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Molly Newton
College Graduates' Perceptions of
Binge Drinking on College and
University Campuses

ABSTRACT

The present study investigated binge drinking culture on college and university campuses, using a purposive sampling plan to explore graduates' perceptions of social factors and motivations that perpetuate binge drinking on college campuses in spite of interventions. One hundred eighty one participants completed an online, anonymous, survey designed to test hypotheses drawn from the literature. Participants were significantly more likely to attribute collegiate binge drinking to social factors other than social norms, and to social motivations. These findings suggest that positive alcohol expectancies may have a strong influence on collegiate binge drinking, and that students most often use binge drinking for "social lubrication," or management of social anxiety. Students binge drink to feel accepted by peers and to feel connected to their communities. Participants were also significantly more likely to report that current binge drinking interventions were somewhat or completely ineffective, and to identify students as the most successful leaders for binge drinking interventions. Consequently, it is recommended that social workers and campus administrators partner with students to decrease binge drinking by developing alternate ways of supporting peer acceptance and social connection on campus.

**COLLEGE GRADUATES' PERCEPTIONS OF BINGE DRINKING ON COLLEGE
AND UNIVERSITY CAMPUSES**

A project based upon an independent investigation,
submitted in partial fulfillment of the requirements
for the degree of Master of Social Work.

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2015

ACKNOWLEDGEMENTS

I wish to acknowledge those whose support and encouragement made this project possible. First, I would like to thank my research advisor, Natalie Hill, for her guidance and dedication to editing innumerable drafts. I would also like to thank my research professor, Gael McCartney, for her early support of this project. In addition, I would like to thank my friends and family for their patience and encouragement.

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CHAPTER ONE

Introduction

Binge drinking is widely recognized as a public health concern affecting colleges and universities, as well as the communities that surround their campuses. The popular cultural stereotype of binge drinking as a rampant problem on college and university campuses is quickly confirmed by examination of current research (Ham & Hope, 2003). Studies show that binge drinking affects a significant number of contemporary college students (Borden et al., 2011; Chauvin, 2012; Jung, Shim & Mantaro, 2010; Pilling & Brannon, 2007; Seo & Li, 2009; Turrisi, Mallett, Mastroleo & Larimer, 2006). The negative consequences associated with binge drinking are profound. Each year more than 600,000 unintentional injuries, 650,000 physical/sexual assaults, and 1,800 alcohol related deaths occur on college campuses (Borden et al., 2011). Not simply a risk to physical health, binge drinking has significant negative consequences for an individual's social and mental health (Gonzalez, Collins & Bradizza, 2009; Gonzalez & Hewell, 2012; Pedersen, 2013; Zahran, Zack, Vernon-Smiley & Hertz, 2007). For the purposes of this study binge drinking will be defined as a pattern of alcohol use that results in intoxication within two hours (Chauvin, 2012; Herschl, McChargue, MacKillop, Stoltenberg & Highland, 2012). This definition has been selected because it is most applicable to the greatest number participants in binge drinking culture on college campuses.

Given the extensive public health challenges associated with collegiate binge drinking, colleges and universities are tasked with the development and implementation of interventions designed to address the negative consequences of binge drinking on campus (Neighbors, Lee,

Lewis, Fossos & Larimer, 2007). However, despite increased focus on prevention and intervention over the last twenty years, colleges and universities have experienced minimal success curtailing the binge drinking activities that involve the majority of college students today (Borden et al., 2011; Chauvin, 2012; Dietz, 2008; Glassman, 2002). Consequently, it is important to better understand the social and cultural factors that contribute to ongoing binge drinking. These include social groups, social norms, motivations, and peer modeling.

Throughout the literature, certain social groups of students are shown to be at high risk for negative consequences related to binge drinking. Perhaps the most commonly identified group of high risk students are those who participate in Greek life through membership in fraternities or sororities (Chauvin, 2012; Dietz, 2008; Neighbors et al., 2007; Seo & Li, 2009; Sharma & Kanekar, 2008; Turrisi et al., 2006). Also at risk for negative consequences associated with prevalent binge drinking are collegiate athletes (Dietz, 2008; Green, Nelson & Hartmann, 2014; Turrisi et al., 2006). Studies show that student athletes drink more heavily and with increased frequency compared to peers who do not participate in athletics (Doumas, Haustveit & Coll, 2010).

Social norms are widely recognized throughout the literature as significant drivers of binge drinking culture on college and university campuses (Chauvin, 2012; Clapp & Shillington, 2001; LaBrie, Atkins, Neighbors, Mirza & Larimer, 2012; Miley & Frank, 2006; Turrisi et al., 2006). Because social norms are subjective, students' perceptions of social norms related to alcohol use on campus are often inaccurate (Borsari & Carey, 2001; Miley & Frank, 2006; Utpala-Kumar & Deane, 2012). Students use social norms to evaluate their own drinking, resulting in miscalculations that can lead to increased binge drinking, (Chauvin, 2012; Jung et al., 2010; Utpala-Kumar & Deane, 2012). Research suggests that student binge drinking can be

understood based on four motivation factors: enhancement motives, social motives, coping motives, and conformity motives (Chauvin, 2012; Cooper, 1994). Defined as the degree to which a student's behavior conforms to that of close peers, peer modeling is based on a student's observations of, rather than their assumptions about, the behaviors of others (Borsari & Carey, 2001). Peer modeling through social norms and social and conformity motivations has a significant impact on students' decisions to engage in collegiate binge drinking culture (Chauvin, 2012; Clapp & Shillington, 2001; Cooper, 1994; LaBrie et al., 2012; Miley & Frank, 2006; Turrisi et al., 2006).

This study explores college graduates' perceptions of social factors and motivations that perpetuate binge drinking on college campuses in spite of interventions. The study utilizes a purposive sampling plan and an anonymous, quantitative, online survey to explore the social factors and motivations that perpetuate binge drinking, as well as to identify the most effective leaders for binge drinking interventions. The findings of this study will benefit professional support staff who work with students around these issues. This group includes clinicians working with college populations as well as administrative staff working in student affairs. Because the consequences associated with collegiate binge drinking have severe negative impacts on institutions, the communities that surround them, and the individuals who participate in binge drinking, it is important to the field of social work to better understand this phenomenon.

Binge drinking has been shown to be resistant to existing interventions. Despite the investment of significant resources in prevention and intervention programs, schools and communities continue to have difficulty curtailing binge drinking. Campus administrators and social workers working in higher education are tasked with managing prevention of and intervention in binge drinking on campus. From different perspectives, both administrators and

social workers are asked to manage individual students identified as struggling with binge drinking, as well as to develop and implement campus programming and policies that reduce binge drinking. Better understanding the factors that perpetuate binge drinking in spite of interventions is a very important tool for these groups. As professional staff build their understanding of the complex social dynamics surrounding collegiate binge drinking, they will be better able to develop effective policies and programs to combat binge drinking on campuses. With increased understanding of these dynamics, professional staff will be better prepared to mitigate negative consequences of binge drinking for students and communities.

CHAPTER TWO

Literature Review

Binge drinking among college and university students is a widely researched phenomenon across numerous different disciplines. Research on collegiate binge drinking is initiated from numerous fields of study including medicine, public health, education, and psychological and social work perspectives. Though each of these fields approach the problem of collegiate binge drinking from different perspectives, conclusions drawn from these studies are highly relevant to all fields invested in addressing collegiate binge drinking. A review of research undertaken by numerous fields of study illustrates the pervasive negative consequences of binge drinking for both individuals and communities, and identifies cultural and social factors that perpetuate high levels of binge drinking on campus.

Definitions of Binge Drinking

A commonly referenced public health concern on college and university campuses, the phenomenon of binge drinking is described using a great variety of definitions throughout the published literature (Ham & Hope, 2003). Perhaps the most commonly cited definition of binge drinking quantifies the practice using the threshold of consumption of at least five drinks for men or at least four drinks for women during one session of drinking (Borden et al., 2011; Courtney & Polich, 2009; Pilling & Brannon, 2007). This definition focuses on the quantity of alcohol consumed, and does not reflect an individual's blood alcohol content (BAC) during the time of consumption. While this commonly used definition is useful because of it effectively operationalizes a commonly understood practice, it does not capture differences in individual

levels of intoxication, or reflect an individual's unique ability to tolerate a particular quantity of alcohol.

Other studies utilize definitions that broaden criteria for binge drinking and move away from quantity-focused criteria. Seo and Li (2009) define binge drinking as a pattern of drinking causing intoxication, but tie intoxication to the legal driving limit of 0.08 BAC. While this exclusion of specific criteria for drinks consumed better reflects individual differences in tolerance, the focus on BAC as a measure of intoxication lacks utility in practice given students' absence of awareness of their own BAC levels when drinking. Studies by Herschl et al. (2012) and Chavin (2012) define binge drinking as a pattern of alcohol use causing rapid intoxication. This broad and inclusive definition does not require a specific number of drinks to be consumed or a certain BAC to be reached; it is therefore applicable to students who participate in a wide range of alcohol related activities.

For the purposes of this study binge drinking will be defined as a pattern of alcohol use that results in intoxication within two hours (Chauvin, 2012; Herschl et al., 2012). Since students cannot estimate their own BAC, intoxication will be defined as a state of impaired cognitive and motor functioning, rather than using BAC to determine intoxication. This definition has been selected because it is most applicable to the greatest number participants in binge drinking culture on college campuses. While many students may not identify drinking a certain number of drinks over a certain period of time and reaching or surpassing a certain blood alcohol level, many students would describe their drinking habits as resulting in intoxication. In order to capture the experiences and perceptions of participants, it is most important that the provided definition of binge drinking be appropriately flexible so as to capture a broad range of experiences and identities.

Binge Drinking: A Public Health Concern

The popular cultural stereotype of binge drinking as a rampant problem on college and university campuses is quickly confirmed by examination of current research (Ham & Hope, 2003). Studies show that binge drinking affects a significant number of contemporary college students (Borden et al., 2011; Carlson, Johnson & Jacobs, 2010; Chauvin, 2012; Jung et al., 2010; Pilling & Brannon, 2007; Seo & Li, 2009; Turrisi et al., 2006). Though statistics for rates of alcohol use vary from a low of 2 in 5 students to a high of 4 in 5 students who endorse participation binge drinking culture, it is clear that binge drinking is a significant health concern on college and university campuses (Carlson et al., 2010; Chauvin, 2012). Widely recognized as a public health concern, this prevalence of binge drinking presents significant challenge on college campuses, because it has the capacity to negatively impact an individual's physical and social/emotional health, negatively impacting both the individual and their community (Ham & Hope, 2003; Turrisi et al., 2006).

Prevalence. Since the middle of the 19th century, colleges and university campuses have been associated with high levels of student consumption of alcohol (Dietz, 2008). Over the last twenty years, drinking rates on college and university campuses have remained relatively stable at 80-90% participation in some level of alcohol consumption (Dietz, 2008). Numerous studies support high levels of student engagement in binge drinking specifically (Borden et al., 2011; Carlson et al., 2010; Chauvin, 2012; Jung et al., 2010; Pilling & Brannon, 2007; Seo & Li, 2009). In a study designed to assess students' baseline levels of alcohol consumption, 80% of students surveyed were found to have participated in at least one episode of binge drinking within the last two months of the time of completion of the survey (Broadwater, Curtin, Martz &

Zrull, 2006). These high levels of participation in binge drinking support a campus culture that is accepting of binge drinking and associated negative consequences for participants.

Implications for future addiction. Despite extreme levels of participation in patterns associated with binge drinking culture on college and university campuses, the majority of students who binge drink are not evaluated for substance abuse/dependence disorders (Ham & Hope, 2003). Though 1 in 12 students meets the criteria for an alcohol abuse or dependence disorder based on DSM IV criteria, the majority of students do not struggle with substance abuse or dependence later in life (Fisher, Fried & Anushko, 2007; Vik, Cellucci & Ivers, 2003). Known as “natural recovery,” the majority of students who may qualify for a psychiatric diagnosis based on their drinking habits while in college experience the resolution of their substance issues without formal treatment (Fisher et al., 2007; Vik et al., 2003). However, though collegiate binge drinking may not be indicative of future struggles with substance abuse for the majority of students, students may suffer the effects of other negative consequences of participation in binge drinking long after graduation.

Participants in collegiate binge drinking. Prevalence of collegiate binge drinking culture indicates that the vast majority of college and university students participate in binge drinking in some capacity (Dietz, 2008). However, within the broad population of college and university students, certain identities and personal experiences increase an individual’s likelihood of experiencing negative consequences related to binge drinking. While certain social groups are known to be at particularly high risk, students with existing mental health concerns and substance use are also known to be at higher risk (Chauvin, 2012; Gonzalez et al., 2009; Gonzalez & Hewell, 2012; Humensky, 2010; Neighbors et al., 2007; Norberg et al., 2011;

Pedersen, 2013; Seo & Li, 2009; Zahran et al., 2007). At the population level, high levels of risk are also reflected in patterns across gender, race, ethnicity and culture.

High-risk social groups. Throughout the literature, certain social groups of students are shown to be at high risk for negative consequences related to binge drinking. Perhaps the most commonly identified group of high risk students are those who participate in Greek life through membership in fraternities or sororities (Chauvin, 2012; Dietz, 2008; Neighbors et al., 2007; Seo & Li, 2009; Sharma & Kanekar, 2008; Turrisi et al., 2006). Often thought to be the group at highest risk for negative consequences associated with binge drinking, Greek organizations frequently perpetuate a culture of binge drinking as a normal and necessary activity for social engagement on campus (Dietz, 2008; Seo & Li, 2009).

Also at risk for negative consequences associated with prevalent binge drinking are collegiate athletes (Dietz, 2008; Green et al., 2014; Turrisi et al., 2006) and first year students (Cleveland, Lanza, Ray, Turrisi & Mallett, 2012; Ham & Hope, 2003; LaBrie et al., 2011; Neighbors et al., 2007). Studies show that student athletes drink more heavily and with increased frequency compared to peers who do not participate in athletics, and are also more likely to approve of higher levels of alcohol use (Doumas et al., 2010). Even after a college athlete's athletic career has ended, former athletes have been shown to continue to drink at levels higher than their non-athlete peers (Green et al., 2014). Similarly to athletes, studies show that first year students establish long term drinking patterns over the course of their first few months a college (LaBrie et al., 2011).

Co-occurring mental health and substance abuse disorders. Similar to social groups known to be a particularly high risk of negative outcomes related to binge drinking, students with co-occurring substance abuse and mental health issues are both more likely to

participate in binge drinking activities and are at higher risk of negative outcomes related to binge drinking (Chauvin, 2012; Seo & Li, 2009). Students who abuse a range of substances are both more likely to participate in and experience harm related to binge drinking culture on college and university campuses. Marijuana, another common substance used to excess on college campuses, is known to significantly increase a student's risk of negative outcomes associated with binge drinking (Chauvin, 2012; Seo & Li, 2009; Sun & Longazel, 2008). At the level of campus culture, campuses where marijuana use is widespread have been shown to experience increased levels of binge drinking, particularly in students who are underage (Seo & Li, 2009).

More likely to engage in binge drinking, students with mental health diagnoses are also more likely to suffer negative consequences related to binge drinking (Ham & Hope, 2003). For many students, binge drinking offers a tool for management of ongoing struggles with anxiety, depression, or general stress (Bhullar, Simons, Joshi & Amoroso, 2012). While the use of binge drinking as a means of coping with negative affect is potentially problematic in all students, this pattern can be particularly damaging to students with mental health concerns (Bhullar et al., 2012; Norberg et al., 2011). Binge drinking is known to be associated with increased levels of anxiety and depression, and must be addressed at both the individual and population level with interventions designed to protect student mental health (Norberg et al., 2011; Pedersen, 2013).

Gender. Studies indicate that male students are more likely to participate in binge drinking culture and more likely to experience negative consequences related to binge drinking than are female students (Ham & Hope, 2003; Neighbors et al., 2007; Pedersen, 2013). However, a study by Norberg et al. (2007) disputes the claim that male students experience more negative outcomes than do female students. This finding seems indicative of differences in the type of

negative outcomes associated with binge drinking commonly experienced by male and female drinkers. While male participants in binge drinking culture tend to experience negative outcomes related to legal issues, injury, violence, and aggression, female students are more likely to suffer negative outcomes that are more personal or emotional, and are less easily quantified by external measures (Labbe & Maisto, 2011; Norberg et al., 2011). Thus, although male students have been shown to drink more than female students, it is more relevant to consider differences in negative experiences based on gender than to conceptualize participation in binge drinking culture as dominated by a particular gender.

Race, ethnicity, and culture. Racial divisions in binge drinking culture are clear: white students are far more likely to participate in collegiate binge drinking culture than are students of any other racial identity (Barnett, Orchowski, Read & Kahler, 2013; Courtney & Polich, 2009; Green et al., 2014; Ham & Hope, 2003; LaBrie et al., 2012; Malone et al., 2012; Sharma & Kanekar, 2008). Though racial trends in binge drinking are clear, researchers have found it difficult to measure binge drinking based on ethnicity, and to compare trends between racial and ethnic groups (Malone et al., 2012). Trends across racial and ethnic groups are difficult to interpret due to a lack of research on the effect of family, religious, and cultural background on experience of alcohol initiation for college students of historically under-represented identities (Malone et al., 2012). Despite these difficulties, research indicates that white participants present with the highest levels of participation in binge drinking, African American participants present with the lowest levels of participation in binge drinking, and Hispanic participants present with intermediate levels of participation (LaBrie et al., 2012; Malone et al., 2012).

Culturally, campus culture has been shown to be more influential than a student's culture of origin (LaBrie et al., 2012). Regardless of a student's interaction with alcohol prior to attending college, the majority of students increase their consumption of alcohol after arriving on campus (LaBrie et al., 2012). Peer norms, rather than norms based on family or home community, influence students' decisions related to alcohol consumption on campus (LaBrie et al., 2012; Neighbors et al., 2007; Utpala-Kumar & Deane, 2012). However, for female students, contact with their mothers during their first semester of college has been shown to reduce the influence of peer norms (LaBrie et al., 2012). Father-daughter and parent-son contact has not been shown to be similarly effective (LaBrie et al., 2012). Despite the general weakness of parental influence on students' binge drinking behaviors, students' perceptions of parental permissiveness related to alcohol use have been shown to influence students' alcohol use during the first weeks of a student's adjustment to college (Fairlie, Wood & Laird, 2012).

Though campus culture and peer activities are known to be primary drivers of student binge drinking, students' historical experiences with alcohol, stretching back to their experiences in their families and home communities, have been shown to influence students' alcohol expectancies, powerful potential motivators of participation (Herschl et al., 2012; Kuntsche et al., 2005). Students' expectations for their own experiences with alcohol are drawn from previously experiences both at home and at school (Herschl et al., 2012; Kuntsche et al., 2005). In addition to experience and expectations, students' inherited biochemical reactivity to alcohol also influences their decision making regarding binge drinking (Kuntsche et al., 2005). Students with a genetic predisposition or vulnerability towards addiction are more likely to binge drink as well as to struggle with substance abuse or dependence before, during, and after their college years (Kuntsche et al., 2005). Despite these small opportunities for parental and community

influence, students are far more influenced by campus culture than by their culture of origin (LaBrie et al., 2012; Malone et al., 2012).

Negative consequences for the individual. The potential negative consequences of engagement in binge drinking for the individual range from inconvenient to deadly. These consequences are perhaps best understood as existing in three categories: health consequences, social (legal/academic) consequences, and mental health consequences. The health consequences associated with binge drinking activities include increased risk of death (Borden et al., 2011; Herschl et al., 2012; Pedersen, 2013; Seo & Li, 2009; Zahran et al., 2007), overdose (Carlson et al., 2010), physical assault (Borden et al., 2011; Pedersen, 2013; Seo & Li, 2009), sexual assault (Borden et al., 2011; Seo & Li, 2009), engagement in risky sex practices (Carlson et al., 2010; Herschl et al., 2012; Pilling & Brannon, 2007; Seo & Li, 2009), pancreatitis, meningitis and hypertension (Courtney & Polich, 2009). These negative consequences for physical health are profound. Each year more than 600,000 unintentional injuries, 650,000 physical/sexual assaults, and 1,800 alcohol related deaths occur on college campuses (Borden et al., 2011).

Not just simply a risk to physical health, binge drinking has significant negative consequences for an individual's social and mental health (Gonzalez et al., 2009; Gonzalez & Hewell, 2012; Pedersen, 2013; Zahran et al., 2007). Students who participate in binge drinking are at increased risk of academic problems, difficulty maintaining healthy relationships, and legal consequences for behavior while intoxicated (Courtney & Polich, 2009; Humensky, 2010; Pedersen, 2013; Pilling & Brannon, 2007). Specific risks for mental health issues include loss of ability to focus, increased risk of anxiety and depression, emotional instability, and suicide (Gonzalez et al., 2009; Gonzalez & Hewell, 2012; Pedersen, 2013; Zahran et al., 2007).

Negative consequences for the community. Given the extensive negative consequences of binge drinking for individuals, it is logical that binge drinking also negatively impacts campuses and surrounding communities. Though often presented as an individual issue, binge drinking on campus has numerous negative consequences at the institutional and community level. Colleges and universities face problems with retention of students and damage to the relationship between campus and the surrounding community based on problems directly related to student engagement in binge drinking (Courtney & Polich, 2009; Pedersen, 2013). Facing ever rising costs, damage to campus facilities, and costs associated with interventions mean binge drinking saps resources from already taxed colleges and universities (Courtney & Polich, 2009). Of particular concern, celebratory drinking events are known for their negative impact on surrounding communities due to damage to property, violence, and general disruptive activity (Foster et al., 2011).

In a more abstract evaluation of the impact of binge drinking on campus and surrounding communities, it is important to consider the impact of binge drinking as a public health concern for communities (Ham & Hope, 2003). Binge drinking culture perpetuates the assumption that excessive alcohol consumption is a necessary and appropriate part of social interactions on college and university campuses (Dietz, 2008). Academic communities populated by students struggling with the negative consequences of binge drinking reflect those struggles in measures of student engagement and student participation in non-alcohol based activities (Correia, Carey, Simons & Borsari, 2003). More research is needed to better understand and quantify the negative effects of binge drinking at the community level.

Collegiate Cultural Factors

The centrality of binge drinking to campus culture is perpetuated by a series of cultural factors that support student binge drinking. Drinking patterns unique to college students and high levels of participation in binge drinking perpetuate a culture where binge drinking is considered a necessary part of social engagement on campus. College students are known to drink alcohol in characteristic patterns that are often considered unacceptable or infrequent activities among non-collegiate drinkers. On campus, these patterns of drinking are socially acceptable and perpetuate high levels of student binge drinking.

Collegiate drinking patterns. Collegiate binge drinking is unique in several important ways. College students tend to consume alcohol in patterns that are infrequently observed in the general population, and are associated with a host of negative personal and public health consequences (Ham & Hope, 2003). These patterns include “pre-gaming” or drinking to the point of intoxication prior to attending an event or party (Barnett et al., 2013), participation in drinking games (Bhullar et al., 2012; Borden et al., 2011), and celebratory, event based drinking (Foster et al., 2011; Neighbors et al., 2012).

As a pattern, pre-gaming promotes consumption of large amounts of alcohol over a short period of time (i.e., binge drinking). Of students who endorse binge drinking within the last two weeks, 71% engaged in pre-gaming; among students who endorse binge drinking within the last month, 98% participated in pre-gaming activities. Especially common among students who are underage, pre-gaming allows students who may not have access to alcohol at a party or event to experience effects of intoxication during their attendance. Over the course of a night of drinking, pre-gaming leads to higher numbers of total drinks consumed and increased intoxication.

Particularly for female participants, pre-gaming also results in higher risks of negative consequences due to participation in binge drinking (Barnett et al., 2013).

Similar to pre-gaming, participation in drinking games is a common pattern of student engagement in binge drinking. Studies have shown rates of participation to be as high as 93% (Bhullar et al., 2012). As in the case of students who participate in pre-gaming, students who participate in drinking games frequently consume more alcohol than students who abstain from participation in these types of games (Bhullar et al., 2012). The high levels of alcohol consumption associated with drinking games increase a participant's risk of experiencing negative consequences associated with binge drinking (Bhullar et al., 2012; Borden et al., 2011). Despite an increased risk of negative consequences associated with participation in drinking games, they remain popular because they help students manage social anxieties and build connections and friendships between strangers (Bhullar et al., 2012; Borden et al., 2011). Drinking games perpetuate the widespread belief that binge drinking is a normal and necessary part of campus culture and the college experience (Dietz, 2008).

Analogous to students' high levels of participation in pre-gaming and drinking games, event based and celebratory drinking are common patterns of college student participation in binge drinking. While certain events are infamous for high levels of celebratory drinking (e.g., 21st birthday, New Year's Eve, or 4th of July celebrations), event based drinking is also commonly associated with tailgating activities, sporting events, and social events such as dances or theme parties (Neighbors et al., 2007; Neighbors et al., 2011; Neighbors et al., 2012). In a study of celebratory drinking events, surveys revealed that 75.4% of students ingested six more drinks than they would have consumed during a non-celebratory night of drinking (Foster et al., 2011). Like student participation in pre-gaming and drinking games, students who participate in

event based drinking are at increased risk of experiencing negative consequences related to participation (Foster et al., 2011).

Motives. While motives for individuals to engage in binge drinking activities are highly personal, certain trends have been shown to exist across the student population. Generally, students' decisions to engage in binge drinking are motivated by individual factors such as personality characteristics, past experiences with alcohol, and individual biochemical reactivity to alcohol, and by current situational factors (Kuntsche et al., 2005; LaBrie et al., 2011). Though research related to motivations for participation in binge drinking culture provides numerous hypotheses and minimal consensus across the literature, trends in alcohol expectancies capture general categories of student motivations for participation in binge drinking (Kuntsche et al., 2005).

Alcohol expectancies. Alcohol expectancies are the positive or negative behavioral, social, and emotional effects an individual anticipates from using alcohol (Kuntsche et al., 2005). Users with negative alcohol expectancies anticipate negative outcomes resulting from their use of alcohol, while those with positive alcohol expectancies anticipate positive outcomes from their use of alcohol (Herschl et al., 2012; Kuntsche et al., 2005; Labbe & Maisto, 2011). Predictably, students with positive alcohol expectancies consume more alcohol than students with negative alcohol expectancies (Herschl et al., 2012; Kuntsche et al., 2005; Labbe & Maisto, 2011). Alcohol expectancies are drawn from participants' past direct and indirect experiences with alcohol, and are influenced by students' experiences with alcohol in their family and home community as well as experiences on campus (Herschl et al., 2012; Kuntsche et al., 2005).

Perhaps the most pervasive positive alcohol expectancy relates to sexual experiences (LaBrie et al., 2011; Neighbors et al., 2007). Both male and female alcohol users report expecting that alcohol will improve sexual experiences, likely because of alcohol's demonstrated ability to enable interpersonal risk taking (LaBrie et al., 2011; Neighbors et al., 2007). Other positive expectancies associated with alcohol use are management of tension and anxiety (Hasking et al., 2011; Labbe & Maisto, 2011; Neighbors et al., 2007), as well as the belief that alcohol will provide "social lubrication" (Neighbors et al., 2007). An individual's alcohol expectancies are extremely important to their decision-making regarding alcohol consumption, and have been shown to impact other motivations for participation in binge drinking, such as coping and enhancement motives.

The four factor model of motivation. Research suggests that student binge drinking can be understood based on four factors of motivation: enhancement motives, social motives, coping motives, and conformity motives (Chauvin, 2012; Cooper, 1994). While the four factor model of motivation is primarily the work of Cooper (1994), the themes represented by this model are reflected throughout the body of literature related to motivations for student participation in binge drinking (Chauvin, 2012). The four factor model was developed by categorizing drinking motives using anticipated outcome of participation (alcohol expectancies) and the source of the expectancy (internally or externally generated; Chauvin, 2012; Cooper, 1994; Cox & Klinger, 1988; Kuntsche et al., 2005).

Students whose alcohol use is motivated by enhancement have positive alcohol expectancies related to "promoting a positive mood or sense of well being" (Chauvin, 2012; Cooper, 1994; Kuntsche et al., 2005; Neighbors et al., 2007; Norberg et al., 2011). These students believe that their alcohol use will improve their feelings of pleasure rather than cause

harm or discomfort (Chauvin, 2012; Hutton, 2012; Kuntsche et al., 2005; Neighbors et al., 2007). Enhancement motives are strongly associated with collegiate binge drinking culture, and are frequently cited as students' primary motivation for engagement in binge drinking (Gonzalez et al., 2009; Kuntsche et al., 2005). Students whose binge drinking is motivated by enhancement tend to consume larger quantities of alcohol, suffer increased negative consequences, and are at higher risk of experimentation with other substances (Chauvin, 2012; Cooper, 1994; Norberg et al., 2011). Enhancement motives are internally generated and positively reinforced (Chauvin, 2012; Cooper, 1994).

Social motives are driven by a student's positive alcohol expectancies related to the effects of alcohol on social relationships and interactions (Chauvin, 2012; Cooper, 1994). Frequently, collegiate binge drinkers with social motivations use alcohol with the hope of effectively managing feelings of social anxiety and to build relationships with others (Bhullar et al., 2012; Ham & Hope, 2003; Norberg et al., 2011; Pedersen, 2013). The most commonly cited positive alcohol expectancies – enabling interpersonal risk taking, improvement of sexual experiences, and “social lubrication” – are all examples of socially motivated binge drinking. While both socially motivated binge drinkers and enhancement motivated binge drinkers tend to consume larger amounts of alcohol than others, socially motivated binge drinkers are less likely to experiment with other substances than are enhancement motivated binge drinkers (Chauvin, 2012; Cooper, 1994). Social motives are externally generated and positively reinforced (Chauvin, 2012; Cooper, 1994).

While most college and university students participate in binge drinking due to the influence of social factors, a substantial subset of this population uses binge drinking as a means of managing negative emotions (Chauvin, 2012; Cooper, 1994; Ham & Hope, 2003; Hasking et

al., 2011; Kuntsche et al., 2005). Students who cite coping with negative affect as their primary motivation for participation in binge drinking culture are known to be at high risk for negative consequences related to their drinking habits, including an increased risk of future substance abuse (Chauvin, 2012; Cooper, 1994; Hasking et al., 2011; Kuntsche et al., 2005; Neighbors et al., 2007). Drinking as a form of coping is also indicative of underlying mental health concerns, and is associated with an increased risk of suicidality (Gonzalez et al., 2009; Gonzalez & Hewell, 2012). Students for whom coping is a motivator for binge drinking often experience negative social consequences related to their alcohol use, and likely lack effective problem solving skills in other areas of their lives as well (Chauvin, 2012; Cooper, 1994; Norberg et al., 2011). Coping motives are internally generated and negatively reinforced (Chauvin, 2012; Cooper, 1994).

Students motivated by conformity are less likely to qualify as regular binge drinkers than are students motivated by enhancement, social, and coping motivations (Chauvin, 2012). Conformity motives describe individuals who drink “to avoid social censure or rejection” (Chauvin, 2012; Cooper, 1994). Conformity motives describe patterns of alcohol consumption related to experiences of peer pressure and a desire to adhere to observed social norms on campus (Borsari & Carey, 2001; Chauvin, 2012; Cooper, 1994). First year students are particularly susceptible to engagement in alcohol use based on conformity motives as they navigate the transition to college and the pressure to establish themselves in peer and social groups (Fisher et al., 2007). Students who engage in alcohol use based on conformity motives are at a lower risk of negative consequences of alcohol use, and are likely to consume smaller amounts of alcohol compared to others motivated by enhancement, social, and coping motives (Chauvin, 2012; Cooper, 1994).

Social norms. Social norms are widely recognized throughout the literature as significant drivers of binge drinking culture on college and university campuses (Chauvin, 2012; Clapp & Shillington, 2001; LaBrie et al., 2012; Miley & Frank, 2006; Turrisi et al., 2006). Peers, more than any other group, influence individual students' decisions related to binge drinking (Miley & Frank, 2006; Neighbors et al., 2012; Turrisi et al., 2006; Utpala-Kumar & Deane, 2012). Social norms can be defined as individuals' perceptions of what is normative behavior in their peer group or on their campus, which then serves as guidelines for individual behavior (Chauvin, 2012; Cho, 2006). These subjective perceptions of social norms serve as a guideline for that person's drinking behaviors, as individuals feel most comfortable acting in ways supported by social guidelines or expectations (Chauvin, 2012; Cleveland et al., 2012; Jung et al., 2010; Seo & Li, 2009).

Because social norms are subjective, students' perceptions of social norms related to alcohol use on campus are often inaccurate (Borsari & Carey, 2001; Miley & Frank, 2006; Utpala-Kumar & Deane, 2012). Particularly problematic are social norms based on inaccurate beliefs that their peers consume larger quantities than are actually consumed on campus (Borsari & Carey, 2001; Miley & Frank, 2006; Utpala-Kumar & Deane, 2012). Because students use social norms to evaluate their own drinking, miscalculations in social norms can lead to increased binge drinking, and negative consequences related to binge drinking (Chauvin, 2012; Jung et al., 2010; Utpala-Kumar & Deane, 2012). These dynamics are particularly common in Greek organizations, where students are particularly prone to overestimation of normative alcohol consumption (Chauvin, 2012; Miley & Frank, 2006). Increasing students' abilities to accurately estimate normative alcohol use on campus has been shown to reduce the amount of

alcohol consumed during episodes of binge drinking (Chauvin, 2012; Turrisi et al., 2006; Utpala-Kumar & Deane, 2012).

Types of social norms. Social norms can be categorized into two different types of norms: descriptive and injunctive norms. Together, descriptive and injunctive norms form the single best predictor of collegiate binge drinking (Fairlie et al., 2012; Neighbors et al., 2007). Descriptive norms are defined as perceived prevalence of binge drinking on campus, and the degree to which an individual acts in accordance with the interpreted norm (Cho, 2006; Neighbors et al., 2007; Rinker & Neighbors, 2014). Descriptive norms are based on the behavior of an individual's friends and social circle, behaviors that are known to directly influence individual decisions to participate in binge drinking (Cho, 2006; Jung et al., 2010).

Injunctive norms capture an individual's conceptualization of to what degree their social connections would approve or disapprove of their binge drinking activities (Cho, 2006; Neighbors et al., 2007). While descriptive norms are relatively simple to measure, injunctive norms can be more difficult to operationalize (Cho, 2006; Neighbors et al., 2007). Commonly assessed using scales designed to measure friends' and family's perceived approval of an individual's participation in binge drinking activities, injunctive norms are associated with a series of expectancies and motivations for alcohol consumption (Neighbors et al., 2007). Students who report their binge drinking to be in accordance with injunctive social norms are more likely to be influenced by social and conformity based motives (Chauvin, 2012; Cooper, 1994; Neighbors et al., 2007). Though injunctive norms play an important role in students' decision-making regarding binge drinking, students are more likely to be influenced by descriptive norms (Cho, 2006).

Peer modeling. As has been demonstrated throughout the literature, peer modeling through social norms and social and conformity based motivations has a significant impact on students' decisions to engage in collegiate binge drinking culture (Chauvin, 2012; Clapp & Shillington, 2001; Cooper, 1994; LaBrie et al., 2012; Miley & Frank, 2006; Turrisi et al., 2006). Defined as the degree to which a student's behavior conforms to that of close peers, peer modeling is based on a student's observations of, rather than their assumptions about, the behaviors of others (Borsari & Carey, 2001). While social norms are drawn from frequently inaccurate assumptions, peer modeling is focused on observable behaviors (Neighbors et al., 2007). Peer modeling, more than explicit encouragement to drink alcohol, influences students' decisions to engage in binge drinking (Neighbors et al., 2007; Vik et al., 2003). Peer modeling is positively associated with heavy drinking (Fairlie et al., 2012; Neighbors et al., 2007). Because people tend to drink more in situations where others are also drinking more, close friends exert a strong influence on the alcohol related behaviors of individuals (Fairlie et al., 2012; Neighbors et al., 2007).

Interventions

Given the extensive public health challenges associated with collegiate binge drinking, colleges and universities are tasked with the development and implementation of interventions designed to address the negative consequences of binge drinking culture on campus (Neighbors et al., 2007). Best practices for interventions designed to effectively target binge drinking include early intervention with high risk groups, addressing environmental factors that perpetuate binge drinking culture, and involving students in the effort to intervene in problematic drinking practices through the use of peer mentoring programs (Pedersen, 2013). Motivational interviewing and individual, personalized feedback are commonly cited as successful

interventions for causing behavior change for individual students (Cleveland et al., 2012; Doumas et al., 2010; Pilling & Brannon, 2007). However, despite increased focus on prevention and intervention over the last twenty years, colleges and universities have experienced minimal success curtailing the binge drinking activities that impact the majority of college students (Borden et al., 2011; Chauvin, 2012; Dietz, 2008; Glassman, 2002).

Social norms campaigns. A common intervention employed by colleges and universities, social norms campaigns are designed to address incorrect student assumptions about social norms related to drinking on campus (Broadwater et al., 2006; Foster et al., 2011; Hutton, 2012; Pilling & Brannon, 2007). Social norms campaigns typically take the form of posters, flyers, public service announcements, and advertisements that convey the results of surveys conducted on campus about average alcohol use (Broadwater et al., 2006). The goal of these campaigns is to normalize decreased alcohol use (Broadwater et al., 2006). Social norms campaigns attempt to target and positively influence campus descriptive norms and are widely used by campus administrations, often in association with National Collegiate Alcohol Awareness Week (an annual event to raise awareness for negative consequences of binge drinking; Fairlie et al., 2012; Pilling & Brannon, 2007). Despite the widespread use and popularity of social norms campaigns, it is unclear whether or not this intervention is effective at reducing rates of binge drinking (Cho, 2006; Jung et al., 2010; Sharma & Kanekar, 2008).

Purpose of the current study

Based on this review of the literature, several hypotheses can be established for the current research question: what social and cultural factors perpetuate binge drinking on college campuses in spite of interventions? Social norms are hypothesized to be the primary factor perpetuating binge drinking. Therefore, the results of this study are expected to show that

participants endorse social norms as a factor in binge drinking more frequently than other influences, and most frequently identify social norms as the most significant influence on college students' decisions related to binge drinking. It is also expected that peer modeling will be the second most frequently selected influence identified by participants. Regarding motivation to participate in binge drinking, it is hypothesized that participants will attribute college binge drinking most frequently to conformity and enhancement motives more rather than social and coping motives.

As college and university administrations attempt to tackle this public health issue, they are tasked with dismantling well-established social norms through the use of campus-wide and individually focused interventions. Binge drinking interventions are expected to be more likely to be identified as somewhat or totally ineffective than somewhat or totally effective. It is expected that participants will identify the most effective interventions for binge drinking to be those that are initiated and implemented by students rather than campus administrators or healthcare professionals.

Regarding demographic trends, participants are expected to be highly influenced by several factors, including membership in high-risk groups (student athletes and Greek life participants). Athletes and students involved in Greek life are expected to identify injunctive norms as the most significant motivation on binge drinking more frequently than non-athletes. Participants involved in athletics and Greek life are also expected to be more likely to report that binge drinking interventions are typically unsuccessful at addressing binge drinking.

Outside of these high-risk groups, trends are expected based religious affiliation and differences between primarily commuter and primarily residential campus populations. Participants who attended schools with religious affiliations are hypothesized to identify social

norms supportive of low levels of binge drinking on campus more frequently than participants who attended schools without religious affiliations. Participants who attended residential schools are hypothesized to report increased acceptance of binge drinking on campus compared to students at commuter schools. These participants are expected to indicate higher levels of support for social norms related to binge drinking.

CHAPTER THREE

Methodology

The purpose of this study is to investigate how social and cultural factors perpetuate binge drinking despite the development of intervention programs. A quantitative, survey design was selected given the versatility and efficiency of survey based research (Engle & Schutt, 2012; Steinberg, 2004). The survey tested a series of hypotheses drawn from the relevant literature, including four central hypotheses and four hypotheses related to demographics.

Central Hypotheses

1. Social norms will be most frequently identified, and peer modeling second most frequently identified, as the strongest influence on student binge drinking
2. Enhancement and conformity motives will be more frequently identified as influences on student binge drinking than social and coping motives.
3. Binge drinking interventions will be seen as somewhat or totally ineffective.
4. Students will be seen as the most successful leaders for binge drinking interventions.

Demographic Hypotheses

1. Students involved in Greek life or collegiate athletics will be more likely to identify injunctive norms as the most significant motivation for binge drinking than students not involved in these activities.
2. Students involved in Greek life or collegiate athletics will see binge drinking interventions as less effective than students not involved in these activities.

3. Higher rates of binge drinking will be reported at residential schools compared to commuter schools.
4. Lower rates of binge drinking will be reported at religiously affiliated schools compared to schools with no religious affiliation.

Sample

The population of interest in this study is college graduates. Throughout the large body of research on collegiate binge drinking, the primary population sampled is current undergraduate students. This study utilized a different population from the majority of published literature—individuals who have graduated from an undergraduate institution and hold a bachelor’s degree. While a few previous studies have focused on college graduates (e.g., Green et al., 2014), these studies have not addressed the social and cultural factors contributing to binge drinking. Because college graduates have experience with the cultural and social environment of interest in this study, but are no longer immersed in it, they may have greater capacity for critical reflection about these factors than current undergraduate students, and are therefore the population most likely to facilitate the examination of the research question under study.

Sampling plan. This study utilized a nonprobability, purposive sampling approach (Steinberg, 2004). Purposive sampling is supported by the exclusion and inclusion criteria of this study, which are limited to the requirement that participants hold a bachelor’s degree. While this sampling method supports the purpose of the study by enabling the inclusion of participants based on a certain characteristic, it does not allow for generalization of results (Steinberg, 2004).

Recruitment. The sampling plan for this study was carried out using web-based outreach to potential participants including email and social media. Electronic links to the survey instrument, hosted by the web-based survey company, SurveyMonkey™, were shared using the

researcher's personal Facebook account (Appendix A). In addition to social media postings, a recruitment email and link to the survey were shared with professional contacts of the researcher (Appendix B). As part of each method of recruitment, potential participants were asked to pass recruitment materials on to others who they believe may be interested in participating in the survey. The final sample size for the study was 181.

Participants. Participants in this study must meet the eligibility requirement of holding a bachelor's degree. Based on the purposive sampling plan, no other selection criteria or selection process were utilized to create the sample for this study. No participant was included or excluded on the basis of demographic characteristics or any other criteria. Given the non-probability study design, participants will not be reflective of the diversity of identities that comprise the population of college graduates.

Ethics and Safeguards

This study was approved by the Human Subjects Review Board (HSRB) of the Smith College School for Social Work (Appendix C). Because participation in this study was limited to completion of an internet-based anonymous survey, participants confidentiality was protected, and participants were at minimal risk of negative outcomes associated with participation. No identifying information was be collected or stored. Prior to completing the survey, participants were required to read the informed consent document (Appendix D) and consent to participation in the study. The benefits of participation in this study included the opportunity for participants to reflect on their experiences as college students interacting with binge drinking on campus, and to contribute to the efforts to better understand and address this public health concern. The benefits of this study to social work include improved understanding of social and cultural factors that perpetuate binge drinking on college and university campuses.

Data Collection

The primary method of data collection for this study was an anonymous, internet-based survey instrument developed by the researcher. The survey instrument is comprised of 17 closed ended questions designed to test hypotheses drawn from the review of relevant literature (Appendix E). This highly structured questionnaire includes 10 demographic questions designed to gather information about the identity and experiences of the respondent, and 7 content focused questions designed to solicit the respondent's opinions on social and cultural factors that perpetuate binge drinking in spite of interventions. The content of the instrument was developed using survey instruments from the published literature. Variables measured by the survey instrument include social norms and peer modeling as factors perpetuating binge drinking, the influence of social norms, peer modeling, and alcohol expectancies on enhancement and conformity motives, and the perceived effectiveness of student initiated binge-drinking interventions.

Reliability and validity. Because the researcher created this instrument for the purposes of this study, there is a higher risk of measurement unreliability and invalidity than in a previously developed instrument drawn from the literature. Numerous steps have been taken to ensure measurement reliability and validity. In surveys, reliability is best supported by low numbers of clear and specific questions with few response categories (Steinberg, 2004). This survey instrument works towards reliability by its short length (17 questions), clear and specific questions, and typically low numbers of response categories. For questions with higher numbers of response categories, the same categories are repeated for each question. To support validity, this instrument has been designed in order to closely reflect variables and indicators drawn from the relevant literature. This direct relationship to variables and indicators reflective of the

purpose of the study supports content validity (Steinberg, 2004). Though the closed-ended nature of this study supports the reliability of the study, it also represents a small threat to the validity of the measure. The development of the instrument has been a collaborative process incorporating the opinions of advisors and others. This collaboration represents a further work towards maintaining highest levels of reliability and validity possible for an instrument designed for the current study.

Data Analysis

T-tests and chi-square tests were used to analyze data. T-tests were used to analyze continuous variables to test hypotheses related to the perceived efficacy of binge drinking interventions, and rates of student engagement in binge drinking. Chi-square tests were used to compare observed versus expected frequency in order to test hypotheses related to social factors influencing binge drinking, motivations for binge drinking, and the most successful leaders for binge drinking interventions.

Methodological Limitations

The limitations of this study are primarily related to the use of a sampling plan that does not enable results to be generalized to the larger population. Because the sample is not representative of the national population of college and university students, it is not possible to generalize results. The study is also limited by the use of a survey instrument developed by the researcher for use in this study. Because the instrument was not tested prior to data collection, reliability and validity are not as strong as with instruments developed using more comprehensive testing procedures. Though the results of this study are not generalizable, the results of the study are still useful to social work practice and educational policy.

CHAPTER FOUR

Findings

The purpose of the study was to explore factors that perpetuate binge drinking on college campuses in spite of interventions. This chapter contains the findings of the study, including demographic data describing the sample, participant perceptions of individual and institutional binge drinking, the motivations behind it, and interventions. This study utilized an instrument designed by the researcher for the purposes of this investigation. Because of this, there is a higher risk to validity and reliability than if a previously developed instrument had been utilized. The study also utilized a nonprobability, purposive sampling plan that does not allow for generalizability of results. In spite of these limitations, findings drawn from the study provide observations relevant to better understanding binge drinking on college/university campuses. Findings also support the need to establish more effective binge drinking intervention programs incorporating a broad range of campus stakeholders.

Demographics

The final sample for the study was 181 participants, all of whom met study criteria and provided informed consent. The sample consisted of 141 females, 37 males, 3 participants who identify as neither male nor female, and 3 participants who declined to report their gender. One hundred seventy two participants reported attending a predominantly residential campus, while 8 participants reported attending a predominantly commuting campus (one participant did not report). One hundred sixty one participants attended colleges/universities not affiliated with a particular religious tradition, while 19 attended schools with a religious affiliation (one

participant did not report). Eighteen participants reported membership in Greek organizations (sororities or fraternities), while 161 participants were not members of Greek organizations (two participants did not report). Fifty nine participants were members of athletic teams; 118 were not (four participants did not report). The median year of graduation for members of the sample was 2009. The mode for year of graduation was 2011. The majority of participants identified as white; see Table 1 for the racial/ethnic makeup of the sample.

Table 1
Race and Ethnicity of Participants

	<i>f</i>	%
White	169	85
Non-Hispanic	8	4
Hispanic	3	1
Asian/Pacific Islander	5	3
Black/African American	4	2
Native American/Native Alaskan	0	0
Other	7	4
No Response	3	1

Drinking Behavior

Participants were asked to describe their experiences of binge drinking at the personal and institutional level. When asked to describe their personal drinking habits during college, participants reported drinking an average of 9 times per month with a standard deviation of 7. The mean reported episodes of personal binge drinking per month was also 9, with a standard deviation of 7. When describing binge drinking at the institution they attended, participants estimated students drank an average of 6 drinks per night of drinking, with a standard deviation of six; the percentages of students at their institutions that they estimated engaged in at least occasional binge drinking are shown in Table 2.

Table 2
Perceived Percentage of Students Engaged in Binge Drinking

	<i>f</i>	<i>%</i>
0-19%	2	1
20-39%	21	12
40-59%	56	31
60-79%	69	38
80-100%	24	13
No Response	9	5

It was hypothesized that higher rates of binge drinking would be reported at residential schools compared to commuter schools. The mean frequency of binge drinking at residential schools was 3.53 while the mean frequency of binge drinking at commuter schools was 3.57. A t-test was performed to assess differences in levels of engagement in binge drinking between residential and commuter campuses. The t-test revealed no significant difference in institutional patterns in binge drinking: participants were not more likely to report higher rates of binge drinking based on attending a primarily residential school ($t = -0.107; p > 0.05$).

It was also hypothesized that lower rates of binge drinking would be reported at religiously affiliated schools compared to schools with no religious affiliation. The mean frequency of binge drinking at religiously affiliated schools was 3.47, while the mean frequency of binge drinking at non-religiously affiliated schools was 3.54. A t-test was performed to assess differences in binge drinking based on religious affiliation of the institution. The t-test revealed no significant difference in binge drinking based on a campus's religious affiliation: participants who attended religiously affiliated institutions were not more likely to report lower levels of student engagement in binge drinking ($t = -0.307; p > 0.05$).

Social Factors and Motivations

Primary hypotheses for this study were related to social factors and motivations that perpetuate patterns of binge drinking on college and university campuses. Questions for this

section of the instrument were designed to illustrate participants' opinions surrounding specific social factors and motivations (drawn from the literature) that perpetuate collegiate binge drinking, including social norms, peer modeling, and positive alcohol expectancies. Similarly, the instrument was constructed to explore student motivation using the four-factor model for motivation, including enhancement, social, coping, and conformity motives for student engagement in binge drinking (Chauvin, 2012; Cooper, 1994).

Social Factors. Social factors, including social norms, peer modeling, and positive alcohol expectancies, were hypothesized to influence student binge drinking. Social norms were hypothesized to be the most frequently selected influence, while peer modeling was hypothesized to be the second most frequently selected influence. To assess social factors, participants selected a series of responses representative of social norms, peer modeling, and factors unrelated to social norms. Participants were first asked to select all social factors they believe influence student binge drinking, and were then asked to select the one social factor they believe to be the strongest influence. Factors unrelated to social norms were more frequently selected than social norms factors in both multiple and single selection scenarios (see Table 3). Chi square tests were run to compare frequencies for significant difference. When selecting multiple social factors, participants were significantly more likely to select non-social norms factors ($p=0.027$, $\chi^2=4.85$) When selecting the most significant social factor, participants selected non-social norms factors with the greatest frequency. Findings for the most significant social factor were not statistically significant ($p=0.163$, $\chi^2=1.94$). These findings contradict the hypothesis.

Table 3
Social Factors Influencing Binge Drinking

	<i>f</i>	%	Significance
Social Factors (Multiple)			
Non-Social Norms	319	46	$p=0.027$
Social Norms	210	30	
Peer Modeling	54	22	
No Response	11	2	$\chi^2=4.85$
Most Significant Social Factor			
Non-Social Norms	83	46	$p=0.163$
Social Norms	40	24	
Peer Modeling	45	25	
No Response	13	7	$\chi^2=1.94$

Social norms include both injunctive norms (the degree to which a participant believes their social connections approve of their drinking) and descriptive norms (perceived prevalence of binge drinking; Cho, 2006; Neighbors et al., 2007). Students involved in Greek life or collegiate athletics were expected to identify injunctive norms as the most significant motivation for binge drinking more frequently than students not involved in these activities.

Of the 18 participants involved in Greek life, 0 identified injunctive norms as the most significant motivation, compared to 15 of participants not involved in Greek life. Of the 59 participants involved in collegiate athletics, 4 identified injunctive norms as the most significant motivator, compared to 56 of participants not involved in collegiate athletics. Chi square tests were performed to assess differences in respondents' assessments of college students' motivation to binge drink based on membership in athletic or Greek life organizations. No significant differences in motivation were found based on membership in Greek ($\chi^2=1.6$; $p=0.447$) or athletic organizations ($\chi^2=0.062$; $p=0.97$).

Motivations. It was hypothesized that enhancement and conformity motives would be more frequently identified as influences on student binge drinking than social and coping motives. Participants' perceptions of students' motivations to engage in binge drinking were

assessed using a series of possible responses representing each of the types of motivation identified by the four-factor model for motivation: social, enhancement, conformity, and coping motives (Chauvin, 2012; Cooper, 1994). Participants were first asked to select all motivations they believe influence student binge drinking, and then asked to select only the most significant motivation for collegiate binge drinking (see Table 4). When selecting all applicable motivations, participants were significantly more likely to select social motivations than enhancement, conformity, or coping motivations ($p=0.016$, $\chi^2=5.76$). When selecting the most significant motivation for student binge drinking, participants selected social motives with the greatest frequency. Findings for the most significant motivation were also statistically significant ($p=0.002$, $\chi^2=9.16$). Thus, findings related to motivations to participate in binge drinking contradict the hypothesis: conformity and enhancement motivations were selected with second and third most common frequency respectively.

Table 4
Motivations for Binge Drinking

	<i>f</i>	%	Significance
Motivations (Multiple)			
Social	228	36	$p=0.016$
Enhancement	134	21	
Conformity	132	21	$\chi^2=5.76$
Coping	126	20	
No Response	10	2	
Most Significant Motivation			
Social	84	40	$p=0.002$
Conformity	44	24	
Enhancement	25	14	$\chi^2=9.16$
Coping	18	10	
No Response	10	6	

Interventions

One goal of this study was to explore factors that perpetuate binge drinking in spite of interventions. As binge drinking is widely recognized as a problem at virtually all colleges and

universities, a great diversity of institutional and individual interventions are used to address this community issue (Borden et al., 2011; Chauvin, 2012; Seo & Li, 2009). Participants were asked to rate the perceived effectiveness of existing binge drinking interventions, as well as to identify the group most likely to lead successful binge drinking interventions.

It was hypothesized that binge drinking interventions would be seen as somewhat or totally ineffective. No participants described current binge drinking interventions as very effective. A small number of participants identified binge drinking interventions as “somewhat effective,” while the majority of participants described binge interventions as “not at all effective” (see Table 5). A chi square test was performed to determine statistical significance. The frequencies for selection of “not at all effective” and “somewhat effective” were compared to other responses. The difference between these frequencies was statistically significant ($p=0.002$, $\chi^2=9.35$). Findings related to efficacy of binge drinking interventions support this hypothesis: participants were significantly more likely to report that interventions were somewhat or totally ineffective.

It was also hypothesized that students involved in Greek life or collegiate athletics would see binge drinking interventions as less effective than students not involved in these activities. T-tests were performed to determine statistical significance. T tests revealed no significant difference. Participants who were members of athletic organizations were no more likely or unlikely to report binge drinking interventions were successful or unsuccessful ($p=0.12$; $t=0.28$). Similarly, members of Greek organizations were no more likely or unlikely to report binge drinking interventions were successful or unsuccessful than participants not involved in these activities ($p=0.16$; $t=-1.32$).

Finally, it was hypothesized that students would be seen as the most successful leaders for binge drinking interventions. When identifying the most successful leaders for campus-based binge drinking interventions, the majority of participants selected students (see Table 5). A chi square test was performed to determine statistical significance. Findings support this hypothesis: participants were statistically more likely to select students as the most effective leaders compared to other types of leaders ($p=0.006$, $\chi^2=7.66$).

Table 5
Interventions for Binge Drinking

	<i>f</i>	%	Significance
Effectiveness of Interventions			
Not At All Effective	71	39	$p=0.002$
Somewhat Ineffective	56	31	
Neither Effective nor Ineffective	36	20	
Somewhat Effective	8	4	$\chi^2=9.35$
Effective	0	0	
No Response	10	6	
Most Successful Leaders			
Students	130	72	$p=0.012$
Healthcare Providers	8	4	
Campus Administrators	6	3	
Other	2	1	$\chi^2=7.66$
None of the Above	25	14	
No Response	10	6	

Summary

The results of the survey did not support study hypotheses related to demographic, social and motivational factors related to binge drinking. No significant trends were found based on membership in specific groups such as Greek and athletic organizations, nor were trends found based on a campus's residential setting or religious affiliation. Social norms were not shown to be the most significant social factor influencing collegiate binge drinking. Enhancement and conformity motives were not shown to be the most significant motivations for students engaging

in binge drinking. Social motives were instead identified as most significant. Hypotheses related to interventions were supported by the findings. Participants considered binge drinking interventions ineffective, though students were identified as the most successful leaders of binge drinking interventions.

CHAPTER FIVE

Discussion

The present study explored college graduates' perceptions of binge drinking and binge drinking interventions on college campuses, using an instrument designed specifically for the purposes of this study. Guided by relevant literature, the study focused on a series of hypotheses related to group membership, campus type, social factors, motivations, and interventions. As these hypotheses were drawn from the literature, instances where hypotheses were confirmed indicate that the findings of this study are supportive of previously published findings. In instances where hypotheses were contradicted by the findings, this study reflects a differentiation from current literature. However, given that a purposive sampling design was used, the results are not generalizable.

Demographics

Four hypotheses were proposed related to the demographic characteristics of the sample. These hypotheses were related to membership in athletic and Greek organizations, whether the campus was dominated by residential or commuter students, and whether the institution was religiously affiliated. A link was proposed between each of these characteristics and binge drinking behavior. Each hypothesis was grounded in current literature, and proposed that the findings of this study would mirror findings of previous investigations into binge drinking. However, this study found no significant differences based on group membership for any of the four proposed hypotheses.

Current research suggests that members of athletic and Greek organizations are at increased risk of binge drinking, as well as negative consequences related to their binge drinking (Chauvin, 2012; Dietz, 2008; Neighbors et al., 2007; Seo & Li, 2009; Sharma & Kanekar, 2008; Turrisi et al., 2006). According to the literature, these groups are also more likely to view binge drinking interventions as ineffective, and to identify injunctive norms as primary motivations for engagement in binge drinking (Dietz, 2008; Seo & Li, 2009). These conclusions were not reflected in the findings of this study. Similarly, institutions with high levels of commuting students, as well as those affiliated with a particular religious tradition, are commonly found to have lower levels of engagement in binge drinking (Borsari & Carey, 2001; Ham & Hope, 2003; Malone et al., 2012). Though these tendencies are well documented in the literature, they were not supported by the findings of this study. Several factors likely influenced these findings contradiction to published literature including the sampling plan, lack of racial diversity, and lack of gender diversity.

Sampling Plan. Most significant among the factors that likely contributed to differences between this study's findings and published research is likely the sampling method. This study utilized a purposive sampling plan. As purposive sample does not yield a sample that is representative of the diversity of the population, results from this type of study are not generalizable to the general population. In this case, low numbers of participants in certain demographic groups limited the statistical power of between-group comparisons. While a relatively high number of college athletes participated in this study (58), much smaller numbers of Greek life participants, commuters, and attendees of religiously affiliated school participated.

Low numbers of participants from these categories show that the sample is likely not appropriately representative of these groups, and that the sampling plan did not engage these

groups. Limited participation of these groups affects findings in several ways. Commuters and attendees of religiously affiliated institutions would be expected to report decreased participation and observation of binge drinking, while members of Greek organizations would be expected to report increased participation and observation of binge drinking (Doumas et al., 2010). As non-residential and religiously affiliated schools tend to have lower rates of binge drinking, graduates of these schools would likely report different motivations for binge drinking. The perspectives of these graduates are not reflected in the findings of this study.

The purposive sampling plan utilized for this study recruited participants using social media and email messages, resulting in a sample reflective of the researcher's social networks. While somewhat diverse, this network is dominated by individuals who attended residential, four-year colleges and universities with minimal (if any) Greek life on campus, and no religious affiliation. As the researcher was a college athlete, those exposed to recruitment efforts were also more likely to have been college athletes, possibly accounting for the high representation of college athletes in the sample.

Racial Diversity. Racial diversity of the sample was limited, with the vast majority of participants describing their race/ethnicity as white. Though it would be preferable for the sample to reflect the diversity of the population, this predominantly white sample captures the group at highest risk of risk of binge drinking (Barnett et al., 2013; Courtney & Polich, 2009; Green et al., 2014; Ham & Hope, 2003; LaBrie et al., 2012; Malone et al., 2012; Sharma & Kanekar, 2008). Similarly, previously completed studies on collegiate binge drinking included high numbers of white participants and low numbers of participants from historically underrepresented groups (Malone et al., 2012). Because the literature shows that binge drinking studies often struggle to build a racially representative sample of the population, it is difficult to

understand how racial diversity impacts the demographic hypotheses under study. Nevertheless, the current sample includes even fewer non-white participants, and is less representative than samples used in similar studies. The lack of racial diversity of the sample is thus considered an influence on the demographic hypotheses.

Gender Diversity. Participants in this study were primarily female. Few male participants were captured by this sample. Research on collegiate binge drinking shows that male and female students are likely to have different experiences of binge drinking (Ham & Hope, 2003; Neighbors et al., 2007; Norberg et al., 2011; Pedersen, 2013). Particularly significant are differing experiences of negative consequences of participation in binge drinking: while male students are known to experience increased negative consequences related to violence and aggression, female students are known to encounter increased negative consequences related to personal or emotional experiences (Labbe & Maisto, 2011; Norberg et al., 2011). Based on this prior research, it is reasonable to conclude that the majority of participants in this study experience the effects of binge drinking as personal or emotional experiences. Because the majority of participants in this study identify as female, the findings of the study are not reflective of the more diverse groups used in the literature from which conclusions have been drawn.

Conclusions. Demographic hypotheses were highly influenced by the non-generalizable, purposive sampling plan utilized by this study. These hypotheses focused on comparison across groups including athletes, Greek life participants, and graduates of religiously affiliated and commuter schools. Though representation of student athletes was adequate, very few participants were members of Greek organizations or graduates of religiously affiliated schools. Poor representation of these groups contributed to findings that were not reflective of trends in

published literature. Though not specifically related to the demographic hypotheses, low levels of racial/ethnic and gender diversity in the sample may also have contributed to findings not reflective of published literature. Findings from the current study related to these hypotheses are reflective of the sample, rather than the population under study, and serve as descriptors of the experiences of participants, rather than the population of college graduates.

Drinking Behavior

Participants were asked to describe their own experiences of binge drinking during their time as students. These findings illustrate participants' experiences of binge drinking, and provide context for the sample. Participants' descriptions of drinking behavior are indicative of high levels of binge drinking among both participants and their peers. Of particular interest were the means for both drinking events per month and binge drinking per month. The means for both variables were 9 (standard deviation of 7), suggesting that the number of times a participant drank each month was equal to the number of times a participant binge drank. This suggests that, on average, participants may have engaged in binge drinking every time they drank. Existing literature reports rates of binge drinking among college students as ranging from 2 in 5 to 4 in 5 (Carlson et al., 2010; Chauvin, 2012). In this study, 4 in 5 participants endorsed binge drinking while undergraduates. Thus, participant responses were reflective of the higher end of trends in existing literature.

Similar trends towards high levels of exposure to binge drinking are illustrated by participants' descriptions of binge drinking at the institutional level. Findings from this study show the estimated average number of drinks per night for an average student to be 6 drinks. By most definitions of binge drinking, including the definition used for this study, 6 drinks per night would qualify as binge drinking for most drinkers. Findings related to frequency of student

participation in binge drinking show a similar trend. Participants indicated that more than 50% of students at their institution participated in binge drinking, with the majority of participants reporting between 60-79% of students participated in binge drinking. As the literature reports rates of binge drinking among students to be between 40-80%, participants' assessments of binge drinking on campus are reflective of trends in the literature. Participants' assessments of the behavior of other students on their campuses were also comparable to their assessments of their own binge drinking, with around 80% participation estimated for both self and others.

Based on these findings, students experience high levels of exposure to binge drinking, and low levels of exposure to less dangerous forms of alcohol use. These findings reflect trends in published literature, which show that students consistently report prevalent binge drinking on campus (Borsari & Carey, 2001; Chauvin, 2012; Cleveland et al., 2012). Asking participants to estimate rates of binge drinking for other students also assesses social norms. As shown by the literature, students are known to overestimate others' drinking (Borsari & Carey, 2001; Miley & Frank, 2006; Utpala-Kumar & Deane, 2012). This well established trend indicates that students are exposed to peer modeling and social norms around binge drinking, but are not exposed to similar peer modeling or social norms for non-binge drinking. This finding is also likely impacted by students' tendencies to overestimate the binge drinking of others (Borsari & Carey, 2001; Miley & Frank, 2006; Utpala-Kumar & Deane, 2012).

Findings related to low levels of engagement in moderate drinking may be affected by overestimation, leading participants to conclude that binge drinking was more widespread than is accurate. Regardless, this finding illustrates participants' perception that dangerous forms of alcohol use were normative on campus. It is important to consider potential overestimation when assessing participants' estimations of binge drinking on their campuses. Despite the potential for

overestimation, results suggest that study participants were exposed to high levels of binge drinking, and that many participated in binge during their college/university experiences.

Conclusions. Participants' experiences with alcohol and binge drinking are relevant for several reasons. This study assesses social factors and motivations associated with collegiate binge drinking. It is important to better understand the context that informs participants' assessments of the factors the literature suggests are relevant to students' decision making around binge drinking. Participants' experiences with alcohol use, including both personal experiences and observations of others, have been shown by the literature to be a powerful influence on individual decision-making around binge drinking (Herschl et al., 2012; Kuntsche et al., 2005; Labbe & Maisto, 2011). In the context of this study, findings that show high levels of exposure to binge drinking illustrate participants' social norms around binge drinking. Because participants' assessments are subjective and affected by the same dynamics that affect current students' perceptions of binge drinking patterns among peers, these findings are likely overestimations. Findings thus illustrate social norms related to high levels of student binge drinking, showing this behavior to be relevant to participants' experiences as students.

Social Factors

A central hypothesis of this study proposed that social norms would be most frequently identified as the strongest social influence on binge drinking, and that peer modeling would be the second most frequently identified influence on student binge drinking. The findings of this study disprove this hypothesis. Participants were significantly more likely to select influences other than social norms or peer modeling. Defined as an individual's perception of normative behavior in their environment, social norms are frequently cited as significant drivers of binge drinking on college and university campuses (Chauvin, 2012; Cho, 2006; Clapp & Shillington,

2001; LaBrie et al., 2012; Miley & Frank, 2006; Turrisi et al., 2006). Similarly, peers are known to influence students' decisions regarding binge drinking more than any other group (Miley & Frank, 2006; Neighbors et al., 2012; Turrisi et al., 2006; Utpala-Kumar & Deane, 2012).

Rather than disputing the importance of peer influence, the rejection of the hypothesis illustrates the diversity of peer-based factors that shape participation in binge drinking. While social norms and peer modeling are direct way that peers influence individuals' binge drinking, peer influence is not limited to social norms. Examples of influences grouped in this study as "non-social norms" include positive alcohol expectancies, conformity motives, and misinformation about alcohol use and personal tolerance. Because social norms capture only the influence of peers' behavior, and not the underlying social and emotional reasons that students binge drink, non-social norms were selected significantly more frequently than other influences.

Represented by the category "non-social norms," positive alcohol expectancies and other factors were perceived by participants to be significantly more influential than social norms. Alcohol expectancies, or positive or negative behavioral, social, and emotional effects an individual anticipates from using alcohol, have been shown to be significant influences on student binge drinking (Herschl et al., 2012; Kuntsche et al., 2005; Labbe & Maisto, 2011). Like social norms, alcohol expectancies are influenced by an individual's assessment of the behaviors of peers on campus (Herschl et al., 2012; Kuntsche et al., 2005). From these assessments, individuals draw either positive or negative expectancies around alcohol use. Though alcohol expectancies are drawn from numerous sources including family and experiences prior to beginning college, college/university peers are known to be an important influence on college/university students' alcohol expectancies.

Among the most pervasive alcohol expectancies is the belief that alcohol provides “social lubrication,” or that alcohol use enables students to manage feelings of anxiety related to social situations (Hasking et al., 2011; Labbe & Maisto, 2011; Neighbors et al., 2007). Related to the widespread belief that alcohol is an effective social lubricant is the similarly popular belief that alcohol improves sexual experiences (LaBrie et al., 2011; Neighbors et al., 2007). Alcohol expectancies, and thus factors considered “non-social norms” for the purpose of the current student, capture students’ use alcohol as a means of enabling interpersonal risk taking, a fundamental task of a entering a college community and building social connections with peers.

Conclusions. In this study, the classification “non-social norms” was used to describe social factors influencing binge drinking other than social norms and peer modeling. Included in this category are alcohol expectancies, as well as other social factors unrelated to alcohol expectancies. Because alcohol expectancies are developed by observation and assessment of experiences of self and peers, alcohol expectancies and social norms are closely related. While significant differences exist between alcohol expectancies and social norms, both involve comparison to peers. Though unique concepts, alcohol expectancies and social norms are closely related. In other studies, alcohol expectancies may have been included with social norms. This difference in classification may account for this study’s findings that contradict previous studies’ findings related to the centrality of social norms. Substantively, though the findings of this study rejected hypotheses related to social norms, these findings support the vital importance of peer influence on student binge drinking. Regardless of whether this influence is labeled social norms, peer modeling, or alcohol expectancies, peers are the most significant social factor influencing binge drinking.

Motivations

Cooper's (1994) four-factor model of motivation for binge drinking was used to explore participants' perceptions of students' motivations. While enhancement and conformity motives were hypothesized to be the most frequently selected motivations for collegiate binge drinking, social motivations were selected significantly more frequently, disproving the hypothesis. Using the four factor model of motivation for collegiate binge drinking, those whose binge drinking is socially motivated drink to manage feelings of social anxiety, particularly around relationship building (Bhullar et al., 2012; Chauvin, 2012; Cooper, 1994; Ham & Hope, 2003; Norberg et al., 2011; Pedersen, 2013). Though social motives are often confused with enhancement motives, social motives are unique because the drinker is focused on improving social relationships, rather than on improving mood or individual experience (Chauvin, 2012; Cooper, 1994).

Social motivations are driven by positive alcohol expectancies (Chauvin, 2012; Cooper, 1994). Identifying social motivations as the most influential motivation for collegiate binge drinking is consistent with positive alcohol expectancies. Participants were significantly more likely to select social motivations over other options more commonly associated with negative alcohol expectancies, such as coping or conformity motivations. While socially motivated binge drinkers tend to consume higher amounts of alcohol than binge drinkers motivated by coping or conformity, they are also less likely to experiment with other substances (Chauvin, 2012; Cooper, 1994).

The high levels of alcohol consumption that are characteristic of social motivations are consistent with participants' reporting of their own drinking behavior. Findings related to personal and institutional binge drinking indicate participants have experience, either personally or by witnessing the actions of others, with consumption of large quantities of alcohol. Social

motivations are also highly compatible with non-social norms and positive alcohol expectancies, identified as the most significant social factors that perpetuate binge drinking: socially motivated drinking is characterized by positive alcohol expectancies specifically related to social experiences.

Conclusions. Positive alcohol expectancies, including positive alcohol expectancies around social lubrication, are examples of social motivations (Chauvin, 2012; Cooper, 1994). In contrast, those with negative alcohol expectancies would not be considered to have social motivations. As this sample endorsed non-social norms as the most influential social factor collegiate binge drinking, it is logical that social motivations would be cited as the most influential motivation. Non-social norms, specifically alcohol expectancies, are more closely related to socially motivated binge drinking than conformity or coping motivated binge drinking. The connection between these findings provides a coherent interpretation of collegiate binge drinking as a practice designed to enable interpersonal risk taking and allow students to feel connect to peers and community.

Interventions

A goal of this study was to explore factors that perpetuate binge drinking in spite of interventions. Binge drinking is a significant public health challenge for colleges and universities that negatively impacts individuals and communities (Neighbors et al., 2007). Because binge drinking is known to be a significant challenge for campus communities, colleges and universities have invested significant resources in the development of interventions designed to target binge drinking (Borden et al., 2011; Chauvin, 2012; Dietz, 2008; Glassman, 2002). A primary hypothesis of this study was that participants would most frequently identify binge-drinking interventions as somewhat or totally ineffective. The findings of this study support

similar published studies that show binge drinking interventions to be generally ineffective (Borden et al., 2011; Chauvin, 2012; Dietz, 2008; Glassman, 2002).

Findings around the lack of effective binge drinking interventions were significant, and are particularly meaningful when understood in the context of participants' binge drinking behavior. Participants in this study reported exposure to high levels of binge drinking on campus, and participated in binge drinking themselves. While potentially predisposed to find binge drinking interventions ineffective based on their own high levels of binge drinking, as graduates, the sample is presumed to be sufficiently removed from their experiences as students to reflect on them with insight. Published literature supports the inclusion of students as leaders in binge drinking interventions. Because students, rather than administrators or other professional staff, establish social norms and alcohol expectancies, students are well placed to effect change around binge drinking. The findings of this study support previous research into the importance of involving students in binge drinking intervention efforts. Student-led binge drinking interventions most commonly involve training students to engage with peers through peer mentoring initiatives (Pedersen, 2013). Student involvement often takes the form of educational events designed to support decreased involvement in binge drinking, while also providing social alternatives to alcohol based events (Pedersen, 2013). Given findings that suggest binge drinking is a means of supporting student connection to community and management social anxiety, peer based interventions are particularly well placed to offer alternate models of student engagement in community. Connection to community and acceptance by peers are experiences that must be facilitated within student communities. Student empowerment around binge drinking offers the opportunity to develop alternative social spaces for alcohol-free experiences of community.

Conclusions. The findings of the current study suggest that collegiate binge drinking is a behavior perpetuated by students' desire to experience acceptance and connection to peers on campus. Students' positive alcohol expectancies, drawn from the experiences of peers, family, and other sources (such as popular culture), perpetuate students' expectation that alcohol enhances social experiences and connections with others. These messages are established prior to students' arrival on campus, as alcohol expectancies begin to be established in childhood (Herschl et al., 2012; Kuntsche et al., 2005). Students' motivations to binge drink are closely tied to the social factors that perpetuate binge drinking- positive alcohol expectancies. Students are motivated to binge drink primarily to enhance feelings of social connection, and to build relationships with peers. Alcohol expectancies around "social lubrication" and improvement of relationships, as well as alcohol as a means of feeling connected to and accepted by communities perpetuate collegiate binge drinking.

Student involvement in binge drinking interventions is necessary for meaningful change in campus culture. As findings for social factors and motivations show binge drinking to be tied to students' needs to feel part of a community and to manage social anxiety, students themselves must be a part of the solution to this public health challenge. Currently, students use alcohol as a tool to feel connected to their communities. To decrease binge drinking, campuses must develop ways for students to feel socially connected and comfortable without alcohol.

Experiences related to alcohol use, such as large parties and drinking games, provide a sense of community and freedom from social anxiety that is more difficult to experience in other venues. High-risk groups, such as first year students, Greek life participants, and college athletes exemplify these findings. These students face the greatest risk of negative outcomes from failing to connect with peers because, for students in these groups, peer acceptance is vital. Athletes

who do not connect with teammates face ostracism and decreased athletic opportunity and performance. Greek life members or first year students who fail to connect with peers face social isolation and associated negative consequences. Students may become members of groups whose social activities perpetuate high-risk behaviors around binge drinking in order to facilitate continued social connection. These dynamics exist, to varying degrees, outside of high risk groups as well, and contribute to a student's sense of urgency around binge drinking.

Alcohol serves as a means of connecting, and escaping the pervasive anxiety associated with fear of not connecting with or being accepted by peers. Social anxiety is known to be a driver of binge drinking among college/university students (Black et al., 2012; Smith et al., 2015; Wells, Graham, & Purcell, 2009). The theme of binge drinking as a bonding activity is reflected in current literature (Black et al., 2012; Smith et al., 2015; Wells et al., 2009). Students, with the support of professionals, can be better prepared to understand how to foster experiences of connection and acceptance in settings that do not require binge drinking (Black et al., 2012). Interventions for binge drinking must move beyond education around negative consequences and accountability around policy violations. Interventions will only be successful when they target the social factors and motivations that perpetuate binge drinking and provide viable alternatives for students to experience acceptance and community without alcohol.

Implications for Social Work

Collegiate binge drinking raises issues that are highly relevant to clinical social work. Supporting individual connection to community and managing social anxiety are common areas of clinical work with adolescents and young adults (Cooper, 1994). College students' need for acceptance and high levels of anxiety around social situations is reflective of unique stressors associated with the transition to college. Understanding the social factors and motivations that

perpetuate binge drinking allows clinicians to more effectively work with these students around substance use. Similarly, understanding these factors also allows clinicians to work with students to develop more effective interventions around binge drinking. Social workers' unique backgrounds in community work provide a strong foundation for supporting student involvement and collaboration around implementation of peer-based binge drinking interventions. A key finding of this study is the need to foster change around engagement with communities. This study highlights the importance of involving stakeholders in building solutions to public health challenges facing communities.

Limitations

Several limitations affect this study. First, the sample was generated using a purposive sampling plan. The results of this study are therefore not generalizable beyond the sample. The sample is not representative of the population of college graduates, and is not reflective of the diversity of this population. Certain demographic groups such as graduates of historically underrepresented racial/ethnic backgrounds, Greek life participants, commuting students, and graduates of religiously affiliated institutions were not adequately represented in the sample.

Secondly, the instrument used for data collection was developed by the researcher for the purpose of conducting this study. While steps were taken to support reliability and validity, neither reliability nor validity can be guaranteed. Sections of the instrument regarding peer modeling and social norms generated concerns around reliability. For questions designed to assess social factors, six potential answers representing social norms, peer modeling, and non-social norms were provided. Three of these potential answers were representative of non-social norms, two were representative of social norms, and one answer was representative of peer modeling. The under representation of peer modeling and social norms in possible responses

may have influenced findings related to hypothesized results for frequency of selection of peer modeling and social norms.

Despite these limitations, the findings of this study remain useful. A significant number of participants completed the study. With 181 participants, this study captures a range of viewpoints and experiences of binge drinking. The size of the sample also provides adequate responses for use of statistical analyses. Despite the lack of diversity of the sample, several high-risk groups are represented. Both white students and student athletes have been identified as high-risk groups for negative consequences of binge drinking. This study included significant numbers of both college athletes and white students. The study also engaged a population typically neglected in collegiate binge drinking research: graduates of colleges and universities. This study adds to the body of current research through the incorporation of the viewpoints of this unique population.

Recommendations for Future Study

Several aspects of social factors, motivations, and binge drinking interventions are recommended for future study. More research is needed to better understand interactions between social norms and alcohol expectancies. As social media becomes an increasingly influential factor in students' lives, it is important to understand how social media affects students' alcohol expectancies and the establishment of social norms. Similarly, more research is needed to understand the relationship between social anxiety and motivation to binge drink. Anxiety around integration into the college community and acceptance by peers seems to be related to engagement in binge drinking, though minimal research has been done to investigate this association. Regarding interventions, more research is needed to explore the efficacy of online interventions, and to explore ways in which students and student perspectives can be

incorporated into existing interventions. New models for incorporating students into binge drinking interventions should also be considered.

Conclusion

This study illustrates the need to expand collegiate binge drinking interventions to address broader themes of acceptance and community. Binge drinking has evolved into a means of facilitating experiences of connection and belonging. While a complex phenomenon, students' desire for acceptance and membership in their communities are fundamental drivers of binge drinking culture on college and university campuses. Social norms, peer modeling, and positive alcohol expectancies contribute to a cultural narrative that identifies binge drinking as a means of building strong relationships and feeling accepted by peers. Students' motivations to participate in binge drinking highlight similar themes, including the belief that alcohol will facilitate stronger relationships with others, and allow them to more effectively manage social anxiety. Current interventions are largely unsuccessful because they fail to provide students with alternative means of managing social anxiety, building strong relationships, and feeling connected to their communities. To reduce binge drinking on college and university campuses, interventions must focus on involving students in building alternatives to binge drinking that provide similar experiences of acceptance and community.

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APPENDIX A

Recruitment Facebook Post

Are you a graduate of a four-year college or university? Do you have thoughts, experiences, or opinions on binge drinking and college culture? If so, please consider taking this online survey! I am conducting a study for my master's degree at the Smith College School for Social Work designed to explore social and cultural factors that affect binge drinking on college and university campuses. Participation in this survey is quick and easy, and will only take 15 minutes or less! The survey is available by clicking this link: _____

Please feel free to share and pass this link on to others who may be interested in participating!

Thank you!

If you have any questions, please contact me.

Thank you so much for reading and sharing!

APPENDIX B

Recruitment Email

Hi _____,

I am conducting a study for my master's degree at the Smith College School for Social Work, designed to explore social and cultural factors that affect binge drinking on college and university campuses. The study involves an online survey designed to gather college graduate's opinions on binge drinking on campus. If you would be willing to complete this short survey, I would be very grateful! Participation in this survey is quick and easy, and will only take 15 minutes or less! The survey is available at the following link: _____

Please feel free to pass this information on to others who may be interested in participating!

Thank you!

If you have any questions, please contact me.

Thank you so much for reading and sharing!

Molly

APPENDIX C

HSRB Letter of Approval



School for Social Work
Smith College
Northampton, Massachusetts 01063
T (413) 585-7950 F (413) 585-7994

January 16, 2015

Molly Newton

Dear Molly,

You did a very nice job on your revisions. Your project is now approved by the Human Subjects Review Committee.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Congratulations and our best wishes on your interesting study.

Sincerely,

A handwritten signature in black ink, appearing to read 'Elaine Kersten'.

Elaine Kersten, Ed.D.
Co-Chair, Human Subjects Review Committee

CC: Natalie Hill, Research Advisor

APPENDIX D

Informed Consent

Title of Study: College Graduates' Perceptions of College/University Binge Drinking

Investigator: Molly Newton, Smith College School for Social Work

Introduction: You are being asked to participate in a research study about college graduates' perceptions of college/university binge drinking. You were selected as a potential participant because you have graduated from a 4-year college or university. I ask that you read this form and ask any questions that you may have via the email address provided before agreeing to participate in the study.

Purpose of Study: The purpose of this study is to explore the social and cultural factors that influence binge drinking among college students. The data collected from this study will be used to complete my Master of Social Work Thesis. The results of the study may also be used in publications and presentations.

Description of Study Procedures: Participation in this study includes answering 17 survey questions, including demographic questions. The survey will take less than 15 minutes to complete.

Risks/Discomforts of Being in this Study: There are no anticipated risks to you from participation in this study.

Benefits of Being in this Study: The benefits of participation in this study include the opportunity to reflect on your experiences as a college student dealing with campus binge drinking, and to contribute to the efforts to better understand and address this public health concern through improved understanding of social and cultural factors that perpetuate binge drinking on college and university campuses.

Confidentiality: This study is anonymous. I will not be collecting or retaining any information about your identity. As a result, it will not be possible to withdraw your responses once you click “submit,” since there will be no way to identify which responses are yours. Survey responses will be encrypted by SurveyMonkey to ensure that data are private and confidential.

Payments: You will not receive any payment for your participation in this study.

Right to Refuse or Withdraw: The decision to participate is entirely up to you. You may refuse to take part in this study by not completing the survey. Refusing to participate will not affect your relationship with the researchers of this study or Smith College. Your decision to refuse will not result in any loss of benefits (including access to services) to which you are otherwise entitled. You have the right not to answer any single question, as well as to withdraw completely by exiting the survey at any time. If you choose to withdraw prior to completing the survey, your answers to previously answered questions will not be recorded. Once you have completed the survey it is no longer possible to withdraw from the study, as your answers are not identifiable.

Right to Ask Questions and Report Concerns: You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study or if you would like to receive a brief summary of the study results, contact me. If you have any other concerns about your rights as a research participant, or if you have any problems as a result of your participation, you may contact the Chair of the Smith College School for Social Work Human Subjects Committee.

BY CHECKING “I CONSENT” AND CLICKING “NEXT” YOU ARE INDICATING THAT YOU HAVE READ AND UNDERSTOOD THE ABOVE INFORMATION, THAT YOU HAVE HAD THE OPPORTUNITY TO ASK QUESTIONS ABOUT THE STUDY, YOUR

PARTICIPATION, AND YOUR RIGHTS, AND THAT YOU AGREE TO PARTICIPATE IN THE STUDY. IF YOU DO NOT WISH TO PARTICIPATE, PLEASE EXIT THE SURVEY AT THIS TIME.

- I CONSENT.

APPENDIX E

Survey Instrument

[1] How do you describe your gender? (Select One)

Male Female Other

[2] What year did you graduate from your undergraduate institution? (Type year)

(yyyy)

[3] How do you describe your race/ethnicity? (Select all that apply)

Hispanic Non-Hispanic Native American/Native Alaskan
 Asian/Pacific Islander White Black/African American
 Other

[4] Did most students:

Live on or near campus Commute from home

[5] Is your school affiliated with a religious tradition? (Select one)

Yes No

[6] While a student, were you a member of a Greek organization (fraternity, sorority, etc.)?

(Select one)

Yes No

[7] While a student, were you a member of an athletic team (varsity, club, etc.)? (Select one)

Yes No

[8] In an average month, how many times did you consume alcohol? _____

[9] In an average month, how many times did you drink enough to become intoxicated within two hours of beginning to drink? _____

[10] On a typical night of drinking, what would you guess was the average number of drinks consumed by a student at your school? _____

For the purposes of this study binge drinking is defined as a pattern of alcohol use that results in intoxication within two hours.

[11] What percentage of students at your school do you believe engaged in at least occasional binge drinking?

_____ 0-19 _____ 20-39 _____ 40-59 _____ 60-79 _____ 80-100

[12] What social factors do you believe influence a student's decision to binge drink? (check all that apply)

___ Not knowing their tolerance or how alcohol will affect them

___ Believing that most students binge drink

___ Seeing other students binge drink

___ Peer pressure to binge drink

___ Believing peers would approve of the decision to binge drink

___ Expecting binge drinking to lead to positive outcomes

[13] Which factor do you believe is the most significant influence on a student's decision to binge drink? (select one)

___ Not knowing their tolerance or how alcohol will affect them

___ Believing that most students binge drink

___ Seeing other students binge drink

___ Peer pressure to binge drink

___ Believing peers would approve of the decision to binge drink

___ Expecting binge drinking to lead to positive outcomes

[14] What do you think motivates students to binge drink? (check all that apply)

- It helps them fit in
- It helps them feel more relaxed in social situations
- It helps them get to know people
- It improves sexual experiences
- It helps them cope with stress and other negative emotions
- It makes them feel good

[15] What do you think is the most important motivation for students to binge drink? (select one)

- It helps them fit in
- It helps them feel more relaxed in social situations
- It helps them get to know people
- It improves sexual experiences
- It helps them cope with stress and other negative emotions
- It makes them feel good

[16] How effective are campus efforts to decrease binge drinking

- Not at all effective Somewhat effective Neither effective nor ineffective
- Somewhat effective Very effective

[17] Campus efforts to decrease binge drinking are most successful when led by:

- Campus administrators Healthcare professionals Students Other
- None of the above