

**THE ROLE OF PARENTS, PEERS, AND AUTONOMY IN ALCOHOL USE DURING
THE FIRST YEAR OF COLLEGE**

by

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Drinking among college students is a serious problem that can have severe consequences, and research on the factors which influence student drinking are prevalent in the literature. Two such factors, parental knowledge and close friend/peer norms about alcohol use, were examined in the current study. It was hypothesized that drinking behavior among college students would be influenced by parental knowledge, close friend alcohol use, and peer norms about alcohol use. In addition, parental and peer influences on alcohol use among college students were expected to differ depending on the levels of autonomy the students possessed. Data were collected from freshmen college students at the University of Pittsburgh during the Fall semester of 2009. Results showed that higher levels of parental knowledge were significantly related to lower levels of alcohol use, and higher levels of both close friend alcohol use and peer norms were associated with higher levels of alcohol use. The moderating effect of autonomy was found for peer norms about alcohol use, but not for parental knowledge or friend alcohol use. The pattern of the results was, however, not in the hypothesized direction, with a stronger association between peer norms and alcohol use among those with higher autonomy than those with lower autonomy. Potential explanations for the findings, along with the limitations of the current study and the future directions, are discussed.

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1.0 INTRODUCTION

The college transition is a stressful, yet exciting, time in the lives of those who choose to continue their educations. First year college students make adjustments academically and socially when they transition to college (Friedlander et al., 2007; Sher & Rutledge, 2007). Academically, students must meet new educational demands in a new educational environment. With increased course load and strenuous evaluation procedures, first year college students often feel stressed (Zeidner, 1992). At the same time, students must also meet new social demands (Dwyer & Cummings, 2001; Tao et al., 2000). Placed in a new environment away from home and interacting with new peers, students learn to develop social skills and a sense of personal identity apart from their parents and home environment (Zaleski et al., 1998). While maintaining positive relationships with family or building new relationships with peers may be difficult, the difficulties and negative outcomes associated with the college transition can be attenuated by strong social support from family and friends, and the transition itself can provide an opportunity for growth for the students involved (Sek, 1991; Steinberg et al., 1992; Steinberg et al., 1994).

Considered a part of emerging adulthood (Arnett, 2000), the college transition is the developmental stage in which students build the “foundation ... for the remainder of their adult work lives” (Arnett, 2000, p. 469). For many, it is a time of increasing independence (Goldscheider & Davanzo, 1986), and participation in high risk behaviors, including heavy

alcohol use, is common (Arnett, 1992). Because these high-risk behaviors can have serious consequences, it is important to understand the factors that might influence behaviors during this developmental period.

1.1 ALCOHOL USE AMONG COLLEGE STUDENTS

Alcohol use among adolescents and young adults is a prevalent problem in the United States. College-age young adults (aged 18-24) have particularly high rates of alcohol use, raising serious public concerns about potential consequences resulting from excess drinking. One in 10 young adults aged 18 to 24 can be classified as heavy drinkers (i.e. drinking five or more drinks for males and four or more drinks for females on the same occasion on five or more days in the past 30 days) and two in five can be classified as binge drinkers (i.e. drinking five or more drinks for males and four or more drinks for females on the same occasion on at least one day in the past 30 days) (NSDUH Report, 2003).

Compared to young adults who do not attend college, college students participate in higher rates of heavy and binge drinking, show higher rates of alcohol dependence or abuse, and perceive less risk in binge drinking and driving under the influence of alcohol (DUI) (NSDUH Report, 2003). College students who are underage drinkers also show high rates of alcohol use. About 58% of underage college students used alcohol in the past month, 40.1% engaged in binge drinking, 16.6% engaged in heavy drinking (NSDUH Report, 2006), and over 25% reported DUI in the past year (NSDUH Report, 2003). Furthermore, the majority of college freshmen (79%) reported drinking alcohol during the academic year (Greenbaum et al., 2005). Thus, risky alcohol

use and its related consequences are not limited to college students who can legally drink, and a majority of freshmen students are also at risk. These findings suggest the importance of studies investigating the factors that contribute to these risky behaviors, which could provide information for designing intervention programs targeting excess drinking among college students.

1.2 PARENTAL INFLUENCES ON COLLEGE STUDENTS' DRINKING

Parents have always been involved in their children's transition to college, but that involvement has become more invasive over time (Coburn, 2006; White, 2005). Parents have gone so far as to contact professors to discuss their students' grades on specific assignments, and some universities have had to establish offices specifically designed to handle parents insistent upon being involved in their students' higher education (Coburn, 2006). As parents now have greater means to stay in contact with their emerging adults through advancements in technology, it is possible that they may be more involved and play a larger role in the lives of freshmen in college.

Parental monitoring is one way parents stay involved in the lives of their adolescents, and it may play a role with emerging adults as well (Granic et al., 2003). Parental monitoring is conceptualized as a parenting behavior meant to guide an adolescent's behavior and is often operationally defined in research as using strategies to learn about an adolescent's friends and activities (Barnes et al., 2006). Parental monitoring is thought to protect adolescents from participation in problem behaviors because parents who monitor adolescents at a higher level

know more about their adolescents' lives, including who they are friends with and what activities they participate in (Steinberg et al., 1994, Wood et al., 2004). As a result of the knowledge gained through monitoring, parents can respond quickly with both appropriate punishments and rewards, and adolescent's subsequent behaviors are likely to be modified through these feedback mechanisms. It is well documented that parents influence adolescent drinking (i.e. drinking among those between the ages of 13 and 17), particularly through the protective role of parental monitoring and knowledge of adolescent activities and whereabouts. Higher levels of parental knowledge are consistently associated with lower levels of adolescent deviance, such as alcohol use and getting in trouble with police (Nash et al., 2005; Patterson et al., 1989; Waizenhofer et al., 2004).

The protective role of parental knowledge has been found to be effective even in the presence of other risk factors, such as deviant peers or high risk environments, with evidence suggesting that parental knowledge attenuates the negative effects of the risk factors. Barnes et al. (2006) found a positive association between the number of deviant peers and alcohol use among adolescents; however, the positive association was weaker when parental knowledge was high. In addition, Jessor (1993) posits that adequate parental knowledge may be an effective strategy for reducing substance use among adolescents in low income neighborhoods, where there is greater risk for participation in problem behaviors. When adolescents are surrounded by deviant peers who are more likely to use alcohol (Barnes et al., 2006) and exposed to higher rates of violence and drug related crime (Jessor, 1993), parents who possess higher levels of knowledge may be able to limit the amount of contact their adolescent has with deviant peers or crime through the use of rules or boundaries (Barnes et al., 2006).

Unlike adolescents, who are likely to live with their parents, it is common for college students to move away from home. This move may facilitate lower levels of parental knowledge (Bachman et al, 1997). However, when parents' high level of involvement is combined with frequent visits or contact through email and texting, parental knowledge can continue to be effective for college students (Amerikaner et al., 1994; Brack et al., 1993; Galotti & Mark, 1994; Kashubeck & Christensen, 1995). Prior research has found that low parental knowledge was related to more frequent heavy episodic drinking among college students (White et al., 2006), but, when parents maintain high levels of knowledge during their child's transition from high school to college, alcohol use does not increase (Wood et al, 2004). First year college students whose parents had high levels of knowledge throughout adolescence probably have a greater understanding of their parents' knowledge about their activities than students whose parents had low levels of knowledge. In addition, they are more likely to be concerned about consequences parents may enforce if they become aware of participation in dangerous alcohol use (White et al., 2006) and, thus, may participate in such behaviors at lower rates after entering college. Although parents may need to modify the strategies they use to monitor and gain knowledge about their college students in their new environment (White et al, 2006), the benefits of high parental monitoring and knowledge appear to be similar to those found in adolescence.

Intervention studies for college students' alcohol use also suggest the protective role of parenting for college students' drinking. In an intervention study focusing on parental communication for entering college freshmen, parents in the treatment group were encouraged to communicate with their students about the consequences of alcohol use shortly before the college transition was made (Turrise et al., 2001). The short term effects demonstrated that the treatment group, compared to the control group, showed reduced drinking, drunkenness, and

drinking related consequences, such as hangovers and becoming physically ill because of drinking. The treatment group also had more negative perceptions about drinking activities and less approval of drinking from peers and parents. These group differences lasted for the entire freshman year (R. Turrisi, personal communication, July 15, 2009). Through communication with parents, students may have become more aware of their parents' knowledge regarding college student behavior at school, as well as learned more about the potential harmful effects of drinking (Turrisi et al., 2001). This simple act of communication may be enough to encourage students to refrain from excess alcohol use.

1.3 PEER INFLUENCES ON COLLEGE STUDENTS' DRINKING

Peer groups are also an influential source of socialization during adolescence and emerging adulthood, and risk of alcohol use in adolescence is elevated by affiliation with alcohol-using peers (Sussman et al., 2000; Urberg et al., 1997). As first year college students become involved with new peer groups, different norms about alcohol use may be adopted (Bachman et al., 1997). Further, unique aspects of new peer groups, such as living in dorms or organized Greek houses, may make peer relations stronger, which, in turn, could lead to stronger peer influences on alcohol use in college (Park, et al., 2006). With the new opportunities and increased freedom presented to students in college, along with increased access to alcohol, peer influences over alcohol consumption are likely to continue, if not to become stronger, in the college years.

Peer influences on alcohol use are often classified as active and passive influences (Woods et al., 2004). Active influences refer to a peer offering or buying an alcoholic drink for a

friend, and passive influences refer to an individual's perception and interpretation of drinking behavior, which are often manifested in perceived peer alcohol norms and social modeling (Woods et al, 2004). While active influences can directly affect an adolescent or young adult's decision to drink or drink heavily, passive influences can affect alcohol use more subtly by enhancing the individual's motivation to be accepted by peers. Adolescents and emerging adults may imitate peer drinking behaviors believed to be normative to gain acceptance into peer groups (Brown & Klute, 2003) and participate in drinking to match their peers because they believe drinking is prevalent among their peers (Baer et al., 1991).

Precollege peer drinking norms and perceived college drinking norms are predictive of alcohol use during the first year of college. Specifically, peer drinking norms (i.e., the number of peers who drink or the quantity of alcohol that peers drink) formed in high school are one of the strongest predictors of first semester heavy drinking among college freshmen (Sher & Rutledge, 2007). In addition, entering college freshmen who believe college students drink excessively and have high rates of alcohol-related problems consistently show higher alcohol use and problems during their first year of college (Read et al., 2002). Students often form drinking norms based on factual or fictional representations of college students in the media before they have direct contact with their college peer group (Montgomery & Cote, 2003). Further, high school students who believe their peers drink, and potentially drink heavily, are likely to believe peers in college drink at similar or even higher levels and may adjust their own drinking behaviors to match those of their peers.

Previous research has also suggested that college students' alcohol use may be augmented in social situations, such as parties or clubs, because peer alcohol use and abuse can easily be overestimated in such situations, which, in turn, leads to higher alcohol use to match

these overestimated norms (Bauman & Ennett, 1996; Kandel, 1978; Pedersen et al., 2008; Wechsler et al., 2003). College students even report more personal alcohol use and peer alcohol use when they are assessed with their close peers in the same room than when they are assessed individually, which suggests that their actual drinking might increase in the presence of peers (Pedersen et al., 2008). These findings suggest that college freshmen, who are mostly social drinkers, may drink at higher levels when they drink in social situations because they overestimate how much their peers drink and, thus, drink at higher levels in an attempt to match these overestimated peer alcohol norms (Wechsler et al., 2003). Attempts to conform to these overestimated norms could result in dangerous drinking behaviors and subsequent negative consequences.

Based on prior research on peer drinking norms, intervention programs with college students have adopted methods to dispel students' false beliefs about peer alcohol use. However, little evidence has been found to suggest these social norm intervention programs affect drinking among college students (Wechsler et al., 2003). After some universities implemented interventions attempting to change social norms about drinking through campaigns and advertisements about healthy alcohol norms, Wechsler and his colleagues (2003) found increases in monthly alcohol use and the total volume of alcohol consumed at the program universities compared to the control universities. It seemed that the intervention program unexpectedly highlighted falsely high peer norms and led students to drink more to meet these exaggerated norms instead of changing their beliefs about their peers' alcohol use. These findings suggest that it may be difficult to change these beliefs (Wechsler et al., 2003) and confirm that the perception of high levels of alcohol consumption among peers may be equally or more important

than the actual levels of peer alcohol use when considering the influence peers have on alcohol use among first year college students.

1.4 RELATIVE INFLUENCE OF PARENTS AND PEERS AND COLLEGE STUDENTS' DRINKING

There are many aspects of the parent-adolescent relationship that are influenced by peer relations, as well as aspects of peer-adolescent relationships which are influenced by parents. For example, parental monitoring can attenuate peer influences on adolescent drinking (Barnes et al., 2006). While parental influences on adolescent behaviors, such as alcohol use, may increase over the course of adolescence and into the college years, exposure to peers, whose beliefs and behaviors are often different from those of parents, can diminish the impact of parental influences (Lau et al., 1990). As adolescents grow into young adulthood and become more autonomous, it is understandable that peers' influence will increase, but parents can still be influential because they can offer different types of support and advice that peers are incapable of providing.

When there is low compatibility, or lack of similarity in attitudes, between parents and peers, an adolescent's social environment is more conducive to problem behaviors (Jessor & Jessor, 1977). In such cases, adolescents are more likely to affiliate with peers who have been rejected by mainstream peers and participate in substance use and other deviant behaviors (Ary et al., 1999; Donovan, 1996; Jessor & Jessor, 1977; Rooney & Wright, 1982; Sirucek et al.,

2007). The effects of compatibility may differ as a result of parent and peer behavior. For example, as adolescents become older, parents may feel that they should modify their level of monitoring accordingly. However, the harmful effects of low compatibility between parents and peers could be more serious if accompanied by a lack of controls from parents (Jessor & Jessor, 1977) because adolescents could feel they are less supported and missing boundaries (Eccles et al., 1993). Thus, while parenting behaviors may need to be appropriate for an adolescent's developmental stage, parents should be careful not to decrease too many rules or supportive behaviors, especially when their adolescent may have few supportive peers in a new environment.

Although research is limited in college samples, parent and peer compatibility may continue to be important during young adulthood (e.g., Jessor et al., 1991). Young adults may have increased levels of independence and freedom in choosing peers and managing time and finances as they move away from home and enter a new stage in life. However, prior studies show that college students' attachment to their parents often remains stable (Rice et al., 1995; Sun et al., 2000), and young adults still use parental guidelines and rules experienced in the past to guide decision making, even though they are independent adults (Montgomery & Cote, 2003). Research is needed to examine how the relative influence of parents and peers plays a role in college freshmen drinking behavior during the transition to college.

1.5 AUTONOMY FROM PARENTS AND PEERS AND COLLEGE DRINKING

Autonomy is defined as being independent and without control by others (Agnes & Guralnik, 2001), and has been operationalized in various ways in research, including making personal choices, self agency, psychological independence, intrinsic motivation, or individual rights (Bridges, 2003; Grusec & Hastings, 2007; Ryan & Deci, 2000; Smetana, 2002; Smith & Schwartz, 1997). Researchers have also broken the broad concept of autonomy into more specific domains, such as emotional autonomy (defined as subjective sense of independence), behavioral autonomy (defined as the capacity for independent decision making), and value autonomy (defined as developing an independent world view) (Collins & Steinberg, 2006; Douvan & Adelson, 1966). Collins and Steinberg (2006) suggested that the development of independence, or autonomy, is embedded in the interpersonal contexts of relationships with family members and peers. Specifically, appropriate levels of autonomy are achieved during adolescence depending on the relations that adolescents have with parents and peers. Thus, it is important to examine an individual's sense of autonomy when considering the influence of family members or peers on behaviors like alcohol use.

During early and middle adolescence, parent-adolescent relationships can be strained because of issues of control and autonomy (Buchanan et al., 1992; Paikoff & Brooks-Gunn, 1991; Steinberg, 1990). When parents offer too much or too little autonomy compared to the amount of autonomy desired by the adolescent, conflicts between the adolescent and their parent are likely to arise and adolescents may show low self-esteem, lack of social competence, and lack of impulse control (Moore et al., 2004). It is important to note that an adolescent's perceived level of autonomy granting may be just as important as the actual level of autonomy parents

allow. If adolescents perceive that their parents use restrictive monitoring over issues that adolescents feel parents should have little legitimate authority over (Smetana & Dadis, 2002), they may respond to the situation by participating in deviant behaviors to rebel against parental control. Eccles and her colleagues (1993; 2003) emphasized the importance of fit between the level of autonomy granted by parents or other authority figures and the level of autonomy desired, because a poor fit between granted and desired autonomy could lead to maladjustment and other problem behaviors during school transitions. When parental control or monitoring is not accompanied with appropriate levels of autonomy granting, the protective effects of parental involvement might be negated (Eccles et al., 1993; Smetana, 2008; Stark, 2008).

Sense of autonomy may play a more central role during the college transition, as students are required to become more independent. Emerging adulthood (Arnett, 2000), which coincides with the transition to college, is a time for exploration before settling into more adult identities and roles, and an individual is typically allowed more independence than during adolescence. With greater sense of autonomy, emerging adults are able to explore romantic relationships, career options, educational opportunities, and worldviews in a way that they could not during adolescence (Arnett, 2000). Supporting this view, studies show that college students benefit when parents allow more autonomy. For example, college freshmen with higher levels of autonomy granting tend to receive higher grades, form better instructor rapport, have higher confidence in completing college, and have higher persistence in the face of difficulty or failure (Strage & Brandt, 1999). Further, perceived autonomy seems to facilitate adaptive adjustment during the transition to college. Male college students, who were residing in dorms, felt that their parents encouraged less independence and reported more frequent alcohol use compared to those living at home, even though the groups did not report different levels of parental involvement

(Sessa, 2005). Perceptions of low autonomy in relationships between young women in college and their mothers were also associated with problematic drinking behaviors (Bartle & Sabatelli, 1989). These findings suggest that the balance between the perceived and granted autonomy from parents may continue to influence alcohol use during the transition to emerging adulthood.

With regard to autonomy from peers, limited research suggests that autonomy may be related to adolescents' social competence and choice of peers. For example, Noom and colleagues (1999) found that higher levels of emotional autonomy and functional autonomy (i.e. being able to develop a strategy to achieve goals without help from others) among adolescents were related to higher levels of social competence and lower levels of problem behaviors, but higher functional autonomy was related to greater problem behaviors (e.g., alcohol use) when emotional autonomy was low. These findings suggest that adolescents who feel capable of achieving goals but do not feel emotionally independent from peers may have lower social competence and choose peers who participate in more deviant activities. Thus, feeling independent from friends, which may include feeling confident and remaining committed to personal beliefs, may matter more than simply feeling capable of achieving personal goals.

From the studies reviewed above, it seems important to consider the role of autonomy in college students' alcohol use and how it may affect the influences of parents and peers on alcohol use. While few studies have examined the role of autonomy in college students' drinking behavior, prior work with adolescent and college samples suggests that first year college students' sense of autonomy could affect the influence of parents and peers on alcohol use.

1.6 HYPOTHESES AND PREDICTIONS

In general, the effects of parental and peer influences on college students' alcohol use were expected to be similar to those found in prior studies on alcohol use during adolescence. However, it was expected that these effects may be attenuated by sense of autonomy. The specific hypotheses were as follows.

1. Parental Knowledge, Alcohol Use, and Autonomy

- a. Higher parental knowledge would be associated with lower drinking levels in first year college students.
- b. The negative relation between parental knowledge and drinking would be moderated by sense of autonomy: the negative association between parental knowledge and drinking would be weaker for students with a high sense of autonomy than those with a low sense of autonomy.

2. Close Friend Alcohol Use/Peer Norms, Alcohol Use, and Autonomy

- a. Higher levels of perceived close friend drinking/peer norms would be associated with higher drinking levels in first year college students.
- b. The positive relation between close friends' drinking/peer norms would be moderated by sense of autonomy: the positive association between close friends' drinking/peer norms and drinking would be weaker for students with a high sense of autonomy than those with a low sense of autonomy.

3. Relative Influence of Friends Compared to Parents, Alcohol Use, and Autonomy

- a. Greater influence of friends compared to parents would be associated with higher levels of alcohol use: students who turn to their friends more often than to their parents to seek advice would show higher levels of alcohol use than those who turn to their parents.
- b. The relation between greater relative influence of friends and drinking would be moderated by sense of autonomy: the positive association between relying more on friends than parents for advice and drinking would be weaker for students with a high sense of autonomy than those with a low sense of autonomy.

2.0 METHODS

2.1 SAMPLE

Participants were 400 full-time students in their first semester of college at a large northeastern university. All had graduated from high school in 2009. The mean age for the sample was 18.2 years old ($SD = .40$). Most of the participants (70.3%) were female. Eighty-five percent of the participants were Caucasian, 7% were Asian, 4% were African American, and 4% had other ethnic backgrounds. Seventy-six percent of the participants reported drinking at least once in the past month, and those who reported no alcohol use in the past month (24%) were included in all of the analyses.

2.2 PROCEDURE

Participants were recruited through introductory psychology classes at the university and were compensated with one hour of research participation towards the four hours of research participation necessary to complete a course requirement. Informed consent was obtained from participants at the beginning of the session. The questionnaires were administered in a classroom setting. After filling out the questionnaires, students received a debriefing form, along with the

contact information of the experimenter in case they wanted to follow up the study findings. Data were collected during the Fall semester between early October and mid-November of 2009. The number of participants in each session ranged from 1 to 14, and participants took approximately 25 to 30 minutes, on average, to complete the questionnaire.

2.3 MEASURES

2.3.1 Alcohol use

Three questions assessed the frequency of alcohol use, frequency of becoming drunk, and frequency of binge drinking (four or more drinks on one occasion for females, five or more drinks on one occasion for males) over the previous 30 days. The questions were based on items from the young adult questionnaire for the *Monitoring the Future* study (Johnston et al., 2009) with some modifications to the response categories to make them more suitable for college students' alcohol use in the past 30 days. While the *Monitoring the Future* study uses the same response categories for alcohol use during lifetime, in the past 12 months, and in the past 30 days (i.e. 0, 1–2, 3–5, 6–9, 10–19, 20–39, and 40 or more occasions), the response categories for the current study were 0, 1–2, 3–5, 6–9, 10–15, 16–20, and more than 21 times in the past 30 days. The Cronbach's alpha of this scale for the current sample was .95. The three items were then loaded onto a single latent variable for the analyses examining the relations among the study variables. Although the fit of a one factor model using these three indicators could not be

evaluated because it was a just-identified model (i.e. the number of estimated parameters was equal to the number of elements in the covariance matrix), resulting in zero degrees of freedom, the standardized factor loadings on the latent variable of alcohol use were high, ranging from .90 to .97¹.

2.3.2 Parental knowledge

Parental knowledge was assessed using modified questions from the *Assessment of Child Monitoring* scale (Hetherington et al., 1992), which were formed based on items from Baumrind's (1978) parental behavior Q-Sort. The specific questions for the current study were obtained from the Family Bereavement Program Follow-Up (PI: Irwin Sandler) at Arizona State University, which have previously been used with adolescents and young adults age 14-22 years old and their caregivers. The items from the original measure by Hetherington et al. (1992) only assess knowledge an individual's mother has about their adolescent, but the items from the Family Bereavement Program have been modified to ask about an individual's caregivers' knowledge. The current study used the same question format as the Family Bereavement Program, which consisted of 13 items assessing student perceptions about how much parents knew about a student's friends, interests, and activities, but asked about participants' parents rather than caregivers. Participants responded to the questions using a scale from 1 to 4, with 1 equal to "nothing", 2 equal to "some", 3 equal to "a lot", and 4 equal to "very much". The Cronbach's alpha of this scale for the current sample was .86.

¹ All of the reported standardized factor loadings were significantly different from zero.

To create a latent variable for parental knowledge, the 13 items for parental knowledge were reduced to four item parcels, based on exploratory factor analysis (EFA). Prior EFA on these 13 items indicated that the four factor solution was appropriate for grouping the items. The items that clustered under a common factor were averaged to simplify the number of latent variable indicators for the full structural equation model. These four parcels represented knowledge about general interests (four items; e.g., how much do your parents know about your activities outside of school?; how much do your parents know about your intellectual interests, both in and out of school?; how much do your parents know about your extracurricular activities, sports, clubs, etc.?; how much do your parents know about your choice of friends, who they are, what they are like?), knowledge about substance use (three items; e.g., how much do your parents know about your use of drugs?; how much do your parents know about your use of tobacco?; how much do your parents know about your use of alcohol?), knowledge about school/outside home life (four items; e.g., how much do your parents know about your school life such as teachers, homework, grades?; how much do your parents know about where you are and what you are doing when away from home?; how much do your parents know about your problem behavior in school such as skipping classes, being late, etc.?; how much do your parents know about your health habits, such as amount of sleep, diet and exercise?), and knowledge about romantic relationships (two items; e.g., how much do your parents know about the extent of your sexual behavior?; how much do your parents know about your interest in activities with a boy/girlfriend, your dating behaviors?). The fit of a one factor model using these four indicators was good, $\chi^2(1) = 1.40$, $p = .24$; RMSEA = .03; CFI = .99. The standardized factor loadings on the latent variable of parental knowledge were high, ranging from .62 to .81.

2.3.3 Close friends' alcohol use

Close friend alcohol use was assessed using items measuring the perceived frequency and number of drinks consumed at a typical drinking occasion, as well as frequency of heavy drinking (i.e. drinking enough alcohol to become drunk, tipsy, wasted, or buzzed). Participants were asked to report frequency and number of drinks consumed at a typical drinking occasion for the past month for three close friends to estimate drinking norms among close friends. The items were modified based on prior studies of college students' drinking (Baer et al., 1991; Wood et al., 2001). Prior studies asked about alcohol use by typical students and friends over the past 3 months (Baer et al., 1991) or typical college students of the same gender as the respondent over the past year (Wood et al., 2001), but this study asked about alcohol use by close friends in the previous month. For frequency of friend alcohol use and heavy alcohol use, participants responded to the questions using the response categories 0, 1–2, 3–5, 6–9, 10–15, 16–20, and more than 21 times in the past 30 days. For number of drinks friends' consumed at a typical drinking occasion, participants responded on a scale from 0 to 8 drinks. The responses on close friend's drinking were collapsed across the three friends to indicate the average frequency of alcohol use, the average number of drinks consumed at a typical drinking occasion, and the average frequency of heavy alcohol use among these three friends. The Cronbach's alpha for the current sample, which was calculated using the average scores for frequency of alcohol use, number of drinks consumed at a typical drinking occasion, and frequency of heavy alcohol use, was .89. The standardized factor loadings were high, ranging from .87 to .96.

2.3.4 Peer norms about alcohol use

Perceived norms of peers' alcohol use were assessed using items measuring the perceived frequency and number of drinks consumed at a typical drinking occasion, as well as frequency of heavy drinking. Participants were asked to report frequency and number of drinks consumed at a typical drinking occasion for the past month for "typical" students at the university to estimate drinking norms among general peers of the same age. The items were modified based on prior studies of college students' drinking (Baer et al., 1991; Wood et al., 1991). While prior studies asked about alcohol use by typical students and friends over the past 3 months (Baer et al., 1991) or typical college students of the same gender as the respondent over the past year (Wood et al., 2001), this study asked about alcohol use by typical college students in the previous month. For frequency of peer alcohol use and heavy alcohol use, participants responded to the questions using the response categories 0, 1–2, 3–5, 6–9, 10–15, 16–20, and more than 21 times in the past 30 days. For number of drinks peers' consumed at a typical drinking occasion, participants responded on a scale from 0 to 8 drinks. The Cronbach's alpha of the items measuring peer alcohol use was .70. The standardized factor loadings were high, ranging from .59 to .91.

2.3.5 Autonomy from parents

Autonomy from parents was assessed through questions from the *Project Alliance Young Adult Survey* (Dishion et al, 2006). The items were designed to assess the relationship characteristics between young adults and their parents but can also be used to measure how much autonomy parents grant their young adults. The items used for the current study examined how much

participants' parents allow them to make their own decisions on various aspects in life (e.g., In the past 30 days, my mother/father encouraged me to make my own decisions, In the past 30 days, my mother/father provided me with the freedom to experiment and learn things on my own) and respect their privacy. In the current study, the respondents responded to statements using a scale of 0 to 100, with the number representing the percent of the time respondents felt their parents fit this behavior during the past 30 days. Some items were reverse coded so that higher scores on the measures reflect higher autonomy *granted by parents*. The questions used to assess granted autonomy were then reworded to assess the amount of autonomy participants desired from their parents in decision making and respect for privacy (e.g., In the past 30 days, I wanted my mother/father to encourage me to make my own decisions, In the past 30 days, I wanted my mother/father to provide me with the freedom to experiment and learn things on my own). The Cronbach's alpha of this scale for the current sample for the granted autonomy scale was .82, and that of the desired autonomy scale was .63.

The 14 items for granted autonomy from parents were reduced to three parcels using the eigen values from an exploratory factor analysis and item content. The same parcels were created separately for the desired autonomy scale. These three parcels represented acceptance of decisions and opinions (seven items; e.g., respected my judgment and decisions, even if different from what he/she would want; was a person to whom I could express differences of opinion on important matters; showed he/she trusted and had confidence in me), controlling of behavior (five items; e.g., tried to control my behavior or plans; imposed his/her ideas and values on me; was critical of my behavior; gave me advice whether or not I wanted it; tried to restrict my freedom), and treated like a child (two items; e.g., did things for me, which I could do for myself; treated me more like a child than an adult). The differences between the pairs of the three

parcels for granted autonomy and three parcels for desired autonomy were then calculated and used to create the indicators of the latent factor reflecting the discrepancy between granted and desired autonomy, with higher scores indicating that more autonomy was granted to participants than the participants desired. The standardized factor loadings were high for the factor, ranging from .49 to .76.

2.3.6 Autonomy from peers

Autonomy from peers was assessed through the *Emotional Independence from Peers* subscale of the Iowa Developing Autonomy Inventory (Jackson & Hood, 1985). The items from the peer subscale assess participants' feelings about being in situations without friends and their ability to have different attitudes or opinions from their friends. Participants responded to statements using a scale from 1 to 4, with 1 equal to "not at all like me", 2 equal to "somewhat like me", 3 equal to "a lot like me", and 4 equal to "very much like me". Some items were reverse coded so that higher scores reflected greater independence from friends for all items. The Cronbach's alpha of this scale for the current sample was .75.

The 15 items for autonomy from peers were reduced to four item parcels using the eigen values from an exploratory factor analysis and item content. These four indicators represented agreement with friends (six items; e.g., I become unhappy when my friends don't like my ideas; I need emotional support from friends when I try new things; I can accept the fact that some of my peers don't like me), acceptance by friends (five items; e.g., to feel accepted by my friends, I'll do things that are against my principles; I feel I conform to my friends' standards; I worry if my friends talk about me when I'm not with them; I can disagree with my boy/girl friends without

feeling guilty; I can evaluate my friends' values and accept or reject them), ability to make plans without input from friends (two items; e.g., I plan my own social life without getting approval from friends; I would go out on a date with someone I like even if my best friends didn't like him/her), and ability to attend social events without friends (two items; e.g., I don't like to go to a new place without a friend; I really feel uncomfortable when I go to a party without my friends). The fit of a one factor model using these four indicators was good, $\chi^2 (2) = 1.36$, $p = .50$; RMSEA= .00; CFI = 1.00. The standardized factor loadings were high for the factor, ranging from .34 to .81.

2.3.7 Relative influence of friends compared to parents

Relative influence of friends compared to parents was assessed through questions from the *Survey of Personal and Social Development at the University of Colorado* (Jessor et al., 2006). Relative influence of friends compared to parents consisted of four items asking who the respondent depended on more for advice regarding certain topics ranging from general issues, such as outlook on life, to more specific problems, such as personal relationship decisions and education. Respondents answered the questions on a scale from 1 to 3, with 1 equal to “parents more”, 2 equal to “parents and friends the same”, and 3 equal to “friends more.” Due to the categorical nature of the variables, an omega coefficient (Raykov, 1997) was calculated for estimated reliability rather than a Cronbach’s alpha, and the omega coefficient of this scale for the current sample was .69. Fit of a one factor model using the four advice indicators was good, $\chi^2 (2) = 2.46$, $p = .29$; RMSEA= .02; CFI = .99. The standardized factor loadings were high for the factor, ranging from .22 to .56.

2.3.8 Covariates

2.3.8.1 Social anxiety Social anxiety has been linked to alcohol use among college students in previous research (Giles et al., 2006). Thus, to prevent social anxiety from confounding the relations among the study variables, it was included as a covariate in the current study. Social anxiety was measured using the *Interaction Anxiousness Scale* (Leary, 1983). The scale consisted of 15 items, and participants responded to statements using a scale from 1 to 4, with 1 equal to “not at all like me”, 2 equal to “somewhat like me”, 3 equal to “a lot like me”, and 4 equal to “very much like me.” The Cronbach’s alpha of this scale for the current sample was .89. Answers were averaged across the 15 items to derive an overall anxiety score.

2.3.8.2 Social desirability Participants high in social desirability can be biased when reporting about themselves. To control for such reporting bias, and the current study included social desirability as a covariate. Social desirability was measured using a shortened version of the *Marlowe-Crowne Social Desirability Scale* (Crowne & Marlowe, 1960). The short form, which contains 7 items from the 33-item *Marlowe-Crowne Social Desirability Scale*, has similar reliability to the full form of the measure (Strahan & Gerbasi, 1972) and has been identified as one of the best forms among the several short forms of the *Marlowe-Crowne Social Desirability Scale* (Fischer & Fick, 1993). Three additional questions from another short form developed by Strahan and Gerbasi (1972), which was also identified as a strong fit, were included as well to more comprehensively gauge social desirability. Participants responded to statements using true or false, which were coded as 0 or 1 depending on the nature of the item. The omega coefficient

of this scale for the current sample was .76. Answers were added to create a total score for the 10 items to get an overall social desirability score.

2.3.8.3 Relationship quality Relationship quality with parents and friends could potentially affect reports on both participants' own alcohol use and measures of parent and friend behavior. As such, measures of relationship quality with parents and friends were included as covariates in the relevant models. Relationship quality with parents and friends was measured using questions from the *Project Alliance Young Adult Survey* (Dishion et al, 2006). The questions were created by Dishion and colleagues, based on their previous work with adolescents and work by Metzler and colleagues (1998). The questions assessed both positive and negative aspects of relationships, with specific questions asking about activities, communication, and arguments. The scale consisted of 10 items, and participants answered separately for parents and friends. Participants responded to the items using a scale from 1 to 4, with 1 equal to "never", 2 equal to "sometimes", 3 equal to "often", and 4 equal to "a lot." The Cronbach's alpha of the relationship quality with parents scale for the current sample was .75, and the Cronbach's alpha of the relationship quality with friends scale for the current sample was .64. Answers were averaged across the 10 items for parents to derive an overall relationship quality with parents score, and answers were also averaged across the 10 items for friends to derive an overall relationship quality with friends score.

2.3.8.4 Demographic variables Demographic variables included respondent gender, ethnicity, and religious affiliation. Information regarding each of these variables was provided by self-report in the survey. Additionally, residential status (i.e. whether the student lives at home,

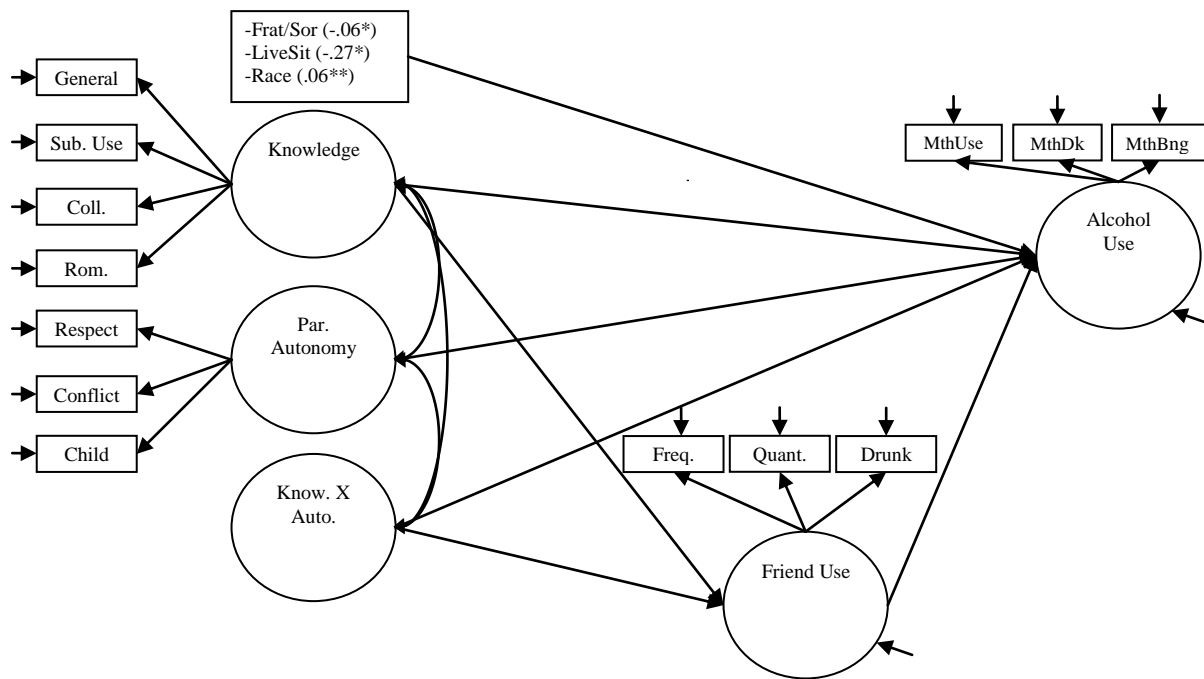
in the dorms, or in an off campus apartment) and intention to join a fraternity or sorority, or existing membership in a Greek organization, was measured. Intention to join a fraternity or sorority was measured using an item from Read and colleagues' (2002) study on alcohol use in students transitioning to college. Amount of contact with parents for the past 30 days, both contact initiated by the student and contact initiated by parents, and number of weekends spent at home during the past month were also measured.

2.4 ANALYTIC OVERVIEW

A total of five models were estimated to examine the effects of parents and peers on alcohol use and the moderating effect of autonomy: models for (1) Influence of Parental Knowledge, (2) Influence of Friend Alcohol Use, (3) Influence of Peer Alcohol Norms, and two models for Relative Influence of Friends Compared to Parents, (4) one with autonomy from parents and (5) the other with autonomy from friends. Data analyses were carried out in the structural equation modeling framework using the Mplus (Muthen & Muthen, 2005) software program. The main focus of each model was to investigate the effect of a social influence on alcohol use, as well as the effect of autonomy, either in relation to parents or friends, on alcohol use. Each model also examined how the effect of the social influence differed at various levels of autonomy through an interaction between a social influence and the appropriate form of autonomy.

The main focus of the parental knowledge model was to examine the main effects of parental knowledge and discrepancy between granted and desired autonomy (called granted-

Figure 1. Parental Knowledge Model (Alcohol $R^2 = .65$)

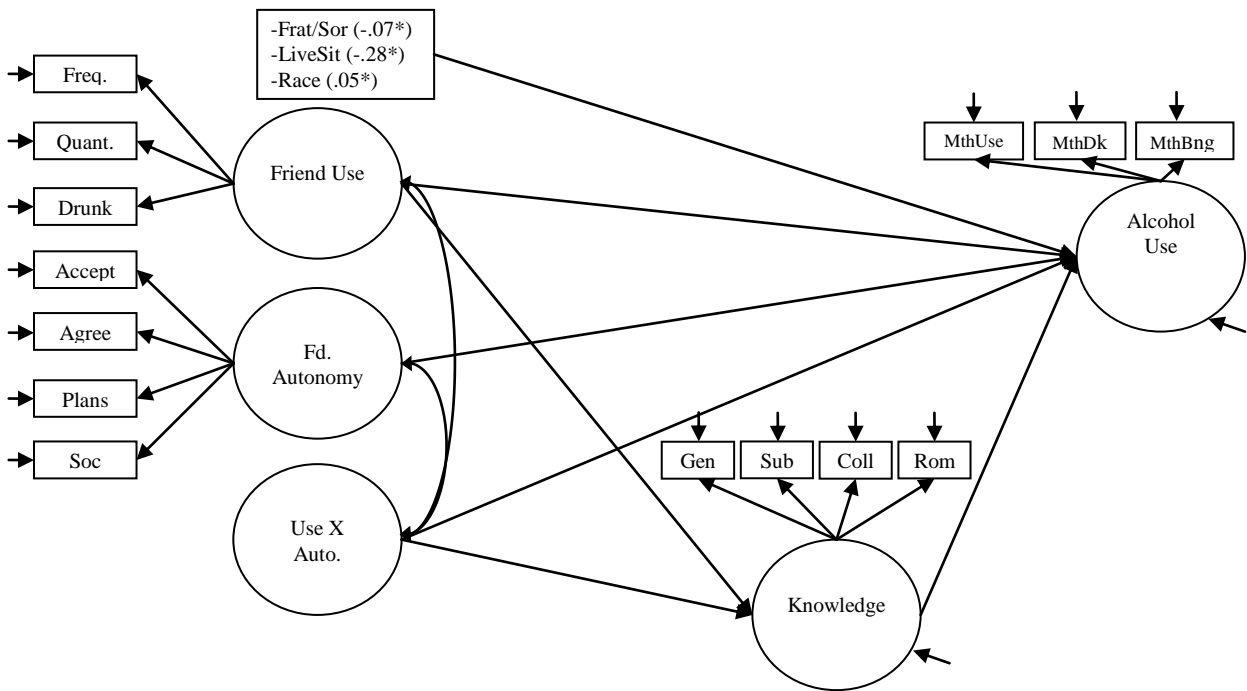


Notes. The path coefficients reported in the model are all standardized. Covariates were estimated separately in the model, and the standardized path coefficients and significance levels for each of the covariates are reported in the parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

desired autonomy hereafter) as well as the interaction effect between parental knowledge and autonomy (Figure 1). Latent variables for parental knowledge, granted-desired autonomy, and the latent variable indicating the interaction between parental knowledge and autonomy were included to predict the latent variable for alcohol use. A latent variable for friends' alcohol use was also included in the parental influence model to estimate the unique effect of parental knowledge controlling for the influence of friends. The relation between parental knowledge and friend use was also estimated so that the indirect effect of parental monitoring on alcohol use via friends' alcohol use could be examined.

Similar models were estimated separately to examine the effects of general peer alcohol

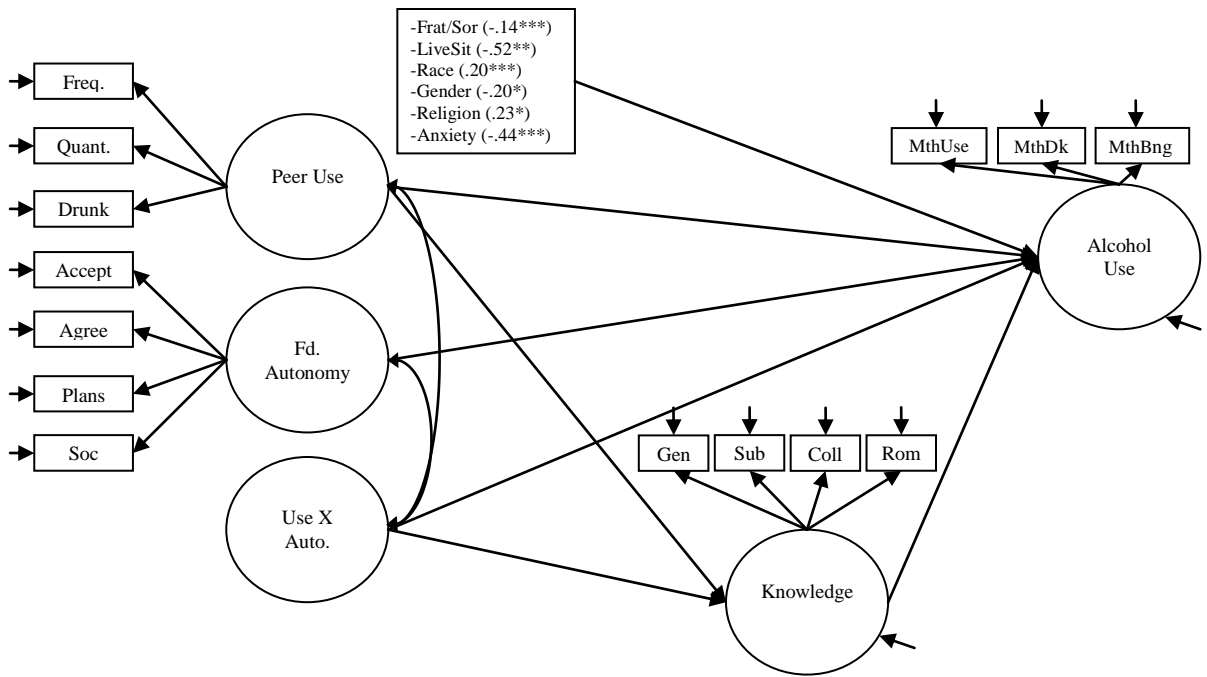
Figure 2. Friend Alcohol Use Model (Alcohol $R^2 = .64$)



Note. The path coefficients reported in the model are all standardized. Covariates were estimated separately in the model, and the standardized path coefficients and significance levels for each of the covariates are reported in the parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

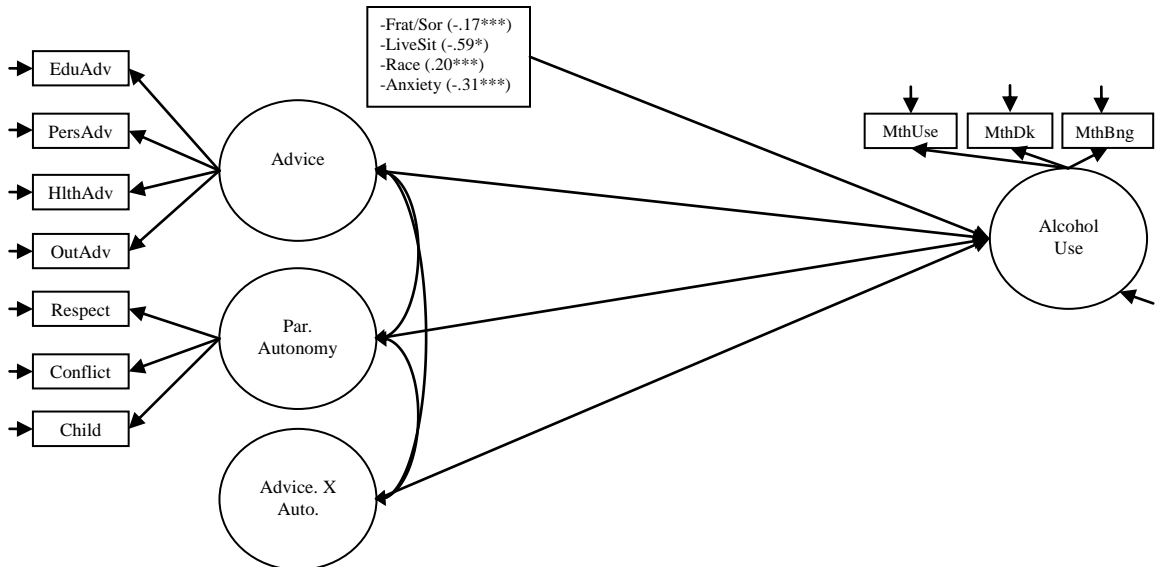
norms and close friend alcohol norms (Figures 2-3). In the friend alcohol use model and peer norms model, relations with parental knowledge were estimated to examine both the unique effects of friend or peer alcohol use as well as the indirect effect of friend or peer alcohol via parental knowledge. For the model examining the relative influence of friends compared to parents, the main focus was to investigate how alcohol use was affected if participants reported relying more on friends than parents for advice and if these patterns differed depending on the levels of autonomy. As the social influences in these models were measured by the relative influence of friends compared to parents, separate models were tested for autonomy from parents (i.e., granted-desired autonomy) and autonomy from friends (Figures 4-5).

Figure 3. Peer Norms about Alcohol Use Model (Alcohol $R^2 = .25$)



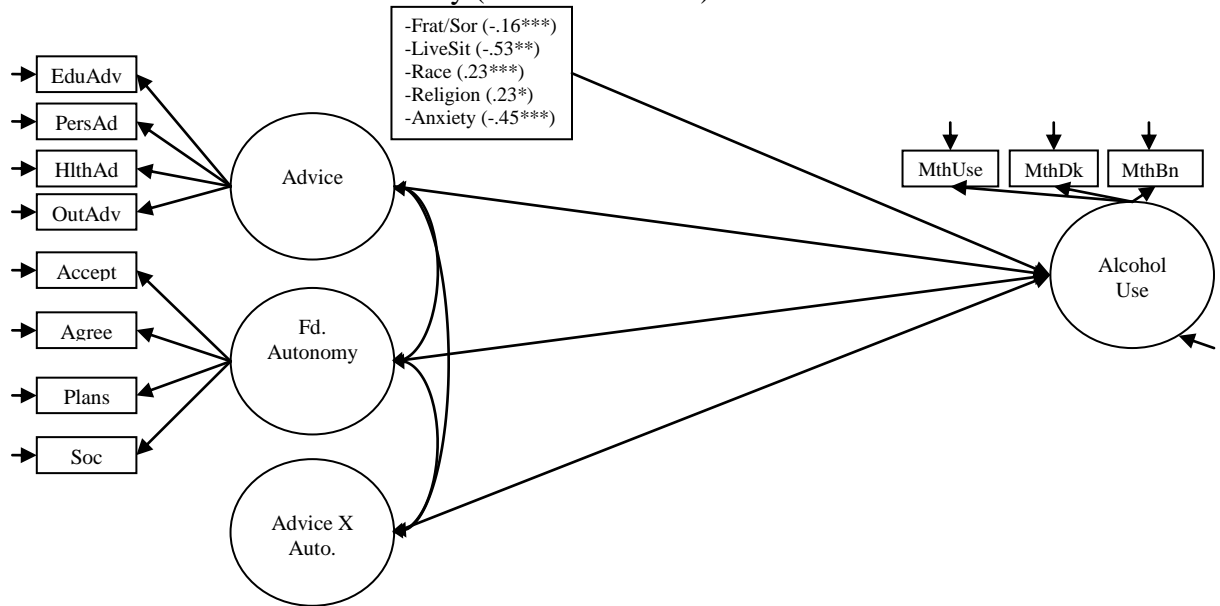
Note. The path coefficients reported in the model are all standardized. Covariates were estimated separately in the model, and the standardized path coefficients and significance levels for each of the covariates are reported in the parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 4. Relative Influence of Friends Compared to Parents Model with Parent Autonomy (Alcohol $R^2 = .18$)



Note. The path coefficients reported in the model are all standardized. Covariates were estimated separately in the model, and the standardized path coefficients and significance levels for each of the covariates are reported in the parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5. Relative Influence of Friends Compared to Parents Model with Friend Autonomy (Alcohol $R^2 = .20$)



Note. The path coefficients reported in the model are all standardized. Covariates were estimated separately in the model, and the standardized path coefficients and significance levels for each of the covariates are reported in the parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$

Before testing the hypotheses in the full models, measurement models were examined to ensure the adequacy of the measures. To take into account the non-normality of alcohol use variables, a robust estimation method, MLR, implemented in Mplus (Muthén & Muthén, 2005) was utilized. As shown in Table 1, the fit indices showed that the measurement models were acceptable or adequate.

The tests for the hypotheses on main effects of parental knowledge, peer norms, and close friends' norms were conducted by examining whether higher levels of parental knowledge were associated with lower levels of alcohol use (hypothesis 1a), higher levels of peer/close friend alcohol use were associated with higher levels of alcohol use (hypothesis 2a), and greater relative influence of friends compared to parents was associated with higher levels of alcohol use (hypothesis 3a). To examine the moderating role of autonomy (hypotheses 1b, 2b, 3b), the *latent*

Table 1. Fit statistics for measurement models.

Model	χ^2 value	χ^2 p-value	CFI	RMSEA
Parental Knowledge	180.59	<.001	.96	.07
Friend Use	208.15	<.001	.96	.07
Peer Use	190.74	<.001	.94	.07
Rel. Inf./Parent Autonomy	59.43	.002	.98	.05
Rel. Inf./Friend Autonomy	62.21	.02	.99	.04

interaction variable approach (Schumaker, 2002) was used. Specifically, a latent interaction variable was created by obtaining the product of the two latent factor scores relevant to the interaction term in each model. For example, to create the interaction latent variable between parental knowledge and granted-desired autonomy, the factor scores for parental knowledge and autonomy were saved, and the product of these two factor scores was calculated. The same procedures were used for the other models using the relevant latent factors. The *latent interaction variable approach* has been found to be more efficient compared to the *product indicant technique*, where the latent variable reflecting the interaction is created using the products of the indicators of the two latent factors. The parameter estimates are similar in both approaches, but the estimated standard errors are smaller in the *latent interaction variable approach* (Schumaker, 2002). The hypotheses on the interaction effects (hypotheses 1b, 2b, and 3b) were tested by examining the relations between the latent interaction variables and the alcohol use latent variable.

For each model, covariates were used to predict the latent alcohol use variable. All of the covariates listed previously were tested in the full models, and the nonsignificant covariates were removed from the final models. Frequency of contact with parents, number of weekends at home during a typical month, social desirability, and relationship quality with parents and friends were not significantly related to alcohol use in any of the models, and were thus dropped from further

analyses. The significant covariates were ethnicity, living situation, membership in a fraternity/sorority, gender, association with an organized religion, and social anxiety. The covariates included in each model are reported in Figures 1-5.

3.0 RESULTS

3.1 DESCRIPTIVES

Participants reported, on average, drinking alcohol between 1-2 times (scale value of 1) and 3-5 times (scale value of 2) during the previous month (Mean = 1.85, SD = 1.38, Mode = 3: 6-9 times), with a similar average frequency of becoming drunk (Mean = 1.50, SD = 1.27, Mode = 0: 0 Times) and binge drinking (Mean = 1.23, SD = 1.24, Mode = 0: 0 Times) during the past 30 days. The frequency of alcohol use variable had a bimodal distribution, with peaks at the scale values of 0 and 3, while both the frequency of becoming drunk (Skewness = .35) and binge drinking (Skewness = .61) were slightly positively skewed. Peers were perceived as consuming alcohol at a greater level than participants' own consumption: drinking between 3-5 times and 6-9 times (scale value of 3) a month on average (Mean = 2.48, SD = .87, Mode = 2: 3-5 Times), with an average perceived quantity of 4-5 drinks during a drinking occasion (Mean = 4.34, SD = 1.53, Mode = 4: 4 Drinks), and participating in heavy drinking between 1-2 times and 3-5 times on average (Mean = 1.91, SD = .91, Mode = 2: 3-5 Times). The frequency of peers' alcohol use (Skewness = .26), quantity of drinks (Skewness = .39), and heavy drinking (Skewness = .44) were all slightly positively skewed. Participants reported that their close friends consumed alcohol at a similar level to themselves; drinking between 1-2 times and 3-5 on average during the past month (Mean = 1.90, SD = 1.08, Mode = 2: 3-5 Times), with an average quantity of 3-4

drinks when drinking (Mean = 3.67, SD = 2.05, Mode = 4.67: 4-5 Drinks), and participating in heavy drinking between 1-2 and 3-5 times during the past 30 days (Mean = 1.52, SD = 1.09, Mode = 2: 3-5 Times). The frequency of close friends' alcohol use (Skewness = .18), quantity of drinks (Skewness = .06), and heavy drinking (Skewness = .43) were all slightly positively skewed.

Regarding sample characteristics other than alcohol use, 97.00% of the participants in the sample lived in the dorms, and almost all of the remaining participants reported living with their parents. In addition, only 7.80% of the sample reported membership in a fraternity or sorority, 14.60% reported being possibly or probably likely to join a fraternity or sorority in the future, and 77.50% reported that they probably would not or definitely would not join a fraternity or sorority in the future. A majority of the sample reported that they were a practicing member of an organized religion (62.80%). Correlations between the variables included in the models can be seen in Tables 2-6.

Table 2. Correlations between variables in the Influence of Parental Knowledge model.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.MthUse	-																
2.MthDk	.90**	-															
3.MthBng	.83**	.87**	-														
4.GenMon	.14**	.13**	.11*	-													
5.SubMon	-.37**	-.34**	-.33**	.32**	-												
6.CollMon	-.04	-.05	-.08	.64**	.46**	-											
7.RomMon	-.07	.06	-.06	.50**	.42**	.49**	-										
8.RespectAut	-.01	.01	-.06	.33**	.23**	.35**	.26**	-									
9.ConflictAut	-.04	.01	-.02	.15**	.12*	.18**	.18**	.50**	-								
10.ChildAut	.07	.08	.03	.09	.02	.03	.14**	.32**	.38**	-							
11.MonXAut	-.07	-.09	-.05	-.24**	-.15**	-.12*	-.09	-.57**	-.47**	-.28**	-						
12.FdFreq	.73**	.72**	.69**	.14**	-.27**	.03	-.03	-.08	-.05	.03	.02	-					
13.FdQuant	.61**	.64**	.64**	.13*	-.24**	.02	-.04	-.08	-.04	.03	-.02	.83**	-				
14.FdDrunk	.69**	.73**	.69**	.16**	-.25**	.04	-.02	.07	-.04	.04	-.03	.92**	.83**	-			
15.Frat/Sor	-.24**	-.22**	-.19**	-.04	.06	.02	.01	-.06	.07	-.05	.03	-.18**	-.18**	-.17**	-		
16.LiveSit	-.10*	.14**	-.11*	-.12*	.02	-.02	-.03	-.07	-.01	-.04	.001	-.10*	-.15**	-.10	.05	-	
17.Race	.21**	.19**	.21**	.20**	.11*	.12*	.01	.06	-.001	.08	.01	.21**	.21**	.21**	.08	.08	-

* $p < .05$, ** $p < .01$

Table 3. Correlations between variables in the Influence of Friend Alcohol Use model.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.MthUse	-																	
2.MthDk	.90**	-																
3.MthBng	.83**	.87**	-															
4.FdFreq	.73**	.72**	.69**	-														
5.FdQuant	.61**	.64**	.64**	.83**	-													
6.FdDrunk	.69**	.73**	.69**	.92**	.83**	-												
7.AcceptAut	.01	.01	-.01	.01	-.01	.01	-											
8.AgreeAut	-.03	-.02	-.02	-.01	-.07	-.002	.51**	-										
9.PlanAut	-.02	-.05	-.05	-.01	.01	.02	.26**	.22**	-									
10.SocAut	-.19**	.21**	.17**	.20**	.16**	.21**	.29**	.19**	.16**	-								
11.FdUseXAut	.09	.10*	.05	.12*	.09	.13**	-.09	-.07	-.13**	.01	-							
12.GenMon	.14**	.13**	.11*	.14**	.13*	.16**	.15**	.15**	.01	.05	-.04	-						
13.SubMon	-.37**	-.34**	-.33**	-.27**	-.24**	-.25**	.11*	.11*	.06	-.08	-.13**	.32**	-					
14.CollMon	-.04	-.05	-.08	.03	.02	.04	.16**	.16**	.05	.06	-.01	.64**	.46**	-				
15.RomMon	-.07	-.06	-.06	-.03	-.04	-.02	.12*	.14**	.12*	.08	-.03	.50**	.42**	.49**	-			
16.Frat/Sor	-.24**	-.22**	-.19**	-.18**	-.18**	-.17**	.12*	.06	.09	-.06	-.03	.04	.06	.02	.01	-		
17.LiveSit	-.10*	-.14**	-.11*	-.10*	-.15**	-.10	.01	.06	.09	.01	-.04	-.12*	.02	-.02	-.03	.05	-	
18.Race	.21**	.19**	.21**	.21**	.21**	.21**	.14**	.20**	.10	.07	-.08	.20**	-.11*	.12*	.01	.08	.08	-

* $p < .05$, ** $p < .01$

Table 4. Correlations between variables in the Influence of Peer Alcohol Norms model.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1.MthUse	-																				
2.MthDk	.90**	-																			
3.MthBng	.83**	.87**	-																		
4.PrFreq	.13**	.11*	.11*	-																	
5.PrQuant	.09	.13**	.14**	.38**	-																
6.PrDrunk	.25**	.27**	.24**	.60**	.54**	-															
7.AcceptAut	.01	.01	-.01	-.01	.04	.05	-														
8.AgreeAut	-.03	-.02	-.02	-.03	-.03	-.01	.51**	-													
9.PlanAut	-.02	-.05	-.05	-.01	-.05	-.07	.26**	.22**	-												
10.SocAut	-.19**	.21**	.17**	-.02	.07	.11*	.29**	.19**	.16**	-											
11.PrUseXAut	.02	.03	.01	-.13**	-.10*	-.15**	-.07	-.07	-.05	-.08	-										
12.GenMon	.14**	.13**	.11*	.03	.08	.11*	.15**	.15**	.01	.05	-.02	-									
13.SubMon	-.37**	-.34**	-.33**	-.002	.05	-.02	.11*	.11*	.06	-.08	-.11*	.32**	-								
14.CollMon	-.04	-.05	.08	-.004	.01	.04	.16**	.16**	.05	.06	-.08	.64**	.46**	-							
15.RomMon	-.07	-.06	-.06	-.01	.07	.02	.12*	.14**	.12*	.08	.001	.50**	.42**	.49**	-						
16.Frat/Sor	-.24**	-.22**	-.19**	-.02	-.08	-.05	.12*	.06	.09	-.06	.01	.04	.06	.02	.01	-					
17.LiveSit	-.10*	-.14**	-.11*	.03	-.12*	.05	.01	.06	.09	.01	-.03	-.12*	.02	-.02	-.03	.05	-				
18.Race	.21**	.19**	.21**	.12*	.07	.15**	.20**	.10	.07	-.07	.20**	-.11*	.12*	.01	.08	.08	-				
19.Gender	-.11*	-.09	-.13**	.08	-.06	.04	-.04	.10	-.12*	-.04	.06	.13**	.09	.06	.07	.02	-.02	-.04	-		
20.Religion	.04	.03	.08	-.05	-.09	-.01	-.02	.04	.02	.01	.03	-.17**	-.06	-.14**	-.01	.14**	-.01	-.15**	-.01	-	
21.Anxiety	-.23**	-.23**	-.20**	.04	-.10*	-.10*	-.37**	-.33**	-.13**	-.43**	.13**	-.11*	-.07	-.11*	-.10*	.14**	.10	-.08	.03	.07	-

* $p < .05$, ** $p < .01$

Table 5. Correlations between variables in the Relative Influence of Friends Compared to Parents model with Parent Autonomy.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.MthUse	-														
2.MthDk	.90**	-													
3.MthBng	.83**	.87**	-												
4.EduAdv	.04	.05	.03	-											
5.PersAdv	-.19**	-.16**	-.18**	.24**	-										
6.HlthAdv	.04	.03	-.003	.17**	.11*	-									
7.OutAdv	-.02	-.04	-.08	.31**	.27**	.07	-								
8.RespectAut	-.01	.004	-.06	.24**	.31**	.01	.17**	-							
9.ConflictAut	-.04	.01	-.02	.16**	.18**	.04	.10	.50**	-						
10.ChildAut	.07	.08	.03	.16**	.13**	.004	.11*	.32**	.38**	-					
11.AdvXAut	-.02	-.03	-.002	-.31**	-.12*	-.11*	-.15**	-.56**	-.50**	-.34**	-				
12.Frat/Sor	-.24**	-.22**	-.19**	-.15**	-.07	.01	.01	-.06	.07	-.05	.002	-			
13.LiveSit	-.10*	-.14**	-.11*	.08	-.004	-.05	-.04	-.07	-.01	-.04	-.04	.05	-		
14.Race	.21**	.19**	.21**	.09	-.07	.05	-.01	-.06	-.001	.08	.03	.08	.08	-	
15.Anxiety	-.23**	-.23**	-.20**	.02	.02	-.01	-.08	-.09	.02	-.05	.01	.14**	.10	.08	-

* $p < .05$, ** $p < .01$

Table 6. Correlations between variables in the Relative Influence of Friends Compared to Parents model with Friend Autonomy.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.MthUse	-																
2.MthDk	.90**	-															
3.MthBng	.83**	.87**	-														
4.EduAdv	.04	.05	.03	-													
5.PersAdv	-.19**	-.16**	-.18**	.24**	-												
6.HlthAdv	.04	.03	-.003	.17**	.11*	-											
7.OutAdv	-.02	-.04	-.08	.31**	.27**	.07	-										
8.AcceptAut	.01	.01	-.01	.03	.06	.07	.13*	-									
9.AgreeAut	-.03	-.02	-.02	.05	.04	.05	.10*	.51**	-								
10.PlanAut	-.02	-.05	-.05	-.04	.04	-.01	.11*	.26**	.22**	-							
11.SocAut	.19**	.21**	.17**	.03	-.004	-.001	.01	.29**	.19**	.16**	-						
12.AdvXAut	-.06	-.04	-.06	.06	.01	.03	-.04	.02	.01	.06	.04	-					
13.Frat/Sor	-.24**	-.22**	-.19**	-.15**	-.07	.01	.01	.12*	.06	.09	-.06	.02	-				
14.LiveSit	-.10*	-.14**	-.11*	.08	-.004	-.05	-.04	.01	.06	.09	.01	.04	.05	-			
15.Race	.21**	.19**	.21**	.09	-.07	.05	-.01	.14**	.20**	.10	.07	.05	.08	.08	-		
16.Religion	.04	.03	.08	-.12*	-.10*	-.07	-.13**	-.02	.04	.02	.01	-.03	.14**	-.01	-.15**	-	
17.Anxiety	-.23**	-.23**	-.20**	.02	.02	-.01	-.08	-.37**	-.33**	-.13**	-.43**	-.03	.14**	.10	-.08	.07	-

* $p < .05$, ** $p < .01$

3.2 INFLUENCE OF PARENTAL KNOWLEDGE ON ALCOHOL USE

The model for parental knowledge and autonomy from parents (i.e., granted-desired autonomy) (Figure 1) fit the data adequately, $\chi^2(105) = 272.30, p < .001$; RMSEA = .06; CFI = .95. Parental knowledge was significantly and negatively associated with alcohol use above and beyond autonomy, friend alcohol use, ethnicity, living situation, fraternity/sorority membership, and the interaction between knowledge and autonomy ($B = -.13, p < .01$). Neither autonomy ($B = .09, p = .24$) nor the interaction between parental knowledge and autonomy ($B = -.004, p = .59$) were significantly related to alcohol use. In addition, friend use was significantly and positively related to alcohol use ($B = .75, p < .001$); however, parental knowledge ($B = -.02, p = .80$) and the knowledge/autonomy interaction ($B = -.003, p = .65$) were not related to friend use. Consequently, the mediational pathway (i.e., parental knowledge affecting alcohol use via preventing affiliation with drinking friends) was not supported.

3.3 INFLUENCE OF FRIEND ALCOHOL USE ON ALCOHOL USE

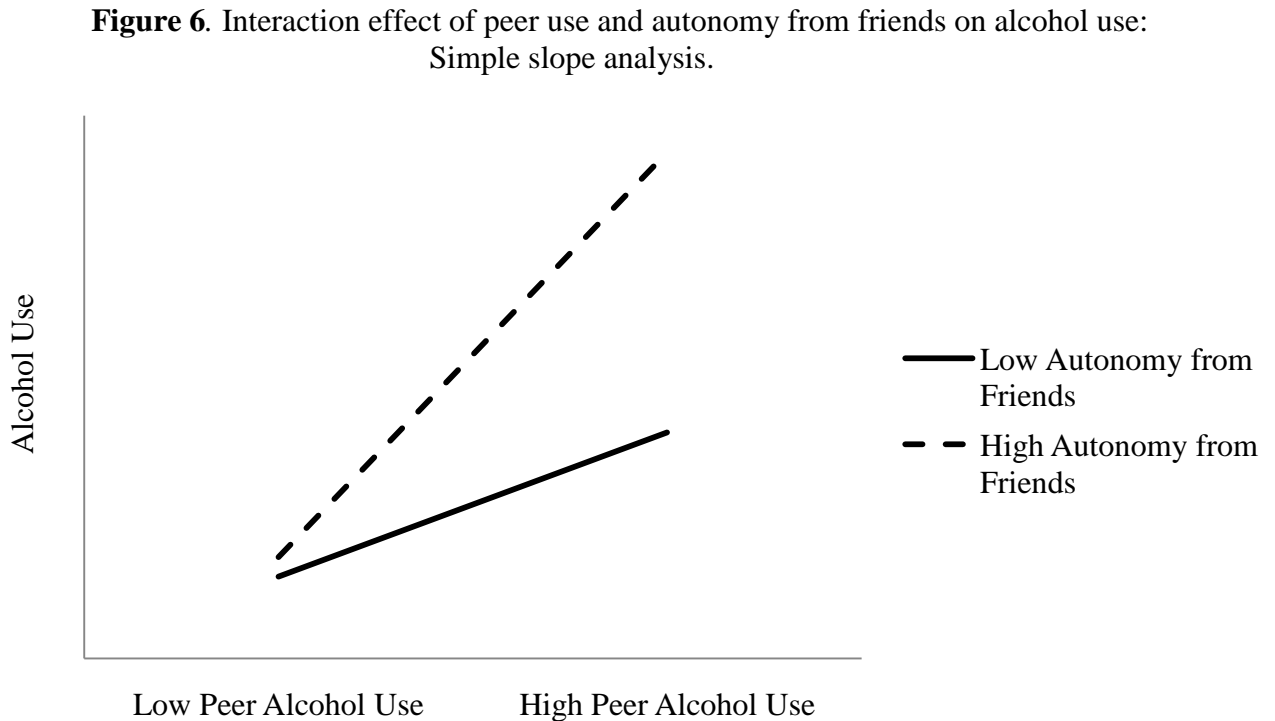
The model for friend alcohol use and autonomy from friends (Figure 2) fit the data adequately, $\chi^2(120) = 285.95, p < .001$; RMSEA = .06; CFI = .95. Friend use was significantly and positively associated with alcohol use above and beyond autonomy, parental knowledge, ethnicity, living situation, fraternity/sorority membership, and the interaction between friend use and autonomy ($B = .75, p < .001$). Neither autonomy ($B = .02, p = .68$) nor the interaction between friend use and autonomy ($B = -.01, p = .90$) were significantly related to alcohol use. Parental knowledge was significantly and negatively related to alcohol use ($B = -.09, p < .05$) but was not significantly related to friend use ($B = .01, p = .90$) or the friend use/autonomy interaction ($B = -.21, p = .20$). Thus, the mediational pathway was, again, not supported.

3.4 INFLUENCE OF PEER ALCOHOL NORMS ON ALCOHOL USE

The model for peer alcohol use and autonomy from peers (Figure 3) fit the data adequately, $\chi^2(168) = 351.52, p < .001$; RMSEA = .05; CFI = .93. Peer use was significantly and positively associated with alcohol use above and beyond autonomy, parental knowledge, gender, ethnicity, religious affiliation, living situation, fraternity/sorority membership, social anxiety, and the interaction between peer use and autonomy ($B = .24, p < .001$). Autonomy was not significantly related to alcohol use ($B = -.11, p = .19$), but the interaction between peer use and autonomy from friends was significantly and positively associated with alcohol use above and beyond the other variables in the model ($B = .38, p < .05$). This finding was checked with bootstrapping and

found to be robust (95% CI: .08 - .86). Parental knowledge was not significantly related to alcohol use ($B = -.10, p = .11$), peer use ($B = .05, p = .37$), or the peer use/autonomy interaction ($B = -.16, p = .46$). Thus, mediational analyses were not supported in any analyses examining potential indirect effects.

Probing the pattern of the significant interaction between peer alcohol use and autonomy from friends, the positive relation between peer alcohol norms and participant alcohol use increased as the level of autonomy from friends increased. As shown in Figure 6, simple slope analyses showed that the relation between peer alcohol norms and participant alcohol use was significant when autonomy was high, i.e., one standard deviation above the mean ($t(389) = 4.54$,



$p < .001$) but not when autonomy was low, i.e., one standard deviation below the mean ($t(389) = 1.84, p = .07$). The direction of the interaction effect was in the opposite direction of the hypothesis, thus further analyses were conducted to address the unexpected findings. Exploratory analyses showed that social anxiety was negatively correlated with the indicators for autonomy from friends ($r = -.13, -.33, -.37, -.43$, all $p < .001$). Comparing the mean levels of social anxiety, participants with autonomy scores lower than the median reported significantly higher levels of social anxiety than those with autonomy scores greater than the median ($t = 9.00, p < .001$). In addition, when social anxiety was removed as a covariate in the model, the interaction between peer alcohol norms and autonomy was no longer significant ($B = .31, p = .06$). Further, examining the items from the adolescent form of the Alcohol Expectancy Questionnaire (Christiansen et al., 1982), participants in the low autonomy group were found to agree more with the expectation that drinking alcohol can make a bad impression on others compared to participants in the high autonomy group ($t = -2.197, p = .03$).

3.5 RELATIVE INFLUENCE OF FRIENDS COMPARED TO PARENTS AND PARENT AUTONOMY ON ALCOHOL USE

The model for relative influence and autonomy from parents (Figure 4) fit the data adequately, $\chi^2(74) = 135.64, p < .001$; RMSEA = .05; CFI = .96. Relative influence was not significantly associated with alcohol use ($B = -.15, p = .15$). Autonomy was also not significantly associated with alcohol use ($B = -.01, p = .90$). The relative influence/autonomy interaction was also not

significantly associated with alcohol use in this model ($B = -.02, p = .24$). Thus, none of the variables of interest were related to alcohol use.

3.6 RELATIVE INFLUENCE OF FRIENDS COMPARED TO PARENTS AND FRIEND AUTONOMY ON ALCOHOL USE

The model for relative influence and autonomy from friends (Figure 5) fit the data adequately, $\chi^2(107) = 177.87, p < .001$; RMSEA = .04; CFI = .96. Similar to the model for relative influence and autonomy from parents, relative influence was not significantly associated with alcohol use in this model ($B = -.08, p = .37$). Autonomy was also not significantly associated with alcohol use ($B = -.12, p = .15$). The relative influence/autonomy interaction was also not significantly associated with alcohol use in this model ($B = -.79, p = .21$). The findings suggest that reliance on parents or friends for advice on specific topics was not related to alcohol use in either model, regardless of which autonomy measure was incorporated into the model.

4.0 DISCUSSION

The purpose of this study was to examine the role of parental knowledge and both close friend and peer (i.e., typical college students) alcohol norms in alcohol use among first semester college students. Additionally, this study investigated how the effects of these social influences may be affected by the level of students' autonomy. Consistent with the existing literature, higher levels of parental knowledge were significantly related to lower levels of alcohol use among participants, and higher levels of perceived close friend alcohol use and peer alcohol norms were both associated with higher levels of participant alcohol use. The perceived relative influence of parents and friends was not related to alcohol use among participants. The relation between parental knowledge and participant alcohol use did not differ depending on the level of discrepancy between granted and desired autonomy reported by the participant, which shows that the influence of parental knowledge on alcohol use was not attenuated by students' sense of autonomy. Similarly, the relation between close friend alcohol use and participants' alcohol use was unaffected by the level of autonomy from friends. In contrast, a significant interaction between autonomy from friends and peer alcohol norms was found. Probing the interaction effect, however, suggested that the pattern was in the opposite direction of the hypothesis, such that the positive relation between peer norms and participant alcohol use was stronger for students reporting higher autonomy from friends.

4.1 PARENTAL KNOWLEDGE, AUTONOMY, AND ALCOHOL USE

The negative relation between parental knowledge and alcohol use among participants corroborate the findings of prior studies with adolescents and college students where higher levels of parental knowledge are associated with lower levels of alcohol use (Nash et al., 2005; Patterson et al., 1989; Waizenhofer et al., 2004; White et al., 2006; Wood et al., 2004). These findings confirm that monitoring and knowledge continue to play an important role in protecting students from participation in dangerous levels of alcohol use during the transition to college. Having higher levels of knowledge may be a result of parents remaining more involved in the lives of transitioning students and helping them through difficulties they may encounter. It should be noted that parental knowledge is a function of both active monitoring by parents and disclosure of information by adolescents (Stattin & Kerr, 2000). Disclosure of information may play a stronger role in the acquisition of parental knowledge during the college years, as many young adults live away from home. As the role of monitoring and disclosure in parental knowledge was beyond the scope of the current study, future research should determine how monitoring and disclosure impact parental knowledge during the college transition. Determining the role of disclosure in parental knowledge during this developmental period could help researchers to design interventions. Once identified, current intervention practices targeting parental communication with freshmen students (Turrisi et al., 2001) could incorporate monitoring and disclosure behaviors.

Contrary to the hypotheses of the current study, the discrepancy between granted and desired autonomy did not impact alcohol use among college students or affect the relation between parental knowledge and participant alcohol use. This is inconsistent with prior research

linking the discrepancy between desired and granted autonomy to participation in problem behaviors, including alcohol use, in adolescent samples (Eccles et al., 1993; Eccles et al., 2003). However, because the majority of the research on autonomy and alcohol use utilizes an adolescent sample, it is unclear whether the same underlying mechanisms are applicable to the current college-age sample. One explanation for this finding is that the college transition may force, at a minimum, an acceptable level of autonomy granting onto parents, given that the college environment is designed to make students responsible for their decisions and behaviors. Consequently, a desire for more autonomy than that granted by parents may not be an issue during the transition to college. Another form of autonomy, specifically *emotional autonomy*, could matter more to students and impact drinking behavior during this period (Collins & Steinberg, 2006; Douvan & Adelson, 1966). Emotional autonomy is thought to reflect emotional detachment from parents (Ryan & Lynch, 1989) and appears to influence the development of self-regulation and self-reliance among young adults. As a result, emotional autonomy may be a more meaningful measure of independence among transitioning students than the discrepancy between granted and desired autonomy.

4.2 FRIEND ALCOHOL USE/PEER NORMS, AUTONOMY, AND ALCOHOL USE

The positive relation between both friends' alcohol use and peer norms and the participants' alcohol use is consistent with other research with college samples (e.g., Woods et al., 2004). It is important to note that the measure of close friend alcohol consumption and the measure of peer norms in the current study are based on the participant's perceptions rather than actual use.

While reports based on perceptions may be overestimated (Pedersen et al., 2008; Wechsler et al., 2003), studies show that beliefs about alcohol use among close friends and peers are more strongly related to participants' own alcohol use than actual alcohol use among friends and peers (Baer et al., 1991; Brown & Klute, 2003). The role of perceived friend alcohol use and peer norms is best illustrated by the positive relation between beliefs about college student alcohol use formed before beginning college and subsequent alcohol use among college freshmen (Read et al., 2002). Transitioning students may have difficulty modifying perceptions about friend and peer alcohol use because drinking is more likely to occur in social situations, where it may be difficult to track others' alcohol use and develop a realistic idea of the level of alcohol use in friends (Bauman & Ennett, 1996; Pedersen et al., 2008). As these norms tend to be formed before students begin college (Sher & Rutledge, 2007) and it is difficult to correct these overestimated norms among college students (Wechsler et al., 2003), interventions on peer norms may need to target pre-college adolescents.

The positive relation between peer norms and participant's alcohol use was found to be accentuated, rather than attenuated, by participant's sense of autonomy from friends. Exploratory analyses examining this unexpected pattern of results showed that the significant interaction effect may be spurious due to social anxiety. Social anxiety was negatively related to both autonomy from friends and participants' alcohol use, and the peer alcohol norms/autonomy interaction was no longer significant when social anxiety was removed as a covariate from the model. In addition, students in the low autonomy group reported higher levels of social anxiety and greater agreement with the expectation that drinking alcohol can make a bad impression on others compared to participants in the high autonomy group. In general, studies show that anxious students who believe that drinking alcohol can damage social relationships tend to drink

less than anxious students who believe that drinking alcohol facilitates social relationships (Giles et al., 2006). In the current study, college freshmen with low autonomy from friends appear to have high social anxiety and worry that they might make a bad impression on peers when drinking alcohol. These individuals may avoid social situations where their alcohol consumption could be influenced by their friends and, as a result, peer norms may have less impact on their drinking. This supports the role of social anxiety speculated from the exploratory analyses, however, further systematic investigation is needed in future research.

4.3 RELATIVE INFLUENCE OF FRIENDS COMPARED TO PARENTS, AUTONOMY, AND ALCOHOL USE

The person a participant relied on more for advice, either parents or friends, was thought to have a greater influence on participants' behaviors. Thus, participants who depended on friends for advice were expected to report higher levels of alcohol use than participants who depended on parents. However, the relative influence of friends compared to parents was not significantly related to alcohol use. It appears that the items in the measure (i.e. advice on education, health, personal life, and outlook on life) may not have captured the conflict between parents and friends as advice sources. For example, while first semester college students may still rely on parents or friends for some decisions (Montgomery & Cote, 2003), it is possible that they may approach others in the college environment, such as academic advisers or professors, for advice about education or career related issues. Similarly, a large proportion of college students report relying on sources other than family or friends for health information, such as doctors and the internet

(Escoffery et al., 2005). As a result, the items used in the current study should be modified for future research to better measure the relative influence of parents or friends among college students. In particular, including more domains college students might need advice about and alternative sources they may seek advice from may make the measure more appropriate for college students.

4.4 LIMITATIONS

There are several limitations to the current study. First, the study measured participants' perceived parental knowledge rather than parent reports, thus there might be a discrepancy between perceived and actual parental knowledge. Previous research on adolescents, however, supports the use of adolescent reports of parenting behaviors because adolescent reports are a better predictor of adolescent behavior and are less influenced by parents' social desirability (Latendresse et al., 2009; Schwarz et al., 1985; Sessa et al., 2001). As similar biases in parent reports are likely in a college sample, college students are likely valid reporters of their parents' behavior. Second, parents' drinking and attitudes toward alcohol use were not assessed in the current study. Just as close friends and general peers influence alcohol use, parents' drinking behavior can also affect alcohol use among emerging adults. Future research would benefit from examining the role of parent alcohol use in addition to examining friend alcohol use. Third, in the measure of close friend alcohol use, close friends were not defined by the researcher but by the participants. Thus, it is possible that the level of closeness and the contexts in which participants and their friends interacted may have varied depending on the friends participants

were referencing. Fourth, the study was not powered to detect interaction effects. The effect sizes of the interactions in four out of the five models were smaller than the expected effect size ($R^2 = .03$). The highest observed power to detect the interaction effect in these models was .51. A sample size of approximately 800 would have been needed to detect the significance of an interaction effect given these small effect sizes. Fifth, the sample was only comprised of students at one university. The university is located in a large city where numerous athletic and fine arts events are available for students, which may or may not involve alcohol. As a result, students at this university may have different college experiences compared to students on other campuses. When compared to another sample of first semester college students, whose alcohol use was assessed using the same scale as the current study, the current sample reported similar mean levels of alcohol use (1.85 vs. 1.36), becoming drunk (1.50 vs. 1.27), and binge drinking (1.23 vs. 1.28) in the past 30 days (Sher & Rutledge, 2007). While the current sample seems to be similar to another sample of first semester college students, future work would benefit from a more representative sample of students. Finally, future work would also benefit from incorporating multiple informants, particularly friends, who may provide another perspective on an individual's autonomy from friends and parents.

4.5 CONCLUSION

The current study suggests that parental knowledge and friend and peer alcohol norms are associated with alcohol use among students transitioning to college. Autonomy has an effect on the relation between peer norms and alcohol use; however, the pattern of the interaction between

autonomy and peer alcohol norms was not in the expected direction, with social anxiety and specific expectancies seeming to covary with autonomy from peers. Despite the null findings of the current study, this is one of the first studies to investigate the role of autonomy in explaining college students' alcohol consumption. As previous research has primarily used proxy variables, such as living situation, to gauge autonomy, more systematic investigation is needed to understand how autonomy develops and affects the lives of college freshmen. Future work should investigate different forms of autonomy (e.g., emotional autonomy) and incorporate larger, more representative samples. In addition, the relation between autonomy from friends and social anxiety should also be investigated further, perhaps using a latent profile analysis to identify subgroups of individuals who show distinctive patterns on these two dimensions. Examining parental and peer influences in these contexts will help researchers address how parenting and peer or close friend alcohol use might affect alcohol use during the college transition.

APPENDIX A

SCRIPT

Who is doing this project, and what is it about?

Dr. JeeWon Cheong and Christine Walther in the psychology department at the University of Pittsburgh are conducting a research project on college life among freshmen in college. The purpose of this project is to investigate patterns of alcohol consumption, beliefs about the effects of alcohol, relationships with parents, relationships with peers, and additional characteristics of college students. We hope to use the findings of this study to help freshmen students as they adjust to the college environment.

What do I have to do?

You must be at least 18 years old to participate in this study. If you are at least 18 years old and agree to participate, we will ask you to answer a series of questions that ask about your relationships with people in your life, your college life, and personal beliefs. Although it is preferred that you answer every question, you may skip any question you don't feel like answering. You will also have the option throughout the survey to cancel your participation in the event that you feel uncomfortable with the research project. All materials related to your participation in the study will be shredded if you choose to cancel your participation. It is important to know that you will not be penalized for ending your participation in this study without completing the survey. It will take you between 40-60 minutes to finish the survey.

Will my answers be confidential?

No one but Dr. Cheong and her research assistants will see your answers. They will be kept on a secure server or in a locked office at the University of Pittsburgh. Because the contact information you provide is stored separately from your other answers, no one will be able to associate the answers you give with your name, and your personal information will not be seen by anyone except the researchers in the study (Dr. Cheong and Christine Walther). **Your answers will not be shared with anyone and the information you provide will not be used to get you into any kind of trouble, no matter what your answers are.** Therefore, please answer all questions as honestly as possible. You may be contacted for follow-up during the Spring semester. A random selection of participants will be contacted in the Spring to examine any group differences in the behaviors and opinions we will be asking about today. If you are asked

to participate, it will not be related to your answers on the measures today, and you are not required to participate in the follow-up study.

What do I get out of this?

You will receive 1 credit toward the research participation requirement for your Introduction to Psychology class. Your participation will also contribute to advancement in psychological research.

What if I have questions?

If you are interested in the study findings, please feel free to contact Dr. Cheong or Christine Walther at the address below so that we can send you the information. If you have any questions about the research or any concerns about your participation, please contact the primary researcher, Christine Walther (cap63@pitt.edu), or her faculty supervisor, Dr. JeeWon Cheong (jcheong@pitt.edu), who will be happy to answer any questions you have about the study. For questions about your rights as a subject or about consequences caused by this research, contact the University of Pittsburgh Institutional Review Board, at (412) 383-1480.

APPENDIX B

DEBRIEFING FORM

Previous research has shown that parents and peers influence the behaviors of adolescents, including behaviors such as alcohol use (Duncan et al, 1998; Eccles et al., 1993; Fuligni et al., 2001; Hawkins et al., 1992; Stice & Barrera, 1995). Sense of autonomy has also been found to be related to behaviors among adolescents (Eccles et al., 2003; Fuligni et al., 2001; Lerner et al. 2003). Determining if these factors play a role in behavior among college students, particularly freshmen in college, could be valuable to those helping freshmen students as they adjust to the college environment. Thus, the purpose of this study is to examine how college freshmen's behaviors are related to the factors we asked about in the questionnaire. Our expectation is that parents and peers, as well as a student's sense of autonomy, will play an important role in the behavior of students. We hope that the findings of this study may be used to help understand behavior in younger college students and enhance their adjustment to the college environment. Thank you again for your participation in this research. If you have any further questions, please feel free to contact the primary researcher, Christine Walther (cap63@pitt.edu; 412-624-8795), or her faculty supervisor, Dr. JeeWon Cheong (jcheong@pitt.edu).

APPENDIX C

COMPLETE SURVEY

In the following questions, please indicate how often you drink alcohol.

1. On how many occasions (if any) have you used alcohol **during the last 30 days?**

- | | |
|------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 10-15 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 16-20 Times |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> More than 21 Times |
| <input type="checkbox"/> 6-9 Times | |

2. On how many occasions (if any) have you used alcohol **during the last week?**

- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 3-5 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 6-7 Times |

3. On how many occasions (if any) have you been **drunk (i.e. tipsy, wasted, buzzed) during the last 30 days?**

- | | |
|------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 10-15 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 16-20 Times |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> More than 21 Times |
| <input type="checkbox"/> 6-9 Times | |

4. On how many occasions (if any) have you been **drunk (i.e. tipsy, wasted, buzzed) during the last week?**

- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 3-5 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 6-7 Times |

If you are male, please continue to questions 5

If you are female, please go to question 7

5. On how many occasions (if any) have you had **five or more drinks in a row on one occasion during the last 30 days**? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | |
|------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 10-15 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 16-20 Times |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> More than 21 Times |
| <input type="checkbox"/> 6-9 Times | |

6. On how many occasions (if any) have you had **five or more drinks in a row during the last week**? Again, count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 3-5 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 6-7 Times |

(Go to the next page)

7. On how many occasions (if any) have you had **four or more drinks in a row on one occasion during the last 30 days**? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | |
|------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 10-15 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 16-20 Times |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> More than 21 Times |
| <input type="checkbox"/> 6-9 Times | |

8. On how many occasions (if any) have you had **four or more drinks in a row during the last week**? Again, count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 3-5 Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 6-7 Times |

In the following questions, please indicate how much alcohol typical college students drink.

1. In the **last 30 days**, how often do you think that **the typical college student** drank alcohol?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

2. In the **last 30 days**, what do you think was the typical quantity of alcohol consumed by **the typical college student** during one drinking occasion? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | | |
|-----------------------------------|-----------------------------------|---|
| <input type="checkbox"/> 0 Drinks | <input type="checkbox"/> 3 Drinks | <input type="checkbox"/> 6 Drinks |
| <input type="checkbox"/> 1 Drink | <input type="checkbox"/> 4 Drinks | <input type="checkbox"/> 7 Drinks |
| <input type="checkbox"/> 2 Drinks | <input type="checkbox"/> 5 Drinks | <input type="checkbox"/> 8 or More Drinks |

3. In the **last 30 days**, how often do you think that **the typical college student** participated in heavy drinking (i.e. drinking enough alcohol to become drunk, tipsy, wasted, or buzzed)?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

Please think of your 3 closest friends. In the following questions, please describe how much alcohol they drink.

4. For **friend #1** of your closest friends, how often do you think he/she drank alcohol in the **last 30 days**?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

5. For **friend #1** of your closest friends, what do you think was the typical quantity of alcohol consumed by him/her during one drinking occasion in the **last 30 days**? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | | |
|-----------------------------------|-----------------------------------|---|
| <input type="checkbox"/> 0 Drinks | <input type="checkbox"/> 3 Drinks | <input type="checkbox"/> 6 Drinks |
| <input type="checkbox"/> 1 Drink | <input type="checkbox"/> 4 Drinks | <input type="checkbox"/> 7 Drinks |
| <input type="checkbox"/> 2 Drinks | <input type="checkbox"/> 5 Drinks | <input type="checkbox"/> 8 or More Drinks |

6. For **friend #1** of your closest friends, how often do you think that he/she participated in heavy drinking (i.e. drinking enough alcohol to become drunk, tipsy, wasted, or buzzed) in the **last 30 days**?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

7. For **friend #2** of your closest friends, how often do you think he/she drank alcohol in the **last 30 days**?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

8. For **friend #2** of your closest friends, what do you think was the typical quantity of alcohol consumed by him/her during one drinking occasion in the **last 30 days**? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | | |
|-----------------------------------|-----------------------------------|---|
| <input type="checkbox"/> 0 Drinks | <input type="checkbox"/> 3 Drinks | <input type="checkbox"/> 6 Drinks |
| <input type="checkbox"/> 1 Drink | <input type="checkbox"/> 4 Drinks | <input type="checkbox"/> 7 Drinks |
| <input type="checkbox"/> 2 Drinks | <input type="checkbox"/> 5 Drinks | <input type="checkbox"/> 8 or More Drinks |

9. For **friend #2** of your closest friends, how often do you think that he/she participated in heavy drinking (i.e. drinking enough alcohol to become drunk, tipsy, wasted, or buzzed) in the **last 30 days**?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

10. For **friend #3** of your closest friends, how often do you think he/she drank alcohol in the **last 30 days**?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

11. For **friend #3** of your closest friends, what do you think was the typical quantity of alcohol consumed by him/her during one drinking occasion in the **last 30 days**? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.

- | | | |
|-----------------------------------|-----------------------------------|---|
| <input type="checkbox"/> 0 Drinks | <input type="checkbox"/> 3 Drinks | <input type="checkbox"/> 6 Drinks |
| <input type="checkbox"/> 1 Drink | <input type="checkbox"/> 4 Drinks | <input type="checkbox"/> 7 Drinks |
| <input type="checkbox"/> 2 Drinks | <input type="checkbox"/> 5 Drinks | <input type="checkbox"/> 8 or More Drinks |

12. For **friend #3** of your closest friends, how often do you think that he/she participated in heavy drinking (i.e. drinking enough alcohol to become drunk, tipsy, wasted, or buzzed) in the **last 30 days**?

- | | | |
|------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 0 Times | <input type="checkbox"/> 6-9 Times | <input type="checkbox"/> 21 or More Times |
| <input type="checkbox"/> 1-2 Times | <input type="checkbox"/> 10-15 Times | |
| <input type="checkbox"/> 3-5 Times | <input type="checkbox"/> 16-20 Times | |

In following questions, please use a score from 1 to 4 to describe some aspects of your relationship with your parents (or the adults who raised you, like your step-parent or guardian). As shown below, the score of 1 indicates nothing, while the score of 4 indicates everything.

1 = Nothing 2 = Some 3 = A Lot 4 = Very Much

___1. How much do your parents know about your choice of friends, who they are, what they are like?

___2. How much do your parents know about your intellectual interests, both in and out of school?

___3. How much do your parents know about your activities outside of school (e.g., sports, jobs, clubs, etc.)?

___4. How much do your parents know about your interest in activities with a boy/girlfriend, your dating behaviors?

___5. How much do your parents know about the extent of your sexual behavior?

___6. How much do your parents know about your health habits, such as amount of sleep, diet and exercise?

___7. How much do your parents know about your use of tobacco?

___8. How much do your parents know about your use of alcohol?

___9. How much do your parents know about your use of drugs?

___10. How much do your parents know about your problem behavior in school such as skipping classes, being late, etc.?

___11. How much do your parents know about your school life such as teachers, homework, grades?

___12. How much do your parents know about your extracurricular activities, sports, clubs, etc.?

___13. How much do your parents know about where you are and what you are doing when away from home?

In the following statements, please indicate how **involved** your parents (or the adults who raised you, like your step-parent or guardian) are in your life. Please answer using a percentage, with 0% equal to “Not at All” 100% equal to “All the Time.”

In the **past 30 days**, my mother/father...

1. Respected my privacy _____% of the Time
2. Tried to restrict my freedom _____% of the Time
3. Took my opinions seriously _____% of the Time
4. Encouraged me to make my own decisions _____% of the Time
5. Was critical of my behavior _____% of the Time
6. Imposed his/her ideas and values on me _____% of the Time
7. Was a person to whom I could express differences of opinion on important matters _____% of the Time
8. Provided me with the freedom to experiment and learn things on my own _____% of the Time
9. Showed he/she trusted and had confidence in me _____% of the Time
10. Tried to control my behavior or plans _____% of the Time
11. Gave me advice whether or not I wanted it _____% of the Time
12. Respected my judgment and decisions, even if different from what he/she would want _____% of the Time
13. Did things for me, which I could do for myself _____% of the Time
14. Treated me more like a child than an adult _____% of the Time

Now, please indicate how much you **wanted** your parents (or the adults who raised you, like your step-parent or guardian) to be involved in your life. While the previous section asked you to describe how involved your parents are in your life, the following questions ask you how much you wanted your parents to be involved in your life regardless of how involved they actually are.

In the **past 30 days**, I **wanted** my mother/father to...

1. Respect my privacy _____% of the Time
2. Try to restrict my freedom _____% of the Time
3. Take my opinions seriously _____% of the Time
4. Encourage me to make my own decisions _____% of the Time
5. Be critical of my behavior _____% of the Time
6. Impose his/her ideas and values on me _____% of the Time
7. Be a person to whom I could express differences of opinion on important matters _____% of the Time
8. Provide me with the freedom to experiment and learn things on my own _____% of the Time
9. Show he/she trusted and had confidence in me _____% of the Time
10. Try to control my behavior or plans _____% of the Time
11. Give me advice whether or not I wanted it _____% of the Time
12. Respect my judgment and decisions, even if different from what he/she would want _____% of the Time
13. Do things for me, which I could do for myself _____% of the Time
14. Treat me more like a child than an adult _____% of the Time

Using the number shown below, please indicate how well the following statements describe you.

1 = Not At All Like Me

2 = Somewhat Like Me

3 = A Lot Like Me

4 = Very Much Like Me

- ___1. It doesn't bother me if my friends don't accept my ideas.
- ___2. I don't like to go to a new place without a friend.
- ___3. I plan my own social life without getting approval from friends.
- ___4. I really feel uncomfortable when I go to a party without my friends.
- ___5. I can disagree with my boy/girl friends without feeling guilty.
- ___6. I would feel worthless if I was not accepted by my peers.
- ___7. I can evaluate my friends' values and accept or reject them.
- ___8. I feel badly about myself when I'm not dating someone.
- ___9. I can accept the fact that some of my peers don't like me.
- ___10. I become unhappy when my friends don't like my ideas.
- ___11. I would go out on a date with someone I like even if my best friends didn't like him/her.
- ___12. To feel accepted by my friends, I'll do things that are against my principles.
- ___13. I need emotional support from friends when I try new things.
- ___14. I feel I conform to my friends' standards.
- ___15. I worry if my friends talk about me when I'm not with them.

The next questions are about your friends and your parents (or the adults who raised you, like your step-parent or guardian).

1. If you had to make a **serious** decision about school, who would you depend on more for advice- your friends here at Pitt or your parents?

Friends More Parents and Friends the Same Parents More

2. If you had to make a **serious** decision about your personal life, who would you depend on more for advice- your friends here at Pitt or your parents?

Friends More Parents and Friends the Same Parents More

3. What about how to take care of your health? Who do you listen to more- your friends here at Pitt or your parents?

Friends More Parents and Friends the Same Parents More

4. What about your outlook on life - what is important to do and what is important to become? Who has more influence on you, your friends here at Pitt or your parents?

Friends More Parents and Friends the Same Parents More

Please indicate the degree to which the statement is characteristic or true of you using the 4-point scale.

1 = Not At All Like Me

2 = Somewhat Like Me

3 = A Lot Like Me

4 = Very Much Like Me

- ___ 1. I often feel nervous even in casual get-togethers.
- ___ 2. I usually feel uncomfortable when I am in a group of people I don't know.
- ___ 3. I am usually at ease when speaking to a member of the opposite sex.
- ___ 4. I get nervous when I must talk to a teacher or boss.
- ___ 5. Parties often make me feel anxious and uncomfortable.
- ___ 6. I am probably less shy in social interactions than most people.
- ___ 7. I sometimes feel tense when talking to people of my own sex if I don't know them very well.
- ___ 8. I would be nervous if I was being interviewed for a job.
- ___ 9. I wish I had more confidence in social situations.
- ___ 10. I seldom feel anxious in social situations.
- ___ 11. In general, I am a shy person.
- ___ 12. I often feel nervous when talking to an attractive member of the opposite sex.
- ___ 13. I often feel nervous when calling someone I don't know very well on the telephone.
- ___ 14. I get nervous when I speak to someone in a position of authority.
- ___ 15. I usually feel relaxed around other people, even people who are quite different from me.

Please answer “True” or “False” to the following statements. Write “T” for “True” and “F” for “False.”

- ___ 1. I have never intensely disliked anyone.
- ___ 2. I like to gossip at times.
- ___ 3. There have been occasions when I took advantage of someone.
- ___ 4. I’m always willing to admit when I make a mistake.
- ___ 5. I sometimes try to get even rather than forgive and forget.
- ___ 6. When I don’t know something, I don’t at all mind admitting it.
- ___ 7. I am always courteous, even to people who are disagreeable.
- ___ 8. At times I have really insisted on having things my own way.
- ___ 9. I have never been irked when people expressed ideas very different from my own.
- ___ 10. I have never deliberately said something that hurt someone’s feelings.

Over the last **30 days**, how often did the following things happen between you and your mother or father (or the adults who raised you, like your step-parent or guardian)?

1 = Never

2 = Sometimes

3 = Often

4 = A Lot

- ___ 1. We enjoyed spending time together (over the telephone, email or in person).
- ___ 2. I got along well with my mother or father.
- ___ 3. My mother/father trusted my judgment.
- ___ 4. I talked with my mother/father about my activities and plans.
- ___ 5. We got angry at each other.
- ___ 6. We visited, did an activity or took a trip together.
- ___ 7. We argued or had a disagreement (over the telephone, email or in person).
- ___ 8. We had a big argument about a little thing.
- ___ 9. One of us got so mad we hit the other person.
- ___ 10. I got my way by getting angry.

Over the last **30 days**, how often did the following things happen between you and your closest friends?

1 = Never

2 = Sometimes

3 = Often

4 = A Lot

___1. We enjoyed spending time together (over the telephone, email or in person).

___2. I got along well with my closest friends.

___3. My closest friends trusted my judgment.

___4. I talked with my closest friends about my activities and plans.

___5. We got angry at each other.

___6. We visited, did an activity or took a trip together.

___7. We argued or had a disagreement (over the telephone, email or in person).

___8. We had a big argument about a little thing.

___9. One of us got so mad we hit the other person.

___10. I got my way by getting angry.

Using the numbers shown below, please indicate how well the following statements describe you.

1 = Not At All Like Me

2 = Somewhat Like Me

3 = A Lot Like Me

4 = Very Much Like Me

- ___1. I would go against my parents wishes if the issue was very important to me.
- ___2. I get upset if I don't get a letter or phone call from my family.
- ___3. My opinions are quite independent from those of my parents.
- ___4. I need to contact my parents when I feel discouraged.
- ___5. I solve most of my problems on my own without family help.
- ___6. I get upset if my parents don't approve of my leisure activities.
- ___7. I don't feel the need to call my parents before making a financial investment.
- ___8. I look to my parents for solutions to personal problems.
- ___9. I can reject my parents' advice.
- ___10. I would prefer to compromise myself than go against my parents wishes.
- ___11. I do not feel the need for family reassurance when I embark on a new venture.
- ___12. I would not feel upset when entering a place that lacked my parents' approval.
- ___13. I don't need my parents' approval of the people I date.
- ___14. I feel emotionally independent of my parents.
- ___15. It's very important to me that my parents accept what I'm doing.

Please read the following statements about the effects of alcohol and indicate how much you agree with the statement. When the statements refer to "drinking alcohol", you may think in terms of any alcoholic beverage such as beer, wine, whiskey, liquor, rum, scotch, vodka, gin, or various alcoholic mixed drinks. Whether or not you have had actual drinking experience yourself, you are to answer in terms of how you think alcohol affects the typical or average drinker. It is important that you respond to every statement.

1 = Disagree 2 = Agree a Little 3 = Somewhat Agree 4 = Strongly Agree 5 = Absolutely Agree

- ___1. Drinking alcohol makes a person feel good and happy.
- ___2. Alcohol makes sexual experiences easier and more enjoyable.
- ___3. Drinking alcohol can get rid of physical pain.
- ___4. People are apt to break and destroy things when they are drinking alcohol.
- ___5. People become harder to get along with after they have had a few drinks of alcohol.
- ___6. Drinking alcohol creates problems.
- ___7. People feel sexier after a few alcoholic drinks.
- ___8. It is easier to open up and talk about one's feelings after a few drinks of alcohol.
- ___9. A person can talk with people of the opposite sex better after a few drinks of alcohol.
- ___10. Drinking alcohol makes a bad impression on others.
- ___11. People drive better after a few drinks of alcohol.
- ___12. Drinking alcohol can take a person's mind off his/her problems at home.
- ___13. Teenagers drink alcohol in order to get attention.
- ___14. It is hard to reason with a person who has been drinking alcohol.
- ___15. Parties are not as much fun if people are drinking alcohol.
- ___16. People are more creative and imaginative (can make-believe better) when they drink alcohol.
- ___17. People feel more caring and giving after a few drinks of alcohol.
- ___18. Drinking alcohol makes it easier to be with others and, in general, makes the world seem like a nicer place.
- ___19. It is easier to play sports after a few drinks of alcohol.
- ___20. Drinking alcohol makes the future seem brighter.

- ___21. A person can do things better after a few drinks of alcohol.
- ___22. Drinking alcohol makes people more friendly.
- ___23. A person may have a few drinks of alcohol in order to be part of the group.
- ___24. When drinking alcohol, people are more apt to insult and make fun of others.
- ___25. People are more sure of themselves when they are drinking alcohol.
- ___26. When drinking alcohol, people do not feel in control of their behavior; they are apt to do something that they do not want to do.
- ___27. Drinking alcohol makes people feel more interesting.
- ___28. Drinking alcohol is O.K. because it allows people to join in with others who are having fun.
- ___29. Drinking alcohol makes a person happier with himself/herself.
- ___30. When talking with people, words come to mind easier after a few drinks of alcohol.
- ___31. People feel powerful when they drink alcohol, as if they can get others to do what they want.
- ___32. Drinking alcohol makes people worry less.
- ___33. People drink alcohol because it gives them a neat, thrilling, high feeling.
- ___34. Drinking alcohol makes people feel more alert.
- ___35. Alcohol increases arousal; it makes people feel stronger and more powerful and makes it easier to fight.
- ___36. Sweet alcoholic drinks taste good.
- ___37. A few alcoholic drinks make people less shy.
- ___38. Drinking alcohol makes people more aggressive or pushy.
- ___39. After a few alcoholic drinks, people are less aware of what is going on around them.
- ___40. Most alcoholic drinks taste good.
- ___41. Most people think better after a few drinks of alcohol.
- ___42. Alcohol helps people stand up to others.
- ___43. People do not worry as much about what other people think of them after a few drinks of alcohol.

- ___44. When drinking alcohol, people are more apt to be taken advantage of by others.
- ___45. People do not drive as well after a few drinks of alcohol.
- ___46. People understand things better when they are drinking alcohol.
- ___47. Drinking alcohol gets rid of aches and pains.
- ___48. People are apt to become careless after a few drinks of alcohol.
- ___49. A person enjoys people of the opposite sex more after she/he has been drinking alcohol.
- ___50. Drinking alcohol makes a person feel less up-tight.
- ___51. People act like better friends after a few drinks of alcohol.
- ___52. Alcohol makes people feel more romantic.
- ___53. Drinking alcohol makes a person more pleased with himself/herself.
- ___54. Drinking alcohol loosens people up.
- ___55. Drinking alcohol causes hangovers.
- ___56. Most alcohol tastes terrible.
- ___57. People do stupid, strange, or silly things when they drink alcohol.
- ___58. Alcohol makes people more relaxed and less tense.
- ___59. People laugh a lot and do silly or crazy things when they have been drinking.
- ___60. Having a few drinks of alcohol is a nice way to enjoy holidays.
- ___61. When drinking alcohol, people are more apt to take advantage of others.
- ___62. It's fun to watch others act silly when they are drinking alcohol.
- ___63. People drink when they have problems.
- ___64. Drinking alcohol makes a person feel healthier.
- ___65. People feel less alone when they drink alcohol.
- ___66. People become dizzy, and are apt to fall down when they drink alcohol.
- ___67. Drinking alcohol makes a person feel close to people.

- ___ 68. Teenagers drink alcohol because they feel forced to do so by their peers.
- ___ 69. Alcohol changes people's personalities.
- ___ 70. People often have trouble remembering what they did while they were drinking alcohol.
- ___ 71. A few drinks of alcohol makes it easier to talk with people.
- ___ 72. People can control their anger better when they are drinking alcohol.
- ___ 73. People have strong feelings when they are drinking alcohol.
- ___ 74. Alcoholic beverages make parties more fun.
- ___ 75. Drinking alcohol does not get rid of problems, it just pushes them aside.
- ___ 76. Alcohol makes people better lovers.
- ___ 77. People don't feel so alone when they drink alcohol.
- ___ 78. After drinking alcohol, a person may lose control and run into things.
- ___ 79. Drinking alcohol gets rid of a person's feelings that he/she is not as good as other people.
- ___ 80. Drinking alcohol relaxes people.
- ___ 81. Drinking alcohol allows people to be in any mood they want to be.
- ___ 82. People become loud and noisy when they drink alcohol.
- ___ 83. Drinking alcohol can keep a person's mind off his/her mistakes at school.
- ___ 84. It is easier to speak front of a group of people after a few drinks of alcohol.
- ___ 85. People get in better moods after a few drinks of alcohol.
- ___ 86. Drinking alcohol helps teenagers to do their homework.
- ___ 87. Drinking alcohol leads students not to do their homework.
- ___ 88. Alcohol seems like magic.
- ___ 89. People don't worry about the things they are in charge of when they are drinking alcohol.
- ___ 90. People become more interested in people of the opposite sex after a few drinks of alcohol.

Different things happen to people while they are drinking ALCOHOL or as a result of their ALCOHOL use. Some of these things are listed below. Please indicate how many times each has happened to you during the last 30 days while you were drinking alcohol or as the result of your alcohol use. When marking your answers, use the following code:

0 = Never

1 = 1-2 Times

2 = 3-5 Times

3 = 6-10 Times

4 = More Than 10 Times

How many times did the following things happen to you while you were drinking alcohol or because of your alcohol use during the last 30 days?

- ___ 1. Not able to do your homework or study for a test
- ___ 2. Got into fights, acted bad, or did mean things
- ___ 3. Missed out on other things because you spent too much money on alcohol
- ___ 4. Went to work or school high or drunk
- ___ 5. Caused shame or embarrassment to someone
- ___ 6. Neglected your responsibilities
- ___ 7. Relatives avoided you
- ___ 8. Felt that you needed more alcohol than you used to use in order to get the same effect
- ___ 9. Tried to control your drinking by trying to drink only at certain times of the day or certain places
- ___ 10. Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking
- ___ 11. Noticed a change in your personality
- ___ 12. Felt that you had a problem with alcohol
- ___ 13. Missed a day (or part of a day) of school or work
- ___ 14. Tried to cut down or quit drinking
- ___ 15. Suddenly found yourself in a place that you could not remember getting to
- ___ 16. Passed out or fainted suddenly
- ___ 17. Had a fight, argument or bad feelings with a friend

___18. Had a fight, argument or bad feelings with a family member

___19. Kept drinking when you promised yourself not to

___20. Felt you were going crazy

___21. Had a bad time

___22. Felt physically or psychologically dependent on alcohol

___23. Was told by a friend or neighbor to stop or cut down drinking

What is your gender? Please check (√) one.

___Male

___Female

___Transgender

What is your current age?

___Years Old

What race or ethnic group best describes you? Please check (√) as many as apply.

___Asian

___Pacific Islander

___Hispanic/Latino/Spanish

___African American or Black

___White or Caucasian

___American Indian/Native American

___Other (please specify): _____

Are you a practicing member of a religion? Please check (√) one.

___Yes (please specify): _____

___No

What type of high school did you graduate from? Please check (√) one.

___Public High School

___Private High School, Religious

___Private High School, Non-Religious

___Home School

___Other (please specify): _____

Which statement best describes your parents' relationship? Please check (✓) one.

- My parents are married
- My parents are not married but live together
- My parents are separated
- My parents are divorced
- One of my parents is deceased

How is your education being paid for? Please check (✓) all that apply.

- Parents/Relatives
- Fellowships/Scholarships/Grants
- Student Loans
- Self/Job
- Other (please specify): _____

How far did your mother go in school?

- Less than middle or junior high school
- Completed middle or junior high school, but did not go to high school
- Went to high school, but did not graduate
- Graduated from high school, but did not go to college or other schools
- Had special job training after high school
- Went to college, but did not graduate
- Graduated from a 2 year associates degree program
- Graduated from a 4 year college
- Some education after college, like graduate school, medical school, or law school
- I don't know

How far did your father go in school?

- Less than middle or junior high school
- Completed middle or junior high school, but did not go to high school
- Went to high school, but did not graduate
- Graduated from high school, but did not go to college or other schools
- Had special job training after high school
- Went to college, but did not graduate
- Graduated from a 2 year associates degree program
- Graduated from a 4 year college
- Some education after college, like graduate school, medical school, or law school
- I don't know

Which description best identifies your position among your siblings? Please check (✓) one.

- Only Child
- Oldest Child
How many younger siblings? _____
- Middle Child
How many younger siblings? _____
How many older siblings? _____
- Youngest Child
How many older siblings? _____

Which of the following best describes your current living situation? Please check (✓) one.

- Living in the dorms
- Living with my parent(s)
- Living in an off-campus apartment or house
- Other (please specify): _____

Will you be joining a fraternity or sorority?

- 1) Already a member or pledge
- 2) Definitely
- 3) Probably
- 4) Possibly would be joining
- 5) Probably would not
- 6) Definitely would not be joining

In the last 30 days, about how often did **you** contact your parents via phone, email, or texting? Please check (✓) one.

- Once a month
- A couple of times a month, but less than once a week
- Once a week
- 2-3 times a week
- 4-5 times a week
- Almost every day
- Once a day
- More than once a day

In the last 30 days, about how often did **your parents** contact you via phone, email, or texting? Please check (✓) one.

- Once a month
- A couple of times a month, but less than once a week
- Once a week
- 2-3 times a week
- 4-5 times a week
- Almost every day
- Once a day
- More than once a day

In the last 30 days, about how many weekends did you go home? Please check (✓) one.

- I live at home
- 0 Weekends
- 1 Weekend
- 2-3 Weekends
- 4 (i.e. every) Weekends

How did you find out about this study? Please check (✓) one.

- Introductory Psychology Research Participation
- Someone Visited My Class
- Other (please specify):

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