanding why students do not drink is

essential in obtaining a holistic picture regarding college drinking. The following studies have been conducted to identify the reasons why some individuals abstain from alcohol consumption. Hilton (1986) surveyed 1,782 life-long alcohol abstainers. He cited four reasons why individuals did not drink: morality, adverse consequences, inconsequential (not liking the idea/taste of alcohol), and background (Hilton, 1986). Greenfield et al. surveyed 2,482 college students in 1989. These students identified self-control, upbringing, self-reform, and performance as the reasons why they limit their alcohol consumption (Greenfield, 1989). Klein conducted a study with 526 college students (Klein, 1990). He concluded that the most common reason cited as a motive for abstaining was staying in control (Klein, 1990). Two other reasons included dislike of alcohol effects and negative experiences with those students who do consume alcohol (Klein, 1990). Lastly, Johnson and Cohen (2004) concluded that reasons for non-drinking include disapproval of alcohol use, bad experiences, loss of control, and no exposure to alcohol. These studies help to provide a clearer picture of the motives for abstinence in college students.

In conclusion, social, developmental, family history, situational, and campus environment provide a brief snapshot of motives associated with college student drinking. These motives vary according to each student and the context. The following passage can provide a summary of motives for college student drinking.

Adolescence is the extraordinary period of dynamic change when a person moves from childhood to adulthood. During this transition, adolescents must cope with dramatic changes in their bodies, feelings, perspectives, and environments. They face new sexual and aggressive urges, the drive for autonomy, and the demands of their peer groups as they seek to develop a stronger sense of themselves. They will experience unfamiliar situations, pressures, desires, and challenges for which they have no prior frame of

reference and often are not fully prepared to deal with effectively on their own.

Furthermore, adolescence is associated with increased freedom, decreased monitoring by adults, and an increased affiliation with peers. (U.S. Department of Health and Human Services, 2007, p. 16)

Thus, motives initiate behavior of alcohol consumption which may lead to negative consequences. Negative alcohol consequences can then affect a student's life in various ways.

Possible Consequences of Alcohol Abuse

Drinking motives can be the direct link between motives and actual behavior (Westmaas et al., 2007) and research suggests that the first six-weeks of enrollment are critical to first year success (National Institute on Alcohol Abuse and Alcoholism, 2002). Data suggest that freshmen report drinking alcohol more frequently and in higher levels than sophomores, juniors, or seniors (Ham & Hope, 2003; Strano, Cuomo, & Venable, 2004). Males report consuming twice as much alcohol than females within the first two months of college (Kidorf, Sherman, Johnson, & Bigelow, 1995). This time frame results in heavy consumption in first year students and can result in moderate to extreme consequences. Heavy alcohol drinkers are 21 times more likely to experience five or more alcohol-related consequences than moderate or light drinkers (Wechsler et al, 2000). Physical consequences can range from medical problems to death from alcohol poisoning (U.S. Department of Health and Human Services, 2007). Other physical consequences include physical and sexual assaults, injuries, and suicide (U.S. Department of Health and Human Services, 2007). These consequences are experienced not only by students that consume alcohol, but also students who do not drink or engage in alcohol abuse. These consequences are then identified as secondhand (National Institute on Alcohol Abuse and Alcoholism, 2002). Secondhand consequences include car crashes, physical and sexual assaults, damaged property,

having to care for a drunken student, humiliation or insults, unwanted sexual advances, disrupted sleep, and disrupted study habits (Hingson et al., 2002; Wechsler et al., 1995, 2000; U.S. Department of Health and Human Services, 2007, Higher Education Center, n.d.). Approximately 77% of college students experience secondhand consequences (Juth, Smyth, Thompson, & Nodes, 2010). Secondhand effects are typically higher in fraternity or sorority houses than in residence halls (Wechsler et al., 2002). Wechsler et al. (1995) found that students that do not engage in binge drinking, where more than half of the student population were binge drinkers, are twice as likely to experience secondhand consequences.

In addition, consequences are not solely based on the amount of alcohol consumed. These consequences are predominantly based on the psychological consequences rather than the actual amount consumed (Bonin, McCreary, & Sadava, 2000; Park, 2004). Alcohol-related consequences, both first and secondhand, can affect a student in various ways.

Academic

Alcohol abuse can lead to academic consequences for students. The inverse relationship between alcohol abuse and GPA can be depicted as follows: "A" average students consume an average of approximately 3.4 drinks per week; "B" average students consume 4.5 drinks per week; "C" average students consume 6.1 drinks per week; "D" or "F" average students consume 9.8 drinks per week (Presley, Meilman, & Cashin, 1996). The same relationship between weekly drinks and GPA was found by Engs et al. (1996). Wechsler et al. (1994) found that binge drinkers were up to 16 times more likely to have missed class or gotten behind on school work. Other academic consequences include performing poorly on a test and lower grades (Dunn & Goldman, 1998; Leigh & Stacy, 2004). A study conducted by Kremer (2005) found that GPA

distribution was related to alcohol and living arrangements. For example, living with a roommate that drank in high school reduces GPA by 0.43 points (Kremer, 2005). In addition, students who themselves drank in high school are also affected by roommates that drink frequently (Kremer, 2005). For these students, GPA may decrease up to a full point if their roommate drank constantly prior to college. But, that relationship is only evident for males. Kremer found no association between females' GPA and a roommates' drinking prior to college.

Academic performance is also related to heavy drinking and age. For example, research suggests that poor academic performance is stronger for underage students than legal-aged students (Wolaver, 2002). Thus, freshman and sophomore students are particularly at risk for poor academic performance due to heavy drinking. Research also suggests that heavy drinking may have an adverse effect on studying (Wolaver, 2002).

On the other hand, research conducted by Paschall & Freisthler (2003) concluded that heavy alcohol use does not have a significant effect on academic performance in college. These results are consistent with research conducted by Wood et al. (1997) that found no association between problem drinking and academic problems in a freshman college sample. Nevertheless, it can be argued that missing class, falling behind in schoolwork and performing poorly on tests are academic consequences even if they do not affect GPA (Paschall & Freisthler, 2003). Furthermore, a sample of students rated alcohol use as one of the top 10 challenges regarding academic performance (American College Health Association, 2006).

Academic consequences can include student attrition. Approximately 57% of college students leave college without obtaining a degree (Tinto, 1987). Many variables affect student persistence and one of these variables can be associated with alcohol. Martinez, Sher and Wood

(2008) concluded that heavy drinking does relate to student attrition. College administrators reported that alcohol is a contributing factor for student dropouts (Higher Education Center, n.d.). Specifically, alcohol is a factor for almost one-third of the dropout rate for first-year students (Shutt, Oswald, & Cooper, 2006). Alcohol is also associated with academic failure for Latino students (Walter, Vaughan, & Cohall, 1993). Thus, research suggests that there may be a relationship between alcohol and academic consequences.

Personal

Approximately 60% of males and 30% of females experience an adverse life consequence as a result of alcohol (American Psychiatric Association, 1994). Personal consequences can significantly impact a student's life. One such personal consequence is unintended and/or unprotected sexual activity. A study conducted by Perkins (1992) found that one-fourth of students reported unintended or unprotected sexual activity due to alcohol consumption. Wechsler and Isaac (1992) found that heavy episodic drinkers were about three-times more likely to engage in unplanned sexual activity. Meilman (1993) found that one in five students admitted to engaging in sexual activity due to drinking. Poulson et al. (1998) concluded that two-thirds of students acknowledged that drinking had a negative consequence for them sexually. Lastly, Anderson and Mathieu (1996) found that 33% of men and 17% of women drank more than usual to make sex easier. Drinking can lead to dire sexual consequences that students would not normally experience if they were not under the influence of alcohol.

Another significant personal consequence that students may face after heavy alcohol consumption is sexual assault. Alcohol is a factor in most college rapes (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004). Approximately 12% of women reported being sexually assaulted due to their drinking (Presley et al., 1996). Sixty-percent of women reported their judgment being

impaired at the time of the assault due to alcohol consumption (Frintner & Rubinson, 1993).

Sexual assaults are more likely to occur for college women that are binge drinkers, were binge drinkers in high school, use drugs, and under the legal age (Mohler-Kuo et al., 2004).

There are some possible explanations for the association between female student drinking and sexual assault. The following explanations attempt to summarize female student drinking and sexual assault.

1. Increased consensual sexual activity prior to the forced activity, as alcohol contributes to more casual sexual behavior that may be misinterpreted by the male as an invitation to further sexual contact;
2. The cultural stereotype of a drinking woman as “loose” and therefore more desirous of sexual contact;
3. The victim’s diminished ability to communicate clearly her choice to reject sexual advances when she is intoxicated; and
4. The diminished ability of the victim to defend herself physically or flee from an aggressor. (Perkins, 2002, p. 94)

These assumptions help to explain how alcohol consumption can impede a woman’s ability to protect herself from sexual assaults. In addition to the above statements, the following assumptions provide an explanation of sexual assaults from the male perspective.

1. Men’s expectations that alcohol increases their sexual arousal;
2. Men’s misperception of women’s sexual intent which increases if the woman is drinking;
and

3. The possibility that alcohol may serve as a defense to justify the perpetrator's behavior.

(Rauch & Bryant, 2000, p. 242)

Additionally, although White college students are more likely than any other ethnic group to experience sexual assaults due to alcohol consumption (Abbey, Ross, McDuffie, & McAuslan, 1996), sexual assault is also prevalent in non-Whites. Sorenson and Siegel (1992) found that Hispanic women report lower rates of sexual victimization than Whites. Yet, other studies have found that Hispanic women are victim to more recurrent victimization than other ethnic groups (Arroyo, Simpson, & Aragon, 1997; Shaw, Lewis, Loeb, Rosado, & Rodriguez, 2001). A study conducted by Monks et al. (2010) revealed that 52% of Hispanic college males and 59% of Hispanic college females had been sexually assaulted. These rates were higher than the 1999 study conducted by Larimer, Lydum, Anderson, & Turner. Larimer et al. (1999) found that 21% Hispanic college males and 28% Hispanic females had been sexually assaulted. But, one factor present with conducting research on Hispanic sexual assault victims is the low number of participants (Monks et al., 2010). Furthermore, sexual assault research tends to focus on males being perpetrators rather than victims; thus more research on male sexual victimization should be explored (Monks et al., 2010).

Personal consequences due to alcohol consumption can also affect general quality of life. For example, a study conducted by Murphy et al. (2006) concluded that students that experience alcohol-related problems have diminished general satisfaction of life. Lack of general satisfaction of life can be found for both men and women. This dissatisfaction can be observed in academic performance, living environment, and family relations. In turn, these problems can lead to depression, stress, anxiety, lower self-esteem, and lower life satisfaction (Murphy et al., 2006). Alcohol use also correlates with gang involvement, anxiety, and depression amongst Latino

adolescents (Alva, 1995; Frauenglass, Routh, Pantin, & Mason, 1997). Personal consequences can interfere with a student's way of life.

Legal

Legal problems are another possible consequence due to heavy alcohol consumption. Approximately 5% to 12% of students report legal trouble with police or campus authorities (Engs & Hanson, 1994). Furthermore, 95% of all violent crimes on campus involve the use of alcohol (Murphy, Hoyme, Colby, & Borsari, 2006). Arrest rates for students tend to increase during leisure time (Juth, Smyth, Thompson, & Nodes, 2010). Arrest rates also increase during weekends, football game days, and rush week (Juth, Smyth, Thompson, & Nodes, 2010). Juth, Smyth, Thompson, & Nodes (2010) found that social and environmental factors increase legal infractions; such as driving under the influence (DUI), minor in possession of alcohol, open container, minor consuming alcohol, and minor entering a liquor establishment citations. Overall, there was a 21% increase from 2001-2005 in the average number of arrests due to alcohol consumption (The National Center on Addiction and Substance Abuse at Columbia University, 2007). Approximately 83% of campus arrests were alcohol related (The National Center on Addiction and Substance Abuse at Columbia University, 2007). Criminal charges may result from alcohol-related legal infractions. Thus, academic, personal, and legal consequences are some of the alcohol-related consequences that students may face.

Alcohol Expectancy

Alcohol Expectancy Theory

There is little difference between motives and expectancies (Goldman et al., 1999). But the primary difference between motives and expectancies is that motives ask individuals why they drink or how much they drink; whereas expectancy asks what happens when they drink

(Goldman et al., 1999). Also, motives for drinking are believed to mediate the effects of expectancies and the closest predictor of behavior (Cooper, Frone, Russell, & Mudar, 1995; Cox & Klinger, 1988). Motives are assumed to be the final link towards alcohol use (Catanzaro & Laurent, 2004; Cronin, 1997). In essence, motives for drinking are related yet distinct from expectancies (Patrick & Schulenberg, 2011).

The term expectancy is cognitive in nature. Expectancy occurs when there is a relationship between an event or object and a situation (Goldman, Brown, & Christiansen, 1987). The relationship becomes stored information and the stored information is the expectancy (Smith & Goldman, 1994). Thus, the relationship becomes an if-then concept establishing a causal status (Goldman et al., 1987). In his 1932 work, Tolman began explaining expectancy theory (Tolman, 1932). Tolman argues that human behavior encompasses stimuli and responses. MacCorquodale and Meehl (1954) further refined Tolman's expectancy theory by arguing that humans learn the relationship between the stimulus, the response, and the outcome. Therefore, the individual may learn what the relationship is without actually performing the action. Bolles (1972) then argues against expectancies simply being formed by reinforcement. Instead he argues that expectancies relate environmental cues and responses to consequences. In 1977, Bandura then categorized expectancies into two types: outcome and efficacy. Bandura wanted to differentiate between behaviors and desired outcomes and an individual's belief that he could perform these behaviors. In essence, expectancies are learned behaviors that result from repetition and integral in the learning process.

Alcohol can influence expectancies. Alcohol use is a learned behavior (Goldman et al., 1987). In turn, alcohol forms alcohol expectancies (Goldman et al., 1987). Alcohol expectancy theory states that "pre-drinking expectancies form positive outcomes from drinking, lead to more

positive initial drinking experiences, which in turn lead to still more positive expectancies, and so forth” (Smith & Goldman, 1994, p. 232). In essence, when individuals consume alcohol, they have outcome expectations (Jones, Corbin, & Fromme, 2001). These outcomes can be either desirable or unwanted outcomes (Agrawal, Dick, Bucholz, Madden, Cooper, Sher, & Heath, 2008). An individual simply needs to possess the belief or expectation (Jones et al., 2001). Moreover, alcohol expectancies can be triggered by the belief that one has consumed alcohol (Norris, Davis, George, Martell, & Heiman, 2002). Alcohol expectancies can form without actual alcohol consumption. Goldman and colleagues (1987) revealed six alcohol expectancies:

1. Global positive change
2. Enhanced sexuality
3. Physical and social pleasure
4. Increased social assertiveness
5. Relaxation and tension reduction
6. Arousal and power. (Goldman et al., 1987, p. 206)

A major conclusion found in this study was that expectancies could be verbalized (Goldman et al., 1987). Researchers no longer had to infer alcohol expectancies. Alcohol expectancies could then be better assessed in future studies. Furthermore, the most important contribution of alcohol expectancies is their ability to predict changes in drinking and the development of alcohol problems (Jones, Corbin, & Fromme, 2001). Alcohol expectancies predict changes in drinking by expanding on initiation and maintenance of drinking patterns (Jones et al., 2001).

Alcohol expectancies have a greater relationship to quantity than to frequency of consumption (Leigh, 1989). Expectancies are the strongest predictors of drinking, even after controlling for other variables (Goldman, Del Boca, & Darkes, 1999). Alcohol expectancies also

predict behavior while drinking (George & Marlatt, 1986; Rohsenow, 1983) and future drinking (Brown, 1985). But, the most important contribution of alcohol expectancies is their ability to predict changes in drinking (Jones, Corbin, & Fromme, 2001).

Positive expectancy

Alcohol expectancy can be categorized into positive and negative expectancies. A positive expectancy is a belief that alcohol will stimulate or enhance a positive affective experience (Read, Wood, LeJuez, Palfai, & Slack, 2004). Positive alcohol expectancies have been stronger predictors of drinking behavior (Lee, Greely, & Oei, 1999; Leigh & Stacy, 1993; Patrick, Wray-Lake, Finlay, & Maggs, 2010) and some studies have found links between expectancies and drinking behavior (McCarty, Morrison, & Mills, 1983; Rohsenow, 1983; Stacy, Widaman, & Marlatt, 1990; Wood, Nagoshi, & Dennis, 1992). Positive expectancies may even predict college drinking one month later (Carey, 1995). Those individuals that believe that alcohol will have a positive effect will be more likely to consume alcohol (Neighbors, Walker, & Larimer, 2003). Also, individuals that have positive expectancies are more likely to view consuming alcohol as a positive experience (Smith & Goldman, 1994). Thus, heavy drinkers tend to endorse positive expectancies (Brown et al, 1980; Mooney, Fromme, Kivlahan, & Marlatt, 1987; Rohsenow, 1983). Overall, positive alcohol expectancies have been associated with increased drinking experiences (Jones et al., 2001).

Positive expectancies have been researched more than negative expectancies (Jones et al., 2001). This may be due to the belief that positive consequences are more likely to affect behavior more strongly than delayed negative effects (Rohsenow, 1983). In addition, positive

expectancies are more easily retrieved from memory than negative expectancies (Stacy, Widaman, & Marlatt, 1990).

Negative expectancy

Although positive expectancies have received more research attention, increasing research suggests the importance that negative expectancies have on drinking behavior (Adams & McNeil, 1991). Negative expectancy is the belief that alcohol will decrease an aversive affective stimulus (Read, Wood, LeJuez, Palfai, & Slack, 2004). These stimuli include tension reduction, stress, or anxiety (Read, Wood, LeJuez, Palfai, & Slack, 2004). Lee et al. (1999) suggest that whereas positive expectancies may initiate drinking, negative expectancies may limit the amount consumed. But, literature has been mixed on negative expectancies. For example, some studies have found men to report greater tension reduction expectancies than women (Brown et al., 1980; Rohsenow, 1983) whereas other studies have not demonstrated this relationship (Mooney et al., 1987; O'Hare, 1990). Research has also been mixed on whether or not negative expectancies are truly negative. This can be due to negative effects being delayed consequences (Leigh, 1989). Some studies suggest that although negative effects are assumed to be negative, individuals may report negative expectancies as positive (Fromme, Stroot, & Kaplan, 1993; Valdivia & Steward, 2005). Others may not even experience negative effects (Goldman et al., 1999). Zamboanga (2006) found that not all female college students perceive negative expectancies as being negative. This, in turn, may place females at an increased risk for higher consumption of alcohol (Zamboanga, 2006). Findings regarding negative expectancies appear to be inconsistent because of the different scales used and measuring techniques. Nevertheless, negative expectancies may be essential in reducing or stopping alcohol consumption.

Valuations

Researchers argue that measuring expectancies is not sufficient (Goldman et al., 1999). Expectancy scales only measure the endorsement or likelihood of alcohol effects (Jones et al., 2001). Yet, individuals may have different subjective values they assign to expectancies (Fromme et al., 1993; Grube et al., 1995; Leigh, 1989). Some studies reflect the importance of evaluations above expectancies in predicting alcohol use (Burden & Maisto, 2000; Burden, Maisto, & Wolfe, 1998). But others argue that measuring valuations adds little information beyond expectancy measures (Fromme et al., 1993; Grube et al., 1995). This is especially true if the expectancy scale has strong predictive powers (Goldman et al., 1999). Thus, research regarding the importance of measuring valuations of expectancies is mixed.

Age

Age has been found to be a moderator between expectancies and drinking (Dunn & Goldman, 1998; Leigh & Stacy, 2004). Alcohol expectancies form at a young age (Goldman, Brown, & Christiansen, 1987). Alcohol expectancies may even form before an individual consumes their first drink (Kraus, Smith, & Ratner, 1994). Children learn about alcohol expectancies through observation, learning, and stereotypes (Critchlow, 1986). Hence, expectancies can be learned vicariously (Goldman et al., 1999). These expectancies are predominantly negative (Jahoda & Cramond, 1972). But as children mature, alcohol expectancies become more positive (Dunn & Goldman, 1998). Expectancies also change with drinking experience. As drinking experiences increase, expectancies change (Leigh & Stacy, 2004). Adolescents with more drinking experience may result in a stronger relationship between expectancies and behavior (Leigh & Stacy, 2004). Therefore, alcohol expectancies at the beginning of a college student's freshman year are related to drinking levels and subsequent

problems at the end of the academic year (Werner, Walker, & Greene, 1995). But, alcohol expectancies decrease over the four years of college (Sher et al., 1996). Being that alcohol expectancies decrease over time, the first year of college is critical in addressing alcohol expectancies (Thompson, Spitler, McCoy, Marra, Sutfin, Rhodes, & Brown, 2009). Sher et al. (1996) concluded that changes in expectancy and drinking parallel.

Furthermore, there has been little expectancy research conducted comparing different age groups. One challenge is the difference in samples (Leigh & Stacy, 2004). Thus far, research has been conducted with college students (Leigh & Stacy, 1993) and adolescents (Smith, Goldman, Greenbaum, & Christiansen, 1995). Lundahl, Davis, Adesso, & Lukas (1997) conducted a study with college students over the age of 20 versus under the age of 20. Students under 20 had higher global positive effects, sexual enhancement, increased power and aggression, and social assertion than students over 20 (Lundahl et al., 1997). Another challenge is the scale used to measure alcohol expectancies (Leigh & Stacy, 2004). There are a variety of alcohol expectancy scales; the most common being the *Alcohol Expectancy Questionnaire* (AEQ) (Brown, Christiansen, & Goldman, 1987). But, the AEQ has two versions—adolescent and adult. The adult version only measures positive expectancies while the adolescent version measures both positive and negative expectancies. Thus, more research is needed comparing alcohol expectancies between age groups.

Gender

Gender is an individual difference that affects expectancies. Expectancies vary by gender according to what is acceptable or desirable for each gender (Windle & Davies, 1999). Findings regarding gender differences and expectancies have been mixed (Neighbors, Walker, and

Larimer, 2003). For example, men typically have stronger positive and weaker negative expectancies than women (Jones, Corbin, Fromme, 2001; Patrick & Maggs, 2008). But Carey (1995) found no significant gender differences in alcohol expectancies between male and female college students. Neighbors, Walker, and Larimer (2003) concluded that men and women held the same beliefs about the effects of alcohol, but men determined the effects to be more favorable. On the other hand, O'Callaghan and Callan (1992) concluded that males were more likely to believe that alcohol would result in negative outcomes. Brown, Goldman, Inn, and Anderson (1980) found that women held positive expectancies and men endorsed arousal and aggression. Thus, men and women may hold different expectancy sets (Brown et al., 1980). Rohsenow (1983) found that women expected less positive social and physical pleasure effects and greater impairment effects than men. Leigh (1987) also concluded greater impairment effects for women. Sher, Walitzer, Wood, & Brent (1991) found that men reported greater social lubrication and performance enhancement than women. Johnson (1994) found that anticipated positive expectancies for females were associated with more frequent drinking. Hence, findings regarding gender differences are mixed for males and females. The only consistent finding is that females report greater expectations of impairment (Sher, Wood, Wood, & Raskin, 1996).

Alcohol expectancies can also have an effect on sexual victimization. There has been mixed support regarding alcohol expectancies and sexual situations (Davis, Norris, Hessler, Zawacki, Morrison, & George, 2010). LaBrie, Grant, and Hummer (2011) found that males and females endorsed more positive sexual expectancies and males reported higher liquid courage. Davis et al. (2010) revealed that alcohol expectancies do not increase women's risky sexual behavior directly. But alcohol myopia theory (AMT) argues against this. Alcohol myopia theory describes how alcohol affects attention cues in the environment (Steele & Josephs, 1990). This

theory suggests that as an individual continues drinking, he or she may ignore cues in the social environment which may lead them to danger. Alcohol expectancies and AMT can combine together to create sexual risks. For example, if a male has strong sexual expectancies after consuming alcohol, he may become more prone to focus on sexual cues in the environment (Monks, Tomaka, Palacios, & Thompson, 2010). This may lead to him becoming sexually aggressive towards a female (Monks, Tomaka, Palacios, & Thompson, 2010). Alcohol expectancies may lead an individual to seek and expect positive effects in sexual situations (Palmer, McMahan, Rounsaville, & Ball, 2010). Alcohol expectancies and alcohol myopia theory can result in a potentially dangerous situation for both males and females.

Additionally, sex-related alcohol expectancies are a significant predictor of unwanted situations (Dermen & Cooper, 1994). Corbin, Bernat, Calhoun, McNair, and Seals (2001) found that women with severe histories of sexual assaults tended to have increased alcohol expectancies such as sexual enhancement, tension reduction, and global positive change. These expectancies resulted in increased drinking, sexual partners, and sexual activity (Corbin et al., 2001). Marx, Nichols-Anderson, Messman-Moore, Miranda, and Porter (2000) concluded that women who had been sexually assaulted had higher alcohol expectancies such as power, aggression, unconcern, relaxation, tension reduction, sexual enhancement, social expressiveness, social and physical pleasure, and global positive expectancy. These expectancies resulted in higher quantity and frequency of alcohol consumption. Klassen and Wilsnack (1986) found that alcohol expectancies enhances women's sexual performance and initiation and slows their decision making process. Then, Rauch and Bryant (2000) studied the relationship between context and alcohol expectancies. They found that women have greater variability of alcohol expectancies in dating situations. For example, one partner may view alcohol consumption as an

invitation for sexual contact whereas the other partner simply views alcohol as a means of relaxation (Rauch & Bryant, 2000). In turn, this leads to miscommunication and unwanted sexual contact. This is especially risky when the female is in an unfamiliar dating situation (Rauch & Bryant, 2000). Thus, research suggests that the strength and pattern of alcohol expectancies change according to context (Rauch & Bryant, 2000). Alcohol expectancies may contribute to sexual assaults.

Consequently, alcohol expectancies may have negative effects upon males. For example, college men that drink more tend to have higher alcohol expectancies and report sexual coercion (Wilson, Calhoun, & McNair, 2002). Furthermore, perpetrators have multiple alcohol-related expectancies that may result in aggression and disinhibition (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004). Alcohol expectancies may result in problem drinking for males (Thompson et al., 2009). Nevertheless, research suggests that alcohol expectancies may be more predictive of alcohol consumption in males than females (Kidorf, Sherman, Johnson, & Bigelow, 1995; Read et al., 2004; Thompson et al., 2009). In a mixed group study, Palmer et al. (2010) found that those individuals that had experienced sexual assault had higher alcohol expectancies, consumed more alcohol, experienced negative consequences, and used fewer protective strategies. Those findings are consistent with prior literature suggesting that alcohol expectancies result in increased alcohol use and negative consequences.

Ethnicity

Alcohol expectancies can also be analyzed according to ethnicity. Research has been mixed on the relationship between alcohol expectancies and ethnicity (Chung, Hipwell, Loeber, White, & Stouthamer-Loeber, 2008). For example, alcohol expectancies and alcohol use were

lower among African-American college women in comparison to other ethnic groups (Randolph, Torres, Gore-Felton, Lloyd, & McGarvey, 2009). In this study, African-American women also reported less positive expectancies, less use of alcohol, and fewer binge drinking episodes than Whites (Randolph et al., 2009). Daisy (1989) also found less positive expectancies for African Americans. Whites also had higher positive alcohol expectancies in comparison with Hispanics and African-Americans in a study conducted by Chartier, Hesselbrock, and Hesselbrock (2009). Slutske, Cronk, Sher, Madden, Bucholz, & Heath (2002) also reported lower positive expectancies for African-Americans adolescents in comparison to Whites. On the other hand, Meier, Slutske, Arndt, & Cadoret (2007) reported lower positive expectancies for Whites in comparison to African-American and Hispanic adolescents.

But, research measuring alcohol expectancies and use for Latino students is lacking (Segura et al., 2004). Hispanic or Latino typically refers to Mexican, Puerto Rican, Cuban, or other Central American and South American descendants (Zamboanga, 2005). There is empirical evidence that links alcohol expectancies with drinking behaviors for Latino populations (Zamboanga, 2005). For example, research suggests that expectancies are linked to alcohol use for those individuals of Mexican backgrounds (Corbett, Mora, & Ames, 1991; Gilbert, Mora, & Ferguson, 1994; Marin, 1996;). Gilbert et al. (1994) found that alcohol expectancies were positively associated with alcohol use for Mexican American women. Zamboanga (2005) also found that Mexican American college students view alcohol as a social agent. He found that positive alcohol expectancies were associated with drinking in social contexts and alcohol-related problems for Mexican American students. He also found that expectancies affect sexual experiences and increase risky behavior for males. In addition, a study conducted by Segura et al. (2004) studied alcohol expectancies in Latino adolescents. They found that Latino students may

be more likely to use alcohol if he or she believes that alcohol will enhance their social behavior around peers. On the other hand, if Latino students believed that alcohol will impede their social behavior, they may be less likely to consume alcohol. Thus, data suggest that alcohol expectancies revolve around peer acceptance for Latino adolescents.

Alcohol expectancies vary within the different Latino subgroups. Mills and Caetano (2010) conducted research to measure predictors of alcohol expectancies with different Hispanic subgroups. The researchers found that Hispanic subgroup was a significant predictor of both positive and negative expectancies, e.g. Cuban-Americans had the lowest expectancies and Mexican-Americans had the highest expectancies. Puerto Rican-Americans also had both high positive and negative expectancies. Overall, research suggests that there may be some differences in alcohol expectancies between Latino subgroups (Mills & Caetano, 2010) and further research should be explored.

Mitchell, Beals, and Kaufman (2006) measured alcohol use and outcome expectancies in American Indian youth. They found significant relationships between positive expectancies and alcohol use (Mitchell et al., 2006). In this study, increases in expectancies resulted in greater alcohol use. Further research measuring alcohol expectancies in American Indian students should be explored.

Lastly, Asian-American alcohol expectancies have been measured. Asian-Americans drink less than Caucasians (Akutsu, Sue, Zane, & Nakamura, 1989; Zane & Sasao, 1992). There are fewer alcohol problems in the Asian American community than other ethnic communities (Yu & Liu, 1986/1987). Han and Short (2009) conducted a study comparing Asian American and Caucasian college students. They concluded that Asian American students drank less in general,

drank less frequently, and had fewer binge drinking episodes than White students (Han & Short, 2009). The researchers also found that Asian Americans had significantly less positive and negative expectancies than Caucasians. Thus, Asian American students expected fewer positive and negative effects. Daisy (1989) also found less positive expectancies in Asian Americans than Whites. Research suggested that positive expectancies are associated with increased drinking whereas negative expectancies are associated with decreased drinking (Reese, Chassin, & Molina, 1994; Sher et al., 1996). Yet in the Han and Short (2009) study the results were different. Negative expectancies were related to increased consumption suggesting that Asian Americans drink despite anticipating negative effects. Thus, further research should be conducted to determine what other factors affect Asian-American expectancies.

Summary

Motives for drinking, possible alcohol-related consequences and expectancies all shape a college student's drinking behavior. Motives, consequences, and expectancies vary according to age, gender, and ethnicity. The literature is mixed regarding alcohol expectancies and age, gender, and ethnicity and further research should be explored to better understand college student drinking. For example, age has been found to be a moderator between expectancies and drinking (Dunn & Goldman, 1998; Leigh & Stacy, 2004). As drinking experiences increase, expectancies change (Leigh & Stacy, 2004). Adolescents with more drinking experience may result in a stronger relationship between expectancies and behavior (Leigh & Stacy, 2004). But, there has been little expectancy research conducted comparing different age groups. Further research should be explored to determine the strength of the relationship between age and expectancies. Expectancies also vary by gender according to what is acceptable or desirable for each gender (Windle & Davies, 1999). Findings regarding gender differences and expectancies have been

mixed (Neighbors, Walker, and Larimer, 2003). Men and women may hold different expectancy sets (Brown et al., 1980). Findings regarding gender differences are mixed for males and females. The only consistent finding is that females report greater expectations of impairment (Sher, Wood, Wood, & Raskin, 1996). Lastly, research has been mixed on the relationship between alcohol expectancies and ethnicity (Chung, Hipwell, Loeber, White, & Stouthamer-Loeber, 2008). Some studies concluded that alcohol expectancies were lower for African-American females than any other ethnic groups (Daisy, 1989; Randolph, Torres, Gore-Felton, Lloyd, & McGarvey, 2009; Slutske, Cronk, Sher, Madden, Bucholz, & Heath, 2002). On the other hand, Meier, Slutske, Arndt, & Cadoret (2007) reported lower positive expectancies for Whites in comparison to other ethnic groups. In addition, research measuring alcohol expectancies and use for Latino, American-Indian, and Asian-American, students is lacking (Akutsu, Sue, Zane, & Nakamura, 1989; Han & Short, 2009; Mills & Caetano, 2010; Mitchell et al., 2006; Reese, Chassin, & Molina, 1994; Segura et al., 2004; Sher et al., 1996; Zane & Sasao, 1992) and research comparing ethnicity and alcohol expectancies should be explored.

CHAPTER 3. METHODS

Introduction

Chapter 1 addressed the statement of the problem, the purpose of the study, the significance of the study, the research questions, the limitations and assumptions of the study, and the definition of terms. Chapter 2 reviewed the literature which considered college students' motives for alcohol consumption, possible consequences associated with alcohol abuse, and alcohol expectancies.

This chapter also reiterates the purpose of the study and the research questions. This chapter will then address participants, procedures, and instrumentation—the *Comprehensive Effects of Alcohol* (CEOA) questionnaire. Reliability and validity of the *Comprehensive Effects of Alcohol* (CEOA) questionnaire are discussed and the chapter concluded with a description of the analysis of the data.

Purpose of the Study

The purpose of this study was to examine alcohol expectancies of college students. Students drink for various reasons. Drinking motives can be defined as “the need or psychological function that alcohol consumption fulfills and are typically assessed by responses of students to questionnaires about their reasons for drinking” (Baer, 2002, p. 45). Brennan et al. (1986) identified two general types of drinking motives: drinking for social purposes and drinking for emotional escape. Once students engage in drinking in a social context, the student's

expectancies or effects of alcohol vary from individual to individual. Thus, a connected concept to drinking motives is alcohol expectancies. Alcohol expectancies can be defined as “specific beliefs about the behavioral, emotional, and cognitive effects of alcohol” (Baer, 2002, p. 45).

This study compared alcohol expectancies between sophomore, junior, and senior students and how these expectancies vary across gender and ethnicity. Alcohol consumption can alter a student’s behavioral, emotional, and cognitive actions that can result in positive or negative effects. Expectancies can also increase a student’s use of alcohol and increase risks associated with alcohol. Understanding a student’s alcohol expectancy is critical in comprehending college student drinking and attempting to curb alcohol abuse. This study provides a better understanding of the differences in alcohol expectancies between sophomore, junior, and senior students by gender and ethnicity.

Research Questions

The following research questions were used in this study:

1. What is the relationship between class standing and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
2. What is the relationship between gender and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
3. What is the relationship between ethnicity and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Participants

The participants of this study were selected from a large southeastern university in the southeastern United States that serves approximately 25,000 students. The university granted

permission to conduct this research (see Appendix E). The participants consisted of 310 sophomore, junior, and senior students enrolled in physical activity and wellness courses in the fall 2011 and spring 2012 semesters. The students were over the age of 19 and demonstrated willingness to participate in this study.

Physical activity and wellness courses were selected from the College of Education based on the variety of students that enroll in physical activity and wellness courses. The university allows a maximum of four physical activity and wellness credits towards an undergraduate degree. Thus, students from all disciplines and majors enroll in physical activity and wellness courses. In addition, students from diverse ethnicities enroll in these courses. Lastly, a vast majority of males and females partake in physical activity and wellness courses. This discipline allows for a wide variety of sophomore, junior, and senior students with diverse gender and ethnicities.

Procedures

The faculty supervisor over the teaching assistants in physical activity and wellness courses was contacted and given an overview of the study, a copy of the survey instrument, as well as a projected timeline for data collection. The faculty supervisor scheduled a meeting with all of the teaching assistants to have the researcher discuss the survey instrument and subsequent research protocols. Teaching assistants in physical activity and wellness courses use Blackboard with each of their courses. Therefore, the faculty advisor then asked all of the teaching assistants to add the survey instrument to Blackboard. Blackboard is an educational system that

works with our clients to develop and implement technology that improves every aspect of education. We enable clients to engage more students in exciting new ways, reaching them

on their terms and devices — connecting more effectively, keeping students informed, involved, and collaborating together (Blackboard, 2011).

Teaching assistants were encouraged to inform students and invite participation in completing the survey.

The survey instrument was available on Blackboard for completion. In order to assess the relationship between class standing, gender, and ethnicity, students were also asked to respond to several demographic questions that were included within the survey. The three demographic questions asked for the student's class standing, gender, and ethnicity.

An information letter was also available on the survey for students to read before completing the survey (See Appendix B). Once the survey was completed by the student, the link was closed and the student could no longer retrieve the instrument.

The survey was available online the last four weeks in the 2011 fall semester and the first two weeks in the 2012 spring semester. After the six week window, the survey was removed from Blackboard. The data were collected by the researcher and secured in a locked cabinet in the researcher's office.

Instrumentation

Comprehensive Effects of Alcohol Questionnaire

Anticipated positive and negative consequences of drinking affect drinking decisions (Cox & Klinger, 1990). Thus, expectancy assessment involves the measurement of positive and negative outcome expectancies. Available expectancy questionnaires, such as the *Alcohol Expectancy Questionnaire* (AEQ) and the *Alcohol Effects Scale* (AES), have the tendency of being either “exclusively or heavily weighted toward assessment of positive expectancies”

(Fromme et al., 1993, p. 20). Although positive alcohol expectancies have been stronger predictors of drinking behavior (Lee, Greely, & Oei, 1999; Leigh & Stacy, 1993; Patrick, Wray-Lake, Finlay, & Maggs, 2010), negative expectancies may limit or cease the amount consumed (Lee et al., 1999). Therefore, assessing positive and negative expectancies and valuations is critical in understanding drinking behavior.

Fromme, Stroot, and Kaplan (1993) developed the *Comprehensive Effects of Alcohol* (CEOA) questionnaire. The questionnaire was first implemented in 1993 with 829 participants from a mid-Atlantic university to assess alcohol expectancies. Specifically, the questionnaire measures “expectations of physiological, psychological, and behavioral outcomes associated with drinking alcohol” (Fromme et al., 1993, p. 19). The CEOA is comprised of two parts: expectancy and valuations. The first part is expectancy. The instrument has 38 items measuring expected effects of alcohol. Each response is based on a Likert scale. The Likert scale is as follows: 1 = Disagree, 2 = Slightly Disagree, 3 = Slightly Agree and 4 = Agree.

In addition to expectancies, the questionnaire also measures valuations. Measuring expectancies is not sufficient because individuals may have different subjective values they assign to expectancies (Fromme et al., 1993; Grube et al., 1995; Leigh, 1989). Considerable variability exists between an individual’s judgments about the desirability of particular effects of drinking (Fromme et al., 1993). This portion of the questionnaire also has 38 items measuring valuations. Valuation refers to the importance placed on an expected outcome (Fromme et al., 1993). Each response is also based on a Likert scale. The Likert scale is as follows: 1 = Bad, 2 = Slightly Bad, 3 = Neutral, 4 = Slightly Good and 5 = Good. A copy of the instrument is included in Appendix C.

The authors of the instrument also developed a scoring scale for data analysis. Four scales measure positive alcohol expectancy effects (sociability, tension reduction, liquid courage, sexuality) and three scales measure negative expectancy effects (cognitive and behavioral impairment, risk and aggression, self-perception). Each scale has several response items that relate to the respective scale. The following is the breakdown of each scale for both the positive and negative factors:

Positive Factors

Sociability

- I would act sociable
- It would be easier to talk to people
- I would be friendly
- I would be talkative
- I would be outgoing
- I would be humorous
- It would be easier to express feelings
- I would feel energetic

Tension Reduction

- I would feel calm
- I would feel peaceful
- My body would feel relaxed

Liquid Courage

- I would feel courageous
- I would feel brave and daring
- I would feel unafraid

I would feel powerful

I would feel creative

Sexuality

I would be a better lover

I would enjoy sex more

I would feel sexy

It would be easier to act out my fantasies

Negative Factors

Cognitive and Behavioral Impairment

I would be clumsy

I would feel dizzy

My head would feel fuzzy

My responses would be slow

I would have difficulty thinking

My writing would be impaired

I would feel shaky or jittery the next day

My senses would be dulled

I would neglect my obligations

Risk and Aggression

I would take risks

I would act aggressively

I would be loud, boisterous, or noisy

I would act tough

I would feel dominant

Self-Perception

I would feel moody

I would feel guilty

I would feel self-critical

My problems would seem worse

The scoring scale also includes instructions on how to calculate the expectancy scores. The scores can be calculated in several ways and the researchers provided instructions for each method. A copy of the scoring scale is included in Appendix D.

Reliability & Validity

Reliability is generally defined as the measure to the extent that two different researchers come to the same conclusions using the same procedures (Gall, Borg, & Gall, 1996). One form of measuring reliability is using a test-retest method. Test-retest reliability for the CEOA questionnaire over two months ranged from $r = 0.66$ to 0.72 for positive expectancy, $r = 0.59$ to 0.78 for positive valuations, $r = 0.75$ to 0.81 for negative expectancy, and $r = 0.53$ to 0.65 for negative valuations (Fromme et al., 1993).

Validity is generally defined as the degree to which a test measures what it claims to measure. Thus, when measuring a new instrument for validity, the most important type of validity is construct validity. Litzinger, Lee, Wise, and Felder (2007) define construct validity as “evidence that the instrument is measuring the construct that it is intended to measure” (p. 311). Construct validity for the CEOA questionnaire was measured using an exploratory factor analysis and a confirmatory factor analysis. The exploratory factor analysis yielded that the positive factor structure accounted for 55.9% of the total variance and eigenvalues ranged from 7.5 to 1.4 (Fromme et al., 1993). The negative factor structure accounted for 46.3 % of the variance and eigenvalues ranged from 4.9 to 1.6. Also, the confirmatory factor analysis yielded

that the positive factors were $\chi^2 (164, N = 485) = 438.11, p < .001$ and the negative factors was $\chi^2 (132, N = 485) = 334.96, p < .001$ (Fromme et al., 1993).

Another study that has validated reliability for the entire instrument is the study conducted by Fromme and D'Amico (2000). Using Cronbach's alpha, internal reliabilities for the CEOA ranged from 0.59 to 0.89. Cronbach's alpha ranges from 0–1. An internal consistency of .90 and higher on Cronbach's alpha indicates an excellent reliability (Shannon & Davenport, 2001). Then a test-retest over a three-month period yielded 0.41 to 0.66 for expected effects and .41 to .66 for valuations.

Satre and Knight (2001) have also measured reliability for the instrument as a whole. This study compared alcohol expectancies to age and sex differences. For the older participants (ages 55-89), alphas ranged from 0.78 to 0.97. For the younger participants (ages 17-32), alphas ranged from 0.61 to 0.95.

Monks et al. (2010) have also utilized the entire CEOA questionnaire to measure expectancies. They reported overall positive expectancies and negative expectancies of 0.90 and 0.86. Neighbors et al. (2003) reported 0.93 and 0.91 for both positive and negative expectancies. Alphas were 0.93 and 0.91 for positive and negative valuations.

But, some studies have only analyzed specific sections of the CEOA questionnaire. For example, Ham, Zamboanga, Olthuis, Casner, and Bui (2010) conducted research using the 38-item expectancy portion of the CEOA. Specifically, they investigated three out four positive factors (Tension Reduction, Sociability, and Liquid Courage). Cronbach's alpha was 0.66 for Tension Reduction, 0.87 for Sociability, and 0.82 for Liquid Courage. Valdivia and Stewart (2005) further examined the internal consistency of the CEOA questionnaire using a specific section of the instrument. They only analyzed Cognitive and Behavioral Impairment, Risk and

Aggression, and Self-Perception. Each factor (Cognitive and Behavioral Impairment, Risk and Aggression, and Self-Perception) ranged from 0.66 to 0.83 for both expectancies and valuations. Read et al. (2004) assessed Social Enhancement and Tension Reduction. The alphas for Social Enhancement was 0.88 (expectancy) and 0.87 (valuation). The alphas for Tension Reduction was 0.65 (expectancy) and 0.67 (valuation). In essence, the instrument demonstrates adequate internal consistency, test-retest reliability, construct validity, and criterion validity (Fromme & D'Amico, 2000; Fromme et al., 1993; Palmer et al., 2010; Zamboanga, 2006).

The researcher conducted an analysis of reliability for the CEOA questionnaire using Cronbach's Alpha for the dependent variables, expectancy and valuations. The Cronbach's Alpha for expectancy for this study was .91. The Cronbach's Alpha for valuation was .95. An internal consistency of .90 and higher on Cronbach's alpha indicates an excellent reliability (Shannon & Davenport, 2001). Overall, the CEOA showed excellent reliability.

Analysis of Data

The three independent variables (IV) investigated in this study were class standing, gender, and ethnicity. The first independent variable was class standing. Age has been found to be a moderator between expectancies and drinking (Dunn & Goldman, 1998; Leigh & Stacy, 2004). As drinking experiences increase, expectancies change (Leigh & Stacy, 2004) and changes in expectancy and drinking parallel (Sher et al., 1996). As such, the researcher compared alcohol expectancies between sophomore, junior, and senior students. Data on freshmen students was not collected.

The second independent variable was gender. Expectancies vary by gender according to what is acceptable or desirable for each gender (Windle & Davies, 1999). As a result, men and

women may hold different expectancy sets (Brown et al., 1980). Alcohol expectancies were compared for both males and females.

Lastly, the third independent variable was ethnicity. Expectancies vary according to the different ethnic groups. The researcher compared alcohol expectancies for White/Caucasian, Black/African Americans, Hispanic/Latino, American Indian/Alaska Native, and Asian students.

There were two dependent variables (DV) for the study. The dependent variables are the domains analyzed in the CEOA questionnaire—expectancies and valuations. Expectancies can be comprised of positive and negative expectancies. Positive alcohol expectancies have been stronger predictors of drinking behavior (Lee, Greely, & Oei, 1999; Leigh & Stacy, 1993; Patrick, Wray-Lake, Finlay, & Maggs, 2010) and many studies have found links between expectancies and drinking behavior (McCarty, Morrison, & Mills, 1983; Rohsenow, 1983; Stacy, Widaman, & Marlatt, 1990; Wood, Nagoshi, & Dennis, 1992). On the other hand, Lee et al. (1999) suggested that whereas positive expectancies may initiate drinking, negative expectancies may limit the amount consumed. In addition, researchers argue that measuring expectancies is not sufficient (Goldman et al., 1999) and expectancies and valuations should be measured together.

Multivariate Analysis of Variance (MANOVA) was used to analyze the data gathered in the study. A MANOVA is an extended analysis form of a one-way Analysis of Variance (ANOVA). The ANOVA is used to analyze the effects of two or more independent variables (Corston & Colman, 2000). A MANOVA has multiple independent variables and multiple dependent variables (French, Macedo, Poulsen Waterson & Yu (2008). The difference between a one-way ANOVA and a MANOVA is the inclusion of interaction between variables (Corston &

Colman, 2000). A one-way ANOVA fails to account for possible interaction effects which can impact significance of the variables (Corston & Colman, 2000).

The data in this study were analyzed using a one-way multivariate analysis of variance (MANOVA) design with a $p < .05$ level of statistical significant difference. Data were analyzed using SPSS 19, a statistical software package that is used in social sciences research projects and that reports quantitative results. All data were handled in compliance with the Institutional Review Board at the university (see Appendix E).

Summary

This chapter reiterated the purpose of the study and the research questions. The study examined alcohol expectancies by comparing expectancies between sophomore, junior, and senior students across gender and ethnicity. Further, this chapter described the participants of the study. The students were sophomore, junior, and senior students who were 19 years of age and older enrolled in physical activity and wellness courses. The students were solicited from physical activity and wellness courses at a large, southeastern university in the United States. The procedures for collecting data and the instrument, the *Comprehensive Effects of Alcohol* (CEOA) questionnaire were discussed. The reliability and validity of the *Comprehensive Effects of Alcohol* (CEOA) was investigated and discussed. The instrument demonstrated adequate internal consistency, test-retest reliability, construct validity, and criterion validity (Fromme & D'Amico, 2000; Fromme et al., 1993; Palmer et al., 2010; Zamboanga, 2006). Lastly, the data dictated that a one-way MANOVA design be used. The results of the study are presented in Chapter 4.

CHAPTER 4. FINDINGS

Introduction

Chapter 1 addressed the statement of the problem, the purpose of the study, the significance of the study, the research questions, the limitations and assumptions of the study, and the definition of terms. Chapter 2 reviewed the literature which considered college students' motives for alcohol consumption, possible consequences associated with alcohol abuse, and alcohol expectancies. Chapter 3 then addressed participants, procedures and instrumentation—*Comprehensive Effects of Alcohol (CEOA)* questionnaire for the study. Chapter three also discussed the reliability and validity of the questionnaire and concluded with the analysis of the data. Chapter 4 also reiterated the purpose of the study and the research questions. The chapter then addressed the demographic results and data analysis.

Purpose of the Study

The purpose of this study was to examine alcohol expectancies of college students. Students drink for various reasons. Drinking motives can be defined as “the need or psychological function that alcohol consumption fulfills and are typically assessed by responses of students to questionnaires about their reasons for drinking” (Baer, 2002, p. 45). Brennan et al. (1986) identified two general types of drinking motives: drinking for social purposes and drinking for emotional escape. Once students engage in drinking in a social context, the student's expectancies or effects of alcohol vary from individual to individual. Thus, a connected concept

to drinking motives is alcohol expectancies. Alcohol expectancies can be defined as “specific beliefs about the behavioral, emotional, and cognitive effects of alcohol” (Baer, 2002, p. 45).

This study compared alcohol expectancies between sophomore, junior, and senior students and how these expectancies vary across gender and ethnicity. Alcohol consumption can alter a student’s behavioral, emotional, and cognitive actions that can result in positive or negative effects. Expectancies can also increase a student’s use of alcohol and increase risks associated with alcohol. Understanding a student’s alcohol expectancy is critical in comprehending college student drinking and attempting to curb alcohol abuse. This study provides a better understanding of the differences in alcohol expectancies between sophomore, junior, and senior students by gender and ethnicity.

Research Questions

The following research questions were used in this study:

1. What is the relationship between class standing and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
2. What is the relationship between gender and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
3. What is the relationship between ethnicity and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Demographic Results

Demographic characteristics for all participants enrolled in physical activity and wellness classes used in this study were summarized in terms of students’ class standing, gender, and ethnicity toward expectancy and valuation as measured by the CEOA questionnaire.

A total of 310 participants were asked to respond to demographic questions including class standing, ethnicity, and gender. All 310 eligible participants responded by completing the survey under established guidelines and protocols.

Class Standing

The first demographic question in the survey asked for the participants' class standing. There were 310 students that participated in this study. Of the 310 students, there were 112 sophomores (36%). Next, there were 71 juniors (23%). Lastly, there were 127 seniors (41%). This study did not include freshmen participants. Distribution of participants within class standing is provided in Table 1.

Table 1

Distribution of Participants by Class Standing

Class Standing	Frequency	Percent
Sophomore	112	36
Junior	71	23
Senior	127	41
TOTAL	310	100

Gender

The second demographic question in the survey asked for participants' gender. This study was composed of 310 participants in a large, southeastern university. Females comprised the largest gender within the study with 207 (67%) female participants. There were 103 (33%) male participants. Distribution of participants by gender is provided in Table 2.

Table 2

Distribution of Participants by Gender

Gender	Frequency	Percent
Male	103	33
Female	207	67
TOTAL	310	100

Ethnicity

The last demographic question in the survey asked for the participants’ ethnicity. Ethnicity was categorized into the following races: White/Caucasian, Black/African Americans, Hispanic/Latino, American Indian/Alaska Native, and Asian. Of the 310 participants, the largest race that participated in the study was White/Caucasian with 243 (78%) students. Because of the small number of participants for Black/African Americans, Hispanic/Latino, American Indian/Alaska Native, and Asian, these races were combined together to form a new category of “other” races. Distribution of participants by ethnicity is provided in Table 3.

Table 3

Distribution of Participants by Ethnicity

Ethnicity	Frequency	Percent
White/Caucasian	243	78
Other	67	22
TOTAL	310	100

Data Analysis

Research Question 1: What is the relationship between class standing and expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Class Standing

The first research question inquired about the relationship between class standing and alcohol expectancy and valuation. A one-way multivariate analysis of variance (MANOVA) was conducted to undertake the research question of the relationship between class standing (IV) and expectancy (DV) and valuation (DV). The MANOVA was tested at the .05 level of significance. MANOVA (multivariate analysis of variance) is used to “analyze data that involves more than one dependent variable at a time. MANOVA allows us to test hypotheses regarding the effect of one or more independent variables on two or more dependent variables” (Statistically Significant Consulting, Inc., 2012). The MANOVA was chosen because it incorporates the relationship among dependent variables (expectancy and valuation).

By administering the descriptive statistics a mean and standard deviation was established for class standing (sophomore, junior, and senior). The mean of expectancy for sophomores was 105.86; juniors were 107.80; and seniors were 103.07. The mean of valuation for sophomores was 103.32; juniors were 105.47; seniors were 97.61. Table 4 displays the mean and standard deviation results.

Table 4

Mean and Standard Deviation for Class Standing

	Class Standing	M	SD
Expectancy	Sophomore	105.86	18.37
	Junior	107.80	15.49
	Senior	103.07	14.69
Valuation	Sophomore	103.32	24.45
	Junior	105.47	20.69
	Senior	97.61	22.00

N=310

An assumption for the MANOVA is the homogeneity of covariance matrices for normality. Violations of homoscedasticity can be determined by interpreting the results of the Box's Test. A non-significant Box's *M*, ($p=0.648$) signified that the homogeneity of variance-covariance matrix assumption was not violated and equal variances can be assumed (see Table 5).

Table 5

Between Groups Homogeneity of Variance and Covariance

Box's <i>M</i>	8.74
F	1.44
df1	6
df2	762156.25
Sig.	.19

The research question addressed whether there was a relationship between class standing and expectancy and valuation. Because Box's Test was not violated, Wilks' Lambda statistic was used to interpret the result of the MANOVA. Wilks' Lambda is the most commonly used statistic for MANOVA (Polit, 1996). The MANOVA result revealed there is not a statistically significant

effect of class standing on expectancy and valuation, Wilks' $\Lambda = .974$, $F(4, 612) = 2.05$, $p = .086$, multivariate $\eta^2 = .013$. A summary of the MANOVA table is included in Table 6.

Table 6

Summary of MANOVA test

Multivariate Effects	Class Standing
Wilks' Lambda (Λ)	.97
df	4,612
df error	612
p	0.09
Eta squared (η^2)	.01

The one-way MANOVA was then followed with a univariate test (ANOVA) for each dependent variable. Grimm and Yarnold (1995) stated that

in the ANOVA there is a continuous dependent variable and one or more categorical independent variables. The purpose of the ANOVA is to determine whether the means of the dependent variable for each level of an independent variable are significantly different from each other. An interaction addresses whether the influence of one independent variable is altered by the level of another independent variable. (p. 250)

The ANOVA results indicated no statistical significant effect of class standing on expectancy, $F(2, 307) = 2.076$, $p = .127$, partial $\eta^2 = .013$. On the other hand, the effect of class standing on valuation was significant, $F(2, 307) = 3.329$, $p < .037$, partial $\eta^2 = .021$. The ANOVA test results are reported in Table 7.

Table 7

Summary of ANOVA test

Univariate Effects	Expectancy	Valuation
F	2.08	3.33
p	.13	.04
Eta Squared (η^2)	.01	.02

p<0.05

Because univariate significance was demonstrated for valuation, a post hoc test was used to reveal which groups are significantly different for each dependent variable. The Bonferroni post hoc analysis revealed that students who were juniors and seniors significantly differ from all other class standing categories.

Research Question 2: What is the relationship between gender and expectancy and valuation as measured by the *Comprehensive Effects of Alcohol (CEOA)* questionnaire?

Gender

The second research question addressed the relationship between gender and expectancy and valuation. A one-way multivariate analysis of variance (MANOVA) was conducted to undertake the research question of the relationship between gender (IV) and expectancy (DV) and valuation (DV). The MANOVA was tested at the .05 level of significance. MANOVA (multivariate analysis of variance) is used to “analyze data that involves more than one dependent variable at a time. MANOVA allows us to test hypotheses regarding the effect of one or more independent variables on two or more dependent variables” (Statistically Significant

Consulting, Inc., 2012). The MANOVA was chosen because it incorporates the relationship among dependent variables (expectancy and valuation).

By administering the descriptive statistics a mean and standard deviation was established for gender (male, female). The mean of expectancy for males was 105.77; females were 104.86. The mean of valuation for males was 107.05; females were 98.70. Table 8 displays the mean results.

Table 8

Mean and Standard Deviation for Gender

	Gender	M	SD
Expectancy	Male	105.77	16.59
	Female	104.86	16.25
Valuation	Male	107.05	17.75
	Female	98.70	24.51

N=310

An assumption for the MANOVA is the homogeneity of covariance matrices for normality. Violations of homoscedasticity can be determined by interpreting the results of the Box's Test. A significant Box's *M*, ($p < 0.004$) signified that the homogeneity of variance-covariance matrix assumption was violated and equal variances cannot be assumed (see Table 9). Because Box's *M* was significant ($p < 0.004$) and group sample size are extremely unequal (male=103, female=207), then robustness cannot be assumed due to unequal variances among groups. These results are uncharacteristic of the population distributed at the university. The male to female percentage at the university is 51% male, 49% female. This study yielded an unequal distribution of male and female participants.

Therefore, a more robust MANOVA test statistic is required. This test statistic is the Pillai's Trace instead of the Wilks' Lambda which is normally used when equal variances are assumed.

Table 9

Between Groups Homogeneity of Variance and Covariance

Box's M	13.48
F	4.46
df1	3
df2	1034085.30
Sig.	.004

The research question addressed whether there was a relationship between gender and expectancy and valuation. Because Box's Test was violated, Pillai's Trace statistic was used to interpret the result of the MANOVA. The MANOVA result revealed there is a statistically significant effect of gender and expectancy and valuation, Pillai's $s=.031$, $F(2,307) = 4.94$, $p < .008$, multivariate $\eta^2 = .031$. A summary of the MANOVA table is included in Table 10.

Table 10

Summary of MANOVA test

Multivariate Effects	Gender
Pillai's Trace	.03
df	2
df error	307
p	.008
Eta squared (η^2)	.03

The one-way MANOVA was then followed with a univariate test (ANOVA) for each dependent variable. The ANOVA results indicated no statistical significance of expectancy on gender, $F(1,308) = .214$, $p = .644$, partial $\eta^2 = .001$. On the other hand, gender was statistically significant for valuation, $F(1,308) = 9.486$, $p < .002$, partial $\eta^2 = .030$. The ANOVA test results are reported in Table 11.

Table 11

Summary of ANOVA test

Univariate Effects	Expectancy	Valuation
F	.21	9.49
p	.64	.002
Eta Squared (η^2)	.001	.03

$p < 0.05$

Research Question 3: What is the relationship between ethnicity and expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Ethnicity

The second research question addressed the relationship between ethnicity and expectancy and valuation. A one-way multivariate analysis of variance (MANOVA) was conducted to undertake the research question of the relationship between ethnicity (IV) and expectancy (DV) and valuation (DV). The MANOVA was tested at the .05 level of significance. MANOVA (multivariate analysis of variance) is used to “analyze data that involves more than one dependent variable at a time. MANOVA allows us to test hypotheses regarding the effect of one or more independent variables on two or more dependent variables” (Statistically Significant

Consulting, Inc., 2012). The MANOVA was chosen because it incorporates the relationship among dependent variables (expectancy and valuation).

By administering the descriptive statistics a mean and standard deviation was established for ethnicity (whites, others). Table 12 displays the mean results.

Table 12

Mean and Standard Deviation for Ethnicity

	Ethnicity	M	SD
Expectancy	Whites	107.69	14.82
	Others	96.01	18.33
Valuation	Whites	102.05	22.84
	Others	99.38	22.72

N=310

An assumption for the MANOVA is the homogeneity of covariance matrices for normality. Violations of homoscedasticity can be determined by interpreting the results of the Box's Test. A non-significant Box's *M*, ($p = .108$) signified that the homogeneity of variance-covariance matrix assumption was not violated and equal variances can be assumed (see Table 13).

Table 13

Between Groups Homogeneity of Variance and Covariance

Box's M	6.15
F	2.03
df1	3
df2	215030.51
Sig.	.108

The research question addressed whether there was a relationship between ethnicity and expectancy and valuation. Because Box's Test was not violated, Wilks' Lambda statistic was used to interpret the result of the MANOVA. The MANOVA result revealed there is a statistically significant effect of ethnicity on expectancy and valuation, Wilks' $\Lambda = .910$, $F(2, 307) = 15.44$, $p < .001$, multivariate $\eta^2 = .090$. A summary of the MANOVA table is included in Table 14.

Table 14

Summary of MANOVA test

Multivariate Effects	Ethnicity
Wilks' Λ	.91
df	2
df error	307
p	.001
Eta squared (η^2)	.09

The one-way MANOVA was then followed with a univariate test (ANOVA) for each dependent variable. The ANOVA results indicated statistical significant effect of ethnicity on expectancy, $F(1, 308) = 29.24$, $p < .001$, partial $\eta^2 = .087$. But, ethnicity did not have a statistically

significant effect on valuation, $F(1,308) = .716$, $p = .398$, partial $\eta^2 = .002$. The ANOVA test results are reported in Table 15.

Table 15

Summary of ANOVA test

Univariate Effects	Expectancy	Valuation
F	29.24	.72
p	.001	.40
Eta Squared (η^2)	.09	.002

$p < 0.05$

Summary

A one-way MANOVA design was conducted for each of the independent variables to test whether there were significant differences between class standing, gender, and ethnicity (IVs) and expectancy and valuation (DVs). Reliability analyses were also conducted to assess the reliability of the instrument used in the study. Cronbach's Alpha coefficient was .91 for expectancy and .94 for valuation, thus indicating that the instrument was reliable.

The results indicated that there was not a statistically significant effect of class standing on expectancy and valuation. On the other hand, the results indicated that there is a statistically significant effect of gender and ethnicity and their relationship with expectancy and valuation. Chapter 5 will present the summary, conclusion, implications and recommendations to the study.

CHAPTER 5. SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

Chapter 1 addressed the statement of the problem, the purpose of the study, the significance of the study, the research questions, the limitations and assumptions of the study, and the definition of terms. Chapter 2 reviewed the literature which considered college students' motives for alcohol consumption, possible consequences associated with alcohol abuse, and alcohol expectancies. Chapter 3 then addressed participants, procedures and instrumentation—*Comprehensive Effects of Alcohol (CEOA)* questionnaire for the study. Chapter 3 also discussed the reliability and validity of the questionnaire and concluded with the analysis of the data. Chapter 4 addressed the demographic results and data analysis. Research findings addressing the three research questions with statistical evidence are also discussed in this chapter. Chapter 5 provided the summary, conclusions, implications, and recommendations for future research.

Purpose of the Study

The purpose of this study was to examine alcohol expectancies of college students. Students drink for various reasons. Drinking motives can be defined as “the need or psychological function that alcohol consumption fulfills and are typically assessed by responses of students to questionnaires about their reasons for drinking” (Baer, 2002, p. 45). Brennan et al. (1986) identified two general types of drinking motives: drinking for social purposes and drinking for emotional escape. Once students engage in drinking in a social context, the student's

expectancies or effects of alcohol vary from individual to individual. Thus, a connected concept to drinking motives is alcohol expectancies. Alcohol expectancies can be defined as “specific beliefs about the behavioral, emotional, and cognitive effects of alcohol” (Baer, 2002, p. 45).

This study compared alcohol expectancies between sophomore, junior, and senior students and how these expectancies vary across gender and ethnicity. Alcohol consumption can alter a student’s behavioral, emotional, and cognitive actions that can result in positive or negative effects. Expectancies can also increase a student’s use of alcohol and increase risks associated with alcohol. Understanding a student’s alcohol expectancy is critical in comprehending college student drinking and attempting to curb alcohol abuse. This study provides a better understanding of the differences in alcohol expectancies between sophomore, junior, and senior students by gender and ethnicity.

Research Questions

The following research questions were used in this study:

1. What is the relationship between class standing and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
2. What is the relationship between gender and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?
3. What is the relationship between ethnicity and alcohol expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire?

Summary

The participants of this study were selected from a large southeastern university in the southeastern United States that serves approximately 25,000 students. Participants consisted of

310 sophomore, junior, and senior students enrolled in physical activity and wellness courses in the fall 2011 and spring 2012 semesters. Students were randomly selected based on being over the age of 19 and the willingness to participate in the study.

In order to assess the relationship of class standing, gender, and ethnicity with expectancy and valuation, the *Comprehensive Effects of Alcohol* (CEOA) questionnaire was utilized. The first part of the CEOA measures expectancy. This portion of the questionnaire is composed of 38 items. The 38 items measure expected effects of alcohol. The second part measures valuations. This portion of the questionnaire is also composed of 38 items. The 38 items measure the importance placed on an expected outcome. Participants completed the survey in the fall 2011 and spring 2012 semesters. Participants also completed the survey reflecting their class standing, gender, and ethnicity.

The quantitative data revealed the following from the three research questions by using a one-way multivariate analysis of variance (MANOVA). Research question 1 addressed the relationship of class standing on expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire. The MANOVA result revealed there is not a statistically significant effect of class standing on expectancy and valuation, Wilks' $\Lambda = .974$, $F(4,612) = 2.05$, $p = .086$, multivariate $\eta^2 = .013$. There is no relationship between class standing and expectancy and valuation.

Research question 2 investigated the relationship of gender on expectancy and valuation as measured by the *Comprehensive Effects of Alcohol* (CEOA) questionnaire. The MANOVA result revealed there is a statistically significant effect of gender on expectancy and valuation, Pillai's $s = .031$, $F(2,307) = 4.94$, $p < .008$, multivariate $\eta^2 = .031$. There is a relationship between

gender and expectancy and valuation. Males and female college students have different alcohol expectancy and valuation. This supports the finding that men and women hold different expectancy sets (Brown et al., 1980).

Research question 3 addressed the relationship of ethnicity on expectancy and valuation. The MANOVA result revealed there is a statistically significant effect of ethnicity on expectancy and valuation, Wilks' $\Lambda = .910$, $F(2,307) = 15.44$, $p < .001$, multivariate $\eta^2 = .090$. There is a relationship between ethnicity and expectancy and valuation. This supports the finding that ethnicity is a factor for alcohol expectancies. But there is something to note about the significance ethnicity has on expectancy and valuation. The variable "others" was created to combine the varying ethnicities (African-American, Hispanic/Latino, American-Indian, and Asian). If these ethnicities were separated, ethnicity would not have had an effect on expectancy and valuation. Combining these races into "others" provided a stronger result than separating each race individually.

Conclusions

To the extent that the data collected for this study were valid and reliable and the assumptions of the study were appropriate and correct; the following conclusions may be made. Based on the results of this study, it may be concluded that there were statistically significant differences of college students' alcohol expectancy and valuation based on gender and ethnicity. Additionally, it may be concluded that there were no statistically significant differences of college students' alcohol expectancy and valuation based on class standing.

Implications

The review of the literature discussed in Chapter 2 established that alcohol expectancies and valuations together are strong predictors of drinking behavior. Alcohol expectancies can initiate, maintain, and reduce drinking patterns (Lee et al., 1999; Jones et al., 2001) whereas valuations explain the subjective values attached to alcohol consumption (Fromme et al., 1993; Grube et al., 1995; Leigh, 1989).

A factor that may influence alcohol consumption is age. There has been little research conducted to assess the relationship between age and expectancies. Some researchers believe that age has been found to be a moderator between expectancies and drinking (Dunn & Goldman, 1998; Leigh & Stacy, 2004). Specifically, as students become older, alcohol expectancies decrease over time (Sher et al., 1996). But, the results in this study did not reveal this relationship between age and expectancies. There is no statistical significant difference between sophomores, juniors, and seniors and their effect on expectancies and valuations. Although research has revealed that age has been found to be a moderator for expectancies, this study does not support this finding.

The alcohol expectancies or drinking patterns for the students in this study did not decrease over time. Because there is no difference between sophomores, juniors, and seniors and alcohol expectancies, university administrators have to place emphasis on safe consumption practices. Alcohol consumption has not decreased for the students in the various age groups. Students from all age groups are maintaining the same alcohol consumption patterns throughout the latter part of their academic years. These alcohol consumption patterns may pose dire consequences for students.

One consequence of high alcohol consumption is found in the academics area. This may include performing poorly on a test or low grades (Dunn & Goldman, 1998; Leigh & Stacy, 2004) and missing class and getting behind on school work (Wechsler et al., 1994). Other consequences include personal, such as unintended/unprotected sexual activity and sexual assaults, (Anderson & Mathieu, 1996; Meilman, 1993; Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004; Perkins, 1992; Poulson et al., 1998; Wechsler & Isaac, 1992). Students may also face legal troubles due to alcohol consumption. Approximately 95% of all violent crimes on campus involve the use of alcohol (Murphy, Hoyme, Colby, & Borsari, 2006). Academic, personal, and legal consequences can be some of the consequences that students may be exposed to because of alcohol consumption. Thus, administrators must try to implement strategies to reduce alcohol consumption on campus. These strategies may include informational campaigns, social norms, alcohol abuse interventions, parental notifications, and more. University attempts to address alcohol abuse will benefit the entire community.

Another factor that may influence alcohol expectancies is gender. Expectancies vary by gender according to what is acceptable or desirable for each gender (Windle & Davies, 1999). Findings regarding gender differences and expectancies have been mixed (Neighbors, Walker, & Larimer, 2003). For example, Carey (1995) found no significant gender differences in alcohol expectancies between male and female college students. But Neighbors, Walker, & Larimer (2003) concluded that men and women held the same beliefs about the effects of alcohol, but men determined the effects to be more favorable. Thus, men and women may hold different expectancy sets (Brown et al., 1980).

This study found that gender does have a significant effect on expectancy and valuation. Men and women do have varying alcohol expectancies. Specifically, men and women have

different valuations in this study. Valuations are the different subjective values assigned to expectancies (Fromme et al., 1993; Grube et al., 1995; Leigh, 1989). Thus, in this study, there is a difference whether an expected alcohol effect is rated positive or negative by males and females. University administrators must take into account these varying alcohol expectancies between men and women because alcohol expectancies can affect sexual situations (Davis, Norris, Hessler, Zawacki, Morrison, & George, 2010). Males and females can interpret sexual situations differently while under the influence of alcohol. These sexual situations can lead to sexual risks which in turn can lead to sexual assaults. Sexual assaults pose a serious threat to campus safety and wellness.

In addition to posing threats on campus, sexual assaults also violate Title IX federal legislation. Title IX states that

Title IX of the Education Amendments of 1972 (Title IX), 20 U.S.C. §§ 1681 *et seq.*, and its implementing regulations, 34 C.F.R. Part 106, prohibit discrimination on the basis of sex in education programs or activities operated by recipients of Federal financial assistance. Sexual harassment of students, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. (Dear Colleague Letter, 2011, p.1)

The U.S. Department of Education, Office for Civil Rights (OCR) has taken great measures to address campus sexual violence with the “Dear Colleague” Letter issued on April 4, 2011. The letter proscribes the guidelines that universities must take in order to successfully address sexual harassment/assault on campus and remain in compliance with Title IX.

Furthermore, the same day that the “Dear Colleague” Letter was released, Vice President Biden announced in a speech on April 4, 2011 that “student[s] across the country deserve the

safest possible environment in which to learn. That's why we're taking new steps to help our nation's schools, universities, and colleges end the cycle of sexual violence on campus." Thus, colleges and universities have to ensure a safe campus environment void of discrimination for compliance with the Department of Education. The university can promote safe sexual practices, especially when alcohol is involved.

Ethnicity is also a factor that influences alcohol expectancies. Research has been mixed on the relationship between alcohol expectancies and ethnicity (Chung, Hipwell, Loeber, White, & Stouthamer-Loeber, 2008). Some studies have found that expectancies have been lower for African-Americans and Hispanics than Whites (Chartier, Hesselbrock, and Hesselbrock, 2009; Daisy, 1989; Randolph, Torres, Gore-Felton, Lloyd, & McGarvey, 2009; Slutske, Cronk, Sher, Madden, Bucholz, & Heath, 2002). Other studies have found that Whites have lower expectancies than African Americans or Hispanics (Meier, Slutske, Arndt, & Cadoret, 2007). Furthermore, research measuring alcohol expectancies and use for Latino (Segura et al., 2004), American-Indian (Mitchell et al., 2006), and Asian-American students (Akutsu, Sue, Zane, & Nakamura, 1989; Yu & Liu, 1986/1987; Zane & Sasao, 1992) is lacking.

This study adds to the body of literature regarding ethnicity and the effects on expectancy and valuation. This study found that ethnicity, for Whites, African-Americans, Hispanics, Native American-Indian, and Asian-Americans, does have a significant effect on expectancy and valuation. Specifically, there is a difference of ethnicity for expectancies but not for valuations. The expected effects of alcohol vary according to ethnicity, but ethnicity does not affect how the valuation is rated positively or negatively. Thus, university administrators can use this information to address drinking practices and patterns prevalent for each race. If students are properly informed about the alcohol consumptions patterns within their own race, they are more

likely to be receptive of the information. But, universities must be careful in the presentation of this information to avoid racial profiling or other drinking stereotypes for the various races.

Recommendations

This study was conducted to assess the relationship of class standing, gender, and ethnicity with expectancy and valuation. There are several recommendations for the replication of the study.

The first recommendation is to conduct this study with freshman students. This study was conducted with sophomore, juniors, and senior students. The study found that there was no statistical significant effect of class standing on expectancy and valuation. The results may differ if the freshman student population was added with the other class standing.

This study could also be replicated by comparing age of students rather than class standing. The literature discussed in Chapter 2 argues that alcohol expectancies decrease over the period of four years for college students (Sher et al., 1996). The literature comparing two or more age groups is lacking (Leigh & Stacy, 2004) and replicating this study would add to this small body of literature.

Another recommendation would be to conduct this study using another alcohol expectancy scale. There are a variety of alcohol expectancy scales; the most common being the Alcohol Expectancy Questionnaire (AEQ) (Brown, Christiansen, & Goldman, 1987). This study utilized the *Comprehensive Effects of Alcohol* questionnaire that measured expectancies (both positive and negative) and valuations.

In addition, the survey would be valuable if students from diverse backgrounds were surveyed. The population consisted of 310 participants; however there was a lack of diverse

ethnic backgrounds. There were 243 Whites/Caucasians. The remaining ethnic groups (African-Americans, Hispanic/Latino, American-Indian, and Asian) were combined to comprise the remaining 67 participants in this study. Although the results yielded that ethnicity does have a statistically significant effect on expectancy and valuation, if the ethnicity were divided, the results would not be significant. Together all of the ethnicities are significant, but would not yield significance if separated. Therefore, by duplicating this study with a more heterogeneous population (among ethnicity) the results may be enhanced.

The location of the university is another factor to consider when replicating this study. The study was conducted in a large southeastern university in the Southeast. The study can be replicated in another region of the United States to possibly produce different results. The study can also be replicated at Historically Black Colleges and Universities (HBCU) or private institutions. Changing the composition of the university may yield different results.

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Appendix A

Site Permission Letter



COLLEGE OF EDUCATION

DEPARTMENT OF KINESIOLOGY

September 15, 2011

Institutional Review Board
c/o Office of Human Subjects Research
307 Sanford Hall
Auburn University, AL 36849

Dear IRB Members,

After reviewing the proposed study, "Examining Alcohol Related Expectancies within College Class Standing", presented by Ms. Aileen Perez, an AU graduate student, I have granted authorization for students to be recruited from the following course(s) (before, during or after class):

PHED 1200; CRN: 18423; Section 2; Instructor: Valerie A. Lee; STACT 207N
PHED 1640; CRN: 18431; Section 2; Instructor: Valerie A. Lee; STACT 207N
PHED 1200; CRN: 18424; Section 3; Instructor: Bridget A. Peters; COLSM 1129
PHED 1200; CRN: 18427; Section 4; Instructor: Jasmine L. Johnson; COLSM 1129
PHED 1230; CRN: 18507; Section 5; Instructor: Jasmine L. Johnson; COLSM 1129
PHED 1230; CRN: 18425; Section 1; Instructor: William A. Tisdale; COLSM 2043
PHED 1200; CRN: 18435; Section 6; Instructor: William A. Tisdale; COLSM 2033
PHED 1230; CRN: 18432; Section 2; Instructor: Michelle Vaughn; COLSM 1129
PHED 1300; CRN: 18033; Section 4; Instructor: Michelle Vaughn; COLSM 1129
PHED 1300; CRN: 18422; Section 5; Instructor: Brian S. Ferguson; COLSM 1129
PHED 1330; CRN: 18007; Section 1; Instructor: Brian M. Kliszczewicz; COLSM 2040
PHED 1340; CRN: 18385; Section 1; Instructor: Christopher G. Ballman; COLSM 1129
PHED 1340; CRN: 18287; Section 2; Instructor: Christopher G. Ballman; COLSM 1129

The purpose of the study is to determine if there is a significant difference of alcohol expectancies within class-standing, gender, and ethnicity. Ms. Perez will conduct the following activities in the above listed course(s): 1. contact the students in the above courses; 2. recruit the students to participate in an online survey provided through the University's Qualtrics software program; and 3. collect data from survey. It is understood that this project will end no later than March 30, 2012.

To ensure that the students are protected, Ms. Perez has agreed to provide to me a copy of any Auburn University IRB-approved, stamped consent document before she recruits participants in the above-listed courses. To eliminate any risk of coercion, I will not be present during Ms. Perez's presentation.

2050 Auburn Drive

Monticello, Alabama

Auburn, AL 36849-5323

Tel: 334-887-3232

334-844-0894

Fax:

334-844-1487



COLLEGE OF EDUCATION
DEPARTMENT OF KINESIOLOGY

If the IRB has any concerns about the permission being granted by this letter, please contact me at the phone number listed above.

Sincerely,

Dr. Jared Russell, Associate Professor, K.N.3 Physical Activity & Wellness Program
Coordinator

2050 Reynolds
Manning Center
Gaines, AL 35819-2524

Phone:
351-844-4483

Fax:
351-844-1267

Appendix B

Information Letter



ATBURN UNIVERSITY

COLLEGE OF EDUCATION

EDUCATIONAL FOUNDATIONS, LEADERSHIP AND TECHNOLOGY

The Auburn University Institutional
Review Board has approved this
document for use from
10/19/11 to 10/18/12
Protocol # 11-310 EX 1110

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)

INFORMATION LETTER

for a Research Study entitled

"Examining Alcohol Related Expectancies within College Class Standing"

You are invited to participate in a research study to measure alcohol expectancies within class standing, gender, and ethnicity. The study is being conducted by Aileen Perez, under the direction of Dr. James Witte in the Auburn University Department of Educational Foundations, Leadership, and Technology. You were selected as a possible participant because you are a sophomore, junior, or senior and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to complete the survey on the University's Blackboard site for this course. Your total time commitment will be approximately 15 minutes.

Are there any risks or discomforts? The risks associated with participating in this study are slight risks of breach of confidentiality. To minimize these risks, we will not be asking for identifiable information.

Are there any benefits to yourself or others? If you participate in this study, you can expect to know how alcohol expectancies can alter your behavioral, emotional, and cognitive actions that can result in positive or negative effects. I cannot promise you that you will receive any or all of the benefits described.

Will you receive compensation for participating? Thank you for your time but you will not be offered any compensation for participating.

Are there any costs? There is no cost for participating.

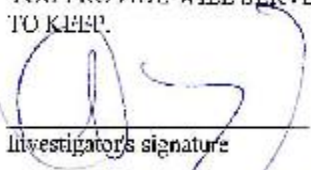

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University or the Department of Educational Foundations, Leadership, and Technology.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by placing your survey under lock and key in the Auburn University Student Center, Suite 3231-10. Information collected through your participation may be used in a dissertation.

If you have questions about this study, please ask them now or contact Aileen Perez at arp0013@tigermail.auburn.edu or Dr. James Witte at witteje@auburn.edu.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubject@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.


Investigator's signature
Date 9/20/11

Aileen Perez

The Auburn University Institutional Review Board has approved this document for use from 10/19/11 to 10/18/12
Protocol # 11-316 Ex 1110

Appendix C

Survey Instrument

Default Question Block

A. Please see information letter

Please mark your gender.

- Male
- Female

Please mark you ethnically.

- White/Caucasian
- Black/African-American
- Hispanic/Latino
- American Indian/Alaska Native
- Asian
- Native Hawaiian/Pacific Islander

Please mark your classification/class-standing.

- Sophomore
- Junior
- Senior

This questionnaire assesses what you would expect to happen if you were under the influence of alcohol. Mark a response from disagree to agree depending on whether or not you would expect the event to happen to you if you were under the influence of alcohol.

This is not a personality assessment. We want to know what you would expect to happen if you were to drink alcohol, not how you are when you are sober.

If I were under the influence of alcohol:

	Disagree	Slightly Disagree	Slightly Agree	Agree
1. I would be coughing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My screens would be deleted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. I would be humorous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. My problems would seem worse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. It would be easier to express my feelings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. My willing would be maintained	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I would feel sexy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I would howl dramatically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I would regret my obligations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I would be dominant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. My head would feel fuzzy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I would enjoy sex more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I would feel dizzy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I would be fiery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I would be clumsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I would be unable to act out my fantasies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I would be loud, boisterous, or noisy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I would feel peaceful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I would be brave and daring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I would feel unwell	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I would feel nervous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I would be outrageous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I would feel shaky or jittery like near dry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. I would be energetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. I would act aggressively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. My responses would be slow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. My body would be relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. I would feel guilty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. I would feel calm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. I would feel maddy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. I would be easier to talk to people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. I would be a better lover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. I would feel self-critical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. I would be talkative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. I would feel tough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. I would be risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. I would feel peaceful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. I would not socialize	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This questionnaire assesses whether you think each effect, which may result from drinking alcohol, is bad or good.

Mark a response from bad to good - depending on whether you think this particular effect is bad, neutral, or good, etc.

We want to know if you think a particular effect is bad or good, REGARDLESS of whether you expect it to happen to YOU personally when you drink alcohol.

This effect of alcohol is:

	Bad	Slightly Bad	Neutral	Slightly Good	Good
1. Being outgoing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Dilated senses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Being humorous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Feeling as seeming worse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Exaggerating feelings more easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Increased eating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Feeling sexy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Having difficulty thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Neglecting obligations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Being dominant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Head feeling fuzzy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Enjoying sex more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Feeling dizzy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Being friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Being clumsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Easier to get out fantasies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Being loud, boisterous, or noisy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Feeling peaceful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Being brave and daring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Feeling unafraid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Feeling creative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Being courageous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Feeling shaky or jittery the next day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Feeling amicable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Acting aggressively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. Having slow responses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Having a relaxed busy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Feeling guilty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Feeling calm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Feeling moody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Being easier to talk to people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Being a better lover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Feeling self-critical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Being talkative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Acting tough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Taking risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Feeling powerful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Acting sociable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL:

If you would like for your teaching assistant (TA) to be notified that you have completed the survey, please provide the following information: Course, Instructor, and day of the week the course meets.

Appendix D

Survey Instrument Scoring Scale

The Comprehensive Effects of Alcohol (CEOA) Questionnaire
Fromme, Stroot, and Kaplan (1993)

The CEOA is a measure of alcohol outcome expectancies. It assesses both the expected effects from drinking alcohol and the subjective evaluation of those effects. The CEOA demonstrates good internal reliability (Fromme & D'Amico, 2000), temporal stability, construct validity, and criterion validity (Fromme et al., 1993). It has been shown to be useful in both young adult and adolescent populations. The questionnaire contains 38 unique items (76, when collecting both expectancy and evaluation responses), which comprise seven factor-analytically derived scales—four measuring positive effects of drinking alcohol and three measuring negative effects. The items of the questionnaire comprising each of the four positive and three negative factors are as follows:

Positive Factors

Sociability

- I would act sociable (item 38)
- It would be easier to talk to people (31)
- I would be friendly (14)
- I would be talkative (34)
- I would be outgoing (1)
- I would be humorous (3)
- It would be easier to express feelings (5)
- I would feel energetic (24)

Tension Reduction

- I would feel calm (29)
- I would feel peaceful (18)
- My body would feel relaxed (27)

Liquid Courage

- I would feel courageous (22)
- I would feel brave and caring (19)
- I would feel unafraid (20)
- I would feel powerful (37)
- I would feel creative (21)

Sexuality

- I would be a better lover (32)
- I would enjoy sex more (12)
- I would feel sexy (7)
- It would be easier to act out my fantasies (16)

Negative Factors

Cognitive and Behavioral Impairment

- I would be clumsy (15)
- I would feel dizzy (13)
- My head would feel fuzzy (11)
- My responses would be slow (26)
- I would have difficulty thinking (8)
- My writing would be impaired (6)
- I would feel shaky or jittery the next day (23)
- My senses would be dulled (2)
- I would neglect my obligations (9)

Risk and Aggression

- I would take risks (36)
- I would act aggressively (25)
- I would be loud, boisterous, or noisy (17)
- I would act tough (35)
- I would feel dominant (10)

Self-Perception

- I would feel moody (30)
- I would feel guilty (28)
- I would feel self-critical (33)
- My problems would seem worse (4)

Scoring: There are several scoring options for the CEOA. Careful thought should be given to the goals of the research in which the CEOA is being used, including the requisite specificity of the measurements to be derived.

- 1) Fromme et al. (1993) recommended the use of summary scores for each factor (adding together the responses to all items in a given factor). In our subsequent research, however, we've found it better to use average scores (summing the scores of all items in a given factor and then dividing by the number of items in that factor). The same procedure should be used for both the Expectancy and Evaluation factor scores.
- 2) If, rather than computing specific scores for each of the seven factors separately, you choose to compute overall Positive and Negative expectancy factors more generally, the same averaging procedure should be followed, i.e., summing across all items among the Positive Factors and the Negative Factors, respectively, and dividing by the total number of items in each.
- 3) Fromme et al. (1993) made an argument against computing expectancy x evaluation interaction scores. We instead recommended using expectancy and evaluation scores separately (e.g., as separate main effects in regression analyses). Other colleagues (e.g., Dr. Barry Jones), however, have successfully used expectancy x evaluation scores. When computing such interaction terms, they should be computed at the item level (again, separately for each of the seven factors).

Citations:

- Fromme, K., Stroot, E., & Kaplan, D. (1993). Comprehensive Effects of Alcohol: Development and psychometric assessment of a new expectancy questionnaire. *Psychological Assessment, 5*, 19-26.
- Fromme, K., & D'Amico, E. (2000). Measuring adolescent alcohol outcome expectancies. *Psychology of Addictive Behaviors, 2*, 206-212.

Appendix E

Institutional Review Board Approval Letter

Protocol approved, # 11-310 EX 1110

Human Subjects [hsubject@auburn.edu]

Sent: Friday, October 21, 2011 4:30 PM

To: aileen percz

Cc: Sheri Downer; James Witte

Attachments: Investigators Responsibility-1.docx (16 KB)

Dear Ms. Perez,

Your protocol entitled "Examining Alcohol-Related Expectancies Between With College Class Standing" has been reviewed. Your protocol has now received final approval as 'Exempt' under federal regulation 45 CFR 46.101(2)(2).

This e-mail serves as official notice that your protocol has been approved. A formal approval letter will not be sent unless you notify us that you need one. By accepting this approval, you also accept your responsibilities associated with this approval. Details of your responsibilities are attached. Please print and retain.

Your approved, stamped information letter will soon be ready for pickup in an envelope in our front office. If we don't hear from you in 2-3 days, we'll forward by campus mail.

Please note that you may not begin your research that involves human subjects until you receive the consent with an IRB approval stamp applied. You must use copies of that document when you consent participants, and provide a copy (signed or unsigned) for them to keep.

Your protocol will expire on October 18, 2012. Put that date on your calendar now. About three weeks before that time you will need to submit a final report or renewal request. (You might send yourself a delayed e-mail reminder for early next October.)

If you have any questions, please let us know.

Best wishes for success with your research!
Susan

Susan Anderson, IRB Administrator
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****NOTE NEW ADDRESS****