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Heavy Drinking Behaviors and Parental Influence Among Greek Affiliated College Students

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ABSTRACT

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Heavy drinking behaviors have been observed in relation to fraternity and sorority membership. Some have argued that this relationship persists as a result of the drinking-conducive social environments of Greek organizations, but others have suggested that this relationship may be spurious. Using data from The Harvard School of Public Health College Alcohol Study (*n* = 10,904) the link between Greek affiliation, alcohol consumption, and parental influence was examined through the lens of social learning theory. It was hypothesized that members of Greek organizations would report higher levels of drinking compared to others and that the inclusion of the variable of parental influence would effectively render this relationship spurious. The results reveal a strong relationship between Greek affiliation and drinking behaviors, but parental influence failed to sufficiently account for this relationship.

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CHAPTER 1

INTRODUCTION

Alcohol is the most commonly used, readily available, and socially acceptable drug in the United States (McCabe et al., 2005). Its use and potential risks can impact anyone, but a particular population may be more susceptible to the detrimental effects of the substance than the general populace. Substance use in general, and particularly the consumption of alcohol, has shown a pattern of increase among young individuals who enroll in college for the first time (McCabe et al., 2005). In accordance with research, the exorbitant consumption of alcohol and problem drinking has largely been a phenomenon of young adulthood (Park, Sher, Wood, & Krull, 2009). The highest occurrences of alcohol abuse have been reported as typical of the population aged from 18 to 29 (Park et al., 2009). Congruent to the mentioned risk to college students, Park et al. (2009) suggested that 18 served as the initial onset of an individual's drinking habits, which is the typical year of induction into a college or university.

The drinking behaviors of college students do not appear to be an isolated phenomenon. In a sample of Virginia University students, between 80% and 90% of college students had partaken in alcohol consumption; almost half were reported as binge drinkers, and 20% had the potential to be diagnosed as sufferers of an alcohol use disorder (Glindemann & Geller, 2003; Park et al., 2009). The experience of an individual's freshman year of college may be an opportunity to integrate and adapt to this level of heavy drinking (Turner, Larimer, & Sarason, 2000). Glindemann and Geller (2003) also proposed that the first year of college attendance was conducive to high rates of alcohol use and profuse incidences of binge drinking. These assenting opinions infer that the freshman year may be a gateway to the subsequent time spent in a college

environment, preparing the new students for a culture of alcohol consumption and risky drinking behavior that pervades the habits of a typical college student.

The problem of drinking is not in itself descriptive of the damaging outcomes that could result from an excess of alcohol consumption; a high degree of problematic drinking among college students can be linked to a host of detrimental consequences. A national sample of data collected from 1998 to 2001 that focused on college students aged 18 to 24 revealed that a steep level of alcohol use impacted 696,000 physical assaults, 97,000 sexual assaults, and 1,717 unintentional deaths (Hingson, Heeren, Winter, & Wechsler, 2005). Although alcohol can serve as a judgment impairment, even more severe problems arise when one overindulges in alcohol consumption. Resultant factors of heavy or binge drinking have led to violence, aggressive sexual advances, and even accidental death (Park et al., 2009). Especially among a group of impressionable individuals such as first-time college students who, for the most part, have not yet personally experienced the stark realities waiting beyond consistent schooling, the presence and high usage of alcohol can be extremely hazardous.

The participation in these risks cannot be generalized to the college population as a whole. There are some abstainers, although they appear to belong to a small minority, and some groups in particular that tend to be at a greater risk of exposure to the lifestyle and dangers of heavy drinking (Glindemann & Geller, 2003; McCabe et al., 2005). Some observed critical factors associated with these risks include students who are male and also those who are affiliated with a Greek organization (Huchting, Lac, Hummer, & LaBrie, 2006). Male students appear to be more apt to increase their alcohol consumption during the span of their college years at a higher degree than women (McCabe et al., 2005). Concurrently, women may be less willing to categorize themselves as binge drinkers or heavy drinkers, thus appearing as if their alcohol

intake is less severe than that of their male counterparts (Glindemann & Geller, 2003). Of more interest is the claim that students involved in Greek associations are more likely to be at the mercy of risks resulting from alcohol consumption. With the inclusion of both fraternities and sororities, this may imply that women also participate in heavier drinking given a properly conducive environment. According to McCabe et al. (2005) women who identified themselves with a sorority were nearly five times more likely than nonmember peers to become high-frequency drinkers during their college experience. This suggests that the Greek environment is related to the drinking behaviors of college students.

In this study the link between Greek affiliation and heavy drinking was examined using the Harvard School of Public Health College Alcohol Survey. The strength of this relationship is expounded upon as well as other factors that may contribute. The heavy drinking expressed in a Greek environment may be a product of socialization among members (Park et al., 2009; Walls, Fairlie, & Wood, 2009), but this relationship may be spurious as Greek organizations may attract those students who already possess a tendency to drink more heavily. Specifically, this study is an examination of socialization into drinking behaviors by a student's parents as the primary factor accounting for both Greek involvement and heavy drinking.

CHAPTER 2

REVIEW OF THE LITERATURE

Greek Organizations and Drinking Activities

Fraternity and sorority organizations have existed in the U.S. since the 1820s. Often they practice rites of initiation (the more severe of which have been labeled as 'hazing' and banned) and maintain housing for their members (McCabe et al., 2005). Also, Greek members are more likely "to drink, drink heavily, to experience negative consequences due to drinking, and to meet criteria for an alcohol use disorder" compared to those who are not affiliated with a fraternity or sorority (Park et al., 2009, p.241). The cause of this increased alcohol use activity could be the central role that alcohol plays in these organizations. The consumption of alcohol is used to forge solid links between members, strengthening the camaraderie and bonds between them (Caudill et al., 2006). The subculture of drinking that this cohesion creates paired with the "enabling environment" that many fraternity and sorority houses present is likely a contributing factor to heavy drinking behaviors (McCabe et al., 2005, p.521).

The pervasiveness of heavy episodic drinking among those who are members of a fraternity or sorority is much more likely to occur in comparison to those who are unaffiliated with a Greek organization. McCabe et al. (2005), with the use of a national longitudinal study with a sample size of 4,299 respondents, found that the average Greek member has been shown to be 65% more likely to engage in an incident of heavy drinking than a nonmember. Their data also suggested that when the member's residency is factored into the equation, those who inhabit their respective fraternity or sorority house were 80% more likely to participate in this behavior than a typical student. To further this, they found that members also suffered from higher incidences of negative consequences related to alcohol consumption, including driving under the

influence, suffering hangovers, and skipping classes due to alcohol-related issues and illnesses. Those who reported consuming more than five drinks at once also reported higher occurrences of unplanned sex, driving while intoxicated, and riding with an intoxicated driver (Turner et al., 2000).

The environment provided by Greek housing and socialization allows those who have histories of drinking to not only continue but increase their levels of alcohol consumption during the transition to college (Park et al., 2009). Those affiliated with Greek organizations had a higher chance of enhancing their consumption to encompass weekly use, heavy episodic drinking, and negative consequences than those who do not associate with fraternities or sororities (Walls et al., 2009). If an individual was involved in the occasional heavy drinking episode precollege, the initiation into a fraternity or sorority will likely lead to more frequent incidences of heavy alcohol consumption. This is especially true if the individual chose to reside in Greek housing, which could increase the expected positive outcomes of alcohol consumption (Caudill et al., 2006). Heavy drinking may become the norm for these members. Living together as a group, any drinking tendencies that an individual possesses are enhanced by the similar tendencies of those they are in close contact with. Thus, what may have amounted to an occurrence of moderate drinking among any particular member of the group is exacerbated to heavy or binge drinking due to social reinforcement of the behavior.

These practices have been ingrained into the Greek culture, causing them to become not only expected, but perhaps required of any new members (Caudill et al., 2006). If an individual joined a fraternity or sorority and abstained from participating in the drinking culture, he or she may be excluded from other activities as well. Thus, even if a member joins without the intention of becoming a drinker, he or she may feel the pressure to conform to the fraternity or sorority

norms in order to be accepted and included. The first semester may be an especially impressionable period for new arrivals because they have not yet established behavioral scripts of this new environment (Park et al., 2009). When thrown into the college context for the first time, especially if the student has moved away from home, there is the automatic need to seek out a sense of stability, an anchor among this sea of new experiences. A fraternity or sorority could serve as this source of balance and security, providing the individual with a supportive environment while exerting the influence of the other members and swaying the student's behavior to conform to their own.

Even if the student has no experience with drinking, he or she could potentially begin once involved with a Greek organization. In a national sample of students who reported abstaining from drinking while in high school, 78% of those who later resided in a fraternity house engaged in binge drinking behaviors while only 32% of nonmembers practiced this activity (Caudill et al., 2006). According to Huchting et al. (2011) students involved in Greek life have more favorable perceptions of alcohol than nonmembers. For those students who ingrain themselves into the Greek culture because of a prior interest in drinking, they will likely continue to contribute to this phenomenon even more. For those who have no such previous experience with alcohol, these attitudes may influence them to alter their behavior. Once they have been accepted into this culture, the beliefs and ideas circulating among the other members may prove to be either firm guidance or heavy pressure to adjust the fraternity's or sorority's opinions of drinking. According to the data gathered by Caudill et al. (2006), once students have adjusted to these views and are capable of seeing alcohol consumption in a more agreeable manner, they are more likely to partake in drinking behaviors themselves.

A number of studies have been conducted to measure this prevalent relationship between Greek organizations and alcohol consumption. One such study by McCabe et al. (2005) focused on the substance use of a sample of students beginning from their last year of high school and extending through their college career. The reported results corresponded with the aforementioned link between fraternities and sororities and increased alcohol consumption. Among the sample alcohol was the substance most commonly used, followed most closely by tobacco and marijuana. When looking at males the use of nearly all substances, including alcohol, was higher for those who identified themselves as fraternity members. For both sexes those who were members of a Greek organization showed greater increases in their episodic drinking behaviors. Those who were initially members and later became inactive in their fraternity or sorority reflected a slight decrease in heavy drinking. The authors cite this as evidence of "socialization effects", attributing the increases and decreases in drinking activity to social interactions with fellow fraternity and sorority members (McCabe et al., 2005, p. 519).

Glindemann and Geller (2003) conducted a study with the purpose of determining if students attending fraternity parties consumed more alcohol than those at other types of parties. The Blood Alcohol Content (B.A.C.) was recorded for a sample of students from Virginia State University attending 1 of 11 fraternity parties or 1 of 8 private parties. According to their findings, there was a significant difference between the intoxication levels of the students in the two settings. Those at fraternity parties were more likely to be legally intoxicated at a rate of 58.2%, regardless of whether they were a member of the fraternity. Fifty-two percent of the attendees of private parties had a BAC that classified them as intoxicated (.08). Even those students who were not members or prospective members tended to drink more alcohol when attending a fraternity party rather than a private one. When looking specifically at those students

who identified themselves as affiliated with a Greek organization, they revealed significantly lower intoxication levels at private parties than at their own fraternity events. This suggests a preference held by members for consuming alcohol in the more familiar setting of their fraternity's residence. This finding supports the speculation that socialization among members promotes a higher degree of alcohol consumption. Even if members are more likely to drink than nonmembers, that behavior is sedated when they are not present at their fraternity's designated residence.

Another study focused primarily on the risky drinking behaviors of a national sample consisting of 3,406 fraternity members (Caudill et al., 2006). Of these, 97% identified themselves as drinkers, 83% were classified as heavy drinkers, 64% were frequent binge drinkers, and 76% qualified as weekday drinkers. As a whole the sample's average number of drinks consumed over the study length (4 weeks) was 80.6. The average number of drinks consumed during each occasion was 7.3 overall and 5.5 for weekdays. Consistent with the previously mentioned age of drinking onset commencing at 18, the oldest group, consisting of individuals aged from 22 to 30, revealed the lowest drinking scores in the sample. There was a trend of drinking declining as age increased, but even this category of older members revealed an average BAC of .083. Comparatively, the mean BAC for freshmen, which would typically fall into the 18-19 age range, was .112. Again, the idea of increased drinking for fraternity residents is reiterated by these results. When separating the BACs of those who lived with their parents and those who inhabited the Greek house, it was a comparison of .059 to .104, the latter representing fraternity occupants. Overall, fraternity members did tend to drink more at their own houses, but even in other settings they typically drank more than the non-Greek individuals present (Caudill et al., 2006).

Lo and Globetti (1993) were concerned with students who entered college as nondrinkers. Of their sample, which was composed of questionnaire respondents from two Alabama universities, approximately 27% reported that they did not engage in the consumption of alcohol during their senior year of high school. Of these students, half began to drink after they had started college. The data compiled suggested that those involved in Greek organizations were twice as likely to become drinkers in college as those who do not. These authors also stressed the influence of peers on the drinking decision. Of those studied, students with an intimate friend network that disapproved of drinking were less likely to engage in alcohol consumption themselves. Adversely, if one's friends approved of alcohol use and perhaps participated in it themselves, the individual was more likely to use alcohol. This raises the suggestion that fraternities, although conducive to alcohol use, may be similar to other peer groups in their level of influence. Perhaps the reasoning for an excess of drinking in such an environment is because of the shared mindsets of the individuals involved. It is a possibility that another peer group composed of those with the same strength of opinion on alcohol use would have the same effect on a newly conducted member regardless of the fraternity label. Overall, four out of five of the students who had not used alcohol in high school began consumption in college if they joined a fraternity or sorority and lacked a friend group that discouraged drinking behavior. The researchers concluded that students who begin college as nondrinkers will likely continue to behave similarly if they prolong their associations with friends who do not approve of drinking behavior and if they avoid fraternity or sorority affiliation (Lo & Globetti, 1993).

A study by Neighbors, Lee, Lewis, Fossos, and Larimer (2007) resulted in further evidence of Greek affiliated students' inclination to drink. They collected data from a sample of first-year students at a public West-coast university. Their data suggested that fraternity and

sorority membership was positively correlated to higher levels of consumption and alcohol-related problems. Likewise, a study of two universities located on opposing coasts of the country reported similarly high levels of alcohol use among Greek students (Huchting et al., 2011). Fraternity and sorority members reported significantly higher numbers of drinks per month in comparison to nonmembers. They also ranked higher in regards to number of days on which they drank, maximum drinks consumed, and past occurrences of these measures. This population reflected more social problems related to alcohol, described by incidences of partaking in unplanned sex, driving under the influence, and other illicit activities associated with drug or substance use (Huchting et al., 2011).

The link between fraternities and sororities and drinking practices has been shown in a number of studies (Caudill et al., 2006; Huchting et al., 2011; McCabe et al., 2005; Park et al., 2009), but membership in a Greek organization may not be the sole explanation for this relationship. Selection effects, which refer to previous experiences that influence individuals to make certain decisions, may be affecting these college students. In this case selection effects would entail that those students who engage in heavy drinking activity may be more prone to become members of Greek organizations than those who do not. Thus, the relationship between fraternity and sorority membership and drinking may be spurious, explainable by a third factor that contributes to the existence of both.

Selection Effects

That previous drinkers may be more likely to become involved with a fraternity or sorority over the course of their college career calls attention to the possible influence of selection effects. The ways in which a student behaved or the environments that the student was in prior to college may prompt him or her to later engage in certain activities. Those who tended

to drink heavily before they began college may be inclined to choose a fraternity or sorority that has a particular reputation for binge drinking and partying, which leads to a "mutually reinforcing" system (McCabe et al., 2005, p.513). This phenomenon may be a result of both the personal characteristics or the background of those who opt to join a fraternity or sorority and the social influences exercised on members once they have been inducted. During the rush and pledging processes, potential members are allowed a glimpse of the Greek organization they are considering joining (Park et al., 2009). For those who are already predisposed to use alcohol, the fraternities or sororities that appear to be the most consumption-friendly in regards to alcohol will likely appeal to them on a greater personal level. If they have previously experienced excessive drinking behaviors, they may be drawn to these Greek individuals and organizations that possess the same risky traits.

Research supports this assumption (Caudill et al., 2006; McCabe et al., 2005). Caudill et al. (2006) conducted a survey of fraternity members. Of these students, 60% of Greek residents admitted to being binge drinkers in high school. This percentage drops to 44% among members who did not inhabit the fraternity house, and further to 34% of those who were not affiliated. This suggests that not only are fraternity members more likely to have previously experimented with heavy alcohol consumption, but those who have are more inclined to reside in an environment where the substance is readily available and promoted by others rather than only acquire a membership and live elsewhere. According to McCabe et al. (2005) high school students who would later become fraternity members expressed a rate of heavy episodic drinking of 47% as opposed to 27% for those who would not. The females in the sample also revealed this pattern, though to a lesser extent. Twenty-six percent of future sorority members reported episodic drinking in comparison to 16% who would not become affiliated with a sorority.

Because these students have selected social environments based upon their personal preferences, they then contribute even more strongly to the chosen atmosphere, building on the preexisting tendency for these groups to be involved with heavy alcohol consumption (Paschall & Saltz, 2007). Compounding on this, fraternity chapters that boast reputations of hosting parties with heavier drinking are rated by fraternity members as having higher social status in general (Caudill et al., 2006), leading to an even higher degree of desirability for these Greek organizations that rank highest on the drinking culture scale.

Beginning college is a transitional period, thus these individuals may actively seek out environments that are compatible with their own personal characteristics, leading them to Greek life (Park et al., 2009). Huchting et al. (2011) used their evidence to suggest that past history of drinking behaviors was the strongest influence on intentions to drink among fraternity and sorority members. This reinforces the aforementioned idea that students who have already engaged in drinking behavior prior to their entry into college are more prone to become affiliated with a Greek group, perhaps as a result of seeking out an alcohol-conducive environment.

Accepting that students may select fraternity or sorority involvement based on their previous attitudes toward the organizations' behaviors, one must also accept that these attitudes and predispositions must have had a beginning at some time in the individual's life. A number of studies have found that parents influence the drinking behavior of college students (Chassin, Curran, Hussong, & Colder, 1996; McCabe et al., 2005; Pearson, D'Lima, & Kelley, 2012; Turner et al., 2000; Walls et al., 2009).

Walls et al. (2009) suggested that parents continue to influence their children's use of alcohol during the college years. They found that students who considered their parents to possess disapproval of heavy drinking were significantly less likely to become heavy drinkers

themselves. Those who perceived their parents as a more permissive authority in regards to alcohol use, however, were more likely to become weekly users of alcohol, engage in heavy drinking, and experience the negative consequences that are associated with these activities. One study supported the idea that young adults with parents who have a history of alcohol abuse not only initiate alcohol use earlier but also exhibit a steeper escalation of drinking behaviors (Chassin et al., 1996). College students who reported having a parent who abused alcohol were at a significantly higher risk for frequent and heavy alcohol consumption, intoxication, and concern about their own drinking than those students whose families lacked a history of alcohol abuse (Walls et al., 2009).

A study conducted by Pearson et al. (2012) supported these claims but also warned that the gender of the alcohol-abusing parent may impact the later alcohol use of the child. Likewise, Elliott, Carey, and Bonafide (2012) claimed that parenting style and modeled drinking activities were associated with later substance use. They interpreted the data collected in their study to support the idea that family history does have a significant effect on alcohol use, consequences, and other drug involvement for a sample of college students. They suggested that these individuals may not drink more overall, but be more prone to problematic and heavy or episodic use. It is possible that drinking itself may be consistent among peers with differences in family history, but those whose parents have a tendency to drink heavily have a higher proclivity to engage in heavy and potentially harmful drinking themselves (Elliott et al., 2012).

Students who report that their parents both engage in heavy drinking behaviors and have attitudes that support drinking are both more likely to mimic those behaviors and involve themselves in fraternity and sorority organizations that support such activities (Akers, 1973). Resulting from this familial link, these students are more likely to assimilate themselves into

groups who practice similar activities (Akers, 1973). If this is true, then the heavy drinking atmosphere of a fraternity or sorority would logically be conducive to these students whose parents have attitudes or behaviors that also support heavy drinking.

Theory

Despite the array of negative consequences that could potentially occur as a result of such heavy and frequent drinking behavior, the question of *why* lingers. Young college students often expose themselves to high levels of hazardous alcohol use activities (Neighbors et al., 2007). Even more pressing, entire groups of individuals participate in this risky behavior as a whole, despite the likelihood that they will not only share in the drinking activities themselves but also in the detrimental effects that could follow (Turner et al., 2000). To explain the choices of so many Greek individuals, the application of theory is necessary.

Theoretically speaking, the most applicable explanation for this link between fraternity and sorority affiliation and drinking behavior is social learning theory, originally posited by Burgess and Akers (1966). This theory was a revision of Sutherland's (1947) differential association. They added an element of B.F. Skinner's behavior theory (1974), attributing much attention to the presence of reinforcement and punishment to explain the ways in which behaviors are learned (Akers, 1973).

The central elements of social learning theory (Akers, 1973) include the modeling of behaviors, differential reinforcement, differential association, and favorable and unfavorable definitions. Behavior modeling, which involves the learning of behavior through the observation and mimicking of another's actions, is especially compatible with the idea of parental influence in regards to college students' drinking habits. If a student's parents had a tendency to consume

alcohol throughout the course of the student's life, then he or she is more likely to mimic these behaviors and engage in the same behavior.

Differential reinforcement could also come into play in the same situation. If a student's parents commonly drink, then the student is more likely to receive positive reinforcement from them for engaging in the same activities (White, Fleming, Kim, Catalano, & McMorris, 2008). Even if the student is not rewarded for these actions, he or she may be less likely to experience punishment for consuming alcohol than would a student whose parents are abstainers (Koning, Eijnden, Verdurmen, Engels, & Vollebergh, 2012).

If much of a student's time was spent around parents who drink, this student may then be more likely to continue to associate with others who do the same. The associations that they seek may be shaped by the differential association that started with their parents as their first "primary group" (Akers, 1973, p. 123).

According to Sutherland (1947) and continued by Burgess and Akers (1966), the idea of definitions promotes the likelihood that an individual will view a behavior as acceptable and thus engage in it. Positive definitions are those that are learned to have an approving connotation. One may be taught to associate good opinions with drinking, thus building positive definitions of alcohol consumption. Adversely, if one has parents who view alcohol as a detrimental substance, then the student may be more likely to internalize negative definitions of drinking and be less inclined to engage in alcohol consumption (Akers, 1973).

If one's parents have made a habit of practicing heavy or excessive drinking, then perhaps the child is more likely to engage in similar behaviors. This suggestion is also conducive to Akers's theory. If one is given an excess of positive definitions, a failure to provide an adequate amount of negative definitions, and behavioral reinforcement, then he or sheis more

likely to engage in alcohol use. In fact, Akers suggested that the initial onset of drinking behavior is shaped most strongly by the influence of parents (Akers, 1973). This implies that parents are a strong determining factor of whether their children will initially begin drinking. If one's parents are heavy drinkers, then it follows that the individual is more likely to become a drinker. If this is true, then the student likewise has a higher chance of associating with others who share similar attitudes. When these others are sought out, they may exceed the levels of alcohol use that even accepting parents consider allowable (Akers, 1973). If a parent's influence inspires a child to begin drinking and thus associate with similarly inclined peers, then the child may also be more likely to engage in heavy or excessive drinking behaviors, perhaps even surpassing the drinking behaviors of the parents. College drinking, for example, is "sustained primarily by the influence of fellow students…" (Akers, 1973, p.127), such as fellow fraternity or sorority members, in this case. After one begins drinking, the extent to which he or she prolongs the behavior is a result of social rewards, most often received from the individual's most integrative social groups.

Akers proposed that learning is the result of social interaction in which other people become the reinforcers for a particular behavior or provide other reinforcers. He suggested that those groups that account for the most influential sources of an individual's reinforcement will have the most influence over their behavior. In the above scenario, those who constitute the 'major source' of a Greek student's reinforcement would initially be the familial group, most likely the parents. As a result, these students may seek out other primary groups who also support this behavior. For a student who joins a Greek organization, this group would most likely be fellow fraternity or sorority members. This would be especially true for those who reside at a fraternity or sorority house rather than off-campus housing. The more time an individual devotes to a particular group, the more closely the individual will identify with that group and tend to

participate in group-sanctioned activities (Akers, 1973). If the student is accustomed to heavy drinking by his or her parents, then the student may seek out a similar environment in which he or she can acquire the same positive reinforcement.

Social learning theory also may be used to explain why those who already drink seek out Greek membership. If a student engages in a night of binge drinking, then the student may suffer from a painful hangover the following morning. However, the positive reinforcement that the student receives from his fellow fraternity members in the form of social acceptance and camaraderie may be such a strong positive reinforcement that the negative effects of a hangover are rendered inadequate to prevent future occurrences of the same activity. The fraternity could be considered a new primary group, which Akers (1973) suggests are the most influential on an individual's behavior. Once an individual has become integrated into fraternity or sorority life, the individual learns to accept the group's behaviors as normal or typical and is thus more likely to be involved, especially if he or she was previously accustomed to such behaviors.

In reference to some of the studies previously mentioned (Caudill et al., 2006; McCabe et al., 2005; Park et al., 2009; Walls et al., 2009), it could be suggested that heavy or binge drinking can be considered a normal incident among Greek cultures. Thus, the occurrence of heavy drinking behavior could be said to be highly prevalent among these social groups. This may be caused by the integration and socialization of a fraternity or sorority group, or it may be a result of selection effects stemming from previous learning experiences with parents.

Hypotheses

As indicated by prior research, a link between fraternity and sorority affiliation and heavy drinking among college students has been strongly suggested and supported by a number of studies (Caudill et al., 2006; McCabe et al., 2005; Glindemann & Geller, 2003; Huchting et al., 2011; Lo & Globetti, 1993; Park et al., 2009). College students in general tend to drink more heavily than their noncollege peers (McCabe et al., 2005), and when they become involved in a Greek organization, these incidences increase even more (Huchting et al., 2006). Students also appear to become more intoxicated at fraternity parties than those of different types (Glindemann & Geller, 2003). This drinking tendency can impact those who are not drinkers before arriving at the college campus (Caudill et al., 2006). The first hypothesis to be examined by this study is that students who report affiliation with a fraternity or sorority will also report higher incidences of heavy drinking behaviors.

It has also been suggested, however, that other factors may influence not only an individual's tendency to drink but to associate themselves with others who condone that behavior as well (Paschall & Saltz, 2007). If so, then it is logical to assume that a factor other than fraternity or sorority affiliation could be linking these individuals together or even swaying them into the Greek environment. This could be explained by parental influence. If an individual's parents tend to be heavy drinkers or have more lenient attitudes toward drinking, then that individual may be more prone to be a heavy drinker and be more likely to associate with a Greek organization (Elliott et al., 2012). For the second hypothesis, it is expected that the relationship between fraternity and sorority affiliation and heavy drinking will be accounted for by parental behavior and attitudes toward drinking.

CHAPTER 3

METHODS

Data

This study uses public data from The Harvard School of Public Health College Alcohol Study, conducted in 2001, which consisted of a nationally representative sample of undergraduate college students attending 4-year colleges or universities. This survey was also done in the prior years of 1993, 1997, and 1999 as a repeated cross-sectional study. Only the results from the 2001 round are used. One hundred nineteen schools were included in this sample, which comprised a total of 10,904 responses. Mail questionnaires were distributed to students chosen through the means of a random sample using probability proportionate to size. Because some colleges and universities have a larger student body than others, this method ensures that no college or university was overrepresented because of the size of its student population. The focus of this survey was on alcohol abuse and other high-risk behaviors among this college population. Certain aspects of student responses, including student identification numbers and the state in which the high school education was obtained, were removed by the researchers to prevent the students from being identifiable based on their responses (Weschler, 2001).

Measurement

Dependent Variables

Two separate measures of drinking are focused on in this study: binge drinking and frequency of drinking. *Binge drinking* is measured by the following survey question: "In the past two weeks, how many times have you had 5 or more drinks in a row?" The provided answers are arranged in an ordinal, Likert-scale format, consisting of: "None" (reported by 60.2% of the

sample), “Once” (12.9%), “Twice” (9.9%), “3 to 5 times” (12.5%), “6 to 9 times” (3.7%), and “10 or more times” (0.8%). Due to the highly skewed distribution, responses are recoded into either “no”, which consists of those respondents who answered “none”, or “yes”, which represents the combined remaining responses ranging from “once” to “10 or more times”. The second measure of drinking, *drink frequency*, is based on the question, “On how many occasions have you had a drink of alcohol in the past 30 days?” Responses are offered on an ordinal scale ranging from “1 to 2 occasions” (28.4%), “3 to 5 occasions” (29.9%), “6 to 9 occasions” (20.3%), “10 to 19 occasions” (17.1%), “20 to 39 occasions” (3.8%), and “40 or more occasions” (0.6%). Because the last response option has so few responses, the categories of “20 to 39 occasions” and “40 or more occasions” are combined to create a single response category representing those who have engaged in drinking on “20 or more occasions” over the past 30 days.

Independent Variables

The first independent variable to be measured is *Greek affiliation*. This variable is indicated by the survey question “Are you a member of a fraternity/sorority?” The response type is a simple dichotomous option of yes (12.8%) or no (87.2%).

The second set of variables measures parental influence. Both the drinking behaviors and attitudes of parents are used to measure the extent to which a student’s parents engage in heavy drinking or are permissive of drinking behaviors in general. *Parental drinking behavior* is measured by the following survey questions: “Describe your father’s alcohol use” and “Describe your mother’s alcohol use”. This is measured on an ordinal scale. The response categories of “Abstainer” (21.4% of fathers and 35.3% of mothers) and “Abstainer – Former Problem Drinker in Recovery or Recovered” (3.0%, 1.0%) are combined because of the similarity of response and

the low response rates for the latter. Other responses include "Infrequent or Light Drinker" (43.1%, 51.3%), "Moderate Drinker" (20.1%, 9.3%), "Heavy Drinker" (5.3%, 1.4%), and "Problem Drinker" (4.7%, 1.3%). These variables are coded from 0 (abstainer) to 7 (Problem Drinker). For the purpose of measuring parents, these two variables, mother's and father's alcohol use, are combined using the mean of the two variables to represent the drinking habits of the students' parents as a single unit. For those students who reported that they are from single-parent homes, the responses regarding the single family member are used.

Another variable is included to measure *parental drinking attitudes*. The posed question is: "How did your family feel about drinking alcohol when you were growing up?" The students responded from a scale consisting of the following responses: "My family did not approve of drinking" (32.5%), "They accepted light drinking but disapproved of heavy drinking" (57.3%), "They accepted heavy drinking" (4.4%), and "There was disagreement about drinking in my family" (5.8%). These responses are recoded into either 0, consisting of those whose responses indicated that their parents did not approve of alcohol consumption, or 1, consisting of all other responses. The "1" category suggests that there was at least one parental unit that accepted some degree of drinking. This variable is used to measure the attitudinal beliefs of the students' parents.

Control Variables

A number of control variables are included to prevent external factors from influencing the results of this analysis. The demographic characteristic of *age* is measured on an ordinal scale with endpoints existing as "17 or younger" (0.2% of sample) and "25 or older" (9.2%). If respondents fell between these two responses, they chose from "18" (9.9%), "19"(20.7%), "20" (20.1%), "21" (19.1%), "22" (12.3%), "23" (5.6%), or "24" (2.9%).

Sex (measured with a binomial response of "male" (35.9%) or "female" (64.1%)) is also controlled for, as well as *race and ethnicity*. This includes "White" (77.2%), "Black" (6.1%), "Asian/Islander" (6.8%), "other", (3.1%), and "Hispanic" (6.7%). The category of "other" consists of the combined responses of "other race" and "Native American/Alaskan" due to the low numbers of responses for each (0.5% and 2.7%, respectively). All of these are included in the models as dummy variables to ensure that any results are not biased by these external factors.

Another control variable included is socioeconomic status, measured by two separate questions of mother's education and father's education. The responses are ranked on a four-point ordinal scale and include "Less than a high school diploma", "High school diploma", "Some college or technical schooling beyond high school", and "Four year college degree or more". The means of these two variables are combined to create a single control variable representing *parental education*. If the student reported a single parent, then the response regarding this parent is used as the sole response for this student. The variable *marital status* is measured in the survey by the responses of "never married" (92.0%), "married" (6.1%), "divorced" (1.5%), "separated", (0.3%), and "widowed" (0.1%). These responses are recoded into a dichotomous variable with the labels of "married" and "unmarried" due to the low rates of students who possess a marital status other than "never married".

The grade point average of the student is also used as a control variable. *GPA* is measured on an ordinal scale ranging from "A" to "D". These are converted into a 4-point scale ranging from 4.0 to 1.0. Finally, the respondents' high school drinking behaviors are also controlled for with the use of two survey questions. The first, *high school drink frequency*, is measured by the question "In your last year in high school, how often did you drink alcohol during a typical month?" The responses range from "never" (42.9%), "1 to 2 occasions" (25.3%),

"3 to 5 occasions" (14.7%), "6 to 9 occasions" (9.3%), "10 to 19 occasions" (4.3%), "20 to 39 occasions" (2.1%), and "40 or more occasions" (1.4%). The second question is "In your last year in high school, on how many occasions did you have five or more drinks in a row?", which is used to measure *high school binge drinking*. The responses range from "never" (54.9%), "1 to 2 occasions" (14.4%), "3 to 5 occasions" (8.9%), "6 to 9 occasions" (5.7%), "10 to 19 occasions" (6.3%), "20 to 39 occasions" (5.5%), and "40 or more occasions" (4.4%). These responses are dichotomized into those students who did not participate in binge drinking in high school, consisting of those who chose "never", and those who did participate, consisting of all other responses. With the inclusion of high school drinking activity, selection effects are further controlled for.

Analytic Strategy

These variables are analyzed using two separate models. The first, measuring drink frequency, is measured with the use of multivariate linear regression. The second, measuring binge drinking, is measured with the use of logistic regression. Both models include weights standardized for age, race, and gender to emulate a constant proportion of males and females, underage and overage students, and White and non-White students (Weschler, 2001). The first linear regression model, implemented to test the first hypothesis, measures the relationship between fraternity or sorority affiliation and drink frequency using the aforementioned control variables. It is predicted that those respondents who indicated affiliation with a fraternity or sorority will report higher levels of drinking.

The second linear regression model adds the variables of parental influence by combining both parental attitudes toward drinking and parental drinking behaviors, as mentioned above, thereby testing the second hypothesis. This is done to assess the extent to which the relationship

between fraternity and sorority membership and heavy drinking is explained by this group of background factors.

The logistic models follow the same patterns as explained above. The first regression model measures the relationship between Greek affiliation and binge drinking and also includes the aforementioned control variables. In order to support the first hypothesis, it is expected that those students who are members of fraternities or sororities will be more likely to report binge drinking behaviors.

The second logistic model includes both parental attitudes and parental behaviors in order to test the second hypothesis. If the hypothesis is supported, the inclusion of these variables will account for the relationship between Greek affiliation and binge drinking, as tested in the first logistic model.

CHAPTER 4

RESULTS

Background Literature

Previous research has found that students involved in a fraternity or sorority are more likely to drink than their peers who are not affiliated with a Greek organization (Glindemann & Geller, 2003; Huchting et al., 2006; Park et al., 2009; Walls et al., 2009). Some of these studies propose that selection effects may be the reason for this phenomenon. Students who have been socialized into drinking by their parents may be more inclined to seek out individuals and environments that are conducive to the same types of behaviors.

Studies have also suggested a strong positive relationship between the drinking behaviors of college students and the drinking practices of their parents, as adolescents whose parents drink more alcohol and do so more frequently are more likely to do the same (Chassin et al., 1996; Elliott et al., 2012; McCabe et al., 2005; Pearson et al., 2012; Turner et al., 2000; Walls et al., 2009). It is possible that biological traits may account for some of this relationship, but these studies support the idea that socialization is responsible. It is possible, according to research, that students may be raised in an environment in which alcohol is used or approved of, causing them to view it as more acceptable. These students then may be more likely to seek out other individuals who have perhaps been raised in a similar environment and have developed the same views, further supporting the presence of selection effects. By this reasoning, students whose parents drank more or had positive attitudes toward drinking may be more likely to join a Greek organization whose members tend to drink more than the general student population (Caudill et al., 2006; McCabe et al., 2005).

Building from this research, the first hypothesis posits that there will be a positive relationship between Greek affiliation and drinking behavior. The second hypothesis is that the relationship between Greek affiliation and drinking will be accounted for by parental attitudes and behaviors toward drinking. To test the first hypothesis, linear regression is used to measure the relationship between Greek affiliation and drink frequency, net of controls. To test the second hypothesis, a second model adds variables measuring parental attitudes and behaviors toward drinking. A similar series of models with binge drinking as the dependent variable is assessed using logistic regression.

Descriptive Statistics

Means and frequencies of the data are reported in Table 1. The mean age of the sample is 20.77, which seems relatively high unless the age cap is considered. The age question on this survey begins the response set with "17 or younger" and ends it with "25 or older." This likely affects the mean of the respondents' ages. Of the data used, respondents who failed to respond to one of the categories used in the measurements for this study were deleted from the data, leaving a sample of 9.354. Of this sample, 35.86% are male, 77.18% are White, 6.06% are Black, 6.80% identified as Asian or Islander, 6.66% are Hispanic, and 3.10% fall into the "other race" category. Also, 64% of the sample is female. These demographic characteristics are similar to other studies using national samples of students in college (Bell, Wechsler, & Johnston, 1997).

The mean of parental education is 3.20, which falls between the responses of "some college" and "four years of college or more." The average grade point average is 3.24 on a four-point scale. The mean of high school binge drinking is 2.28, which indicates that the mean is between the responses of "1-2 occasions" and "3-5 occasions". The mean of high school drink frequency is 2.19, which is between the same responses as high school binge drinking: "1-2

occasions" and "3-5 occasions." Focusing on the key independent and dependent variables of this study, only 12.77% identify themselves with a Greek organization. In McCabe et al.'s (2005) national longitudinal sample, 17% of respondents were affiliated with a fraternity or sorority. Compared to this sample, the percentage of students affiliated with Greek organizations in the current study is slightly lower. Parental drinking has a relatively low mean of 0.99, and 32.52% of the respondents reported that their parents disapproved of drinking. Finally, the mean of the respondents' drink frequency is 1.63. This mean is between the response categories of "1-2 times" and "3-5 times" in the past 30 days. Of the 9,354 respondents, 39.84% report that they have engaged in binge drinking. These drinking levels are similar to past research on college drinking (Chauvin, 2011; Peralta, Steele, Nofziger, & Rickles, 2010).

Table 1.

Descriptive Statistics. n = 9,354

Variables	Mean or Frequency	Standard Deviation	Range
Drink Frequency	1.63	1.48	0.00 – 5.00
Binge Drinking	39.84		0.00 – 1.00
Greek Affiliation	12.77		0.00 – 1.00
Parental Drinking Behaviors	0.99	0.74	0.00 – 4.00
Parental Drinking Attitudes	32.52		0.00 – 1.00
Age	20.77	1.99	17.00 – 25.00
Male	35.86		0.00 – 1.00
White	77.18		0.00 – 1.00
Black	6.06		0.00 – 1.00
Asian/ Islander	6.80		0.00 – 1.00
Other Race	3.10		0.00 – 1.00
Hispanic	6.66		0.00 – 1.00
Parental Education	3.20	0.75	1.00 – 4.00
Grade Point Average	3.24	0.56	1.70 – 4.00
High School Binge Drinking	2.28	1.82	1.00 – 7.00
High School Drink Frequency	2.19	1.41	1.00 – 7.00

Bivariate Results

Because a major focus of this research is on selection effects, preliminary bivariate tests are undertaken to establish relationships between the key independent and dependent variables. Three chi-square tests are initiated to test Greek affiliation, drink frequency, and binge drinking as these variables relate to parental attitudes. With the intention of conducting this test parsimoniously, drink frequency is recoded into a dummy variable, with 0 representing those who have not drank within the 30-day period preceding the study and 1 representing those who have.

The first chi square, measuring Greek affiliation and parental attitudes, supports the expectations of the hypotheses. Of those who are members of a Greek organization, 70.5% indicate that their parents approve of alcohol use. Adversely, 67.0% of those who are not members of a Greek organization indicate that their parents approve of drinking. While this appears to be a slim difference, it is statistically significant. The full results of the chi square tests can be found in Table 2.

Drink frequency and parental attitudes reveal a consistent pattern. Of those whose parents approve of drinking, 73.3% of students indicate that they drink while only 54.9% do not. Thus, students whose parents approve of drinking appear to be significantly more likely to engage in drinking themselves. The results of the binge drinking variable are similar. Of those whose parents approve of drinking, 73.3% of students indicate that they engage in binge drinking while 63.6% do not. Like the previous test involving drink frequency, it seems that parental approval of drinking does relate more strongly to the drinking behaviors of the respondents.

Table 2.

Chi Square Test Results

	Parental Approval	
Variables	Approve	Disapprove
Greek Affiliation		
Yes	70.5%*	29.5%*
No	67.0%*	33.0%*
Drink Frequency		
Yes	73.3%***	26.7%***
No	54.9%***	45.1%***
Binge Drinking		
Yes	73.3%***	26.7%***
No	63.6%***	36.4%***

*$p < .05$. **$p < .01$. ***$p < .001$.

A group of t-tests were used to view the relationships between the aforementioned variables in regards to parental alcohol use. The results are displayed in Table 3. The first t-test, using the variable of Greek affiliation, has a mean of 1.05 for those who indicated that they were affiliated with a Greek organization and a mean of 0.99 for those who were not. According to this, those whose parents drink are more likely to belong to a Greek organization. Although there does not appear to be a large difference between these two means, the relationship is statistically significant.

The next variable, drink frequency, yields similar results. According to this t-test, the mean of those who drink is 1.10 while the mean of those who do not is 0.78. This suggests that students who report that their parents drink alcohol are more likely to drink alcohol themselves. This relationship is again statistically significant. The last variable viewed beneath the lens of a t-test, binge drinking, expresses similar results as the previous two variables. In regards to parental drinking, the mean of those students who indicate they engage in binge drinking is 1.10. The

mean of those who do not is slightly lower at 0.93. Those whose parents drink are more likely to engage in binge drinking at a statistical significance level of .001.

Table 3.

Independent Sample t-test Comparing Mean Parent Alcohol Use

Variables	Mean
Greek Affiliation	
Yes	1.05**
No	0.99**
Drink Frequency	
Yes	1.10***
No	0.78***
Binge Drinking	
Yes	1.10***
No	0.93***

*$p < .05$. **$p < .01$. ***$p < .001$.

Multivariate Results

Linear Regression

Table 4 shows the linear regression models predicting drinking frequency. Model 1 tests the first hypothesis that there will be a relationship between Greek affiliation and drink frequency, including controls. Results show that Greek affiliation is significant at the level of .001. Specifically, respondents who are members of a Greek organization report .512 increased levels of drink frequency compared to those who have no Greek affiliation, on average.

Results also show that age is a positive factor, where each unit of increase in age is associated with an increased level of drink frequency by .030, on average. In addition, males have higher levels of drink frequency compared to females, which is consistent with prior research (Whaley, Hayes-Smith, & Hayes-Smith, 2010). Each racial or ethnic group reports

lower levels of drink frequency compared to Whites. This pattern of increased drink frequency in White individuals is also supported by prior research (Dawson, 1998; Weschler, Dowdall, Davenport, & Castillo, 1995). For every unit of increase in parental education, levels of drink frequency are increased by an average of 0.168. Adversely, a one unit increase in grade point average is related to decreased levels of drink frequency of 0.203, on average. Lastly, high school drink frequency is positively related to drink frequency in college, with a one unit increase in high school drink frequency being related to increased levels of drink frequency of 0.453, on average.

Table 4.

Linear Regression for Drink Frequency. *n* = 9,354

	Model 1		Model 2	
Variables	*b*	SE	*b*	SE
Greek Affiliation	0.512***	0.039	0.505***	0.039
Age	0.030***	0.007	0.028***	0.007
Male	0.198***	0.028	0.226***	0.027
Black	-0.654***	0.056	-0.629***	0.056
Asian/Islander	-0.601***	0.053	-0.569***	0.052
Other Race	-0.274***	0.076	-0.240**	0.075
Hispanic	-0.300***	0.053	-0.289***	0.053
Parental Education	0.168***	0.018	0.177***	0.018
Grade Point Average	-0.203***	0.024	-0.200***	0.024
High School Drink Frequency	0.453***	0.009	0.431***	0.010
Parental Drinking Attitudes			0.204***	0.030
Parental Drinking Behaviors			0.139***	0.019
Intercept	0.107	0.170	-0.124	0.169
R Squared	0.276		0.288	

*$p < .05$. **$p < .01$. ***$p < .001$.

Model 2 from Table 4 tests the second hypothesis that the relationship between Greek affiliation and drink frequency is accounted for by parental attitudes and behaviors towards

drinking. Results reveal that both parental attitudes and parental behaviors show significant positive relationships, increasing average levels of drink frequency by 0.204 and 0.139, respectively. The addition of these variables does not, however, significantly change the level of drink frequency in regards to Greek affiliation. In the first model, the unstandardized coefficient of Greek affiliation is 0.512. When parental attitudes and behaviors are included in the model, this coefficient is only slightly reduced to 0.505, representing roughly a 1.5% [(1 – (0.505/0.512))*100] reduction in the coefficient. It thus appears that while exhibiting significant main effects on drink frequency, parental attitudes and behaviors toward drinking do not explain much of the relationship between Greek affiliation and drink frequency.

Logistic Regression

Table 5 displays the logistic regression models predicting binge drinking. Model 1 again tests for the hypothesis that there will be a relationship between Greek affiliation and binge drinking. Like the linear regression models, the logistic regression models yield significant results in support of the first hypothesis. Results show that respondents who are affiliated with a fraternity or sorority have a 114.8% increase in odds of binge drinking compared to those who are not affiliated with a fraternity or sorority.

Results also find that a one unit increase in age corresponds to a decrease in odds of binge drinking by 6.1% ((1 – 0.939)*100). This pattern is notably different from the previous model predicting drink frequency. The other variables follow the same pattern as before. Males report a 61.9% increase in odds of binge drinking compared to females. Compared to Whites, Blacks (59.1%), Asian/Islanders (52.2%), Hispanics (47.9%) and other races (43.0%) each report a decrease in odds of binge drinking. As parental education increases by a single unit, the odds of

binge drinking also increase by 16.4%. As expected, grade point average is inversely related. For every one unit increase in grade point average, the odds of engaging in binge drinking decreases by 33.8%. High school binge drinking is the most strongly related variable in this model. A one-unit increase in high school binge drinking is related to an increase in odds of binge drinking in a college setting by 629.2%.

Model 2 adds the variables of parental attitudes and behaviors to test the hypothesis that the relationship between Greek affiliation and binge drinking will be accounted for by parenting factors. Results are similar to the drink frequency analyses. As parental alcohol use increases, there is a 10.3% increase in odds of binge drinking. Likewise, compared to respondents whose parents disapprove of alcohol use, respondents whose parents do approve of alcohol use report an increase in odds of binge drinking by 21.0%. Despite these significant main effects on binge drinking, Greek affiliation is still strongly linked to binge drinking. In fact, incorporating the parental influence factors only reduces the Greek affiliation coefficient by approximately 1% [(1-(0.761/0.765))*100]. Contrary to the predictions of the second hypothesis, the inclusion of parental alcohol use and attitudes does not substantially account for the relationship between binge drinking and Greek affiliation.

Table 5.

Logistic Regression for Binge Drinking. (*n* = 9,354; standard errors in parentheses)

	Model 1		**Model 2**	
Variables	*b*	Exp(*b*)	*b*	Exp(*b*)
Greek Affiliation	0.765***	2.148	0.761***	2.139
	(0.073)		(0.073)	
Age	-0.063***	0.939	-0.066***	0.936
	(0.013)		(0.013)	
Male	0.482***	1.619	0.506***	1.658
	(0.051)		(0.052)	
Black	-0.895***	0.409	-0.876***	0.416
	(0.126)		(0.127)	
Asian/Islander	-0.738***	0.478	-0.717***	0.488
	(0.111)		(0.111)	
Other Race	-0.563***	0.570	-0.538***	0.584
	(0.150)		(0.151)	
Hispanic	-0.651***	0.521	-0.642***	0.526
	(0.102)		(0.102)	
Parental Education	0.152***	1.164	0.158***	1.172
	(0.034)		(0.034)	
Grade Point Average	-0.413***	0.662	-0.412***	0.662
	(0.045)		(0.045)	
High School Binge Drinking	1.987***	7.292	1.946***	7.000
	(0.050)		(0.051)	
Parental Drinking Attitudes			0.190**	1.210
			(0.058)	
Parental Drinking Behaviors			0.098**	1.103
			(0.036)	
Intercept	0.622	1.863	0.439	1.551
	(0.319)		(0.321)	
Cox & Snell	0.243		0.246	

*$p < .05$. **$p < .01$. ***$p < .001$.

Conclusion

The first hypothesis expected that a positive relationship would exist between Greek affiliation and drinking. Both the linear and logistic models measuring drink frequency and binge drinking supported this assumption. Fraternity and sorority affiliation was statistically significant at the .001 level for both models. This is consistent with previous research that indicates higher incidences of drinking among Greek members (Caudill et al., 2006; Glindemann & Geller, 2003; Huchting et al., 2006; McCabe et al., 2005; Park et al., 2009; Walls et al., 2009).

The second hypothesis expected that the inclusion of parental influence as a variable would eliminate much of the previous relationship between Greek affiliation and drinking. It was supposed that the positive relationship between parental influence and drinking, supported by prior research (Chassin et al., 1996; Elliott et al., 2012; McCabe et al., 2005; Pearson et al., 2012; Turner et al., 2000; Wall et al., 2009), would serve as a selection effect that caused certain students to choose the Greek lifestyle. Contrary to this assumption, the addition of the parental influence variables did not greatly impact the relationship between Greek affiliation and drinking. The reduction of the Greek affiliation coefficient was only 1.5% in the linear regression model and only about 1% in the logistic regression model. According to this and despite the expectations of the second hypothesis, the addition of parental attitudes and behaviors did not have a great impact on the original hypothesis. These slim percentages suggest that parental influence does not account for the relationship between Greek affiliation and drinking.

CHAPTER 5

DISCUSSION

Both Greek affiliation and the drinking practices of one's parents have been shown to be predictors of alcohol use (Caudill et al., 2006; Chassin et al., 1996; Elliott et al., 2012; Glindemann & Geller, 2003; Huchting et al., 2006; McCabe et al., 2005; Park et al., 2009; Pearson et al., 2012; Turner et al., 2000; Walls et al., 2009). The purpose of this study was to explore the link between Greek membership and drinking and also examine the potential role of parental influence on both of these factors. Consistent with previous research, data supported the first hypothesis as there was a positive relationship between fraternity and sorority membership and alcohol use. Support for the second hypothesis, however, was not found as parental influence, while exhibiting significant main effects on drinking, failed to account for the relationship between Greek affiliation and drinking.

The first hypothesis expected that there would be a significant positive relationship between drinking and Greek affiliation. Consistent with this, both drink frequency and binge drinking revealed an increase among those respondents who identified themselves as affiliated with a Greek organization. This relationship was statistically significant in all models. This is consistent with other studies that yielded similar results (Caudill et al., 2006; Glindemann & Geller, 2003; Huchting et al., 2011; Lo & Globetti, 1993; McCabe et al., 2005; Park et al., 2009). The majority of studies focused mostly on binge drinking among fraternity and sorority members (Caudill et. al, 2006; McCabe et al., 2005; Turner et al., 2000). These studies found that the individuals involved in these organizations have a tendency to engage in more incidences of binge drinking than their non-Greek peers. A study that measured drink frequency also revealed the same results found in this study (Park et al., 2009). When the two variables of drink

frequency and binge drinking are both examined, as they were in this study, there is still an increase in drinking activities; both frequency and binge drinking are higher among Greek members (Walls et al., 2009).

The second hypothesis sought to explore this relationship further with the addition of the variables of parental influence. It was predicted that by including parental influence in the models, measured by parental drinking attitudes and parental drinking behaviors, that the relationship between drinking and Greek affiliation would be lessened or eliminated. Both measures of parental influence demonstrated significant main effects on drinking. According to other research, there tends to be a positive relationship between the drinking behaviors of college students and the drinking behaviors of their parents (Chassin et al., 1996; Elliott et al., 2012; McCabe et al., 2005; Pearson et al., 2012; Turner et al., 2000; Walls et al., 2009). Despite the significant main effects the significant relationship between Greek affiliation and drinking behaviors remained, contrary to expectations.

On the one hand, these findings suggest that Greek affiliation may thus have a direct impact on drinking behavior. It is important to note that in addition to attempting to account for selection effects through parental influence, prior drinking behaviors were also controlled for in all models. While past behavior, as indicated by the variables of high school binge drinking and high school drink frequency, were strongly related to drinking, the relationship between Greek affiliation and drinking remained and thus appears to be fairly robust. These students may be socialized into drinking simply through a product of the organization itself rather than a predisposition to drinking. This direct influence would be consistent with studies that focus on how the environment and associations that come with being a member of a fraternity or sorority

may directly influence drinking (Caudill et al., 2006; Huchting et al., 2011; McCabe et al., 2005; Neighbors et al., 2007; Park et al., 2009; Walls et al., 2009).

As proposed earlier, social learning theory may explain how the Greek environment and associations influence drinking behaviors. It is possible that once joining a fraternity or sorority, a student is initiated into a subculture where drinking is learned and socially rewarded. These students could follow the sequential process of learning as proposed by Burgess and Akers (1966). They are first subjected to differential association in which they are exposed to these individuals who engage in heavy drinking. As a result of these associations, definitions are formed that are conducive to the use of alcohol. Once enough positive definitions are developed, the students begin to imitate the behavior of others, engaging in alcohol use themselves. Once they progress to this stage, their future behavior hinges on differential reinforcement. If they are socially rewarded by their peers for this behavior they are likely to continue, thus furthering this behavior among future generations of Greek members. This social learning process could explain the link between Greek affiliation and drinking to an extent, but future research still should pry deeper into this link to determine how causal the relationship truly is.

On the other hand, despite attempting to account for selection effects by incorporating numerous controls and parental influence in the models, it is possible that other variables not included in the models can account for the relationship between Greek affiliation and drinking behaviors. In other words, selection effects may yet be responsible for this result. The unmeasured third factor that may provoke a spurious relationship between drinking and Greek affiliation could be a number of variables.

One set of factors that seems logical, however, are social class characteristics. This study attempted to control for social class through the use of a variable measuring parental education,

finding a positive relationship between parental education and drinking. This measure, however, was somewhat limited by focusing exclusively on education as an indicator of social class. There may be other indicators of social class that are more crucial to explaining the relationship between Greek affiliation and drinking. For example, the areas in which these students and their parents live may be more conducive to alcohol use than other areas, leading to a relationship between parental influence and student alcohol use that is not caused by a direct link. As mentioned before, middle- to upper-class individuals are more likely to engage in alcohol use (Dawson, 1998; Weschler et. al, 1995). If this is true, then both the parents and the students would be more likely to drink based on the environment in which they live. Along with this, it is possible that those who join Greek organizations may be these individuals who are of a higher social class. Research supports this idea that class has an effect on the ways in which individuals develop and determines what activities, such as Greek membership or drinking, they involve themselves in (Lareau, 2003). Moreover, becoming a member of a Greek organization often requires an offering of monthly fees, sums which would be unattainable for some who were more economically disadvantaged. As a result, only those students who are from more monetarily fortunate families may have the means necessary to be involved in these Greek organizations. Aside from the monetary uniqueness of working- and upper-class families, there may also exist a "party subculture" (Hagan, 1991, p. 579) that prompts these individuals to engage in mildly frowned upon activities such as drinking. Greek organizations may be an extension of this subculture, providing a college context where individuals of similar backgrounds can participate in similar behaviors. Future research should explore this link in order to determine of socioeconomic status may be the predicting factor for both Greek affiliation and drinking behaviors.

Most of the results in regards to demographics were expected based on previous research, but some yielded surprising findings. The variable of age was interesting due to the mixed results. In the linear regression model used to predict drink frequency, increases in age presented increases in average levels of drink frequency. In the logistic model used to predict binge drinking, increases in age led to a decrease in the odds of binge drinking. The mean age of this sample was 20.77, leading to some different explanations that could be used to resolve this discrepancy. In one study measuring the drinking practices of young adults, those in the upper ranges of ages measured (22-24) tended to drink more than younger individuals (Chen, Dufour, & Hsiao-ye, 2004). This causes the increase in age and drink frequency to be a logical occurrence in this study. As the respondents' age increases, drawing nearer to the cap of 25 and older, their frequency of drinking increases as well. The relationship between age and binge drinking is not supportive of this idea, but it can also be rationalized. Research suggests that college is a "transitional period" (McCabe et al., 2005) for incoming students. The typical age of newly accepted first-year freshmen students is 18. If this truly is a transitional period in which these students are introduced to new ideas and activities, then they may be more prone to engage in binge drinking behaviors. Once a student has attended college for a few years, he or she may no longer feel the need to indulge in such activities. It is possible that they still engage in drinking, but perhaps their inclinations to participate in risky alcohol use activities such as binge drinking are not as strong as they were when they first arrived on the college campus.

Limitations

This study contributes to general knowledge by addressing a factor that has not been considered in prior research. A central purpose of this study was to examine the link between

parental drinking behaviors and attitudes and if this affected the likelihood of the student to become affiliated with a fraternity or sorority organization when attending college. This potential relationship has not been the focus of any prior studies. There are, however, some limitations to the current study.

In the data used, fraternity and sorority affiliation is indicated by the simple binomial responses of "yes" or "no". These responses do not allow the consideration of the type of fraternity or sorority in which the student is involved. Social fraternities or sororities may be more prone to engaging in drinking behaviors than other types, such as athletic or academic Greek groups. Little research has focused on the different types of fraternities and sororities, but it seems logical to conclude that there are likely differences in the types of individuals who join these different types of Greek organizations; the current study was intended to focus more on the social groups. The addition of athletic or academic fraternities and sororities may have an impact on the analyzed data. In future research the specifics of fraternity and sorority groups should be considered. Also, the students' involvement in their fraternity or sorority was not included in the regression models. Those who were more involved in their Greek organizations may be more attached and thus more likely to conform to the drinking culture that research suggests is common of these environments. Those who are not as involved may be more likely to refrain from drinking as opposed to those who spend more time and have a higher investment in their fraternity or sorority.

Another limitation of this data is the year in which it was collected. This survey was issued in 2001, over a decade ago. It is very possible that the current status of college students in the United States would be very similar now as it was at that time. There remains the possibility, however, that there are differences separating this sampled population from current students. In

order to rectify this, future research should examine this problem of fraternity affiliation, parental influence, and alcohol use in regards to more current data to discover if the same trends and results continue to exist in the present. It would also be helpful to refer to longitudinal studies that stretch over a span of years in order to better address issues that may arise from selection effects or to more successfully make causal inferences about the studied variables.

The way in which the question responses were shaped also reveals a limitation of this study. For the measurement of age, an ordinal scale was used with the endpoints existing as "17 or younger" and "25 or older". The ages between 17 and 25 could be selected individually, but these two categories are quite vague. The former category does not pose much of a potential impact on this research (only 0.2% of respondents selected this option) but there is a wide range of options extending past 25 that could affect the data differently (10.3%). In the future responses should be offered as ratio rather than allowing the creation of an ordinal scale.

Policy Implications

The results of this study suggest that when policies are created, they are not best directed toward the college population alone. This study, as well as prior studies, suggested that there is indeed a positive link between Greek affiliation and drinking behavior. As a result, some alcohol prevention or treatment policies should be tailored to this sort of environment. Fraternities and sororities tend to consist of a tight-knit group of individuals. If they are receiving support and reinforcement from one another in regards to drinking, it is unlikely that they will be willing to seek out help on their own, even if they become aware that they may be experiencing alcohol use problems. If programs are created that address an entire group rather than leaving the responsibility of participation with the individual, it is possible that it would be more effective among students in this particular situation.

Previous research has suggested that Greek members may be resistant to programs that prevent a typical student from drinking, presenting a problem when trying to rectify the enhanced drinking practices of this population (Marlatt, Baer, & Larimer, 1995). Some suggested programs present overall awareness as a potential means to combat high levels of drinking. Trockel (2004) explains that perceived drinking norms may play a role in a fraternity or sorority member's decision to engage in drinking. If it is assumed that other Greek organizations or groups of students are practicing heavy drinking, they are more likely to see this as acceptable and do the same. If these perceived norms are alleviated with the belief that not all students participate in high incidences of heavy drinking, perhaps a Greek organization's desire to engage in heavy alcohol use will be lessened.

Due to the negative relationship between alcohol use and grade point average, an effort could be made by Greek organizations to strictly enforce grade point average requirements. If a student must maintain a stringent 3.0 grade point average in order to retain membership in a fraternity or sorority, he or she may be more inclined to devote more time and focus to academic pursuits instead of drinking behaviors. Even if this approach does not prompt students to improve their grades and their GPAs continue to decrease, they will be removed from the Greek organization. If this occurs, they will no longer be around these social influences and it is possible that their drinking may decrease because of this lack of social reinforcement. Potentially, if this pattern continued, fraternities and sororities may become less conducive to alcohol use altogether, providing these groups with a lower chance of being exposed to alcohol-related risks.

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