

SELF-CONTROL, BINGE DRINKING, AND PERCEPTIONS OF DRINKING LEVELS

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by
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Abstract

SELF-CONTROL, BINGE DRINKING, AND PERCEPTIONS OF DRINKING LEVELS.
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This study utilizes Gottfredson and Hirschi's General Theory of Crime, also known as self-control theory, to determine if there is a relationship between self-control, binge drinking, and perceptions of drinking levels. The author inquires about subjects' self-control, which should govern their tendency toward imprudent or risky behaviors. In this study, the risky behavior of interest is binge drinking. Further, the author examines the differences between college students at the beginning of the transitional phase of emerging adulthood and those at the end of that same phase. The author provides discussion of the relationship between self-control and binge drinking, the role of age relative to self-control and engaging in binge drinking, and what these findings mean for campus policies and programs. Finally, opportunities for future research are discussed.

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Dedication

To my mother and my father for being the kind of teachers who make their children eager to learn. To my sister for being herself, unapologetically, and inspiring me to do the same. To the three of you for teaching me to embrace and relish pressure.

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CHAPTER 1: INTRODUCTION

Individuals who lack self-control may be more likely to engage in spur-of-the-moment behavior without careful consideration of the potential long-term consequences of their actions (Gottfredson & Hirschi, 1990; Pratt, Turanovic, Fox, & Wright, 2014; Stewart, Elifson, & Sterk, 2004). For example, the tendency to seek out any chance for fun can lead to risky behaviors, and such risky behaviors may include binge drinking. Additionally, such risks might include interacting with dangerous people (Pratt et al., 2014). Further, those displaying lower self-control are more likely to be confrontational and prefer physical activities to verbal interactions. The tendency to be physical, especially when alcohol is involved, may lead to subsequent physical victimization (Stewart et al., 2004). In sum, the relationship between low self-control and risky behaviors can make an individual with low self-control more susceptible to the negative outcomes associated with binge drinking.

Binge drinking, especially amongst college students, is a common risky behavior. The Centers for Disease Control (CDC) (2012) estimate that nearly 40 million American adults engage in binge drinking, and, on average, they do so about 4 times per month. Negative consequences associated with binge drinking include being hurt or hurting others due to car crashes and violent behavior (CDC, 2012). The CDC also estimates that, in 2006, binge drinking cost the United States' economy \$223.5 billion. Finally, the CDC (2012) reports that more than 90 percent of alcohol consumed by underage (youth) drinkers is consumed while binge drinking. Given the pervasiveness of this risky behavior amongst

college students, it is important to better understand factors that may be associated with binge drinking.

This study can contribute to knowledge to research in the fields of life-course theory, college-student behavior, and drinking behavior. A prime goal of this study is to determine if those with lower levels of self-control are more likely to engage in binge drinking. Lower self-control may prevent college students from realizing how much they are drinking, or, if they realize that their drinking is a problem, not have the self-control to stop drinking before their consumption reaches hazardous levels. The question of recognition (perception) of drinking levels will also be addressed in this study.

Another goal of this study is to shed more light on Gottfredson and Hirschi's (1990) claim that self-control levels are established in childhood. They claim that a person's tendency toward criminal or deviant behavior remains stable throughout his or her life. The study will examine the relationships between age, self-control, and engagement in binge drinking.

Given the assertion that low self-control increases risky behaviors (Gottfredson & Hirschi, 1990) and the CDC's (2012) assessment of the risks associated with binge drinking, further investigation of the relationship is warranted. In order to address this problem and investigate these questions, measures of self-control, student drinking levels, and student opinions of *peer* drinking levels, as well as various demographic factors, will be utilized to investigate relationships between low self-control and binge drinking. These measures play an important role in discovering populations at risk for binge drinking, and, thus, at risk for the adverse effects associated with excessive drinking. Greater detail regarding these concepts and measures will be provided in subsequent chapters.

College students, the population of this study, present a unique group for research of drinking and self-control. This population is going through immense life changes, experiencing freedom from parents for possibly the first time, and experimenting with new activities. Arnett (2000), who believes that this stage warrants research, labels the time from ages 18 to 25 as “emerging adulthood.” Due to the higher average age of marriage and the emphasis on higher education in hopes of securing long-term employment, there is a longer stretch of time between adolescence and adulthood than in the past, and that longer stretch, just like childhood, could be a formative period (Arnett, 2000).

This study attempts to apply important concepts in self-control, binge-drinking, and life-course literature. The following chapter will provide a detailed assessment and review of the literature and past research concerning self-control theory, binge drinking as a problem behavior, and the importance of emerging adulthood in the life course. Chapter 3 outlines how variables were conceptualized and operationalized, the characteristics and importance of the sample population, and how responses were gathered. The findings and discussion, presented in chapters 4 and 5, respectively, help contribute to ongoing discussions regarding the safety and environment of college students and could help influence on-campus educational programs about risk factors when considering normative, acceptable drinking levels. The study begins in Chapter 2 with an overview of the literature.

CHAPTER 2: LITERATURE REVIEW

In 1990, Gottfredson and Hirschi developed a theory attempting to explain an individual's tendency toward crime and deviant behavior. Gottfredson and Hirschi (1990) define crime as acts of force or fraud, and, as a result, they define criminality as the tendency to use force or fraud. Additionally, they suggest that the motivating factors that produce crime also produce deviant, reckless, or imprudent behaviors (i.e. analogous behaviors). These motivating factors stem from Gottfredson and Hirschi's belief that all humans are rational and ultimately motivated by self-interest. Finally, they argue that opportunities to utilize force and/or fraud are ever-present in human interactions, thus providing opportunities for crime (Gottfredson & Hirschi, 1990).

Originally named the general theory of crime (GTC), Gottfredson and Hirschi's (1990) theory is now commonly known as self-control theory. The development of this new name stems from Gottfredson and Hirschi's (1990) assertion that crimes and analogous behaviors, since they are caused by the same factors, are all the product of the relatively stable trait of low self-control. Low self-control increases the likelihood of giving in to aforementioned self-interested motivations by choosing immediate pleasure before considering long-term consequences. Additionally, low self-control makes an individual more likely to take advantage of the opportunities for crime. Therefore, according to self-control theory, differences in criminality come from two sources, both of which are governed by self-control: 1) the tendency to act on self-interested motivations and 2) the tendency to

take advantage of the opportunities to utilize force and/or fraud (Gottfredson & Hirschi, 1990).

Self-control is a product of the level of nurturance and discipline provided to a child by parental figures (Gottfredson & Hirschi, 1990). In other words, ineffective child-rearing produces low self-control. If a child misbehaves and is not disciplined or shown that there are consequences for deviant actions, he or she may never develop an awareness of potential long-term consequences. If low self-control is to be avoided, someone must monitor the child's behavior, recognize deviant behavior, and punish deviant behavior upon recognition (Gottfredson & Hirschi, 1990). Gottfredson and Hirschi (1990) also argue that self-control is developed in childhood and remains relatively stable throughout the life course.

Differences in self-control levels come from a variety of sources and varying tendencies. These elements of self-control are laid out by Gottfredson and Hirschi (1990). First, those with low self-control focus on immediate satisfaction. They focus on tangible, quick results, while people with high self-control defer or delay gratification. Those with low self-control usually focus on tasks that lead easily to gratification; they prefer simple tasks and lack diligence and persistence. They tend to prefer physical activities, while those with high self-control prefer cognitive activities. They have little interest in long-term planning, and this leads to unstable relationships, friendships, or jobs. Those with low self-control have little value for academic or cognitive skills and do not see the need for formal training. Finally, those with low self-control may be insensitive to the suffering of others (Gottfredson & Hirschi, 1990). In sum, those who lack self-control will be impulsive, insensitive to the feelings of others, prefer physical tasks to mental tasks, and are risk-seeking, short-sighted, and non-verbal (Gottfredson & Hirschi, 1990).

Self-control theory has been studied from a variety of perspectives. For example, Burt, Sweeten, and Simons (2014) investigated the stability of self-control, specifically investigating Gottfredson and Hirschi's claim that low self-control is established in childhood and remains stable throughout the life course. Contrary to self-control theory, Burt et al. (2014) found that self-control is unstable. Impulsivity and risk-seeking, both central to self-control theory, have distinct patterns of development. These authors believe that the varied developmental paths of impulsivity, risk-seeking, and self-control could have an impact on crime (Burt et al., 2014). Polakowski (1994) found that, while there was some support for low self-control being moderately stable over time, there is still noticeable, unexplained variation.

Numerous scholars have examined the effects of low self-control on criminal and deviant behavior (e.g. Burton, Evans, Cullen, Olivares, & Dunaway, 1999; Grasmick, Tittle, Bursik, & Arneklev, 1993; Keane, Maxim, & Teevan, 1993; Polakowski, 1994). Some studies, consistent with GTC's expectations, found that there was a significant relationship between low self-control and offending (Burton et al., 1999; Polakowski, 1994). For example, Polakowski (1994) found that low self-control significantly predicted future convictions within a London sample, even when controlling for prior convictions. Polakowski (1994) explains that the presence of low self-control may reflect weak bonds to family and other societal institutions. This lack of bonding or accountability that led initially to low self-control then leads to a lack of external or internal restraints on a person's behavior. Although this approach touches on theories of social bonds, it is rooted in self-control theory. It is the lack of self-control that causes people not to develop social bonds, and the subsequent lack of accountability for their behaviors leads to deviance. More

recently, research has found that there is a significant link between low self-control and a tendency to commit acts of cybercrime (Donner, Marcum, Jennings, Higgins, & Banfield, 2014). The relationship between low self-control and the relatively new crimes that fall under the realm of cybercrime supports the generality of self-control theory. According to Gottfredson and Hirschi (1990), all forms of imprudent behaviors, rather than just a specific type of crime, are products of low self-control.

Given the relationship between victimization and offending, there have also been recent efforts from researchers to study the effect of self-control on victimization (Franklin, 2011; Piquero, MacDonald, Dobrin, Daigle, & Cullen, 2005; Pratt et al., 2014; Schreck, Stewart, & Fisher, 2006). In general, these studies found that low self-control, even when controlling for past victimization and delinquency, is associated with victimization (Shreck et al., 2006), including homicide victimization (Piquero et al., 2005). Shreck et al. (2006) investigated the longitudinal association between self-control and victimization. The personality traits that make a person more likely to engage in criminal behavior, such as seeking risk and a preference for physical tasks, may also cause them to be surrounded by others with low self-control, which makes them a candidate for victimization.

Of particular interest to this study, there have been efforts to examine the effect of low self-control on imprudent or risky behaviors, such as smoking, drinking, and gambling (Arneklev, Grasmick, Tittle, & Bursik, 1993). These studies focused on a range of topics, including binge-drinking behaviors and alcohol-related risk factors (Ford & Blumenstein, 2013; Franklin, 2011; Piquero, Gibson, & Tibbetts, 2002). For example, Piquero et al. (2002) found that low self-control has a statistically significant, positive effect on binge drinking and alcohol-related behaviors.

Still other studies focused on risky behaviors like drinking and driving (Keane et al., 1993) or texting while driving (Quisenberry, 2014). Quisenberry (2014) found that increased levels of self-control led to less texting while driving. Further, increased self-control led to fewer incidents due to texting while driving. More relevant to this study's focus on the dangers associated with binge drinking, Keane et al. (1993) found that men in their sample of Ontario night-and-weekend drivers did not report higher perceived certainty of apprehension as a deterrent for driving under the influence. This shows that individuals willing to engage in risky behavior act impulsively, act on self-interest, and do not fully appreciate the long-term consequences of their actions.

This study hopes to add to the breadth of self-control theory literature by examining its effect on binge-drinking and perceptions of drinking compared to peers. Additionally, it examines the relationship between levels of self-control levels and age.

Binge Drinking

The behavior of interest in this study is binge drinking; Specifically, the study utilizes the CDC (2014) definition of binge drinking as, "a pattern of drinking that brings a person's blood alcohol content to 0.08 grams percent or above." The CDC projected that this blood alcohol level is reached when men consume five or more drinks or when women consume four or more drinks in roughly a two-hour period. This definition is also used by the National Institute on Alcohol Abuse and Alcoholism (2015) (hereafter, NIAAA), a part of the National Institutes of Health. The CDC (2014) identifies binge drinking as the most common pattern of excessive alcohol use in the United States, which highlights the importance of understanding the risk factors that may lead to binge drinking (e.g. Park, Kim, Gellis, Zaso, & Maisto, 2014; Patrick & Schulenberg, 2013) and harmful results of binge

drinking (e.g. Brewer & Swahn, 2005; Glasheen, Pemberton, Lipari, Copello, & Mattson, 2015; Piquero et al., 2002).

Binge drinking research has attempted to study the problematic behavior from multiple perspectives, hoping identify factors that increase a person's tendency toward binge drinking. Available research examined binge drinking in terms of gender differences (CDC, 2014; Choi & DiNitto, 2011; Pederson, 2013; Peralta, Steele, Notziger, & Rickles, 2010; Wechsler, Dowdall, Davenport, & Rimm, 1995), differences amongst those who are members or non-members of fraternities and sororities (Wechsler, Dowdall, Davenport, & Castillo, 1995), and differences amongst those participating in organized college athletics compared to those who do not (Green, Nelson, & Hartmann, 2014). Participation in college athletics is positively associated with binge drinking (Green et al., 2014). Further, former college athletes engage in higher levels of binge drinking even after their participation in college athletics is complete. Elevated levels of binge drinking amongst athletes and former athletes could be due to athletes seeking sensations or thrills similar to that of participating in athletics (Green et al., 2014).

Partially due to their stage in the life course and sampling convenience, college students are a very popular population for the study of binge drinking behaviors. Research on binge drinking amongst college students is of particular interest to this study. The Centers for Disease Control (2012) reports that college students commonly engage in binge drinking; around ninety percent of the alcohol consumed by youth under the age of 21 is in the form of binge drinks. The NIAAA (2015) corroborates these numbers, noting that about half of the college students who drink at all participate in binge drinking. Furthermore, binge drinking is likely to rise as a person enters his or her late teens and early twenties. Kypri, Cronin, and

Wright (2005) found that college students were 50-60% more likely to drink than non-students in the same age range (Kypri, Cronin, & Wright, 2005).

Not only are college students very likely to engage in binge drinking, they are also likely to feel long-term, detrimental effects of binge-drinking. Jennison (2004) found that binge drinking during college led to continued alcohol abuse up to a decade later. Piquero et al. (2002) observed a relationship between binge-drinking behavior and alcohol-related problems, such as being in trouble with the police, getting into fights, or missing school and work. Pederson (2013) surveyed college students and found that depression and school-related stress increase binge drinking. Additionally, the aforementioned emphasis on sororities, fraternities, and college athletics further highlights the role of college-related activities in binge-drinking behaviors.

Research focusing on college students also examines the relationships between binge drinking and the influence of peer groups. For example, higher levels of binge drinking are related to social or peer networks composed of heavy drinkers (Delucchi, Matzger, & Weisner, 2008). Additionally, students who did not regularly participate in binge drinking thought that other students also tried to avoid binge drinking (Miley & Frank, 2006). Further, groups known for binge-drinking tendencies (fraternities, college athletics teams) likely believe that other students drink at similar levels (Miley & Frank, 2006).

The NIAAA's (2015) discussion on the harmful effects of drinking focuses on 18 to 24-year-olds. They report that nearly 700,000 college students between the ages of 18 and 24 are assaulted each year by another student who has been drinking, and almost 100,000 college students between the ages of 18 and 24 are victims of alcohol-related sexual assaults each year (NIAAA, 2015). Additionally, the NIAAA (2015) finds that nearly 25 percent of

college students report academic consequences due to their own drinking behaviors. These academic shortcomings include missing class, doing poorly on exams, and receiving lower final grades.

Emerging Adulthood

The NIAAA's focus on students between the ages of 18 and 24, the immense amount of binge-drinking research focusing on the behavior of college students, and general questions regarding potential changes in self-control levels and risky behaviors are important for the current research. This study surveys college students due to their unique stage in the life course. The stage of interest, emerging adulthood, is a time of immense change and importance (Arnett, 2000). Arnett proposes that those from ages 18 to 25 are in a unique stage of development; they are no longer adolescents and are not yet young adults. Emerging adults have abandoned some of the dependence of adolescence but are not yet taking on the enduring responsibilities of full adulthood (Arnett, 2000, 2007). These individuals are exploring new possibilities in work and worldviews, sometimes utilizing a trial-and-error system to determine their own preferences (Arnett, 2000, 2007).

Arnett (2000) explains that several types of risky behavior peak during *emerging adulthood*, rather than during adolescence. This stage in the life-course aligns with the peak years (18-25) for unprotected sex, driving while intoxicated, and various types of substance abuse, including binge drinking. Emerging adults often engage in risky behavior as a part of identity exploration and a desire for novel experiences (Arnett, 2000, 2007). The median age of marriage is rising; and, after moving away from parents (and moving out of adolescence), emerging adults are free to engage in novel and risky behaviors before the roles of marriage and/or parenthood reduce those behaviors (Arnett, 2000). Of particular importance for this

study, the imprudent and risky behaviors that peak during emerging adulthood are similar to Gottfredson and Hirschi's (1990) conceptualization of behaviors analogous to criminal behaviors.

Researchers have studied the fairly new concept of emerging adulthood from life-course and risky-behavior perspectives. One of the most common approaches is to investigate the effect of adolescent tendencies (such as risk-seeking or substance abuse) on tendencies or behaviors throughout emerging adulthood (Chassin, Pitts, & Prost, 2002; Kort-Butler & Martin, 2015; Tucker, Ellickson, Orlando, Martino, & Klein, 2005). Given the uptick in risky behaviors during emerging adulthood (Arnett, 2000), alcohol use is also a popular topic of study in emerging-adulthood literature. Tucker et al. (2005) demonstrated that the transitional period of emerging adulthood is a period of vulnerability for binge drinking. Delucchi et al. (2008) found that alcohol consumption, after peaking early in this stage of the life course, stabilizes around age twenty-four. Those who were not early users and then began abusing substances during emerging adulthood were at relatively high risk for adverse outcomes, suggesting that prevention efforts are needed at multiple stages.

Present Study

While there are various ways to measure self-control, the scale developed by Grasmick et al. (1993) has been used as a standard measure of these self-control factors (Delisi, Hochstetler, & Murphy, 2003; Higgins, 2007; Pratt & Cullen, 2000). Arneklev et al. (1993) investigated the relationship between low self-control and imprudent behaviors such as smoking, gambling, or drinking and discovered that, while some aspects of the Grasmick et al. (1993) scale more directly predicted certain imprudent behaviors, the general measure of low self-control had a significant effect on imprudent behaviors. The measures of

preferring simple tasks and preferring physical activities to cognitive activities were not significant predictors of imprudent behaviors, while the measure of risk-seeking is a strong predictor of imprudent behaviors (Arneklev et al., 1993). The Grasmick et al. (1993) scale was scrutinized by Higgins (2007) utilizing fit models. He asserted that, though it has been generally accepted as a good measure of self-control, certain items on the scale do not fit when analyzed by the fit model. Higgins found that, according to the fit-model analysis, 16 of 24 measurement items *do* properly measure self-control (2007). These studies show that, while the Grasmick et al. (1993) scale needs work and is only a starting point when attempting to measure self-control, it is still widely used as a measure for self-control.

Piquero et al. (2002) found that low self-control is a significant predictor of binge drinking and alcohol-related problems, such as trouble with the police, drinking more than intended, getting into fights, finding it hard to stop drinking, or damaging chances for a raise or better job. Franklin (2011) found that low self-control is correlated with increased odds of alcohol-induced sexual assault victimization. Ford and Blumenstein (2013) found that low self-control was significantly correlated with binge drinking when students also reported greater opportunities for binge drinking.

The evidence provided both by government and academic research illustrates the detrimental effects of binge drinking and the need for further research on factors that increase the likelihood of binge drinking. Self-control is a relevant framework for further investigation of this issue, as Gottfredson and Hirschi (1990) posited that the traits that lead a person towards crime may also lead a person towards other risky, negative behaviors, such as binge drinking.

In addition to assessing the relationship between self-control and binge drinking, this study provides new research on the relationship between self-control and perceptions of drinking levels. This will heighten understanding of whether or not binge drinkers are *aware* of their behaviors. It will also provide information about the role of self-control in awareness of risky behaviors.

Finally, the suggestion that emerging adulthood is a transitional phase for both the tendency to seek risk and the vulnerability for risky behaviors has implications for Gottfredson and Hirschi's (1990) general theory of crime. This phase of trial-and error, change in behavior, and potential change in self-control is fitting for a study of college students going through such changes. Investigation of those in emerging adulthood means that this study provides new information regarding the differences between those entering emerging adulthood and those at the end of emerging adulthood, thus shedding more light on the stability of self-control. In sum, it is clear that further investigation of the relationships between self-control, binge drinking, and emerging adulthood is warranted and will help inform policy and programming decisions.

CHAPTER 3: METHODOLOGY

Online surveys were disseminated during the Fall semester of 2014 to one medium-sized university in the South. After being granted institutional review board approval, a list of 3,000 random emails was provided by the Registrar's office. An initial email informed the recipient about the study, its importance, and requested subsequent participation by the recipient. One week later, the first solicitation email was sent to the same 3,000 emails requesting participation in the survey. After one more week, a follow-up solicitation email was sent only to those who had not yet responded. Finally, a week after the first follow-up email, a final solicitation for participation was sent to the remaining non-responders. To review, the pattern of emails was as follows: week 1 - initial information/notification of upcoming email; week 2 - first email requesting participation; week 3 - second email requesting participation; week 4 - final email requesting participation. Participation in this survey was incentivized with a link to a separate survey to enter a raffle for a \$75 Visa gift card. This appears to have been a useful incentive, as 75 percent of those who participated in the survey entered the gift-card raffle.

The online survey was hosted by SurveyMonkey (Appendix A). Those choosing to participate in the survey copied and pasted a URL (from their email) into their web browser and were first taken to the informed consent page where they were again given information about the study and notified of its institutional review board approval. Potential participants

were given the options “Yes, I wish to continue,” and “No, I do not wish to continue.” If they chose to continue, they were directed to the survey.

Of the 3,000 solicitations, 482 students participated, providing a 16 percent response rate. The sample population, while not a precise match, is somewhat representative of the student population (Table 1). The percentages of freshmen and sophomores responding to the survey were lower than the percentages of freshmen and sophomores in the campus population, and the difference in those numbers may be explained by a higher percentage of graduate students participating in the survey. The sample population was 56.7 percent female and 32.1 percent male (11.3 percent did not respond to the gender inquiry). This is somewhat representative of the campus population, which is 53.3 percent male and 46.7 percent female. The sample population is similar to the campus population in terms of the percentage of females, but much different in terms of the percentage of males. It is important to note that, on both of these demographic factors, missing data could account for some of the lack of representativeness.

Research Questions and Measures

After a review of existing literature regarding self-control, binge drinking, and perceptions of peer drinking behaviors, two primary research questions were composed. The first question examines the relationship between self-control levels and binge-drinking behaviors. The second question examines the relationship between self-control levels and perception of drinking behaviors. The specific hypotheses are listed below:

Hypothesis 1 (H1): Those respondents with lower self-control levels will report more instances of self-reported binge drinking in a typical week.

Hypothesis 2 (H2): Those respondents with lower self-control levels will believe that they drink more than their peers.

Independent Variable

Self-control is measured utilizing the Grasmick scale (Appendix A, Question #2). This is borrowed from the work of Grasmick, Tittle, Bursik, and Ameklev (1993). This questionnaire is designed to test elements of self-control, such as impulsivity, preference of simple tasks, risk-seeking, preference of physical activity over mental activity, self-centeredness, and temper (Grasmick et al., 1993). This scale, despite recommendations from Higgins (2007) to alter certain aspects and measures, is a reliable and popular measure of self-control. Pratt (2014) found that the effect size of low self-control was not significantly different between similar studies that utilized Grasmick et al. (1993) scale and scales from other researchers. Two distinct variables were created from the same measurement: *self-control rating* (ratio-level data) and *self-control groupings* (groups derived from ratio-level rating data).

Self-control rating. The Grasmick et al. (1993) scale is a 24-question Likert scale. This scale, appearing in the survey as the first question after participants decide to participate by answering “Yes, I wish to continue,” requests that participants respond to statements by selecting one of four choices: strongly disagree, disagree, agree, or strongly agree.

The responses to these questions were then totaled together for each respondent to create a variable called *self-control rating*. This means that the minimum possible *self-control rating* is 24, and the maximum possible self-control rating is 96. It is important to note, however, that the self-control *level* is opposite of what the *rating* shows. The way the scale is designed, the maximum answer of 4 corresponds with the “strongly agree” option,

giving those who agree with the statements higher self-control ratings. This means that those with higher *self-control ratings* actually have lower self-control levels. This measure provided ratio-level data. The scale has been found to be reliable with a Chronbach Alpha score of 0.86.

Self-control grouping. To examine the differences across levels of self-control, responses to the self-control scale were divided into three separate *self-control groups*. This was done by dividing the ratio-level data from self-control ratings into equivalent groups: 24 to 47, 48 to 71, and 72 to 96. Again, given the nature of the scores, the 24 to 47 group represents *high* self-control (coded as 1), 48 to 71 represents *medium* self-control (coded as 2), and 72 to 96 represents *low* self-control (coded as 3). This was done to make the data appropriate for examining differences between demographic groups.

Dependent Variables

The dependent variables in this study were respondent-reported binge drinking behavior and perception of peer drinking habits. These create the ability to examine self-control's relationship with drinking habits and perceptions of peer drinking habits. It is important to note that abstainers were identified via a direction yes-or-no question of, "Do you drink?" prior to entering the self-reporting section of the survey. Those responding "no" to this question were taken (via an embedded skip pattern) to a question of their peers' typical drinking habits and then to demographics questions at the end of the survey.

Binge drinking. This study utilized the CDC (2014) definition of binge drinking. This definition states that, to "qualify as" binge drinking, males must consume five or more drinks and women must consume four or more drinks in roughly a two-hour period. The survey asked respondents to think about their typical week and report the number of drinks

they would likely have each day. A blank was provided for each day, and respondents filled in the blanks with a numerical value. This questionnaire strategy was borrowed from Doumas, McKinley, and Book (2009).

When the actual number of binge drinking sessions were counted, the gender difference in the threshold (four drinks for females, five drinks for males) for binge drinking was dropped. The reason was to include more of the responses (and not lose data from those respondents who did not answer the gender question). To avoid being *too* inclusive on the definition of binge drinking, the threshold was moved to 5+ drinks for all respondents. Future analyses incorporate this distinction.

Binge drinking sessions. This measure represents the total number of self-reported binge sessions in a typical week. For example, if someone reported having no drinks on a typical Sunday through Thursday, and 7 drinks on a typical Friday and Saturday, they have 2 binge sessions for the week. This provided ratio-level data for analyses.

Binge episode grouping.

Drinkers were placed into one of three groups: abstainers or non-binge drinkers (coded as 0), occasional binge drinkers (coded as 1), and frequent binge drinkers (coded as 2). Groupings were based on the ratio-level data regarding binge-drinking sessions. Abstainers and non-bingers are those who either answered no to the direct question regarding drinking or reported no binge sessions in a typical week. Occasional binge drinkers are those who reported 1 or 2 binge sessions in a typical week. Finally, frequent binge drinkers are those who reported 3 or more binge instances per week. This was done to make the data appropriate for examining differences between demographic groups.

Perception. This study was also interested in whether or not self-control levels (and, to a lesser extent, binge-drinking levels) were related to the perception of typical-college-student drinking levels and respondents' perception of their own drinking levels *compared to* peers.

Perception rating. To create this measure, the number of perceived *peer* binge-drinking sessions in a typical week (see Appendix A, questions 4 & 7) was subtracted from the number of *self-reported* binge-drinking sessions in a typical week (see Appendix A, question 5). If the difference was a positive number, that respondent believed that he or she drinks more than the typical college student. If the difference was a negative number, that respondent believes that he or she drinks less than the typical college student. Finally, if the difference was "0," the respondent believes that he or she drinks the same amount as the typical college student. This provided ratio-level data for analyses.

Perception groupings. In an effort to ensure reliability of perception measures, the survey incorporated the question, "How much do you feel you drink compared to average levels amongst peers?" (See Appendix A). This question had five possible responses, ranging from "Much less than peers" to "Much more than peers." While these are two different measures, they provided similar results. For instance, the first perception measure found that 60.5 percent of respondents believe they drink less than the typical college student, while the second perception measure (the Likert scale) found that 63.8 percent of respondents believe they drink less than their peers. It is important to note that these groupings were based on a question that utilized a Likert scale (Appendix A), not based on the ratio-level perception data.

Control Variables

This study also incorporated various demographic variables into analyses. Prior research, in an effort to examine new factors related to self-control and drinking behaviors, analyzed the roles of age, year in school, gender, grade point average (GPA), Greek-life participation, location of residence, and level of employment were included as other variables of interest. The role of age in the relationship between self-control and binge drinking is of considerable interest.

Age. Early-adulthood literature argue that age plays a vital role in changing both perception and behavior. Given the importance of age, it was addressed two different ways in this study. First, there was a direct question asking the participant's age. This was a continuous, ratio-level variable with a range of 17 years of age to 57 years of age. The population of interest, emerging adults (18 year-olds to 25 year-olds), comprised 90 percent of the study. There was also a question of the participant's year in school. This measure will serve as a proxy or secondary measure for age. It is important to note that this proxy for age may not work for schools with a heavy emphasis on non-traditional students. However, the school of interest to this study is composed mostly of "traditional" students, allowing year in school to act as a proxy for age. Freshmen were coded as 1, sophomores (as 2), juniors (as 3), seniors (as 4), graduate students (as 5), and "other" (as 6). The year-in-school variable was utilized in chi-square analyses for comparison of groups.

Other variables of interest. Based on self-control and binge-drinking research, this study also examines the roles of gender, grade point average, and Greek-life membership within the context of the main variables of interest. The following variables provided categorical data appropriate for comparing groups through chi-square analyses.

For the variable of gender, males were coded as 0, and females were coded as 1. Those confirming memberships in a university-affiliated sorority or fraternity were coded as 1, while those denying memberships were coded as 0. Because this survey was delivered in the Fall semester, the question inquiring about a respondent's GPA suggested that incoming freshmen report their high school GPA.

The study examined two other variables of interest: location of residence and level of employment. Location of residence was divided into two groups, either on-campus (coded as 1) or off-campus (coded as 0). Level of employment had three possible responses: unemployed, coded as 1, part-time, coded as 2, or full-time, coded as 3.

These control variables provide two different types of measurement for the important variable of age, and they allow for investigation of college-related activities, such as Greek-life participation. To reiterate, the first hypothesis expects respondents with lower levels of self-control to have more instances of self-reported binge drinking in a typical week. The second hypothesis expects respondents with lower levels of self-control to *think* that they drink more than their peers.

CHAPTER 4: FINDINGS

This study examined the relationships between low self-control, self-reported binge drinking, and perceptions of drinking levels compared to peers. It was hypothesized that those with low self-control will self-report more binge drinking sessions in a typical week. Additionally, it was hypothesized that those with low self-control will think that they drink more than their peers in a typical week. Finally, based on emerging adulthood literature (Arnett, 2000), this study wanted to examine differences between those in the beginning stages of emerging adulthood and those in the final stages of emerging adulthood. The findings regarding these hypotheses and other significant factors are presented in this chapter.

Hypothesis 1

The first hypothesis states that one should expect there to be a correlation between self-control and binge drinking. Those with lower levels of self-control are predicted to report more binge-drinking sessions throughout a typical week, and those with higher levels of self-control will report fewer binge drinking sessions throughout a typical week.

The results show that self-control rating is positively and significantly correlated with weekly binge-drinking instances (Table 2). The Pearson's correlation of 0.178 is significant at the 0.01 level, and leads to a rejection of the null hypothesis. The correlation that was predicted in *Hypothesis 1* is supported in the results. It is important to clarify what a positive correlation between these two variables means. The higher score on the measure of self-

control indicates a *lower* level of self-control. Therefore, the positive correlation shows that, as self-control rating increases (i.e. a respondent's self-reported self-control gets lower and lower), binge-drinking episodes in a typical week increase.

Chi-square tests were utilized to explore any significant differences between self-control groups and gender, year in school, Greek life, location-of-residence, level of employment, the aforementioned binge-drinking groupings, and perception of drinking levels compared to peers (Table 3). These variables are ratio-level; and, in order to measure group differences, the ratio-level variables of self-control and binge drinking sessions were transformed to be categorical, as well.

Amongst the number of significant relationships that emerged, the first to be discussed is gender (value = 6.337; $p = .042$). Slightly higher numbers of males reported medium self-control, while slightly higher numbers of females reported high self-control levels. Interestingly, very few total respondents (3) landed in the low self-control grouping. This is visually demonstrated in Figure 2.

A significant relationship was found between year in school and self-control grouping (value = 21.365; $p = .019$). Many more seniors and graduate students reported high levels of self-control, while freshmen, sophomores, and juniors were more likely report medium levels of self-control (Figure 1). Perhaps unsurprisingly, the only grouping with more people in the *high* self-control group than the *medium* self-control group is graduate students.

The third significant relationship to emerge was between binge grouping and self-control score (value = 10.359, $p = .035$). The group with the highest percentage of respondents in the high self-control group is the abstainer/non-binge group (Figure 3).

Interestingly, the people in the low self-control group (only 3 in total) all also landed in the abstainer or non-binge grouping, as shown in Figure 3.

Chi-square tests were also utilized to assess the significance of differences between binge-drinking and demographic groups of gender, year in school, Greek life, location of residence, level of employment, and the aforementioned grouping of perception of drinking levels compared to peers (Table 4). Similar to self-control, gender also had a significant relationship with binge-drinking grouping (value = 27.351, $p = .000$). A higher percentage of males appear in the occasional-binge group, while a higher percentage of females appear in the abstainers or non-binge group. A significant relationship was found between year in school and binge-drinking grouping, (value = 19.198, $p = .038$). A lower percentage of seniors and graduate students reported frequent binge drinking (Figure 4). A significant relationship was also found between level of employment and binge-drinking grouping, (value = 20.491, $p = .000$). The unemployed grouping had the highest number of frequent binge drinkers, while the group of full-time workers did not have a single person who qualified for the frequent binge drinking group (Figure 5).

Hypothesis 2

The second hypothesis states that one should expect a positive correlation between self-control rating and the measurement of perception. In other words, as self-control ratings go up, it is expected that people think they drink more than their peers. Given the measure of self-control for this study, this hypothesis predicts that people with *lower* self-control will believe that they drink more than their peers.

The results show that self-control rating is positively correlated with the measurement of perception (Table 5). The Pearson's correlation of 0.129 is significant at the 0.05 level,

and leads to a rejection of the null hypothesis. The correlation that was predicted in *Hypothesis 2* is therefore confirmed in the results. This means that people with lower self-control (i.e. a higher self-control score or rating) believe that they binge drink more in a typical week than their peers drink in a typical week. Given these results, it appears that those with low self-control not only drink more in a typical week than their peers, but they are conscious of their habits and realize that they are drinking more. On the other hand, those with high levels of self-control have fewer binge instances in a typical week and realize they drink less than their peers.

Chi-square tests are once again utilized to determine if, in terms of these five perception groupings, there are differences in the demographic groups of gender, year in school, Greek life, location of residence, and level of employment. The only significant relationship that emerged was with Greek-life participation and perception (value = 11.573; $p = .021$). Those participating in Greek life were slightly more likely to believe they drink much more than their peers, and slightly less likely to believe they drink much less than peers. (Figure 9).

Summary

The two main hypotheses are supported. Respondents with lower self-control levels self-reported more sessions of binge drinking in a typical week. Further, those with lower self-control will think that they drink more than their peers. In addition, age repeatedly emerged as a factor significantly related to self-control and binge drinking. Further elaboration on this relationship is found below. This elaboration is important, because it seems to support Burt et al. (2014) assertion that self-control may not be as stable as Gottfredson and Hirschi (1990) argued and suggests the importance of emerging adulthood

as a significant stage in the life course. If those at the beginning of the phase of emerging adulthood look different than those at the end of emerging adulthood, it shows that this phase of the life course may have implications for changes in self-control and problem behavior.

Relevance of Emerging Adulthood

Age and Self-Control

Table 2 indicates a significant negative correlation between age and self-control rating. That is, the older the respondent, the lower his or her self-control rating tends to be. In other words, older people reported higher levels of self-control. This correlation has a Pearson's correlation value of -0.151 and is significant at the 0.05 level. It is important to clarify that this finding does not suggest that self-control definitely improves as someone gets older. Without utilizing a pre- and post-test, changes over time cannot be assumed.

Age and Binge Drinking

On a related note, there was also a correlation measure between age and self-reported weekly binge instances. Table 2 indicates a Pearson's Correlation value of -0.198 that is significant at the 0.05 level, the measure shows that older people in the sample, in addition to having higher self-control, report fewer instances of binge drinking per week. Given the results of the first hypothesis, which showed that higher self-control is correlated with fewer instances of binge-drinking, this result is not entirely surprising. Older respondents were more likely to be in the "abstainer or non-binge" grouping, while younger respondents were more likely to be in the "occasional binge" grouping (Figure 10). This supports research that risky behaviors often decrease and then level off toward the end of the emerging adulthood phase (Arnett, 2000, 2007).

Age and Perception

Consistent with hypothesis 2, results indicate that those with high levels of self-control not only engage in less binge drinking, but might be planning to binge-drink less, as their perception shows that they believe they engage in binge drinking fewer times during a typical week. Interestingly, age is significantly (at 0.01 level) and negatively (Pearson's correlation: -0.151) correlated with the measure of perception. In terms of these measures, this means that older respondents were more likely to think that they drink less than their peers. This makes sense, because they typically are drinking less than their peers, but it may show that, as respondents get older, they make an effort toward healthier drinking behavior.

These findings indicate a difference between those at the beginning of emerging adulthood and the end of emerging adulthood. This is important for investigation of the stability of self-control and problem behaviors. However, it is important to note the possibility of inherent selection bias given this study's sample population. Those who enter college (typically at the beginning of emerging adulthood) with low self-control or higher levels of binge drinking may be less likely to complete college. Therefore, those who are still college students at the end of emerging adulthood may have higher levels of self-control than those who are no longer available for this convenience sample.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

The current research examined the relationship between Gottfredson and Hirschi's (1990) self-control theory, binge drinking behaviors, and perceptions of those behaviors amongst a sample of college students. Gottfredson and Hirschi (1990) presented two traits regarding self-control that are especially important when examining the results of this study. First, they posited that self-control is associated with crime or deviant behaviors. More specifically, they believe that these behaviors are a product of *low* self-control. Those with low self-control tend to be impulsive, risk-seeking, and short-sighted. The combination of these three traits increase the likelihood of opting for small, short-term benefits over long-term costs or consequences. Second, they stated that self-control levels are established at a young age and should remain stable throughout the life course.

The findings of this study suggest that low self-control is correlated with an increase in binge-drinking episodes during a typical week for college students and that individuals with low self-control tend to believe that they are drinking more than typical college students. These findings are consistent with Gottfredson and Hirschi's (1990) claim that low self-control is associated with behaviors analogous to crime. Further, the correlation between low self-control and apparent recognition by the individual that he or she is drinking more than peers supports Gottfredson and Hirschi's (1990) claim that self-control governs both acting on self-interest and taking advantage of opportunities to, as they put it, take advantage of opportunities to utilize force or fraud.

When Gottfredson and Hirschi (1990) explain the tendency to take advantage of opportunities, they initially refer to criminal behavior. However, they do explain that analogous behaviors have similar motivations. When the imprudent behavior of drinking is combined with low self-control and the tendency to take advantage of opportunities for that behavior, binge drinking (a problematic behavior) may be the result. In other words, drinking, while perhaps imprudent, is not necessarily damaging. However, when acceptable drinking is combined with low self-control and opportunity, binge drinking is more likely to occur. This study suggests that impulsivity, risk-seeking, and short-sightedness (i.e. low self-control) combine with opportunity to produce problematic behavior (i.e. binge drinking).

The correlation between low self-control and binge drinking is also interesting when one considers on self-interest. Those with low self-control in this study perceive that they are drinking more than typical college students. Perhaps due to their interest in having fun and partying, they accept the risks associated with binge drinking and rationalize the behavior through short-term rewards or enjoyment. Those with high self-control levels, while perhaps acknowledging the enjoyment of partying and binge drinking, may have reached a point where long-term considerations finally outweighed short-term rewards. It would be interesting to examine the motivations behind decreased binge-drinking behavior amongst those with higher self-control. It could be argued that those with high self-control levels are also motivated by their own self-interest; they simply have different interests.

A particularly intriguing finding of this study is that higher levels of self-control are found amongst the older participants. It is important to note that, without measures of self-control from another point in a particular subject's life, these findings do not show that self-control increases with age. It simply shows that those reporting higher self-control levels are

likely older, while those reporting low self-control are likely younger. Looking deeper into age as an important factor, one finds that older respondents report lower levels of binge drinking, while younger respondents report higher levels of binge drinking.

These results may call into some question Gottfredson and Hirschi's (1990) claims regarding the establishment and stability of self-control. Given that older respondents are more likely to report higher levels of self-control and more likely to report lower levels of binge drinking, it is possible, and perhaps reasonable, to infer that age plays an important role in the development of self-control, risk-aversion, and logical or rational decision-making.

Arnett (2000) explained emerging adulthood as a stage in the life course that demands more attention. Prior to his emphasis on this stage, leaving adolescence and entering adulthood was viewed as a fairly quick transition. The logical next step after leaving parental constraints was to find a companion and begin a steady career. Arnett's (2000) assertion that the span from 18 years of age to 25 years of age is worthy of its own label and research, and it has been discovered that the stage of emerging adulthood is rife with developmental changes that are essential to developing an identity as an adult. Therefore, despite Gottfredson and Hirschi's (1990) insistence that self-control is a stable trait, it should not be entirely surprising if a person's self-control level, or pursuit of risky behaviors, changes.

This possibility of unstable self-control levels is supported by Burt et al. (2014). This could mean that, while parenting has an immense effect on the behavior of a child, growth and change in other stages of the life course (those with less parental involvement) are possible, perhaps even likely. Novel experiences, knowledge, and priorities may play a role in alerting people to their own deviant behavior, and feedback or consequences may help

those people police their own behaviors that went unnoticed or unpunished in an earlier stage of the life course.

These discoveries and possibilities provide universities with evidence of college student behavior, hopefully leading to more-informed policies or programs. One recommendation, stemming partially from Arnett's (2000) life-course perspective, is to provide programming that focuses on binge-drinking behaviors more often than it is currently provided. If universities target freshmen orientation or freshmen dormitories as a one-time target, programs may not provide much benefit. Given the variety of factors pulling and pushing emerging adults in new directions, it might be helpful for younger people with lower self-control to hear about the detrimental effects of binge drinking more than once. The desire to find a new social group may make it easy to ignore the warnings provided at orientation.

Another recommendation is to capitalize on the experience of students who have higher levels of self-control and lower levels of binge drinking by increasing opportunities for mentoring and advocacy in orientation and dormitory settings. These older students could share details about their path to short- and long-term benefits versus short- and long-term costs. Making younger students with lower self-control more aware of how binge drinking might affect their coursework and, in turn, their career path might cause them to value self-control at a younger age.

Emerging adults learn through experience and feedback, so prevention and intervention programs can only reduce risky behaviors to a certain extent. The goal is not even necessarily complete prevention of these behaviors. However, goals should make students more aware of the choices they are making, more aware of the potential

consequences, and more aware of why they might be making these choices. Additionally, a goal should be to lower the age of the high self-control group. This study did not provide evidence of change over time, but it did find that older students have higher self-control. Given these goals, further research should focus on the effect that self-control and binge drinking may have on criminal victimization. This will provide more information about the behavior of college students and emerging adults, while simultaneously providing more evidence about the risks associated with binge drinking. Universities also must make sure to evaluate and assess the progress and performance of new programs. A program emphasizing more information sessions for incoming freshmen needs to investigate whether the program affects the behaviors of young students, allowing for constant improvement in research and programming.

The strengths of this study include the percentage (> 90%) of emerging adults, the population of interest, in the study. This percentage provides a good representation of emerging adults attending a medium-sized university in the southern United States. Additionally, this study focuses on a typical week of drinking behavior, rather than a questionnaire about behavior in the last 30 days, where memory might affect results. Drinking behaviors in a typical week focus on a pattern of behavior for each respondent.

Amongst this study's weaknesses is its cross-sectional nature. Additionally, the study would benefit from clarification between "peer" drinking behaviors and "typical college student" drinking behaviors. Finally, the survey instrument utilized some questions that were not used in the analyses. Better focus in the survey instrument could increase the likelihood of answers on all questions, including demographic questions at the end of the survey.

Future studies should attempt to incorporate pre- and post-testing of self-control and drinking, perhaps testing students when they enroll and again when they apply for graduation. Future research should also further emphasize the role of gender, and a more focused survey instrument could help with focus on that demographic factor. Finally, future research could inquire about how a person's drinking behavior has changed since a different stage in his or her life, and ask for elaboration on what ignited such changes.

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Appendix A: Survey Instrument in SurveyMonkey

1. You are invited to participate in a research study conducted at Appalachian State University. This study has been approved by the University's Institutional Review Board for Human Subjects (IRB # 14-0297). The purpose of this research is to further investigate drinking behaviors amongst college students, perception of one's own drinking levels, and how these factors may interact and lead to victimization.

You will be asked to complete a brief online survey that should take between 10 and 15 minutes. The survey focuses on your typical drinking behaviors, the drinking behavior of typical college students, occurrences of victimization while or shortly after consuming alcohol, and how you view your drinking habits compared with the typical college student. To ensure your comfort and privacy while taking the survey, it may be best to complete it in a private environment.

After completing the survey, you may provide your name and email address if you wish to be provided the chance to win the \$75 Visa gift card. Please note that no participant is required to enter the drawing or provide any contact information upon completion of the survey. Your chance of winning depends on the number of participants who chose to enter.

All survey responses you provide for this study will be anonymous. That means that no one, including the members of the research team, will know that any information given came from you. This same anonymity applies to those who wish to enter the drawing, as the contact information will be collected separately, after the responses to the survey. Additionally, your information will be combined with information from other people taking part in the study. When we analyze the data to write up the study and share it with other researchers, we will write about the combined information, not anyone's specific responses.

By clicking "Yes" below, you acknowledge that you have read and understand the following:

- Your participation in this survey is entirely voluntary. You may withdraw and discontinue participation in the project at any time, and your refusal to participate or continue will not result in any penalty.
- To the best of our knowledge, the risk of harm and discomfort from participating in this study is the same you could experience in everyday life. You may feel some discomforts while completing the survey, including the possibility of reliving stressful instances of victimization and admitting to illegal behavior (e.g. underage drinking).
- There may not be immediate, personal benefits gained from your experience in this study, but the knowledge gained through analysis will help others in the future.
- You have given consent to be a subject of this research.

The people conducting this study will be available now and in the future to answer any questions regarding the research. If at any time you have questions about the research, you may contact Daniel Baker at bakerdb@appstate.edu or Dr. Tammatha Clodfelter at clodfelterta@appstate.edu. If you have questions about your rights as a research participant, contact the Appalachian Institutional Review Board Administrator at 828-262-2692 (days), through email at irb@appstate.edu, or at Appalachian State University, Office of Research and Sponsored Programs, IRB Administrator, Boone, NC, 28605.

This research project has been approved, as required, by the Institutional Review Board of Appalachian State. This study was approved on August 21, 2014. This approval will expire on August 20, 2015 unless the IRB renews the approval of this research.

- Yes, I wish to continue
- No, I do not wish to continue

Next

2. Evaluate the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I often act on the spur of the moment without stopping to think.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not devote much thought and effort to preparing for the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often do what brings me pleasure here and now, even at the cost of some distant goal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm more concerned with what happens to me in the short-run than in the long-run.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I frequently try to avoid projects that I know will be difficult.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When things get complicated, I tend to quit or withdraw.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The things in life that are easiest to do bring me the most pleasure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I dislike really hard tasks that stretch my abilities to the limit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excitement and adventure are more important than security.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes find it exciting to do things for which I might get into trouble.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sometimes I will take a risk for the fun of it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to test myself every now and then by doing something a little risky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I had a choice, I would almost always rather do something physical than something mental.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree	Disagree	Agree	Strongly Agree
I almost always feel better when I am on the move than when I am sitting and thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to get out and do things more than I like to read or contemplate ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seem to have more energy and a greater need for activity than most other people my age.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to look out for myself first, even if it means making things harder for other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will try to get the things I want even when I know it's causing problems for other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm not very sympathetic to other people when they are having problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If things I do upset people, it's their problem not mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I lose my temper easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm really angry, other people better stay away from me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Often, when I'm angry at people I feel more like hurting them than talking to them about why I am angry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have a serious disagreement with someone, it's usually hard for me to talk calmly about it without getting upset.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Do you drink alcohol?

Yes

No

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4. During a typical week, please write the number of drinks that *atypical college student* would probably have each day:

Monday	<input type="text"/>
Tuesday	<input type="text"/>
Wednesday	<input type="text"/>
Thursday	<input type="text"/>
Friday	<input type="text"/>
Saturday	<input type="text"/>
Sunday	<input type="text"/>

[Prev](#) [Next](#)

5. During a typical week, please write the number of drinks you would probably have each day:

Monday	<input type="text"/>
Tuesday	<input type="text"/>
Wednesday	<input type="text"/>
Thursday	<input type="text"/>
Friday	<input type="text"/>
Saturday	<input type="text"/>
Sunday	<input type="text"/>

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6. During a typical week, please select the box of the *highest number* of drinks you will consume

	0	1	2	3	4	5+
Monday	<input type="radio"/>					
Tuesday	<input type="radio"/>					
Wednesday	<input type="radio"/>					
Thursday	<input type="radio"/>					
Friday	<input type="radio"/>					
Saturday	<input type="radio"/>					
Sunday	<input type="radio"/>					

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7. During a typical week, please write the number of drinks that *atypical college student* would probably have each day:

Monday	<input type="text"/>
Tuesday	<input type="text"/>
Wednesday	<input type="text"/>
Thursday	<input type="text"/>
Friday	<input type="text"/>
Saturday	<input type="text"/>
Sunday	<input type="text"/>

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8. How much do you feel you drink compared to average levels amongst peers?

Much less than peers Less than peers Equal to peers More than peers Much more than peers

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12. Age (write number)

13. Gender

- Male
 Female

14. Year in school (choose one)

- Freshman
 Sophomore
 Junior
 Senior
 Graduate
 Other

15. Major (Write in blank. If undecided, write undecided):

16. Current GPA (If freshman, please provide High School GPA) (write number):

17. Are you a member of an ASU-affiliated sorority or fraternity?

- Yes
 No

18. Location of residence

- On-campus
 Off-campus

19. Employment Status

- Full-time
 Part-time
 Not employed

Thank you for your interest in this study. If you wish to participate at a later time, please click on the link provided in the email you received.

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Your participation in this study is now complete. The research extends sincere Thank Yous for participating in this study.

If you wish to enter the drawing for a chance to win a \$75 Visa Gift Card, please copy and paste the secured link into your browser. This link will route you to another survey that cannot connect your contact information with your responses.

<https://www.surveymonkey.com/s/RJMS82L>

Prev Done

Table 2. Correlations Table: Self-Control and Binge Drinking

		Self-Control Rating	Weekly Binge Sessions	Age	GPA
Self-Control Rating	<i>Pearson C.</i>	1	.178**	-.151**	-.123*
	<i>Sig. (2-tailed)</i>		.002	.002	.012
	<i>N</i>	432	312	423	420
Weekly Binge Sessions	<i>Pearson C.</i>	.178**	1	-.198***	-.148*
	<i>Sig. (2-tailed)</i>	.002		.000	.010
	<i>N</i>	312	314	306	306
Age	<i>Pearson C.</i>	-.151**	-.198***	1	.001
	<i>Sig. (2-tailed)</i>	.002	.000		.990
	<i>N</i>	423	306	423	416
GPA	<i>Pearson C.</i>	-.123*	-.148*	.001	1
	<i>Sig. (2-tailed)</i>	.012	.010	.990	
	<i>N</i>	420	306	416	420

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

Table 3. Chi-Square: Self-Control Grouping

	High Self-Control		Med. Self-Control		Low Self-Control		Chi-Square	p.
	N	(%)	N	(%)	N	(%)		
Gender (A)							6.337	.042**
Male	47	30.5	105	68.2	2	1.3		
Female	114	41.9	157	57.7	1	0.7		
Year in School (B)							21.365	.019**
Freshman	29	34.5	55	65.5	0	0		
Sophomore	19	29.2	46	70.8	0	0		
Junior	35	34.0	65	63.1	3	2.9		
Senior	57	44.2	72	55.8	0	0		
Graduate	21	51.2	20	48.8	0	0		
Other	0	0	6	100	0	0		
Greek Life (C)							2.438	.296
Yes	17	29.8	40	70.2	0	0		
No	143	39.2	219	60.0	3	0.8		
Residence (D)							0.610	.737
On-Campus	54	35.3	98	64.1	3	0.7		
Off-Campus	107	39.1	165	60.2	2	0.7		
Employment (E)							5.455	.244
Unemployed	73	36.1	127	62.9	2	1.0		
Part-time	67	37.0	114	63.0	0	0		
Full-time	20	47.6	21	50.0	1	2.4		
Binge Grouping (F)							10.359	.035**
Abstainer / Nonbinge	77	39.9	113	58.5	3	1.6		
Occasional Binge	25	26.0	71	74.0	0	0		
Frequent Binge	5	20.0	20	80.0	0	0		
Perception v. Peers (G)							11.209	.190
Drink much less than peers	25	44.6	31	55.4	0	0		
Drink less than peers	53	36.6	89	61.4	3	2.1		
Drink same amount as peers	24	28.2	61	71.8	0	0		
Drink more than peers	6	23.1	20	76.9	0	0		
Drink much more than peers	0	0	3	100	0	0		

* **P ≤ 0.05**

** **P ≤ 0.01**

*** **P ≤ 0.001**

Populations within Various Groups

A: n = 426; **B:** n = 428; **C:** n = 422; **D:** n = 427; **E:** n = 425; **F:** n = 314; **G:** n = 315

Table 4. Chi-Square: Binge-Drinking Grouping

	Abstainers/Non-Binge		Occasional Binge		Frequent Binge		Chi-Square ^a	p.
	N	(%)	N	(%)	N	(%)		
Gender (A)							27.381	0.00***
Male	47	42.7	53	48.2	10	9.1		
Female	144	72.0	42	21.0	14	7.0		
Year (B)							19.198	.038*
Freshmen	26	52.0	19	38.0	5	10.0		
Sophomore	20	47.6	18	42.9	4	9.5		
Junior	40	58.8	20	29.4	8	11.8		
Senior	71	64.0	34	30.6	6	5.4		
Graduate	30	88.2	2	5.9	2	5.9		
Other	4	66.7	2	33.3	0	0		
Greek Life (C)							5.299	.071
Yes	27	55.1	14	28.6	8	16.3		
No	163	62.9	79	30.5	17	6.6		
Residence (D)							0.562	.755
On-Campus	59	64.1	27	29.3	6	6.5		
Off-Campus	132	60.6	67	30.7	19	8.7		
Employment (E)							20.491	.000***
Unemployed	65	50.4	48	37.2	16	12.4		
Part-time	91	64.1	42	29.6	9	6.3		
Full-time	33	89.2	4	10.8	0	0		
Perception v. Peers (F)							84.218	.000***
Drink much less than peers	51	92.7	4	7.3	0	0		
Drink less than peers	103	71.0	38	26.2	4	2.8		
Drink same amount as peers	32	38.1	39	46.4	13	15.5		
Drink more than peers	6	23.1	14	53.8	6	23.1		
Drink much more than peers	0	0	1	33.3	2	66.7		

* **P ≤ 0.05**

** **P ≤ 0.01**

*** **P ≤ 0.001**

Populations within Various Groups

A: n = 310; **B:** n = 311; **C:** n = 308; **D:** n = 310; **E:** n = 308; **F:** n = 313

Table 5. Correlations Table: Self-Control and Perception

		Self-Control Rating	Perception	Age	GPA
Self-Control Rating	<i>Pearson C.</i>	1	.129*	-.151**	-.123*
	<i>Sig. (2-tailed)</i>		.022	.002	.012
	<i>N</i>	432	314	423	420
Perception	<i>Pearson C.</i>	.129*	1	-.151**	-.148*
	<i>Sig. (2-tailed)</i>	.022		.008	.010
	<i>N</i>	314	314	306	306
Age	<i>Pearson C.</i>	-.151**	-.151**	1	.001
	<i>Sig. (2-tailed)</i>	.002	.008		.990
	<i>N</i>	423	306	423	416
GPA	<i>Pearson C.</i>	-.123*	-.148*	.001	1
	<i>Sig. (2-tailed)</i>	.012	.010	.990	
	<i>N</i>	420	306	416	420

* **p ≤ 0.05**
 ** **p ≤ 0.01**
 *** **p ≤ 0.001**

Table 6. Chi-Squares: Perception Grouping

	Much Less than Peers		Less than Peers		Same as Peers		More than Peers		Much More than Peers		Chi-Square	p.
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)		
Gender (A)											7.673	.104
Male	16	14.3	47	42.0	33	29.5	15	13.4	1	0.9		
Female	39	19.6	97	48.7	50	25.1	11	5.5	3	1.0		
Year (B)												
Freshmen	5	10.0	26	52.0	15	30.0	4	8.0	0	0	24.392	.226
Sophomore	10	23.8	14	33.3	12	28.6	6	14.3	0	0		
Junior	14	20.6	33	48.5	16	23.5	5	7.4	0	0		
Senior	23	20.7	53	47.7	23	20.7	10	9.0	0	0		
Graduate	2	5.7	16	45.7	16	45.7	0	0	2	1.8		
Other	1	16.7	2	33.3	2	33.3	1	16.7	0	0		
Greek Life (C)											11.573	.021*
Yes	4	8.2	29	59.2	10	20.4	4	8.2	2	4.1		
No	51	19.6	115	44.2	71	27.3	22	8.5	1	0.4		
Residence (D)											1.902	.754
On-Campus	18	19.6	44	47.8	23	25.0	7	7.6	0	0		
Off-Campus	37	16.9	99	45.2	61	27.9	19	8.7	3	1.4		
Employment (E)											7.385	.496
Unemployed	18	14.0	58	45.0	41	31.8	11	8.5	1	0.8		
Part-time	29	20.4	67	47.2	31	21.8	14	9.9	1	0.7		
Full-time	7	18.4	18	47.4	11	28.9	1	2.6	1	2.6		

* **P ≤ 0.05**

** **P ≤ 0.01**

*** **P ≤ 0.001**

Populations within Various Groups

A: n = 311; **B:** n = 312; **C:** n = 309; **D:** n = 311; **E:** n = 309

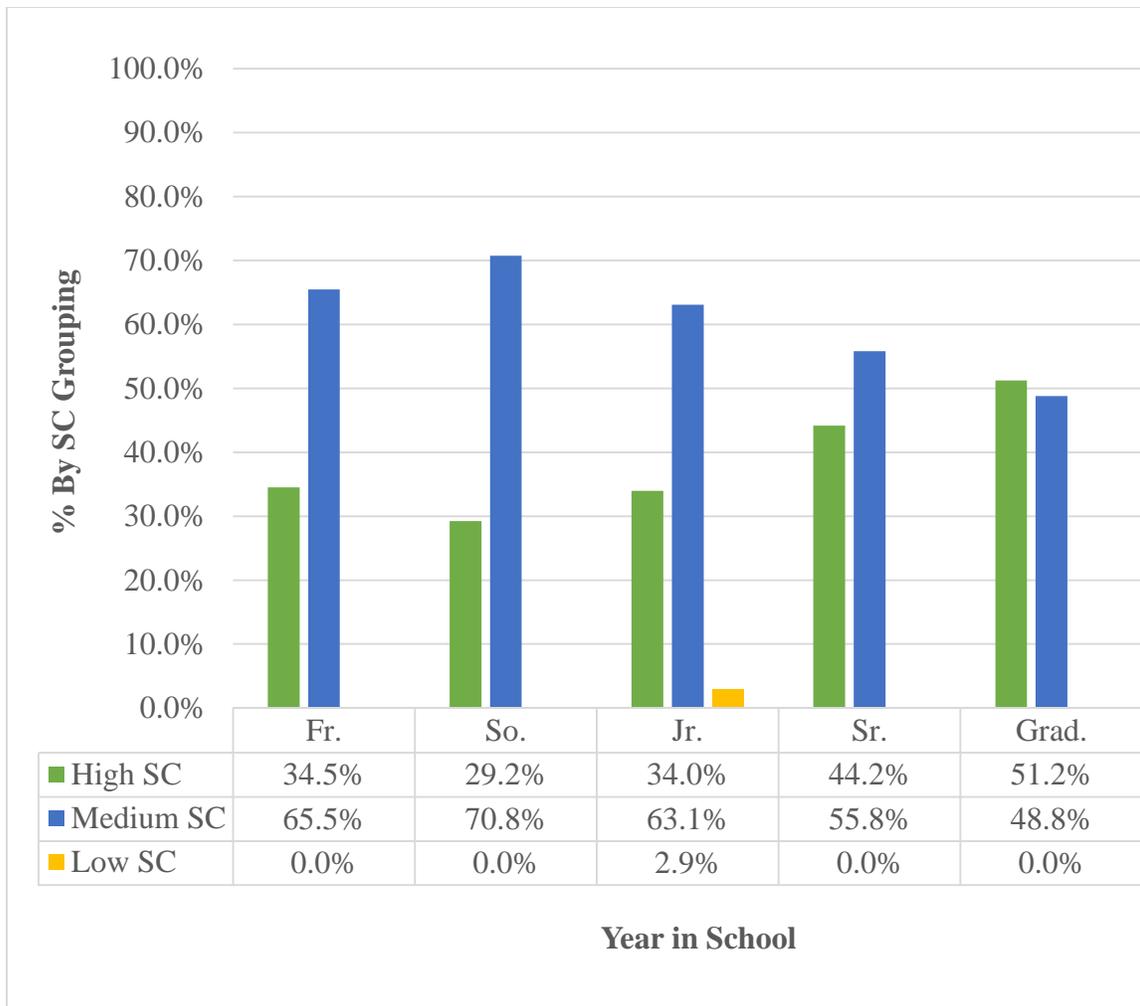


Figure 1: Self-Control and Year in School

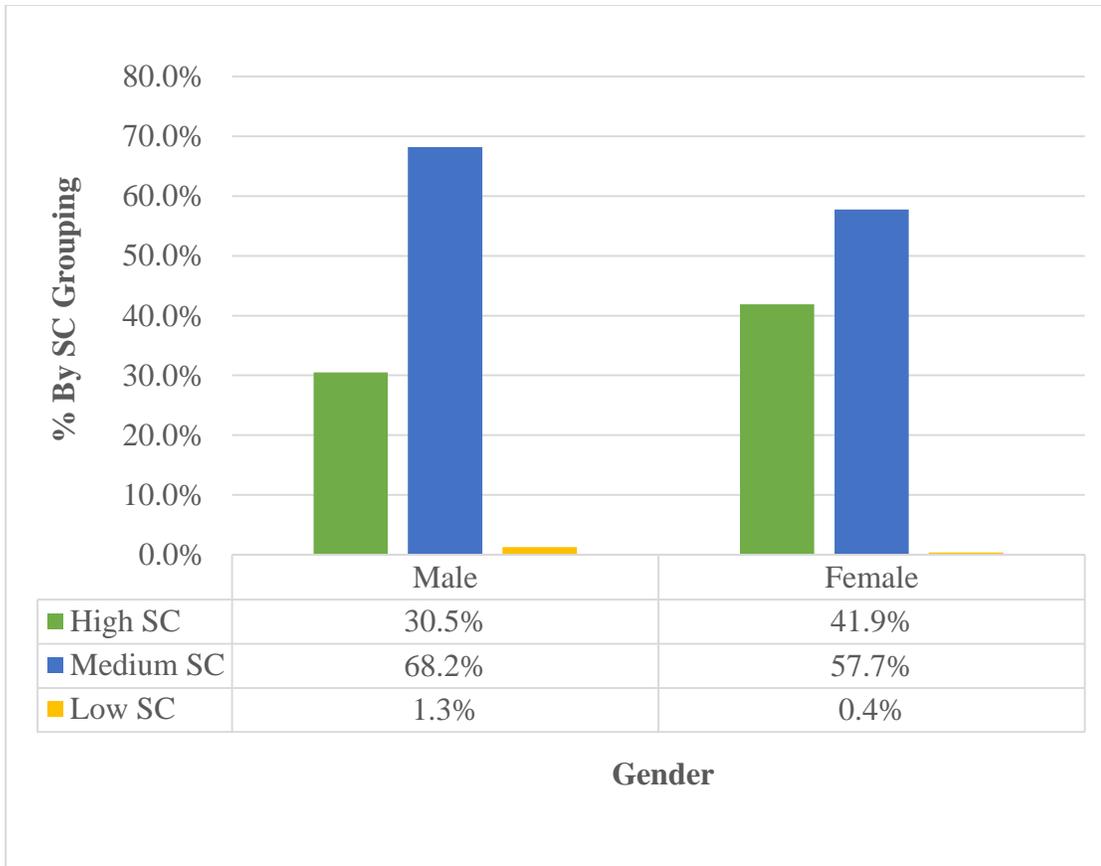


Figure 2: Self-Control and Gender

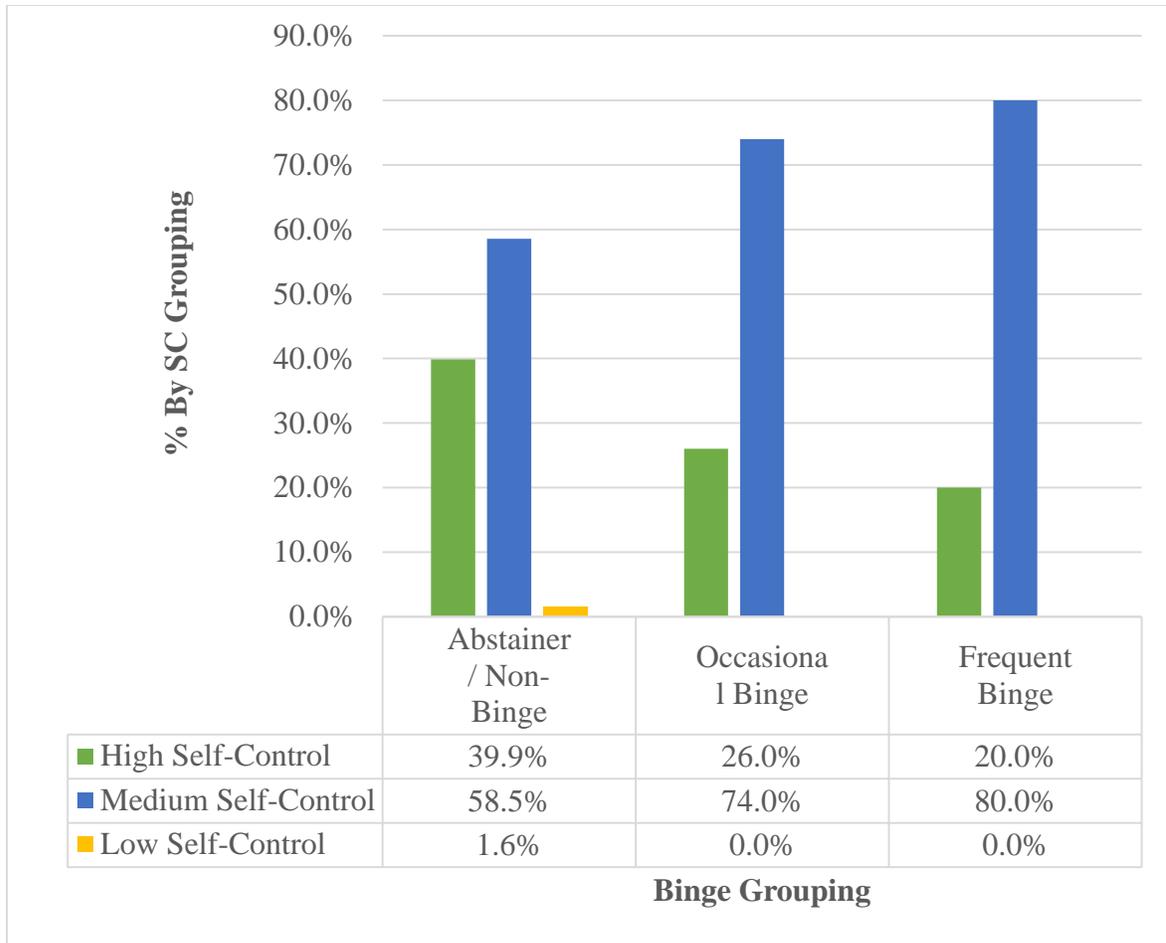


Figure 3: Self-Control and Binge Drinking

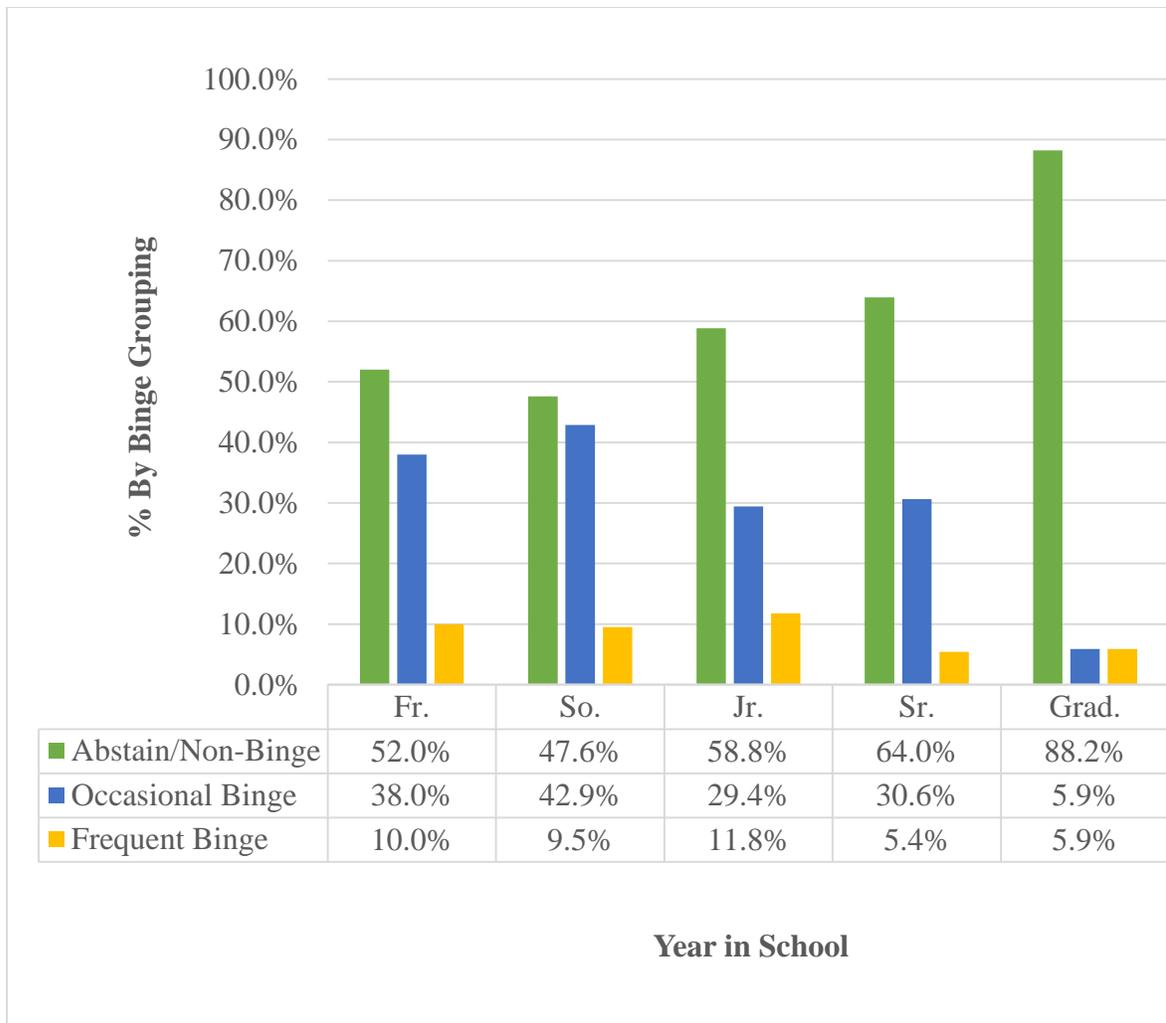


Figure 4: Binge Drinking and Year in School

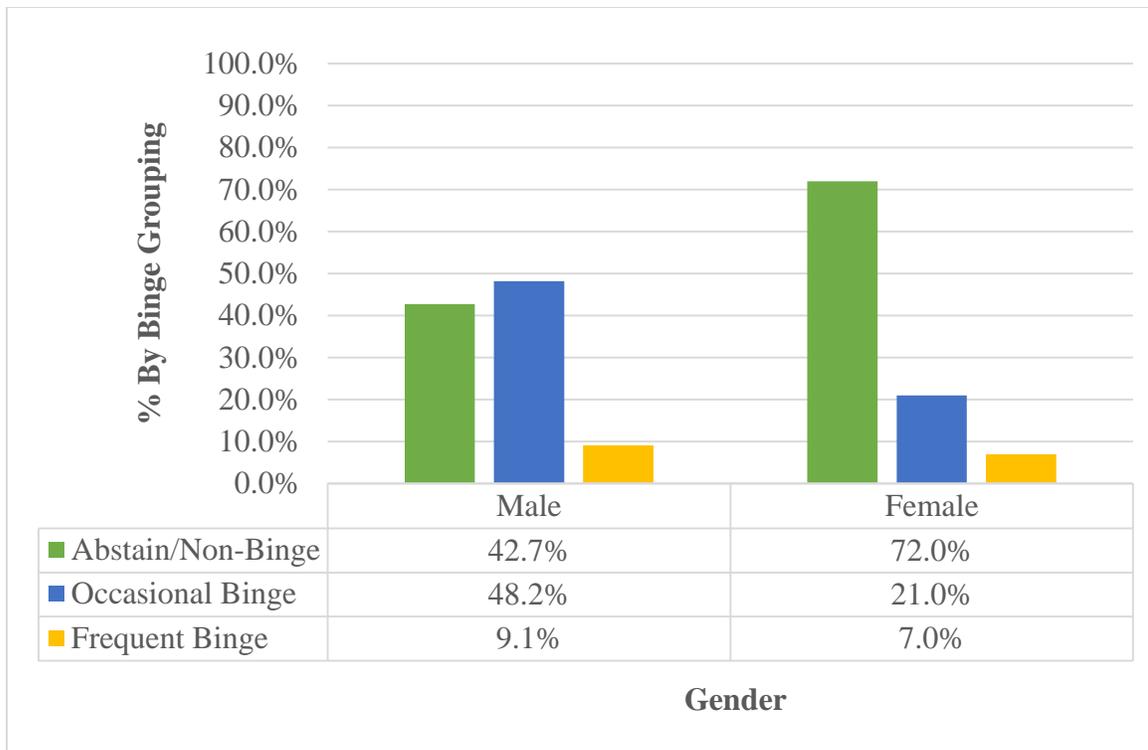


Figure 5: Binge Drinking and Gender

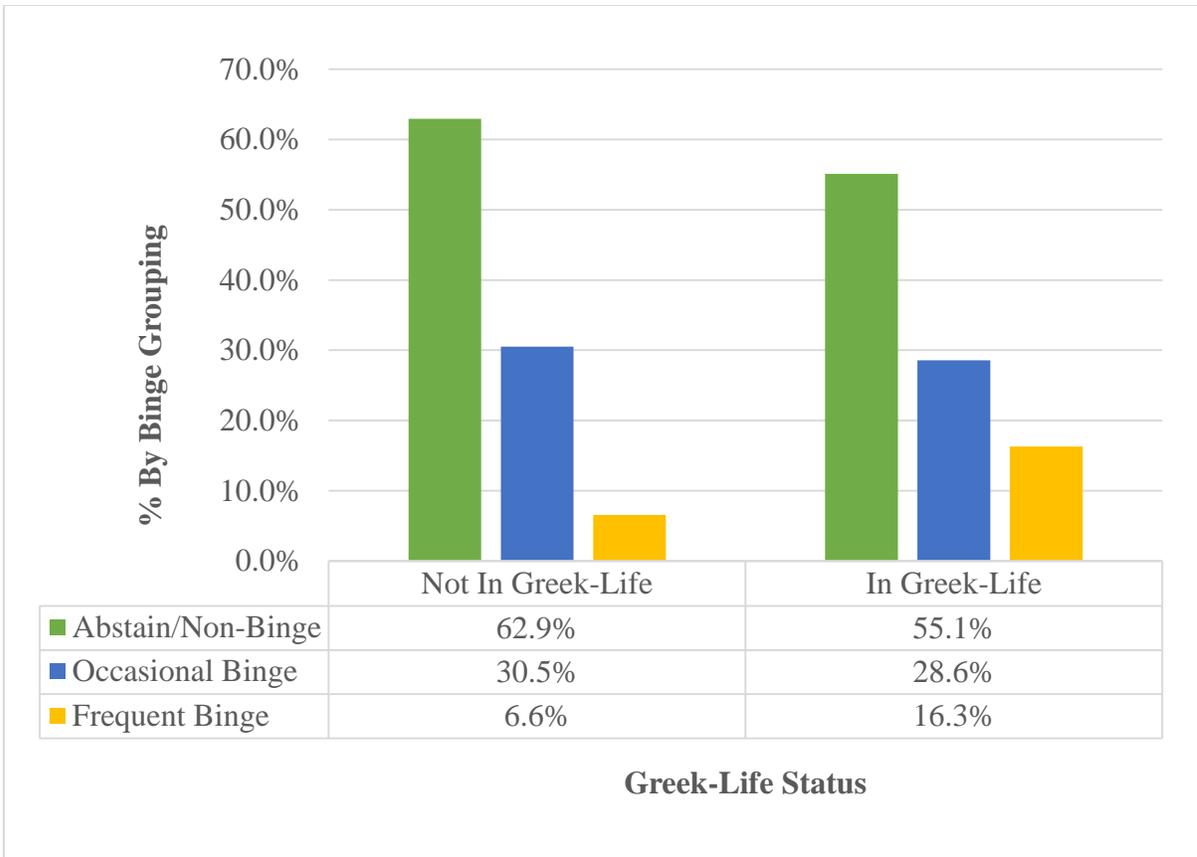


Figure 6: Binge Drinking and Greek Life

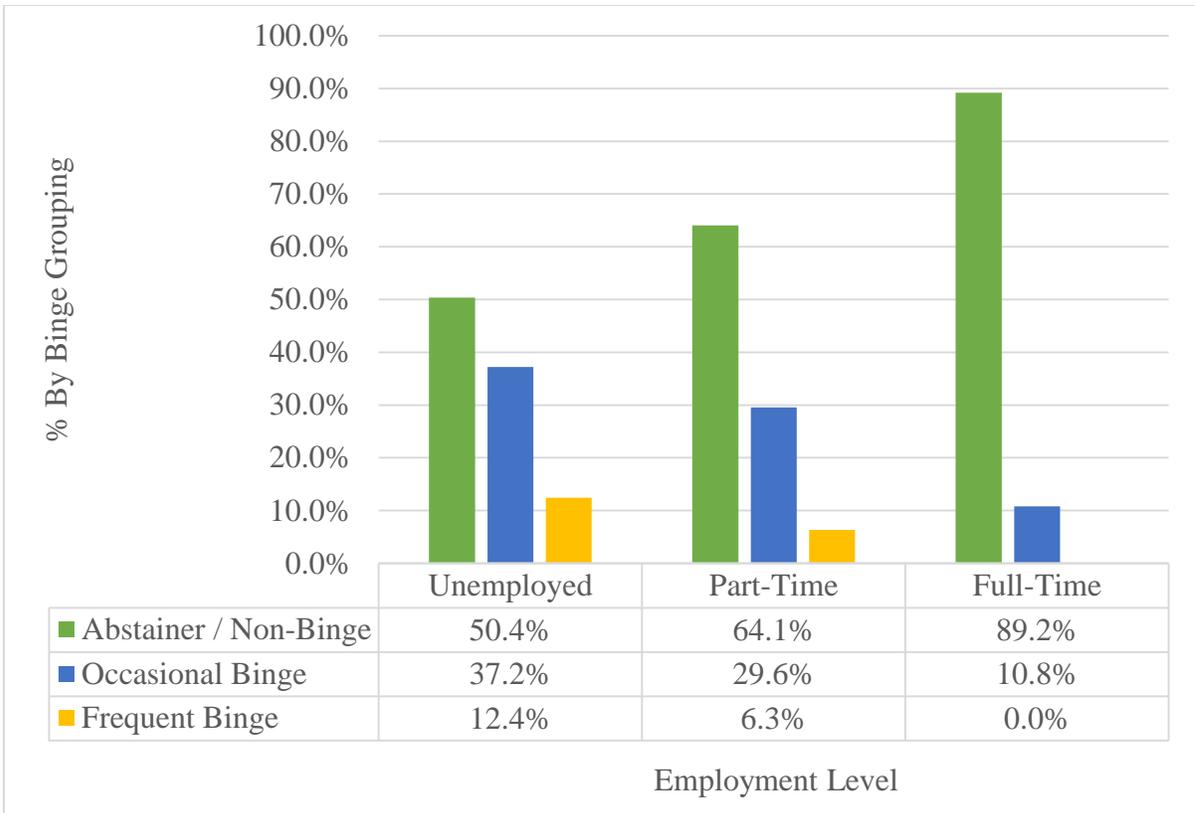


Figure 7: Binge Drinking and Employment Level

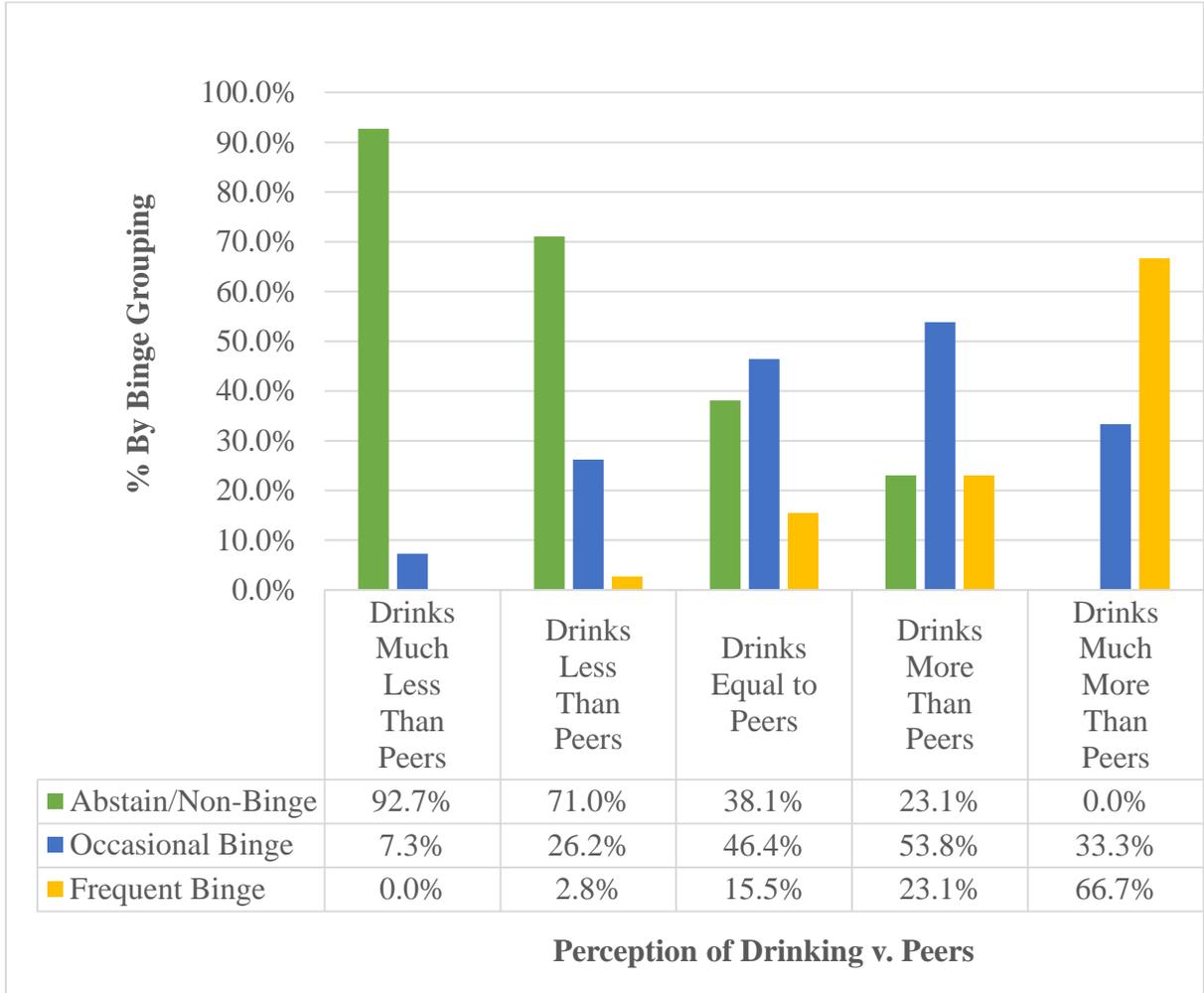


Figure 8: Binge Drinking and Perception

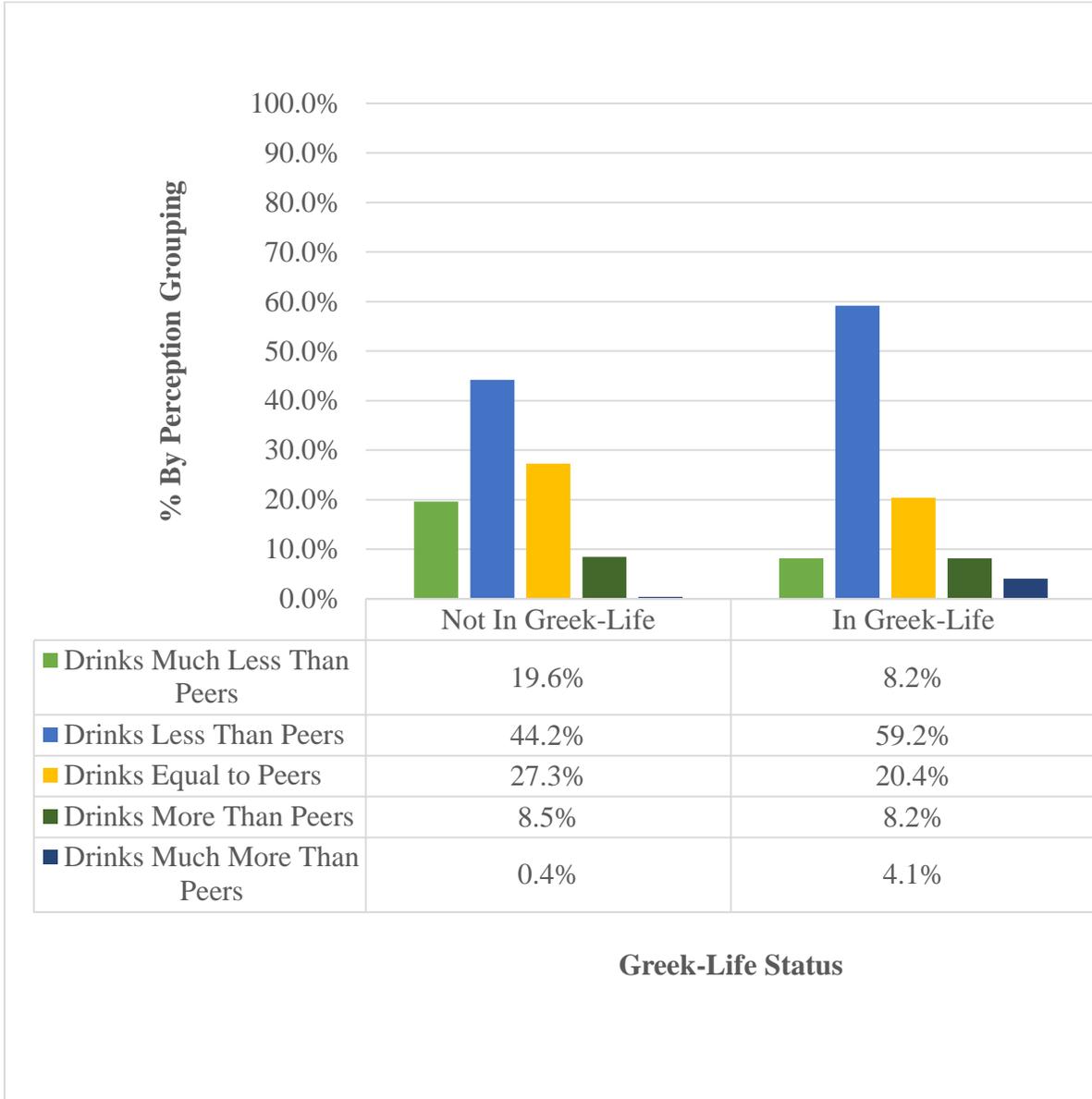


Figure 9: Perception and Greek Life

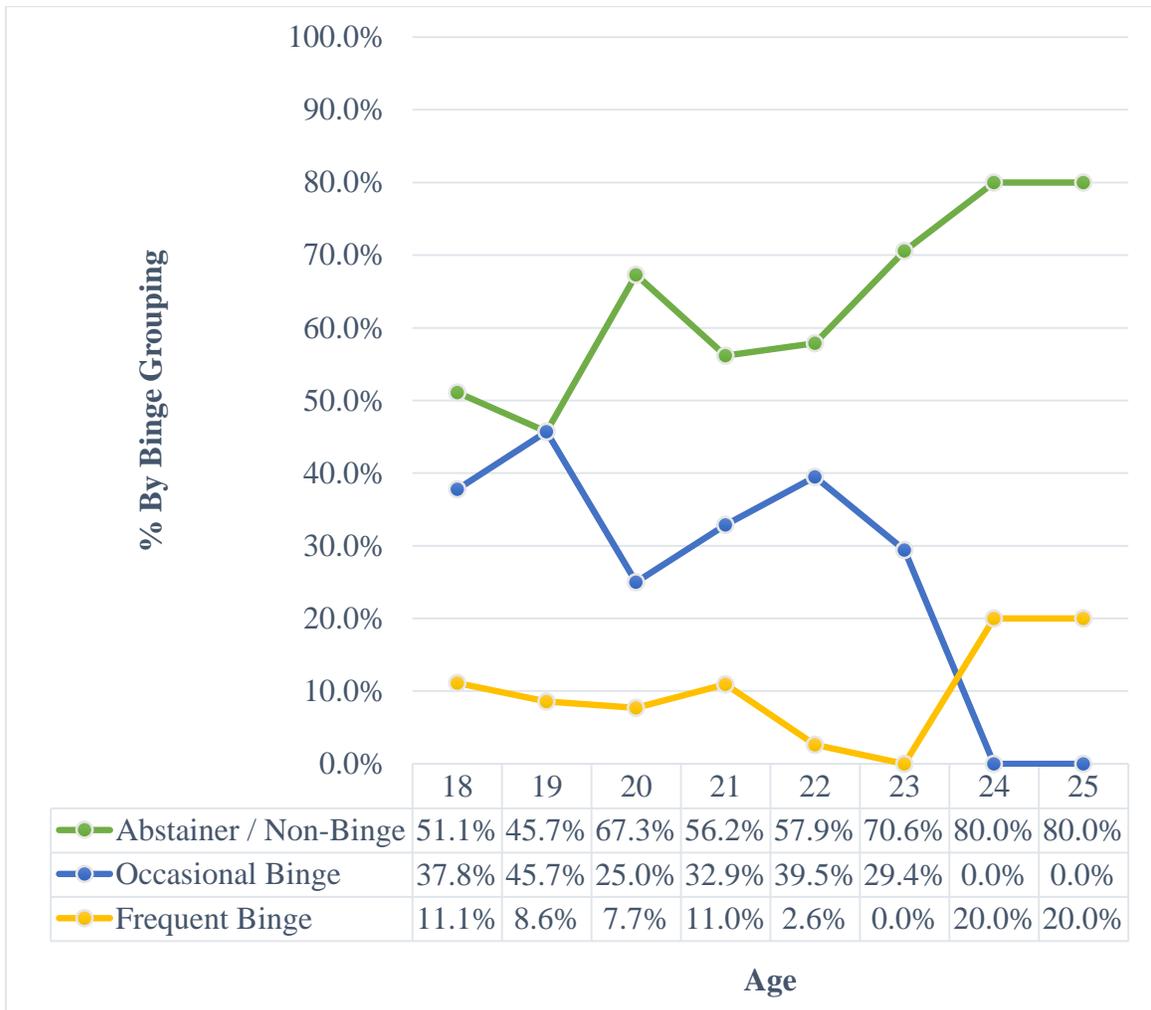


Figure 10: Binge Drinking and Emerging Adulthood

VITA

Daniel Brice Baker was born in Columbia, South Carolina, to William and Gillian Baker. He is lucky enough to be the younger brother of one sibling, his sister Chelsea. He finished his Bachelor's degree at Appalachian State University in criminal justice in August 2012 and completed his Master's degree in criminal justice and criminology at Appalachian State University in May 2015.

Beginning in the Fall of 2015, he will be attending The Ohio State to continue his graduate-level studies as a doctoral student at the John Glenn College of Public Affairs. He will enter the program focusing on education policy and organizational culture.