

SORORITY PLEDGES: A LONGITUDINAL
EXAMINATION OF CHANGES IN ALCOHOL
ATTITUDES, BEHAVIORS, AND NORMATIVE
PERCEPTIONS THROUGHOUT RECRUITMENT
AND EARLY PLEDGING

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By

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CHAPTER I

INTRODUCTION

Alcohol abuse is a major problem on college campuses (Task Force, 2002). An estimated 90% of college students use alcohol at least occasionally (Lo & Globetti 1995). Further, 44% of students engage in binge drinking (Wechsler, Dowdall, Davaenport & Castillo, 1995). Binge drinking in most research studies is defined as five or more drinks in a sitting for men or four or more drinks per sitting for women (Wechsler et al., 1995). Consumption at these levels is often problematic not only for the individual engaging in drinking, but also for his or her friends, family, fellow students, and community (Presley, Meilman, & Leichter, 2002).

Despite the multitude of negative consequences which can be associated with heavy drinking, statistics for consumption levels of members of fraternities and sororities far outweigh those of typical students (Alva, 1998). In fact, it has been estimated that fraternity residents report 20.3 drinks per week versus 7.5 drinks for all male students and that sorority residents consume 6.2 drinks per week for sorority residents compared with 3.2 drinks per week for all female students (Cashin, Presley, and Meilman, 1998). What is more troubling than the increased drinking levels however, is the increased number of negative consequences, such as drunk driving or risky sexual behavior, experienced by members of Greek organizations (Presley et al., 2002). Furthermore, increased drinking levels and increased numbers of negative consequences are also experienced by those

who merely express the intent to affiliate with Greek organizations (Read, Wood, Davidoff, McLacken & Campbell, 2002; Harrington, Brigham & Clayton, 1997; Canterbury, Gressard, Vieweg, Grossman, Westerman & McKelway, 1990).

A major factor correlated with problematic college drinking is normative beliefs, or beliefs about other students' behaviors or attitudes. These beliefs are often inaccurate. Many students believe that levels of alcohol consumption for the "typical student" are much higher than is actually the case. Further, students often believe that the typical student's use of alcohol is more extreme than their own. Norm misperceptions can also occur when individuals believe that others hold more permissive attitudes about alcohol consumption than is actually the case. These individuals often attempt to decrease the discrepancy between their own behaviors and attitudes and that of their perceived norm. One of the most common strategies is for the individual to change his or her behavior toward the perceived norm (Prentice & Miller, 1993). This may be especially problematic within the Greek population. These students have been found to hold even higher norms for drinking. Thus, individuals who try to be more like their misperception of the norm may increase already problematic levels of drinking.

Correlations have been found between college student drinking and age, race, gender, emotional distress, environment, and living situation. Further, and of concern to this study, is the relationship between Greek status and problematic drinking. There are mixed findings about the cause of increased drinking among Greeks. Two hypotheses have been proposed and investigated – causation and selection. Some support has been shown for the traditionally held hypothesis, the "causation" hypothesis, which claims that socialization within Greek organizations creates higher consumption levels among its

members (Sher, Bartholow, & Nanda, 2001). However, there has been more support for the “selection” hypothesis which asserts that students enter college already drinking at high levels and then seek out environments which will be supportive of their drinking levels (Baer, 1994; Read et al., 2002).

Despite the support for the selection hypothesis, there is relatively little support on how normative perceptions and drinking behaviors affect selection into different sororities and fraternities. In other words, there is support that heavier drinking individuals self-select into the Greek system as a whole. However, there is little evidence how their normative beliefs and current drinking behaviors affect specific house selection. Previous studies have failed to longitudinally examine the relationship between normative perceptions and individual attitudes and behaviors concerning alcohol. The current study examined how individual attitudes and behaviors influenced the match process between potential members of sororities and the sorority house they ultimately joined. It also examined how these attitudes and behaviors of the potential members changed during the process of formal sorority recruitment (rush) and the early stages of the pledging process. It only examined students who self-selected themselves into the recruitment process.

Previous literature would suggest that students will form perceptions of drinking norms based on their closest reference group (Carter & Kahnweiler, 2000). Further, in an attempt to decrease the discrepancy between perceived norms and their own attitudes and behaviors, students will change to become more like their perception of the norm. Thus, it was hypothesized that students who pledge sororities would change normative perceptions, as well as individual attitudes and behaviors to become more like the group

they most closely associate with – the house they ultimately pledge. Individuals who did not pledge Greek organizations were expected to choose reference groups similar to their current attitudes and behaviors and thus display less change.

If individuals choose to join houses that match their behaviors and normative beliefs, the selection hypothesis would be supported. However, if individuals who actually pledge sororities show significantly greater change in normative perceptions, attitudes, and behaviors over the course of the recruitment, and the early pledging process, that would be supportive of the causation or socialization hypothesis. The causation hypothesis will be further supported if individuals alter their norms, attitudes, and behaviors to become significantly more congruent with their closest reference group, their sorority. Further support for the causation hypothesis will be seen if normative beliefs, attitudes, and behaviors of sorority pledges change to a significantly greater degree than do those of women who do not join sororities. Given the fact that both baseline levels of heavy drinking amongst those that self-select for sorority membership, as well as significant changes in norms, attitudes, and behaviors are expected, it is anticipated that the findings will support a combination of self-selection into Greek organizations and enhancement of drinking levels through socialization and adoption of house norms. Significant differences in the degree of change among Greek houses would provide further support for the idea that increased drinking in the Greek system is attributable to a combination of these two hypotheses.

CHAPTER II

A REVIEW OF THE LITERATURE

College Drinking

Alcohol use among students is prevalent on most college campuses. Sher et al. (2001) report that seven out of eight college students drink. While percentages reported for college student drinking and binge drinking vary, most are relatively high. In 1993, Lo and Globetti reported that nationwide 91% of students had tried alcohol and 64% had used alcohol in the month prior to their survey. More recently, a 2002 study by Read et al. reports that 86% of respondents drank alcohol in the year prior to the study. Lo et al. (1995) conclude that drinking patterns have been fairly stable over the past twenty years, with approximately 90% of participants responding that they are drinkers.

Perhaps the most concerning group of students who drink engage in binge drinking. Binge drinking in most research studies is defined as five or more drinks in a sitting for men or four or more drinks per sitting for women (Wechsler et al., 1995). Overall, the most consistent estimate of binge drinking seems to be that approximately 44% of college students engage in binge drinking (Wechsler et al., 1995). However, estimates of binge drinking among college students can vary dramatically based on the time period being examined. Presley et al. (2002) report that 1 in 5 students is a heavy episodic drinker, which they define as someone who consumes five or more drinks in a row in the past two weeks. Similarly, when examining a two week period, one in five undergraduates in American colleges and universities reported bingeing three or more

times (Wechsler et al., 1995). When considering the time period of a year, a 2002 study by Read et al. found that 63% reported engaged in binge drinking.

When searching for an explanation for statistics regarding binge drinking, it seems that, partially at least, the problem is attributable to age. An individual's lifetime consumption level peaks sometime in his or her late teens or early twenties (Baer, Kivalahan, Blume, McKnight, & Marlatt, 2001). This is the usual age frame for traditional undergraduate students. However, college students drink more than their same age peers who are not in college (Baer et al., 2001). Thus, age alone is not sufficient in explaining college student drinking. A variety of other factors such as gender, environment, emotional distress, and ethnicity have been found to influence drinking levels in college students.

Second of the most prominent factors found to influence drinking is gender. The rates of undergraduate drinking have become quite similar in undergraduate men and women (Korcuska & Thombs, 2003). However, there are still gender differences related to alcohol consumption between the two sexes. It seems that men still report levels of higher alcohol consumption and drinking consequences (Korcuska & Thombs, 2003). Men also had significantly more drinking problems compared to women (Engs, Diebold, & Hanson, 2001). Interestingly however, in comparison to men, as women increase alcohol consumption, they also experience a greater number of negative alcohol related consequences (Harrington et al., 1997). Many hypotheses have been proposed about the differential drinking levels between men and women. For example, one explanation is that gender differences in alcohol consumption may come as a consequence of commonly held gender stereotypes about drinking. Suls and Green (2003) suggest that men may

experience more social pressure and embarrassment if they convey concerns about drinking whereas women are more likely to be criticized for excessive drinking. Though there is currently a gender difference, future research may see a change in this trend. Indeed, both quantity and frequency of drinking appear to be increasing at more rapid rates for women (Lo & Globetti, 1995).

A third influencing factor is environment. Research indicates that when immersed in an environment that promotes heavy drinking behaviors, such as spring break or a fraternity house setting, students are likely to increase their drinking levels (Sher et al., 2001). However, when removed from these situations, consumption decreases. This finding may be particularly relevant given that the current study examined students who were exposed to Greek environments.

A fourth potential influencing factor on collegiate drinking is emotional distress. Kuther and Timoshin (2003) link alcohol use with depressive symptomatology, anxiety, and social support. Interpersonal relationship difficulties, psychological problems, and impaired behavior and performance were more often experienced by frequent heavy drinkers (Canterbury et al., 1990). However, Baer (2002) claims that there is only mixed support for this assertion. If there is a link, alcohol may be being used to manage anxiety in social situations.

Another variable which seems to affect alcohol consumption is ethnicity. For example, fewer black students engage in high-risk or heavy episodic drinking and experience fewer damaging consequences than white students (Presley et al., 2002).

Other risk factors found in previous studies for drinking are related to perceptions about drinking, the severity of its consequences, and criteria for problem drinking. One

perception related to binge drinking is that drinking in college is important (Wechsler et al., 1995). Students have also reported that drinking and learning to handle drinking must be accomplished through an individual's own experiences and that they base their perception of problem drinking on frequency rather than quantity of drinks (Lederman, Stewart, Goodhart & Laitman, 2003). It also appears that students have difficulties recognizing that their own behavior is problematic. Participants in a 1993 study by Baer and Carney reported that they defined a behavior as more indicative of problematic drinking if it occurred for others than if it occurred for themselves.

While alcohol use or misuse is certainly influenced by individual variables, it is also influenced by external factors such as the availability and pricing of alcohol, the social setting where drinking takes place, and campus customs (Presley et al., 2002). Overall, Engs et al. (2001) suggest that whites, males, Catholics, the non-religious, those with low grade point averages, members of Greek associations, those attending colleges in the Northeast region of the United States, those attending private colleges, those attending colleges with an enrollment less than 10,000 students, and those attending college in a small community are the most at-risk for heavy drinking practices.

To say that alcohol consumption by college students has extended to become a campus-wide concern might be an understatement. Instead, it is more probable that consequences of collegiate drinking spread to a much larger population than the college campus. Attitudes and behaviors of college drinkers impact their families, friends, neighbors, fellow students and community members. Secondary alcohol effects experienced by others may include unwanted sexual advances, having to care for others under the influence, and disruption of personal study or sleep time (Elkins, Helms &

Pierson, 2003). Empirical findings suggest that students at colleges with high drinking levels are almost four times as likely as students at colleges with low drinking levels to experience at least one problem due to others' excessive alcohol consumption (Borsari & Carey, 1999). Indeed, Carter and Kahnweiler (2000) cite alcohol use as the number one campus health problem. Presley et al. (2002) further recognize the problem when they cite a 1989 study by the Carnegie Foundation for the Advancement of Teaching as reporting that 67% of college presidents acknowledged campus alcohol use as a moderate or major problem. Further, these presidents described alcohol misuse as the single greatest threat to the quality of campus life. Largely, the concerns are bred from observation or experiences of negative consequences related to alcohol use.

Negative consequences include major risks to the community such as drunken driving, violence, vandalism, getting in trouble with the police, or risky sexual behavior (Meilman, Yanofsky, Gaylor, & Turco, 1989). Further, there are various risks which may be considered minor by some, perhaps largely because they affect only the individual drinker, but nevertheless are troublesome. Such "minor" risks include poor academic success, student development, legal liability and illness or injury due to alcohol abuse (Elkins et al., 2003). While illness and injury may seem trivial to some and perhaps brings about images of hangovers and alcohol induced vomiting to most, in fact, alcohol related injuries and accidents are the most common cause of death for the collegiate age group (Larimer, Irvine, Kilmer, & Marlatt, 1997; Marlatt et al., 1998). Despite the fact that negative consequences associated with academic performance pale in comparison to alcohol related deaths, they are still a major concern. Alcohol use has been shown to be negatively correlated with overall grade point average (Korcuska & Thombs, 2003).

Alcohol abuse may serve to lower grade point average through poor class attendance and failure to study for exams or complete homework.

While students may be aware of the negative consequences of drinking alcohol, Steffian (1999) hypothesizes that individuals may discount warning signs regarding their own behavior if they believe that others' behavior and consequences from their behavior are more severe than the individual's own. Furthermore, these negative consequences may be eased by the physical assistance given to impaired or sick drinkers and the de-emphasis on drinking problems (Borsari & Carey, 1999). Despite the multitude of negative consequences, it must not be overlooked that there are, at least it would seem to the user, also positive consequences to alcohol use.

Benefits often cited relate to social lubrication effects, such as increased sexual confidence, increased ability to socialize, decreased fears of being socially inadequate, and relaxation from school or work (Harrington et al., 1997). In fact, Baer (2002) claims that there are two motives for drinking: for social purposes and for emotional escape or relief. Whether or not these positive consequences actually exist, college drinking is positively correlated with expectation for positive consequences from drinking (Kuther & Timoshin, 2003). Alcohol expectancies, a person's beliefs about the positive and negative effects of using alcohol, play an important role in alcohol consumption (Borsari & Carey, 2000).

Expectations about the effects of alcohol, perceived peer norms, and personal skills across social situations are three factors known to be predictors of alcohol consumption (Reis, 2000). Baer (2002) supports this by saying that heavy drinkers expect more positive and less negative effects from their drinking. For example, heavy drinking

may be perceived as a positive factor for the reputation of the organization within the Greek system and thus may lead to heavier drinking by the members (Larimer et al., 1997). Peer influence may serve to shape these expectancy effects for alcohol use (Marlatt et al., 1998). However, an individual does not need to be aware of his or her alcohol expectancies to be influenced by them (Corbin, McNair, & Carter, 2001).

There seems to be some debate about the role of the expectation of negative consequences. Kuther and Timoshin (2003) assert that negative expectations predict abstaining from drinking. In contrast, others argue that negative alcohol expectancies are moderated by perceived level of impairment. Experiencing more negative consequences while expecting to be less impaired is characteristic of more frequent drinkers whereas the opposite is true for less frequent drinkers (Elias et al., 2001). It is further possible that college drinkers assess the potential positive and negative consequences of drinking and then make a rational choice about whether or not to drink (Kuther & Timoshin, 2003). Thus, maybe students are well aware of the negative consequences of drinking but perceive the benefits to outweigh any potential costs of drinking. Or, as Workman (2001) suggests, high risk drinking behavior, regardless of its consequences, may be viewed by students as a positive, functional activity.

Normative Perceptions

One variable consistently linked to alcohol use and abuse is normative perceptions. There are two types of norms. Injunctive norms, also known as subjective norms, involve the perceptions of which behaviors and attitudes are socially approved of (Cialdini, 2003; Larimer & Neighbors, 2003). Descriptive norms on the other hand, involve the perceptions of which behaviors are actually occurring (Larimer & Neighbors,

2003; Cialdini, 2003). These norms can also be referred to as attitudinal and behavioral norms respectively (Perkins, 2002). Larimer and Neighbors (2003) assert that perceived descriptive norms are related to alcohol use and abuse and that, similarly, perceived injunctive norms are associated with social behaviors such as alcohol consumption and other health behaviors. Cialdini (2003) further argues that people are drawn to fulfill both normative perceptions by doing what is most approved of as well as what is most popular. Studies suggest two properties of norms which shape how they are perceived and transmitted (Prentice & Miller, 1993). First, social norms are defined by people's observable public behavior. Second, they are permeated with an impression of universality. Thus, as the appearance of universality decreases (a tactic used by norms approaches), the norm produces less influence (Prentice & Miller, 1993).

Both types of norms can be inaccurate. Discomfort, alienation, and a tendency to move in the direction of the group seem to be consequences of perceiving oneself as deviant, despite whether the perception is accurate or not (Prentice & Miller, 1993). Common misperceptions associated with norms include false consensus effects, false uniqueness effects, and pluralistic ignorance (Larimer & Neighbors, 2003). False consensus effects occur when individuals mistakenly believe that the behavior or attitudes of others are similar to their own (Larimer & Neighbors, 2003). This occurs when individuals project their own attitudes and behaviors concerning alcohol use onto their friends and peer reference group. In contrast, false uniqueness effects occur when individuals falsely believe that their attitudes and behaviors are different from others (Larimer & Neighbors, 2003). A third common norm misperception, pluralistic ignorance, is the shared faulty belief that one's own behavior and attitudes are different

from others despite few public behavior differences (Larimer & Neighbors, 2003). Two key features of pluralistic ignorance are the departure of perceived norms from the actual norms and an illusion of universality (Prentice & Miller, 1993).

Individuals often employ strategies to reduce the distress associated with normative misperceptions. Prentice and Miller (1993) assert that there are three strategies for decreasing the discrepancy between the perceived norm and privately held attitudes: changing private attitudes so that they are more similar to the perceived norm, changing the norm so that it is more similar to an individual's private attitudes, and rejecting the normative group. Of these, the method which is easiest and probably most often used is to change personal attitudes so that they are more in line with perceived norms (Prentice & Miller, 1993).

In addition to gender differences in drinking, there may also be gender differences in normative perceptions. Kuther and Timoshin (2003) found that male students perceived peer norms as more supportive of drinking than did female students. Men also seem to perceive higher levels of drinking in their peers (Korcuska & Thombs, 2003). In their 1993 study, Prentice and Miller also found gender differences related to the strategies used to reduce the discrepancy between perceived norms and private attitudes. They found that men changed their own attitudes to more favor their perceived social norm but that women did not.

Norms play an important role in an individual's drinking behaviors and attitudes. When considering norms, it seems that perceived peer norms are closely associated with an individual's drinking (Kuther & Timoshin, 2003; Korcuska & Thombs, 2003). This is the case only if one's peers are considered his or her closest reference group. In fact, it is

the perception of the norms of the most proximal reference group which are the most influential (Korciuska & Thombs, 2003). Subjects in a 1991 study by Baer, Stacy and Larimer reported perceiving both their closest friends and people in general as drinking more than themselves. Furthermore, friends' perceived drinking patterns were closely related to an individual's own quantity and frequency of drinking (Baer et al., 1991). In support of this, Steffian (1999) found that participants' drinking levels one year later were predicted by their current assessments of the prevalence of alcohol use. In addition to increased alcohol intensity, peer norms also appear to be positively correlated with drinking consequences (Korciuska & Thombs, 2003).

The shift from influence by other reference groups to peer groups often occurs during late adolescence and is especially pertinent to alcohol and substance abuse (Perkins, 2002). While there are other groups which provide norms for students to follow, there is evidence of relatively little impact of the norms of parental values and behaviors on students (Perkins, 2002). However, there may be a small influence through internalized attitudes and modeled behavior which have often been passed down primarily through religious beliefs and traditions (Perkins, 2002). This may also be seen in the fact that ambivalence in family attitudes toward drinking and lack of personal drinking guidelines are correlated with heavier levels of drinking (Faulkner, Alcorn, & Garvin, 1989). Parental influence appears to differ from peer influence in that it is exerted through the transmission of norms to their children as well as influencing the child's selection of friends whereas peers model drinking behaviors (Lo, 1995). There is little research to consult about the impact of faculty norms on student drinking. However, a

prevention component may be norms about expectations for academic performance (Perkins, 2002).

Norms can be influenced by a multitude of factors. As with drinking levels, there is controversy over the effect of gender on normative perceptions and influence. Read et al. report that in their 2002 study, perceived norms did not vary based on gender or intention to join a Greek letter organization. Interestingly however, they also found that the relationship between perceived norms and quantity and frequency of alcohol consumption was significant for men but not women. Given the insignificant gender differences in perceived norms, Read et al. (2002) hypothesize that norms may play a stronger role for men than for women when determining levels of alcohol use. Norms may also vary according to social factors like living arrangements and membership in a Greek organization (Read et al., 2002, Presley et al., 2002). Dispositional vulnerability to peer influences and peer pressure also moderates the relationship between perceived alcohol use norms and undergraduate drinking (Novak & Crawford, 2001). Thus, those students who are highly attentive to social comparison information receive the most impact from campus drinking norms (Novak & Crawford, 2001). Norms research has also found that the perception of peer alcohol use and peer support for heavy drinking behaviors mediates the relationship between drinking behaviors and Greek membership status (Sher et al., 2001).

Korcuska and Thombs (2003) assert that the norms literature provides evidence for two things. First, most students overestimate the drinking norms of their peers. Second, these misperceptions create an environment which is permissive of alcohol use. Students have consistently been mistaken in believing that peer alcohol use is higher and

peers hold more permissive attitudes than is really the case (Perkins, 2002). Findings from literature often indicate that undergraduates perceive their close friends as drinking more than themselves, and typical members of the campus as drinking more than their close friends (Korcuska & Thombs, 2003). Perceptions of group norms are also higher than the mean self-reported drinking of individual group members (Baer, 1994). Perkins (2002) offers an explanation for why normative misperceptions are so rampant. He proposes that the combination of the observation of vivid public intoxicated behavior and the common human error of misattributions of another's behavior to his or her disposition rather than to his or her circumstances (the fundamental attribution error) leads one to believe that many people often engage in heavy drinking practices. He further proposes that these misperceptions are facilitated and reinforced by media sources which disproportionately represent heavy drinking as part of youth culture. The perceptions are re-created and reinforced through the media by such means as advertising campaigns targeting students (e.g. Happy Hour) (Lederman et al., 2003).

It further appears that overestimation of norms may serve a functional purpose for heavy drinkers by allowing them to justify their own behaviors by viewing others' drinking as being heavier or riskier than their own or at least view their own behavior in a more favorable light (Borsari & Carey, 2000; Suls & Green, 2003). Normative misperceptions can be risky for students by allowing them to believe that their behaviors are within the range of drinking behaviors for the typical student and thus not problematic. Indeed, normative research indicates that binge drinking may not be perceived as a high risk behavior that needs to be changed (Carter & Kahnweiler, 2000). Despite the magnitude of student misperceptions, they are not alone in their

misperception of excessive drinking as the norm. Parents and teachers also share this perception (Lederman et al., 2003).

Within the college population, normative misperceptions are not secluded to a single group but are instead found across genders, ethnic groups and residences (Perkins, 2002). Research from the norms literature supports that Greek members are no exception and have skewed normative ideas. In a 2000 study, Carter and Kahnweiler found that fraternity men at a private Southern university perceived drinking among typical students and Greek men as the same. These men also perceived their own drinking the same as their closest friend's drinking. This study supports previous research findings that one's behavior is most closely associated with perceptions of the norms for one's own group (Carter & Kahnweiler, 2000). Among Greeks, those in leadership positions generally did not hold differential beliefs about the positive nature of drinking.

Perceived norms may be very important in the fact that higher perceptions of norms lead to higher alcohol consumption. If perceived drinking norms are higher than an individual's personal norms, he or she may attempt to alter his or her own drinking levels to match the perception of "typical drinking" levels (Borsari & Carey, 1999). However, Baer (2002) asserts that this may occur only under conditions where more accepting social attitudes toward drinking already exist. Some groups, such as Greek letter organizations, may actually wish to maintain perceptions of high alcohol use in their organizations as they may link this to a perception of popularity (Perkins, 2002).

Social norms approaches to prevention, which attempt to correct normative misperceptions by publicizing more accurate norms, have been associated with reported decreased consumption in the general population but have had little impact among Greek

students (Carter & Kahnweiler, 2000). Carter & Kahnweiler (2000) cite three possible flaws of the social norms approach in changing the drinking behaviors of members of Greek letter organizations. First, it appears that there is no healthy drinking norm within the Greek system. Second, students are influenced more by their own social network than by others outside this network. Third, within Greek organizations, binge drinking is the norm. Given that social norms approaches advertise appropriate drinking norms in hopes that students will change their misperceptions, it is obvious how the Greek system not having a healthy norm to advertise will be a roadblock for this approach. After finding that even after participants held more accurate perceptions of norms their behaviors did not change, Steffian (1999) suggests that attitudes toward alcohol have little to do with actual drinking behavior.

Although the perceptions of college drinking norms, especially Greek college student drinking norms, favor heavy drinking, there has been a time when norms created an atmosphere that drinking was not as acceptable. Surveys from 1926 (during the period of Prohibition) suggest that drinking was experienced and approved of by only a minority of students (Goodwin, 1992). Norms on drinking and drinking behaviors vary according to the social situation and according to individual variations on various social factors (Room, 1975). Lowering drinking levels in Greek houses is likely to affect house norms, consequently making drinking less acceptable, further lowering drinking levels (Goodwin, 1992).

Greek College Drinking

Greek organizations are a popular component of many college campuses. In 1998, Cashin, Presley and Meilman reported that 46% of all North American post-secondary

institutions reported having fraternity or sorority systems. Further, as of 1990, membership in Greek letter organizations was at an all time high (Ozegovic, Bikos, & Szymanski, 2001). Drinking by members of Greek letter organizations presents a special set of concerns. It has been widely cited that members of these organizations have both higher quantity and higher frequency of drinking than do non-Greek organization members (Sher et al., 2001). In fact, Greek membership has been associated with greater quantity and frequency of drinking, greater alcohol dependence symptoms, and increased likelihood of experiencing alcohol related negative consequences than those that are not members of Greek organizations (Sher et al., 2001). Further, it seems that simply the intention to join a Greek letter organization is predictive of increased alcohol consumption. Canterbury et al. (1990) assert that the prevalence of frequent drinkers is twice as high for students planning to join Greek organizations as it is for those with no such intention. Again, gender differences emerge as Read et al. (2002) suggest that Greek intent is significantly associated with alcohol consumption for men but not for women.

Students who affiliate with Greek organizations may, because of membership requirements and different drinking opportunities, have more peer pressure to drink than students not belonging to such organizations (Lo & Globetti, 1995). Greek organizations may influence members through both direct and indirect peer pressure. Examples of direct peer pressure would include direct invitations or urging a pledge to drink (Borsari & Carey, 1999). In contrast, indirect peer pressure might be exemplified by heavy drinking social models and observation of reinforcement for drinking (Borsari & Carey, 1999). Given that the current trend of those attending social functions associated with

fraternities is nine drinkers to every one abstainer, drinking models are abundant (Kodman & Sturmak, 1984).

It has been found that many variables associated with drinking within the Greek system may be moderated by gender and residence. Men residing in fraternities have been found to have increased quantity, frequency, increased episodes of binge drinking, and report more negative alcohol related consequences than those not residing in fraternities (Larimer et al., 1997). Wechsler (1994) asserts that 75% of fraternity residents who were not heavy episodic drinkers in high school became so in college. However, Sher et al. (2001) found that Greek status did not significantly influence heavy drinking in women.

Perhaps the magnitude of the drinking statistics for members of Greek organizations is most alarming when compared to the drinking of non-Greek counterparts. As with statistics concerning the average college student drinking levels, estimates of quantity and frequency for Greek members compared to non-Greek members vary. Alva (1998) reported that fraternity males reported an average weekly consumption of 5.78 drinks compared to 2.77 drinks for non Greek males. Sorority members also reported significantly higher typical weekly alcohol consumption levels (2.25 drinks per week) than non-Greek females (1.11 drinks per week). Cashin et al. (1998) report a significantly higher number of drinks per week for these groups. They report 20.3 drinks per week for fraternity residents versus 7.5 drinks for all male students and 6.2 drinks per week for sorority residents compared with 3.2 drinks per week for all female students.

Although it has been found that Greek students drink more than non-Greek students, little is known about the differences between the two groups (Baer, 2002).

Furthermore, heavy drinking is not found equivalently across all Greek groups. While this has been the traditional perception, new evidence suggests that instead heavy drinking may be related to specific organizational characteristics within individual houses (Larimer et al., 1997). This is evidenced by the considerable differences in drinking patterns across Greek letter houses. Larimer et al. (1997) propose that these differences can be explained through social learning theory. This theory would suggest that drinking behavior can be influenced by a variety of things which vary across houses including perceived and actual norms within the group, peer support for drinking, and modeling of drinking behaviors by others in the group. Congruent with this, it has been found that in the presence of the model, exposure to heavy drinking models increases alcohol consumption whereas exposure to light drinking models decreases consumption (Larimer et al., 2001).

Variance due to residence, which is commonly hypothesized to contribute to increased Greek drinking levels, might also be explained by social learning theory. It has been found that living within a sorority or fraternity house is associated with particularly high drinking levels (Baer, 1994). In fact, forty-seven percent of fraternity residents have been found to engage in heavy drinking practices (defined as drinking five times a week or six or more drinks once a week) (Borsari & Carey, 1999). Following social learning theory, it would make sense that those members with the most exposure to heavy drinking models would also display the heaviest drinking behaviors themselves.

Some assert that leaders of Greek organizations may be of special concern because they may be both drinking more and experiencing more negative consequences (Elkin et al., 2003; Cashin et al., 1998). There is evidence that, among men, increasing

levels of involvement within the organization lead to greater alcohol consumption with the leaders drinking the greatest amount (Cashin et al., 1998). Through modeling of these heavier drinking practices, these leaders may be facilitating and reinforcing heavier drinking norms (Baer, 2002). However, no effect of leadership on alcohol consumption was found for women (Cashin et al., 1998).

As with the typical college student population, beliefs about alcohol held by members of fraternities and sororities have a huge impact on their drinking behaviors. To a greater extent than non-Greeks, members of Greek organizations view alcohol as a means to friendship, increased social activity, and sexual opportunity (Alva, 1998). Greek members were also more likely to have friends who approved of heavy or binge drinking (Alva, 1998). In addition to individual alcohol expectancies, members of Greek organizations may contend with the pressure of fulfilling the expectancies of their individual chapters or the Greek system as a whole. Within the Greek system, houses judged by other fraternity and sorority members as engaging in heavy alcohol use were also judged to have the most favorable social reputations (Larimer et al., 1997). Further, fulfillment of the group expectancy may produce individual benefits for sorority and fraternity members. Larimer and colleagues also found that men from fraternities with reputations for high levels of alcohol consumption considered themselves more popular, better looking, sexually active, and wealthier than members of average or low consuming fraternities. Similarly, women of houses with reputations for high levels of alcohol consumption rated themselves as significantly more popular, better looking, sexually active, wealthier, and academically superior than women of average and low alcohol consuming houses (Larimer et al., (1997).

Members of Greek organizations also encounter an enhanced set of problems related to drinking. With the exception of arrest for driving under the influence of alcohol, being criticized for drinking, and drinking related vandalism, Greek members were associated with more alcohol related problems than their non-Greek counterparts. Members of Greek organizations also scored significantly lower than nonmembers on measures of academic, personal and emotional adjustment. (Montgomery & Haemmerlie, 1993). Further, Harrington et al. (1997) found, for both members of sororities and fraternities, a negative correlation between level of consumption and condom use.

Despite these quite high levels of problems, there seems to be an even further increase for problems reported by students who live in fraternity and sorority houses (Marlatt et al., 1998). Students residing in Greek houses have extraordinarily high levels of problematic alcohol use and have more negative consequences compared to students in general (Presley et al., 2002). While membership in a Greek organization is predictive of an increase in alcohol related negative consequences, in fact, the mere intention to join a Greek organization is consistently associated with higher levels of alcohol use and more alcohol related problems (Read et al., 2002; Harrington et al., 1997; Canterbury et al., 1990).

Compared to their non-Greek counterparts, members of Greek organizations are also more likely to hold beliefs which might lead to risky consequences. Such beliefs include that “a real man should be able to hold his liquor; it is easier to meet people if one has been drinking; when they are at a gathering together, people who drink have more fun than those who do not; getting drunk is a harmless way to have fun; it is okay to get drunk to get away from school work for while; and it is okay to drive after one has had a

few drinks” (Klein, 1992). However, the belief that may be of the most concern is that members of Greek organizations do not seem to perceive themselves as having a drinking problem and thus are less likely to take advantage of available resources for treatment and prevention of drinking problems (Kilmer, Larimer, Parks, Dimeff, & Marlatt, 1999). Furthermore, even when this population does participate in intervention programs and decrease their levels of drinking, their drinking levels still remain high enough to put them at risk for negative alcohol related consequences (Kilmer et al., 1999). Larimer and Cronce (2002) found that even after reducing fraternity member alcohol consumption through efficacious prevention programs, these men were still drinking heavily enough to be at risk for negative consequences.

Causation versus Selection Hypotheses

It is not yet clear whether joining a Greek letter organization causes students to increase their drinking patterns or if students with high drinking patterns seek out these organizations (Sher et al., 2001). The causation hypothesis proposes that students increase their drinking levels after becoming members of sororities and fraternities due to socialization processes which occur as part of Greek membership. In contrast, the selection hypothesis asserts that students who are heavy drinkers, or wish to be heavy drinkers, select themselves into the Greek culture that supports their drinking style. A third hypothesis is that there may be certain personality or background variables which may account for both heavy drinking and Greek membership (Sher et al., 2001). Baer (2002) proposes that among college students, the personality dimension of “impulse expression/sensation seeking” may be related to increased quantity and frequency of drinking as well as experiencing more negative consequences. A fourth hypothesis, and

the one that will be tested by this study, is that heavy drinking among members of Greek organizations is a combination of self selection into environments supporting their pre-existing drinking levels and enhancement of these levels through socialization processes. Some support for this hypothesis can also be found in the relevant literature. For example, Baer (2002) asserts that although higher levels of drinking have been found for high school students who plan to join Greek organizations, drinking levels are likely influenced by both selection processes and socialization into the organization. Lo and Globetti (1995) further claim that through increased opportunity for drinking and more permissive attitudes toward drinking, sororities and fraternities both facilitate and enhance high drinking levels among members.

Although findings have been mixed, at this point there appears to be more evidence for the selection hypothesis. Baer (1994) reports that while norms are more extreme for drinking in the Greek system, they do not appear to develop when students transition into college or throughout the first year of college. Thus, he asserts that his data failed to support the hypothesis that living in a fraternity or sorority creates differential norms or a different course for norm development. Read et al. (2002) also support the selection hypothesis based on their findings that perceptions of alcohol use and consequences are already in place upon entering college (or at least very soon afterwards). Lo and Globetti (1995) found further interesting information for the selection versus causation debate when they discovered that students experiencing alcohol related problems in high school were more likely to join sororities and fraternities in college. Finally, findings from a 1996 study by O'Connor, Cooper, and Thiel support the selection

hypothesis by finding that overall alcohol consumption level is a good predictor of whether or not students pledged a Greek organization

In contrast, Sher et al. (2001) claims that drinking occurs in Greek organizations independent of selection processes. Additionally, in support of the causation hypothesis, it has been found that non-Greek college freshman were more than twice as likely to have abstained from alcohol during their senior year of high school, sorority members were three times more likely than their non-member counterparts to increase their alcohol consumption, and Greek members in general were more likely than nonmembers to increase their quantity and frequency of alcohol consumption. Finally, Lo and Globetti (1993) found that in a sample of high school abstainers, membership in a Greek organization was likely to lead respondents to start drinking.

CHAPTER III

THE PRESENT STUDY

Previous studies have examined the impact of such factors as residence, age, year in school, gender, ethnicity, personality variables, Greek status, and norms on college student levels of alcohol consumption. Previous studies have also examined the selection and causation hypotheses of Greek drinking increases. While previous studies have found greater problems for Greek men than for Greek women, this trend is not certain to continue. In fact, both quantity and frequency of drinking appear to be increasing at faster rates for women than men (Lo & Globetti, 1995). Previous studies have failed to examine both normative perceptions and actual alcohol consumption behaviors as they change through recruitment and the early stages of the pledging process. Furthermore, little research has examined the relation between differences between norms and behaviors across members of different Greek houses. By examining the magnitude and direction of change in attitudes, perceived norms, and drinking behavior among both those who pledge sororities and those who do not, as well as the degree to which potential sorority members match with sorority chapters based on normative beliefs, the current study provides important information about the mechanisms responsible for increased levels of drinking among members of Greek organizations. This study further provides information essential to the understanding of how to best intervene with Greek drinking. Effective interventions for sorority and fraternity members will be beneficial via

decreased negative consequences for the individual, his or her friends, campus, community, and the Greek system.

Hypothesis one: Potential members of sororities will be more likely to join sorority houses that most closely match their pre-existing alcohol-related normative perceptions of sorority members' typical quantity, peak quantity, and frequency of use.

Klein (1992) found that attitudes toward alcohol are highly predictive of an individual's drinking patterns. In fact, Baer et al. (1991) found that friends' perceived drinking patterns were closely related to an individual's own quantity and frequency of alcohol consumption. Thus, it would seem probable that individuals would seek environments that are congruent with their pre-existing perceptions of appropriate alcohol usage.

Hypothesis two: Potential members of sororities will be more likely to join sorority houses that most closely match their own alcohol behaviors in reference to typical quantity, peak quantity, and frequency of use.

Previous studies have found that heavy drinking is not found equally across all Greek houses (Larimer et al., 1997). Thus, it would seem that individuals likely seek the organization which is most congruent with their current behavior. Doing so is beneficial for the individual because she will have to expend less time and energy to decrease the discrepancy between her drinking behaviors and those of the house she joins. Further, it would seem that joining a house with more consistent behavior would make it less likely that she would be alienated for her drinking behaviors, whether that be drinking too much or too little.

Hypothesis three: Pledges will change their attitudes, behaviors, and normative perceptions about alcohol use so that they become more consistent with their chosen house over time.

Research findings have supported the idea that perceived peer norms are related to alcohol consumption (Reis, 2000). For example, Carter and Kahnweiler (2000) found that one is influenced more by within network norms than outsiders. In fact, Carter and Kahnweiler (2000) assert that one's behavior is most closely associated with the perceptions of the norms for one's own group. Given that drinking is not the same across all sororities, it would be expected that the individual would, in an attempt to decrease the discrepancy between her attitudes and behaviors and those perceived to be true of her sorority, she would become more like them. Consequently, she would grow further from other sorority norms. Further, individuals who are exposed to a heavy drinking model significantly increases the individual's alcohol consumption level in the presence of that model, whereas the opposite is true for individuals in the company of a light drinking model (Larimer et al., 2001).

Hypothesis four: Individuals who join sororities will change their attitudes, behavior, and normative perceptions about drinking to a significantly greater degree than those who ultimately do not join Greek sororities

Greeks have been found to drink more than non-Greeks, possibly because of membership requirements and different drinking opportunities. Those women joining sororities will have a new, and in most cases very close, circle of friends from whom to draw references. There will likely be at least mild discrepancies between individual attitudes and behaviors and those of their new affiliation. Prentice and Miller (1993)

assert that when individuals are faced with a discrepancy between their own attitudes and the perceived social norm, the simplest method of decreasing this discrepancy is to bring private attitudes closer to the norm. Individuals not joining Greek sororities will not be faced with the discrepancy between their own private attitudes and a new and very salient reference group.

CHAPTER IV

METHODOLOGY

Participants

Recruitment. Potential members were recruited at Time 1 through attendance at a meeting of approximately 600 women going through formal sorority recruitment in the Fall 2004 semester. Women who agreed to participate provided an email address at which they could be contacted for subsequent data collection at Time 2. A substantial number of these participants failed to respond to the email request for participation at Time 2 and thus data from Time 2 was not included in the analyses. Because of poor response at Time 2, the researcher obtained permission from the sorority houses and attended a pledge-only meeting for nine houses to solicit participation for Time 3. These women were asked to continue their participation by filling out the survey at Time 3 and to provide their email address. The email addresses provided at Time 3 were removed from the original email list. Some sorority houses chose not to allow the researcher to attend pledge meetings at this time. Further, women who did not join a sorority could not be contacted by this means. Thus, a request for participation via the web survey was sent to the remaining addresses on the original email address list.

Current members were recruited by approaching a delegate from each sorority house and requesting she present the survey to members of her respective house. These

women then presented the request for participation in the survey to members of their sorority house at a weekly member meeting.

In order to comply with National Panhellenic Council (the ruling body of nationally recognized sororities), participant ethnicity was not obtained. However, observation during data collection indicated that the majority of participants appeared to be consistent with the ethnic make-up of campus in general, with the majority appearing to be of white, non-Hispanic ethnicity.

Pledges. Five hundred-two female students enrolled in Fall 2004 sorority recruitment provided consent and participated in the study at Time 1 (see Figure 1). Participants' ages ranged from 18-21 with a mean of 18.29 ($SD = .53$). Participants designation in school was reported as 73.9% ($n = 371$) freshmen, 14.5% ($n = 73$) sophomore, 1.8% ($n = 9$) junior, and 9.8% ($n = 49$) chose not to report their designation. Thus, the majority of participants were freshman.

Only 187 (38%) of the original participants participated in data collection at Time 2 and 354 (71%) of the original participants participated in data collection at Time 3 (see Figure 1). No significant differences were found for age [$t(499) = .463, p = .64, d = .04$] or classification [$t(451) = .679, p = .50, d = .07$] between the participants who were included in the analyses versus those who were not (see Table 1). However, significant differences were found for the variables of peak drinking [$t(475) = 4.15, p < .001, d = .34$], typical amount of drinking [$t(475) = 4.44, p < .001, d = .38$], and frequency of consumption [$t(500) = 3.87, p < .001, d = .36$]. For these variables women who were not included in the analyses consumed significantly more alcohol both at peak level and typical level, and consumed alcohol significantly more frequently than did the group of

women who were included. Furthermore, significant differences were found between women included in the analyses and women not included in the analyses for the variables of approval of a close friend drinking alcohol every weekend [$t(500) = 3.70, p < .001, d = .34$] and approval of a close friend drinking enough alcohol to pass out [$t(490) = 2.61, p = .009, d = .21$]. For both of these variables the women who were not included in the study reported significantly more approving attitudes.

Current members. Two hundred fifty-seven female students who were currently members of an on-campus sorority participated in the study. These participants represented nine different sororities. However, corresponding pledge data was not available for all houses participating, thus, 186 participants representing six different sororities with corresponding pledge data were included in the analyses. Participants' ages ranged from 18-22 with a mean of 19.74 ($SD = .96$). Participants' designation in school was reported as 10.2% ($n = 19$) freshmen, 39.2% ($n = 73$) sophomore, 34.9% ($n = 65$) junior, 15.1% senior ($n = 28$) and 0.7% ($n = 1$) chose not to report their designation. Thus, the majority of participants were sophomores.

Procedure

The same measures were administered to both potential members and current members. To ensure anonymity of data, participants created a unique code number which they used for each time of participation. The unique code number was created by each participant using the following algorithm: last three digits of social security number-birth month-birth date. For example if a participant's social security number is 123-45-6789 and she was born on November 03, 1986, her unique code would be 789-11-03. Data from potential members were analyzed according to individual responses. In contrast,

data from current members were averaged by house to create a house norm for each response or scale score.

Design and Procedure

Potential members were administered the survey at three time periods. Participants were recruited at Time 1. Potential sorority members were recruited during a formal organizational meeting held during the week of formal sorority recruitment (rush). Current sorority members were recruited via chapter delegates at a Panhellenic Council meeting held the week before the commencement of formal rush. Chapter delegates were trained in administration of the survey to their respective sorority members and were asked to return completed questionnaires the following week.

Researchers or trained recruiters read a standardized script to potential participants (see Appendix B). Individuals who choose to participate were asked to sign a consent form. The consent form also included contact information and instructions to contact the researcher with any further questions about the experiment. The time period that the first survey was administered was during the week of formal recruitment, the week of August 6, 2004. At this time period, participants completed a paper and pencil version of the questionnaire packet.

One week following the rush period (when pledges were affiliated with their chosen sororities for approximately one week) and six weeks following the end of formal sorority rush (when pledges were affiliated with their chosen sororities for approximately six weeks) all participants who were surveyed at the pre-recruitment orientation meeting were contacted via electronic mail with a request for their participation in completing the questionnaire for Time 2. Poor participant retention via the web-based method of data

collection necessitated personal contact with pledges for data collection at Time 3.

Potential members who could not be contacted in person were sent a link to an online version of the survey which they previously filled out at Time 2.

In exchange for participation of all time points in the survey, participants had their email addresses entered into a raffle. The participant whose email address was drawn from the raffle was contacted via that email address and was offered her choice of a Magnavox 13” TV/VCR Combo, an Emerson DVD/VCR Combo, or a Sony ATRAC/MP3 CD Walkman. The raffle was held two weeks after the conclusion of the third questionnaire session. After completing the second and third surveys, participants were directed to a separate page that asked them to submit their name, student number, and other information to make sure they were acknowledged for participating and thus entered into the raffle. This information was kept separate from the data provided on the survey.

Measures

Demographics. All participants were asked to provide demographic information. This information was requested as part of the other measures in the questionnaire packet (see Appendix C). The measure asked participants to report data such as age, ethnicity, designation in school, and Greek affiliation (if any). In response to the demographic question of Greek affiliation, participants were advised to respond “no affiliation” if they were currently not a member of a sorority.

Frequency-Quantity Questionnaire. The Frequency-Quantity Questionnaire is a measure in which participants indicate their typical frequency and quantity of alcohol use in a specified period of time (see Appendix C; Dimeff, Baer, Kivlahan & Marlatt, 1999).

On the original version of this questionnaire, participants are asked to respond how much alcohol they drank on the occasion they drank the most in the past month (peak quantity) and how much alcohol they drink on a typical weekend evening (typical quantity). On these two questions, 11 response choices are provided ranging from 0, “no drinks” to 10, “19 or more” drinks. A third question asks participants how often they drank alcohol in the past month (frequency of use). Participants choose from response choices ranging from 0, “I do not drink at all”, to 5, “Once a day or more.” For the purposes of statistical analyses, potential members’ responses will be referred to as *peak quantity*, *typical quantity*, and *frequency of use*. The average of current members’ responses will be referred to as *house peak quantity norm*, *house typical quantity norm*, and *house frequency of use norm*.

Perceived Behavioral Norms. This measure is similar to the measure used by Baer et al. (1991). It includes three questions which ask the respondent how much she believes a typical sorority member has drank on an occasion they drank the most in the past month (peak quantity perceived norm), how much she believes a typical sorority member drinks on a typical weekend evening (typical quantity perceived norm). For these first two questions, participants choose from eleven response choices ranging from “no drinks” to “19 or more” drinks. A third question asks the participant how often she believes a typical sorority member drinks in a typical month (perceived frequency of use norm). For this question, participants choose from response options ranging from “She does not drink at all” to “Once a day or more.” For the purposes of statistical analyses, potential members’ responses will be referred to as *peak quantity perceived norm*, *typical quantity perceived norm*, and *typical frequency of use perceived norm*. Current members’

responses will be referred to as *house peak quantity perceived norm*, *house typical quantity perceived norm*, and *house frequency of use perceived norm*.

Attitudinal Norms. This measure includes items assessing the participants' approval of drinking behavior (see Appendix C). It is an abbreviated version of a measure used by Baer (1994). Participants are asked how they would respond if they found out their closest friend drank alcohol every weekend, if they found out their closest friend drinks alcohol daily, and if they found out their closest friend drank enough alcohol to pass out. Seven response choices for each item are provided ranging from 0, "strong disapproval", to 7, "strong approval." Scores were summed to create a total individual attitude score. Potential members' responses were used as individual attitudes. Higher scores indicate attitudes that are more permissive of drinking behavior whereas scores closer to zero indicate lower approval of drinking in others. For the purposes of statistical analyses, potential members' responses will be referred to as *attitudes*. Current members' responses will be referred to as *house attitude norms*.

Perceived Attitudinal Norms. This measure includes items assessing the participants' perception of the typical sorority member's approval of drinking behavior (see Appendix C). This measure is a modified version of a measure used by Baer (1994). Participants are asked how they think a typical sorority member would respond if she found out her closest friend drank alcohol every weekend, if she found out her closest friend drinks alcohol daily, and if she found out her closest friend drank enough alcohol to pass out. Seven response choices for each item are provided ranging from 0, "strong disapproval", to 7, "strong approval." Higher scores indicate greater approval of drinking behaviors.

Web-based survey. All paper and pencil versions of each measure were converted into the web-based version of the questionnaire which was administered at Time 2 and, for some potential members, Time 3. Thus, the web-based survey (see Appendix D) administered questions verbatim from the above described Frequency-Quantity Questionnaire, the measure of perceived behavioral norms, the measure of attitudinal norms, and the measure of perceived attitudinal norms. Participants were also provided with the same response choices as found on the paper-and-pencil version of the survey. Additionally, the web-based survey asked participants to enter in their unique code number, age, Greek affiliation ethnicity, and designation. At the conclusion of the survey, participants were asked for their email address and read a page thanking them for their participation.

CHAPTER V

RESULTS

Data Manipulation

The *a priori* alpha level established for each analysis in this study was .01. This level was chosen in order to reduce the risk of Type I error. Given the somewhat exploratory nature of this study, a more conservative criterion was not used.

Given the small number of participants retained for Time 2, this data was not included in the analyses. Participants were also excluded from the analyses if they did not respond at both Time 1 and Time 3 or had excessive missing data points (i.e., more than four questions left unanswered). Participants were excluded from the analyses testing hypotheses one, two, and three if there was no normative data available for the house that the participant joined. One hundred ninety-one participants were examined in the analyses for hypotheses one, two and three. These participants had data for both Times 1 and 3 and joined houses for which normative data were available. Of this sample, participants' ages ranged from 18-21 with a mean age of 18.28 ($SD = .53$). Participants designation in school was reported as 75.9% ($n = 145$) freshmen, 14.7% ($n = 28$) sophomore, 1% ($n = 2$) junior, and 8.4% ($n = 16$) chose not to report their designation. Thus, the majority of participants were freshman.

In order to test hypothesis four, a slightly different data set including pledges for which no house norms were available and non-pledges was used. Two hundred sixty-

eight female students who were currently pledged members of sororities comprised the “pledge” group. Participants’ ages ranged from 18-21 with a mean of 18.31 ($SD = .56$). Designation in school was reported as 72% ($n = 193$) freshmen, 17.9% ($n = 48$) sophomore, 1.9% ($n = 5$) junior, and 8.2% ($n = 22$) chose not to report their designation. Twenty-one female students who self-selected for sorority recruitment but did not pledge sororities comprised the “non-pledge” group. Participants’ ages ranged from 18-19 with a mean of 18.10 ($SD = .30$). Designation in school was reported as freshmen for 100% ($n = 21$) of the non-pledge sample.

Current members’ data were analyzed for each variable and the mean score of each sorority house was used as the house norm (see Table 2). In order to examine whether or not there were significant differences between the drinking behaviors and attitudes of current members of the sororities under study, a one-way analysis of variance (ANOVA) was used to analyze significant differences in the drinking behaviors and attitudes between members of different sororities. Significant differences were found for the variables of peak drinking, typical drinking, frequency of drinking, perception of a typical sorority member’s peak drinking, perception of a typical sorority member’s typical drinking, perception of a typical sorority member’s approval level of a close friend drinking alcohol every weekend, perception of a typical sorority member’s approval of a close friend drinking enough to pass out. Current sorority members did not significantly differ on the variables of perception of a typical sorority member’s drinking, their own attitudes about drinking, or their perception of a typical sorority member’s approval of her closest friend drinking alcohol daily. This analysis indicates that current sorority members significantly differed based on house of membership in their own

drinking behaviors, perceptions of a typical sorority member's drinking behaviors, and perception of a typical sorority member's approval of drinking behaviors.

Tukey HSD post hoc analyses were conducted to determine specifically how houses differed for each variable. Results from these analyses yield that there is little variability among houses with significant differences seen on the omnibus F test appearing to be driven by differences between few houses for each variable (see Table 2). Post hoc probing further reveals that there appears to be systematic variation with regard to drinking behaviors in that one house consistently reports higher levels of drinking than do other houses. However, there does not appear to be systematic variation with one house consistently differing from all others on variables related to normative perceptions or attitudes.

Hypothesis one

It was hypothesized that potential members of sororities would be more likely to join sororities whose normative behaviors more closely match their pre-existing alcohol-related normative perceptions of sorority members' typical quantity, peak quantity, and frequency of use. To test this hypothesis, absolute difference scores were computed between potential members' scores on the variables of perceived typical quantity, perceived peak quantity, and perceived frequency of use, as well as an overall perceived drinking variable at Time 1 compared to each current member house norm for each of the variables. Rankings were then assigned with a ranking of one assigned to the house from which the potential member showed the least differences, a ranking of two was assigned to the house from which the potential member showed the second least difference, and so on. Each potential member was then given a "match" score for each variable which

reflected the ranking of the house which she ultimately joined. The variable of match was then examined with a one-sample chi square goodness-of-fit test (see Table 3). The chi square analysis examines whether an equal number of participants fell into each ranking category as would be predicted by chance.

Chi square analysis for the match of perceived typical quantity and perceived peak quantity were not significant indicating that potential members were not more likely to join a house whose norm for typical quantity or peak quantity matched their own perception of these behaviors at a significantly different rate than chance. In contrast, a significant difference was observed for the match of perceived frequency of use. In this case, potential members were less likely to join houses that were the most similar to them ($n = 17$ compared to the expected $n = 31.8$) for houses that held the least different frequency of drinking from their own perception of sorority drinking (rank = 1) and the most likely to join houses that were consumed alcohol at a frequency moderately different (rank = 3) than their own perception of sorority frequency of use ($n = 52$ compared to the expected $n = 31.8$).

An analysis for the match of perceived attitudes compared with actual house attitudes revealed non-significant findings for approval of closest friend drinking every weekend (perceived attitude 1) and approval of closest friend drinking enough to pass out (perceived attitude 3) indicating that potential members were not more likely to join a house whose approval of these behaviors matched their own perception of the house approval level at a significantly different rate than chance. In contrast, however, a significant finding was observed for the variable of approval of closest friend drinking alcohol daily (perceived attitude 2). Contrary to the predicted direction, women were the

most likely to join a house that was the least different (rank = 6, $n = 59$) from their own perception. However, a significant majority of women also joined the house most similar to their own perception (rank = 1, $n = 49$). A smaller number of women joined houses corresponding with rankings 2 thru 5.

Hypotheses two

It was hypothesized that potential members of sororities would be more likely to join sorority houses that most closely matched their own alcohol behaviors in reference to typical quantity, peak quantity, and frequency of use. To test this hypothesis, absolute difference scores were computed between potential members' scores on the variables of typical quantity, peak quantity, and frequency of use, as well as an overall drinking variable at Time 1 compared to each current member house norm for each of these variables. Rankings were then assigned with a ranking of one assigned to the house from which the potential member showed the least differences, a ranking of two was assigned to the house from which the potential member showed the second least difference, and so on. Each potential member was then assigned a "match" score for each variable which reflected the ranking of the house which she ultimately joined. The variable of match was then examined with a chi square goodness-of-fit test. The chi square analysis examines whether an equal number of participants fell into each ranking category as would be predicted by chance.

Chi square analyses for typical quantity, peak quantity, frequency of use, perceived peak, approval of closest friend drinking every weekend, approval of closest friend drinking enough to pass out, perceived approval of closest friend drinking every weekend, perceived approval of closest friend drinking daily, and perceived approval of

closest friend drinking enough to pass out were not significant indicating that potential members were not more likely to join a house whose these variables matched their own at a significantly different rate than chance (see Table 4). However, significant results were revealed for perceived typical quantity, perceived frequency, and approval of closest friend drinking daily suggesting that these variables did have some impact on the match process between potential members and sorority houses. Although these variables were significant, findings were not in the predicted direction. For each of these three variables, no meaningful pattern was observed for the match between potential members and sorority houses.

Hypothesis three:

It was hypothesized that pledges would change their attitudes, behaviors, and normative perceptions about alcohol use so that they became more consistent with their chosen house over time. To test this hypothesis, an absolute difference score was computed between the pledges' responses from Time 1 for each of the variables attitude, perceived attitude, peak quantity, typical quantity, frequency of use, peak quantity perceived norm, typical quantity perceived norm, and frequency of use perceived norm and the normative scores corresponding to these variables for the houses that these pledges joined. Absolute difference scores were also computed at Time 3 between the pledge's responses to the above mentioned variables and the normative scores for these variables for the houses which the pledges joined.

Significant differences between the amount the pledge differed from the house she joined at Time 1 versus the amount she differed at Time 3 were found for three variables (see Table 5). The difference between house joined peak drinking and own peak

drinking was significantly different for the pledges from Time 1 to Time 3. However, pledges were found to have become more divergent from the house norm over time rather than the predicted direction of becoming more similar (Time 1 $M = 3.85$, Time 3 $M = 4.19$). Similarly, the difference between house joined perceived typical drinking and pledge perception of sorority typical drinking was significantly different for the pledges from Time 1 to Time 3. Consistent with the proposed hypotheses, pledges appeared to be more similar in reference to perception of typical drinking with the house they joined at Time 3 ($M = 2.26$) than they were at Time 1 ($M = 2.68$). The difference between house joined perceived frequency of use and own perception of sorority frequency of use was also significantly different for the pledges from Time 1 to Time 3. Contrary to the proposed hypotheses, however, pledges appeared to be more divergent in reference to perception of frequency of use with the house they joined at Time 3 ($M = .1.77$) than they were at Time 1 ($M = .70$). Significant differences were not found between pledge responses at Time 1 and Time 3 for the difference between their own typical quantity of use and house joined typical quantity of use, for their own frequency of use and house joined frequency of use, for the difference in their perceived peak quantity and house joined perceived peak quantity, or for any attitude or perceived attitude variables. However, it should be noted that the difference between pledge perceived peak quantity and house joined perceived peak quantity decreased from time 1 ($M = 3.97$) to time 3 ($M = 3.46$) to a degree that reflected a possible trend.

Examination of the means reveals that pledges tend to overestimate the norm for peak alcohol consumption, typical alcohol consumption, frequency of alcohol consumption, approval of a closest friend drinking alcohol daily, and approval of closest

friend drinking enough alcohol to pass out (see Table 6). Interestingly, these women underestimated the norm for approval of closest friend drinking alcohol every weekend.

Hypothesis four

It was hypothesized that individuals who join sororities would change their attitudes, behavior, and normative perceptions about drinking to a significantly greater degree than those who ultimately do not join sororities. To test this hypothesis, a difference score was created between each variable at Time 1 and the variable at Time 3. Difference scores were then analyzed using an independent samples t-test with pledge status (i.e. 0 = not a pledge, 1 = pledge) as the grouping variable.

Analyses revealed that pledges and non-pledges changed at a significantly different degree only for the variable of perceived frequency of use (see Table 7). In comparisons to non-pledges, pledges did not change over time to a significantly different degree in reference to the variables of peak quantity, typical quantity, frequency of use, perception of peak quantity consumed, perception of typical quantity of use, or any attitude or perceived attitude variables. Thus, it appears that pledges differentially changed from non-pledges over time only in their perception of the frequency of alcohol use by a typical sorority member. Examination of the means reveals that, on average, pledges increased their perception of the frequency of use by a typical sorority member ($M = 1.84$) to a significantly greater degree than did non-pledges ($M = .38$).

Additional Analyses

To test whether there were significant differences among the pledges at Time 1, a one way analysis of variance (ANOVA) was conducted. Pledges were grouped by their stated affiliation at Time 3. Significant differences were found between groups for the

variables of approval of a close friend drinking daily and approval of a close friend drinking enough to pass out. This may indicate that pre-existing attitudes about level of approval of a close friend's drinking played a role in the matching of pledges with sorority houses. In other words, it would seem that sorority houses chose groups of girls that held attitudes and normative perceptions significantly different than those held by women who joined other houses. Pledges did not differ significantly on the other variables under study.

An independent samples t test was conducted to discern if significant differences existed between the group of current members included in the analysis (those for whom pledge data was available) and current members not included. Significant differences were found for the variables of age [$t(255) = 2.75, p = .01, \eta^2 = .38$] and classification [$t(254) = 2.82, p = .01, \eta^2 = .40$]. No other significant differences were observed.

An independent samples t-test was conducted to determine if there were any differences at Time 1 between the women who ultimately pledged a sorority and the women who ultimately did not pledge a sorority. Analyses revealed no significant differences for any of the variables under study. This would indicate that at all the women who self selected for sorority recruitment were relatively equal with regard to drinking behaviors, normative perceptions, and attitudes about drinking.

CHAPTER VI

DISCUSSION

Alcohol use is a widespread fact on most college campuses. Perhaps what is the most troubling about this fact, however, is the level at which college students are abusing alcohol through binge drinking. Excessive alcohol use has been shown to lead to a multitude of negative consequences, not only for the individual, but for that individual's roommates, classmates, and the campus and community members as a whole (Presley et al., 2002). Examples of negative consequences often incurred include risky sexual behavior, drunk driving, assault, theft, etc. Although it is undisputable that the level at which college students in general use alcohol is problematic, a larger concern is often that of college Greek drinking (Alva, 1998). Studies have shown that students in fraternities and sororities not only engage in higher levels of alcohol use and have more permissive attitudes about the acceptability of alcohol use, but also experience more negative consequences as a result than does the general college population (Presley et al., 2002). Furthermore, this difference may be seen in students who have simply expressed the intention to join a Greek organization (Read et al., 2002; Harrington et al., 1997; Canterbury et al., 1990).

One proposed explanation for high levels of alcohol consumption is that students hold misperceptions about the actual norms for drinking on their campus. Consequently, in an attempt to decrease the discrepancy between perceived alcohol norms and their own

behavior, students may be increasing their level of alcohol consumption and level of approval toward alcohol behaviors in order to become more consistent with their perceived norm (Prentice & Miller, 1993).

Previous research has addressed the question of whether the increased levels of Greek drinking and permissive attitudes toward drinking exist before membership in the Greek organization (selection hypothesis) or if they are created as a result of membership in a Greek organization (causation hypothesis) (Sher et al., 2001; Baer, 1994; Read et al., 2002). Studies have produced mixed findings concerning these competing hypotheses. Indeed, a third hypothesis is that a combination of both selection and causation is responsible for the increased levels of drinking and permissive alcohol attitudes seen among members of Greek organizations. This hypothesis, which was tested in the present study, proposes that students seek environments which will support their current drinking levels and enhance these levels through socialization (Baer, 2002; Lo & Globetti, 1995). A fourth hypothesis, which was not examined in this study, is that there may be certain personality or background variables which are responsible for both the choice of Greek membership as well as heavy drinking (Sher et al., 2001; Baer, 2002).

Although previous studies have examined a multitude of alcohol related behaviors and attitudes, they have failed to examine how normative perceptions and behaviors change based on the specific house joined. A review of the relevant literature suggests that students will form perceptions of drinking norms based on their closest reference group, thus suggesting that we would expect the women under investigation to differentially change their drinking attitudes and behaviors depending on the house that they joined (Carter & Kahnweiler, 2000). Observation of such a change would be

indicative of support for the causation hypothesis. On the other hand, proponents of the selection hypothesis would assert that these women already drink at high levels and hold permissive attitudes and the match process would serve simply to locate them into an environment which was supportive of these behaviors and attitudes (Baer, 1994; Read et al., 2002). Given that it was expected the current study would reveal both self-selection by women into houses that most closely matched their own alcohol attitudes and behaviors as well as differential change depending on sorority house joined, it was expected that findings from the current study would support the combination hypothesis.

Findings from the test of hypothesis one provide some support for the idea that pre-existing alcohol related attitudes influence the match between potential members and sorority houses (see Table 3). Interestingly, however, these findings do not follow the predicted direction. It was predicted that women would be more likely to join sorority houses that most closely matched their pre-existing normative perceptions for alcohol use behaviors. While it was found that variables related to perceived frequency of alcohol use and attitudes about the acceptability of high frequency alcohol use do impact women's eventual match with a sorority, these women did not necessarily match with the sorority to which they were the most similar. Indeed, for the variable of frequency of use, women were most likely to match with the sorority house that was the third closest to their normative perception of typical sorority member frequency of drinking rather than the house that was the closest match. Women were the least likely to match to the two houses that were closest to their pre-existing normative perception. In contrast, when considering the variable of approval of daily drinking, a u-shaped distribution was seen in how the house the women ultimately joined matched with their pre-existing normative perceptions

of what a typical sorority member would approve. Thus, larger than expected proportions of women matched with houses that were closest to their pre-existing normative perceptions and large numbers of women matched to houses that espoused a normative attitude least like their pre-existing normative perceptions, with a smaller number of women ultimately joining houses that moderately matched their normative perceptions. Women did not appear to match with sorority houses whose behaviors and attitudes most closely matched their perception of these behaviors and attitudes for the variables of peak consumption, typical consumption, overall drinking, approval of closest friend drinking every weekend, and approval of closest friend drinking enough to pass out. Therefore, we might conclude that these findings regarding perceptions of frequency of use and typical sorority member approval of closest friend drinking daily somehow impact the match but are not supportive of the selection hypothesis because the women did not join houses supportive of their pre-existing beliefs.

Findings from the analysis of hypothesis two also provide support for the idea that pre-existing alcohol related beliefs somehow influence the match between potential members and sorority joined (see Table 4). It was hypothesized that potential members of sororities would be more likely to join houses that most closely matched their own alcohol behaviors. The current study investigated the match between not only behaviors, but also attitudes and normative perceptions. It appears that normative perceptions of how much a typical sorority member typically drinks and how often a typical member drinks, as well as normative perceptions of how approving a typical sorority member might be of a close friend drinking daily may have some impact on the selection of women into sorority houses. In the case of perceived typical drinking, the largest number

of women did ultimately match with the sorority house that held the closest and second closest normative perceptions of typical sorority member drinking to their own. Thus, findings were largely in the predicted direction. However, a large group of women also matched with their fifth closest match on the perception of typical sorority drinking variable. This finding is unexplainable and calls into question whether or not the results can be said to support the selection hypothesis. Similarly, when considering how the perception of the frequency of a typical sorority member's drinking affects match between potential members and sorority houses, the conclusions are unclear. Similar to the results seen for hypothesis one, women were more likely to join houses which espoused normative perceptions of the frequency of sorority drinking either the least similar or most similar to their own perceptions, with a small number of women joining houses that moderately matched their own perceptions. Regarding how attitudes about how a typical sorority member would feel if she found out her closest friend was drinking daily has an impact on the match between potential members and sorority houses the pattern is again unclear. Although it does appear that this variable impacted sorority match, the results are difficult to interpret given that large numbers of women joined houses that were their 1st, 3rd, 4th, and 6th closest match whereas fewer women joined houses that were their 2nd and 5th closest match. Therefore, it would seem that hypothesis two was not supported in that potential members were not more likely to join sorority houses whose typical quantity of drinking, peak quantity of drinking, or frequency of use most closely matched their perceptions of a typical sorority member's alcohol behaviors. Similarly, the overarching concept of selection does not appear to be supported.

However, the match between potential members and houses seemed to be impacted in some way by similarity of normative perceptions.

Hypothesis three predicted that pledges would change their attitudes, behaviors, and normative perceptions about alcohol use so that they became more consistent with their chosen house over time. Support was found for this hypothesis as evidenced by the significant change in participant responses to the variables of peak drinking, perceived typical amount a sorority member drinks, and perceived frequency with which a typical sorority member drinks. As would be expected based on the causation hypothesis, pledges significantly increased their drinking from Time 1 to Time 3, they also increased their perception of how often a typical sorority member drinks and their perception of overall typical sorority member drinking. Interestingly, pledges decreased their perception of the amount a typical sorority member drinks on a typical drinking occasion.

Limited support for the causation hypothesis was also seen from the results for hypothesis four. It was hypothesized that individuals who join sororities would change their attitudes, behavior, and normative perceptions about drinking to a significantly greater degree than those who did not join sororities. However, support for this hypothesis was only found for the variable of perceived frequency. It appears that pledges changed their perception of frequency by significantly increasing their perception. No significant differences were found in the degree that pledges changed compared to non-pledges for any other variable.

Overall, it appears that findings from the current study provide limited support for the causation hypothesis; however, results concerning selection aspect of this hypothesis are less clear. Although findings from this study indicate that alcohol related behaviors

and attitudes impact the match between potential members and sorority houses, it was not found that potential members matched up with houses most similar to their pre-existing alcohol behaviors and attitudes. Thus, the current study does not provide support for the selection hypothesis. Further investigation is warranted to understand specifically how the variables impact house selection.

There are multiple limitations to the current study. First, a large number of the women who participated in Time 1 did not continue participation in additional time points of the study. This is a severe limitation because it appears that these women differed on a number of variables of interest including peak and typical drinking as well as approval of a close friend drinking alcohol daily and approval of a close friend drinking enough alcohol to pass out. Given that these women, on average, indicated higher levels of alcohol consumption and more permissive attitudes, it is possible that for these women alcohol related variables had a stronger influence on which sorority house they joined. Second, there was limited variability between the sorority houses examined in this study. Thus, it might be the case that even if women match to sorority houses based on alcohol related variables, the differences between the sorority houses in this study were too small to discern or impact decision making processes. Third, data for this study was collected during “dry rush” and, for many sororities, “dry pledging.” In other words, university and often sorority policy dictated that potential members of sororities and many pledges not drink during this time period. This period of abstinence from alcohol may have numerous implications for the findings. It is interesting to note however, that changes in alcohol related behaviors and attitudes did occur despite “dry rush” and “dry pledging.” Fourth, the match between potential member and sorority

house ultimately joined is not a decision entirely under the control of the potential member. In fact, a potential member may only join a sorority house if invited to do so. Thus, it is likely that current members held preferences for attributes of new members which influenced the match. Given this fact, it may be that the variables under study would have had more or less influence on ultimate match if the decision was solely that of the potential member. Finally, this study was unable to examine differences based on the ethnicity of its participants.

Future studies should attempt to obtain a sample with more variability.

Examination of specifically how the variables indicated in the current study impact match between potential members and sorority houses is also warranted.

REFERENCES

- Alva, S. A. (1998). Self-reported alcohol use of college fraternity and sorority members. *Journal of College Student Development, 39*, 3-10.
- Baer, J. S. (1994). Effects of college residence on perceived norms for alcohol consumption: An examination of the first year in college. *Psychology of Addictive Behaviors, 8*, 43-50.
- Baer, J. S. (2002) Student factors: Understanding individual variation in college drinking. *Journal of Studies on Alcohol, (Suppl. 14)*, 40-53.
- Baer, J. S. & Carney, M. M. (1993). Biases in the perceptions of the consequences of alcohol use among college students. *Journal of Studies on Alcohol, 54*, 54-60.
- Baer, J. S., Kivlahan, D. R., Blume, A. W., McKnight, P., Marlatt, G. A. (2001). Brief intervention for heavy-drinking college students: 4-year follow-up and natural history. *American Journal of Public Health, 91*, 1310-1316.
- Baer, J. S., Stacy, A., & Larimer, M. (1991). Biases in the perception of drinking norms among college students. *Journal of Studies on Alcohol, 52*, 580-586.
- Bishop, J. B. (2000). An environmental approach to combat binge drinking on college campuses. *Journal of College Student Psychotherapy, 15*, 15-30
- Borsari, B. E. & Carey, K. B. (1999). Understanding fraternity drinking: Five recurring themes in the literature, 1980-1998. *Journal of American College Health, 48*, 30-37.
- Borsari, B. & Carey, K. B. (2000). Effects of a brief motivational intervention with college student drinkers. *Journal of Consulting and Clinical Psychology, 68*, 728-733.
- Canterbury, R. J., Gressard, C. F., Vieweg, W.V.R., Grossman, S.J., Westerman, P.S. & McKelway, R. B. (1990). Psychosocial inventory among first-year college students by patterns of alcohol use. *Advances in Alcohol and Substance Abuse, 9* (3-4), 1-11.

- Carter, C. A., Kahnweiler, W. M. (2000). The efficacy of the social norms approach to substance abuse prevention applied to fraternity men. *Journal of American College Health, 49*, 66-71.
- Cashin, J. R., Presley, C. A. & Meilman, P. W. (1998). Alcohol use in the Greek system: Follow the leader? *Journal of Studies on Alcohol, 59*, 63-70.
- Cialdini, R. B. (2003). Crafting normative messages to protect the environment. *Current Directions in Psychological Science, 12*, 105-109.
- Dimeff, L.A., Baer, J.S., Kivlahan, D.R, Marlatt, G.A. (1999) *Brief alcohol screening and intervention for college students: A harm reduction approach*. New York, NY: The Guilford Press.
- Corbin, W. R., McNair, L. D., Carter, J. A. (2001). Evaluation of a treatment-appropriate cognitive intervention for challenging alcohol outcome expectancies. *Addictive Behaviors, 26*, 475-488.
- Elkins, B., Helms, L. B., Pierson, C. T. (2003). Greek-letter organizations, alcohol, and the courts: A risky mix? *Journal of College Student Development, 44*, 67-80.
- Elias, J. W., Bell, R. W., Eade, R., Underwood, T., Winsky, K., Shonrock, M. D., et al. (1996). "Alcohol myopia," expectations, social interests, and sorority pledge status. *Journal of Alcohol and Drug Education, 42* (1), 78-88
- Engs, R. C., Diebold, B. A., Hanson, D. J. (1996). The drinking patterns and problems of a national sample of college students. *Journal of Alcohol and Drug Education, 41*, 13-33.
- Faulkner, K. K., Alcorn, J. D., Garvin, R. B. (1989). Prediction of alcohol consumption among fraternity pledges. *Journal of Alcohol and Drug Education, 34*(2), 12-20.
- Goodwin, L. (1992). Alcohol and drug use in fraternities and sororities. *Journal of Alcohol and Drug Education, 37*(2), 52-63.
- Harrington, N. G., Brigham, N. L. & Clayton, R. R. (1997). Differences in alcohol use and alcohol-related problems among fraternity and sorority members. *Drug and Alcohol Dependence, 47*, 237-246.
- Kilmer, J. R., Larimer, M. E., Parks, G. A., Dimeff, L.A. & Marlatt, G. Alan (1999). Liability management or risk management? Evaluation of a Greek system alcohol policy. *Psychology of Addictive Behaviors, 13*, 269-278.

- Klein, H. (1992). College students' attitudes toward the use of alcoholic beverages. *Journal of Alcohol and Drug Education, 37*(3),35-52.
- Kodman, F, Sturmak, M. (1984). Drinking patterns among college fraternities: A report. *Journal of Alcohol and Drug Education, 29*(3), 65-69
- Korcuska, J. S. & Thombs, D. L. (2003). Gender role conflict and sex-specific drinking norms: Relationships to alcohol use in undergraduate women and men. *Journal of College Student Development, 44*, 204-216.
- Kuther, T. L. & Timoshin, A. (2003). A comparison of social cognitive and psychosocial predictors of alcohol use by college students. *Journal of College Student Development, 44*, 143-154.
- Larimer, M. E., Irvine, D. L., Kilmer, J. R., & Marlatt (1997). College drinking and the Greek system: Examining the role of perceived norms for high-risk behavior. *Journal of College Student Development, 38*, 587-598.
- Larimer, M. E., & Neighbors, C. (2003). Normative misperception and the impact of descriptive and injunctive norms on college student gambling. *Psychology of Addictive Behaviors, 17*, 235-243.
- Larimer, M. E., Turner, A. P., Anderson, B. K, Fader, J. S., Kilmer, J. R., Palmer, R. S., et al. (2001). Evaluating a brief alcohol intervention with fraternities. *Journal of Studies on Alcohol, 62*, 370-380.
- Lederman, L. C., Stewart, L. P., Goodhart, F. W., & Laitman, L. (2003). A case against "binge" as the term of choice: Convincing college students to personalize messages about dangerous drinking. *Journal of Health Communications, 8*, 79-91.
- Lo, C. C. (1995). Gender differences in collegiate alcohol use. *Journal of Drug Issues, 25*, 817-836.
- Lo, C. C. & Globetti, G. (1993). A partial analysis of the campus influence on drinking behavior: Students who enter college as nondrinkers. *Journal of Drug Issues, 23*, 715-725.
- Lo, C. C. & Globetti, G. (1995). The facilitating and enhancing roles Greek associations play in college drinking. *The International of the Addictions, 30*, 1311-1322.
- Marlatt, G. A., Baer, J. S., Kivlahan, D. R., Dimeff, L. A., Larimer, M. E., Quigley, L. A., et al. (1998). Screening and brief intervention for high-risk college student drinkers: Results form a two-year follow-up assessment. *Journal of Consulting and Clinical Psychology, 66*,604-615.

- Meilman, P.W., Yanofsky, N., Gaylor, M.S. & Turco, J. H. (1989). Visits to the college health service for alcohol-related injuries. *Journal of College Health Association*, 37, 205-210.
- Montgomery, R. L. & Haemmerlie, F. M. (1993). Undergraduate adjustment to college, drinking behavior, and fraternity membership. *Psychological Reports*, 73, 801-802.
- Novak, K. B. & Crawford, L. A. (2001). Perceived drinking norms, attention to social comparison information, and alcohol use among college students. *Journal of Alcohol and Drug Education*, 46(3), 18-3
- O'Connor, R. M. Jr., Cooper, S. E., & Thiel, W.S. (1996). Alcohol use as a predictor of potential fraternity membership. *Journal of College Student Development*, 37, 669-675.
- Ozegovic, J. J., Bikos, L. H. & Szymanski, D. M. (2001). Trends and predictors of alcohol use among undergraduate female students. *Journal of College Student Development*, 42, 447-454.
- Perkins, H. W. (2002). Social norms and the prevention of alcohol misuse in collegiate contexts. *Journal of Studies on Alcohol*, (Suppl. 14), 164-172.
- Perkins, H. W. & Wechsler, H. (1996). Variation in perceived college drinking norms and its impact on alcohol abuse: A nationwide study. *Journal of Drug Issues*, 26, 961-974.
- Prentice, D. A. & Miller, D. T. (1993). Pluralistic Ignorance and Alcohol Use on Campus: Some consequences of misperceiving the social norm. *Journal of Personality and Social Psychology*, 64, 243-256.
- Presley, C. A., Meilman, P. W., & Leichliter, J. S. (2002). College factors that influence drinking. *Journal of Studies on Alcohol*, (Suppl. 14), 82-90.
- Read, J. P., Wood, M. D., Davidoff, O. J., McLacken, J. & Campbell, J. F. (2002). Making the transition from high school to college: The role of alcohol-related social influence factors in students' drinking. *Substance Abuse*, 23, 53-65.
- Reis, J. (2000). College student's determinants of alcohol consumption according to stage of change and weekly consumption: implications for intervention planning. *Journal of Alcohol and Drug Education*, 46(2), 46-54.
- Room, R. (1975). Normative perspectives on alcohol use and problems. *Journal of Drug Issues*, 5, 358-368.

- Sher, K. J., Bartholow, B. D., Nanda, S. (2001). Short- and long-term effects of fraternity and sorority membership on heavy drinking: A social norms perspective. *Psychology of Addictive Behaviors, 15*, 42-51.
- Steffian, G. (1999). Correction of normative misperceptions: An alcohol abuse prevention program. *Journal of Drug Education, 29*, 115-138.
- Suls, J. & Green, P. (2003). Pluralistic ignorance and college student perceptions of gender-specific alcohol norms. *Health Psychology, 22*, 479-486.
- Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism. (2002). *A call to action: Changing the culture of drinking at U.S. colleges* (NIH Publication No. 02-5010). Bethesda, MD: U.S. Department of Health and Human Services
- Wechsler, H., Dowdall, G. W., Davenport, A. & Castillo, S. (1995). Correlates of college student binge drinking. *American Journal of Public Health, 85*, 921-926.
- Workman, T. A. (2001). Finding the meanings of college drinking: An analysis of fraternity drinking stories. *Health Communication, 13*, 427-447.

APPENDIX A

Institutional Review Board Approval Form

Oklahoma State University Institutional Review Board

Date: Thursday, July 29, 2004

IRB Application No AS053

Proposal Title: Attitudes About Alcohol

Reviewed and
Processed as: Full Board

Approval Status Recommended by Reviewer(s): Approved

Protocol Expires: 7/22/2005

Principal
Investigator(s):

Rachel Horton
215 North Murray
Stillwater, OK 74078

Thad Leffingwell
215 N. Murray
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact me in 415 Whitehurst (phone: 405-744-1676, colson@okstate.edu).

Sincerely,


Carol Olson, Chair
Institutional Review Board

APPENDIX B

Informed Consent Form

Informed Consent

Attitudes about Alcohol

What is this project? Who is responsible for the project?

This project is designed to understand the association between attitudes about alcohol, normative perceptions of other's alcohol use and attitudes about alcohol, and alcohol consumption. This project is titled "Attitudes about Alcohol" and is being conducted by Rachael Horton, a graduate student in the Department of Psychology at Oklahoma State University and Thad Leffingwell, Ph.D., Assistant Professor. This project is approved by OSU's Institutional Review Board.

Why might I be asked to participate?

You have been asked to participate because you are either currently a member of a sorority or are considering sorority membership and are at least 18 years of age.

What will I be asked to do?

If you choose to participate, you will complete a brief questionnaire on three occasions. Questionnaires taken at the second and third time periods will be on-line questionnaires. You will be contacted via email one week after recruitment ends and six weeks after recruitment ends. At those times, you will be provided a link to the online questionnaire. These questionnaires will include questions about your alcohol use, your attitudes toward alcohol use, and your estimate of other's alcohol use and attitudes toward alcohol use. Any student can participate, even if you don't use alcohol.

What are the risks of participating in this project?

Participants are asked to report personal alcohol consumption. For participants under 21 years of age, this may be perceived as a legal risk. However, all data will be submitted anonymously. Therefore, participants will not experience legal repercussions as a result of participation in this study.

What about my privacy and confidentiality?

You will be asked to create a **unique id number** that you will use instead of your name each time you complete this questionnaire. This password will keep your response anonymous. Use the following rubric to create your id number: last 3 digits of social security number- birth month-birth date. Example, if your social security number is 123-45-6789 and you were born on March 17, 1986, your id number would be 789-03-17. Your individual responses to the questionnaire will only be seen by the researchers, and will not be seen by anyone else at Oklahoma State University, legal authorities, or your parents. You will be asked to provide an email address so that we can contact you to ask for your further participation in parts two and three of the study. However, the email link that you receive will simply take you to the survey. Your responses on the survey once you reach the webpage will in no way be linked to your email address.

What are the benefits of participating?

In exchange for participation of all time points in the survey, you will have your email addresses entered into a raffle. The participant whose email address is drawn from the raffle will be contacted via that email address and will be offered her choice of a Magnavox 13" TV/VCR Combo, an Emerson DVD/VCR Combo, or a Sony ATRAC/MP3 CD Walkman. The raffle will be held two weeks after the conclusion of the third questionnaire session. After completing the second and third surveys, you will be directed to a separate page that will ask you to submit your name, email address, and other information to make sure you are acknowledged for your participation and thus eligible for entry into the raffle. This information will be kept separate from the data provided on the survey.

Findings from this study will contribute to the body of knowledge about the mechanisms underlying the facilitation of Greek college drinking. This knowledge is essential for future development of prevention and treatment programs for college drinkers belonging to Greek organizations.

What are the alternatives?

The alternative is to not participate. Your participation is voluntary. There is no penalty for choosing not to participate. If you are eligible for research credit in a course due to your participation, the instructor of that course will make optional comparable activities available. You may choose to not participate now, or at any time during your participation without penalty.

What will happen to my data after I participate?

All electronic information will be protected on a password-protected computer in a locked laboratory. No data will be stored on a network. All hard copy data, including informed consent forms will be kept in a locked file cabinet in our locked laboratory. The investigators and designated research assistants will be the only persons with access to the files. In the same manner, raw data will be retained for 5 years after the publication of the research report. After 5 years, hard copy data will be destroyed by shredding and electronic data will be purged from the computer. Results from data collected will be reported as part of a thesis project and will be published in a research journal.

What if I have other questions or concerns about my participation?

If you have any questions or need to report an effect about the research procedures, you may contact Thad R. Leffingwell, Ph.D. at (405) 744-7494 or 215 North Murray, Stillwater, OK 74078. If you have any questions about your rights as a research participant, you may take them to Dr. Carol Olson, IRB Chair of OSU's Institutional Review Board at (405) 744-1676 or 415 Whitehurst, Stillwater, OK 74078.

After reading the above information, sign below to give your consent. Please also provide your email address on the next page, which contains no personal identifiers to link the email address to you, so that we may contact you for the second and third parts of this study.

Participant

Date

Please provide us your email address so that we may contact you for participation in parts two and three of this study. Your email address is also needed to enter you into the prize raffle for your participation.

Email Address

APPENDIX C

Recruitment Scripts

Recruits Script

Hi my name is _____. I am administering this questionnaire today on behalf of Rachael Horton, a graduate student in the psychology department. She is interested in the association between attitudes about alcohol, normative perceptions of other's alcohol use and attitudes about alcohol, and alcohol consumption.

If you choose to participate, you will complete three questionnaires during three different time periods. Questionnaires taken at the second and third time periods will be on-line questionnaires. You will be contacted by email one week after recruitment ends and six weeks after recruitment ends. At those times, you will be provided a link to the online questionnaire. These questionnaires will include questions about your alcohol use, your attitudes toward alcohol use, and your estimate of others' alcohol use and attitudes toward alcohol use. Any student who is at least 18 years old can participate, even if you don't use alcohol.

Don't worry; your responses will be completely anonymous. The researcher will not be able to identify any of the answers as yours. In order to keep your answers confidential, you will be asked to create a unique id number to use instead of your name each time you complete the questionnaire. You will create your number by using the last three digits of your social security number, birth month, and birth date. For example, if your social security number is 123-45-6789 and you were born on November 03, 1985, your id number would be 789-11-03. These instructions are also on your consent form to help you remember all the rules for creating your password. Your data will be stored in a secure location until five years from now, at which point it will be destroyed.

Your participation is completely voluntary. There is no penalty for choosing not to participate. In exchange for participation of all time points in the survey, participants will have their email addresses entered into a raffle. The participant whose email address is drawn from the raffle will be contacted via that email address and will be offered her choice of a Magnavox 13" TV/VCR Combo, an Emerson DVD/VCR Combo, or a Sony ATRAC/MP3 CD Walkman. The raffle will be held two weeks after the conclusion of the third questionnaire session. You may choose to not participate now, or at any time during your participation without penalty.

If you have any questions or need to report an effect about the research procedures, you may contact Thad R. Leffingwell, Ph.D. at (405) 744-7494 or 215 North Murray, Stillwater, OK 74078. If you have any questions about your rights as a research participant, you may take them to Carol Olson, IRB chair of OSU's Institutional Review Board at (405) 744-1676 or 415 Whitehurst, Stillwater, OK 74078.

Does anyone have any questions? Ok, if you would like to participate, please read over the consent form, sign it, and fill out the questionnaire. When you are finished, please pass both the consent form and questionnaire to me. Please also remember to include your email address so that you can be contacted for part two and three of the study. Thank you for your time and participation.

Current Member Script

Hi my name is _____. I am administering this questionnaire today on behalf of Rachael Horton, a graduate student in the psychology department. She is interested in the association between attitudes about alcohol, normative perceptions of other's alcohol use and attitudes about alcohol, and alcohol consumption.

If you choose to participate, you will complete the questionnaire I have here today. This questionnaire will include questions about your alcohol use, your attitudes toward alcohol use, and your estimate of others' alcohol use and attitudes toward alcohol use. Any student who is at least 18 years old can participate, even if you don't use alcohol.

Don't worry; your responses will be completely anonymous. The researcher will not be able to identify any of the answers as yours. In order to keep your answers confidential, you will be asked to create a unique id number to use instead of your name each time you complete the questionnaire. You will create your number by using the last three digits of your social security number, birth month, and birth date. For example, if your social security number is 123-45-6789 and you were born on November 03, 1985, your id number would be 789-11-03. These instructions are also on your consent form to help you remember all the rules for creating your password. Your data will be stored in a secure location until five years from now, at which point it will be destroyed.

Your participation is completely voluntary. There is no penalty for choosing not to participate. Potential members are also being asked to take part in this study. However, they will be asked to fill out the questionnaire now, again one week after recruitment, and a third time six weeks after recruitment. In exchange for participation of all time points in the survey, participants will have their email addresses entered into a raffle. The participant whose email address is drawn from the raffle will be contacted via that email address and will be offered her choice of a Magnavox 13" TV/VCR Combo, an Emerson DVD/VCR Combo, or a Sony ATRAC/MP3 CD Walkman. The raffle will be held two weeks after the conclusion of the third questionnaire session. You may choose to not participate now, or at any time during your participation without penalty.

If you have any questions or need to report an effect about the research procedures, you may contact Thad R. Leffingwell, Ph.D. at (405) 744-7494 or 215 North Murray, Stillwater, OK 74078. If you have any questions about your rights as a research participant, you may take them to Carol Olson, IRB chair of OSU's Institutional Review Board at (405) 744-1676 or 415 Whitehurst, Stillwater, OK 74078.

Does anyone have any questions? Ok, if you would like to participate, please read over the consent form, sign it, and fill out the questionnaire. When you are finished, please pass both the consent form and questionnaire to me. Thank you for your time and participation.

APPENDIX D

Measure

Unique ID # _____

Year in School _____

Greek
Affiliation _____

Age _____

Ethnicity _____

(please provide sorority
or write "no affiliation")

Think of the occasion
you drank most this past
month. How much did
you drink?

On a given weekend
evening, how much do
you typically drink?
Estimate for the past
month.

How often in the past
month did you drink
alcohol?

- 0) No drinks
- 1) 1-2 drinks
- 2) 3-4 drinks
- 3) 5-6 drinks
- 4) 7-8 drinks
- 5) 9-10 drinks
- 6) 11-12 drinks
- 7) 13-14 drinks
- 8) 15-16 drinks
- 9) 17-18 drinks
- 10) 19 or more

- 0) No drinks
- 1) 1-2 drinks
- 2) 3-4 drinks
- 3) 5-6 drinks
- 4) 7-8 drinks
- 5) 9-10 drinks
- 6) 11-12 drinks
- 7) 13-14 drinks
- 8) 15-16 drinks
- 9) 17-18 drinks
- 10) 19 or more

- 0) I do not drink at all
- 1) About once a month
- 2) Two to three times a
month.
- 3) Three to four times a
month.
- 4) Nearly every day.
- 5) Once a day or more.

How much do you
believe is the most
typical sorority member
drank on an occasion in
the past month?

How much do you
believe is the most a
typical sorority member
drinks on a typical
weekend evening?

How often do you think
a typical sorority
member drinks alcohol
in a month?

- 0) No drinks
- 1) 1-2 drinks
- 2) 3-4 drinks
- 3) 5-6 drinks
- 4) 7-8 drinks
- 5) 9-10 drinks
- 6) 11-12 drinks
- 7) 13-14 drinks
- 8) 15-16 drinks
- 9) 17-18 drinks
- 10) 19 or more

- 0) No drinks
- 1) 1-2 drinks
- 2) 3-4 drinks
- 3) 5-6 drinks
- 4) 7-8 drinks
- 5) 9-10 drinks
- 6) 11-12 drinks
- 7) 13-14 drinks
- 8) 15-16 drinks
- 9) 17-18 drinks
- 10) 19 or more

- 0) She does not drink at
all
- 1) About once a month
- 2) Two to three times a
month.
- 3) Three to four times a
month.
- 4) Nearly every day.
- 5) Once a day or more.

How would you respond if you knew your closest friend drinks alcohol every weekend?

- 1) Strong Disapproval
- 2) Moderate Disapproval
- 3) Mild Disapproval
- 4) Wouldn't Care
- 5) Mild Approval
- 6) Moderate Approval
- 7) Strong Approval

How would you respond if you found out your closest friend drinks alcohol daily?

- 1) Strong Disapproval
- 2) Moderate Disapproval
- 3) Mild Disapproval
- 4) Wouldn't Care
- 5) Mild Approval
- 6) Moderate Approval
- 7) Strong Approval

How would you respond if you found out your closest friend drank enough alcohol to pass out?

- 1) Strong Disapproval
- 2) Moderate Disapproval
- 3) Mild Disapproval
- 4) Wouldn't Care
- 5) Mild Approval
- 6) Moderate Approval
- 7) Strong Approval

How do you think a typical sorority member would respond if she found out that her closest friend drinks alcohol every weekend?

- 1) Strong Disapproval
- 2) Moderate Disapproval
- 3) Mild Disapproval
- 4) Wouldn't Care
- 5) Mild Approval
- 6) Moderate Approval
- 7) Strong Approval

How do you think a typical sorority member would respond if she found out that her closest friend drinks every day?

- 1) Strong Disapproval
- 2) Moderate Disapproval
- 3) Mild Disapproval
- 4) Wouldn't Care
- 5) Mild Approval
- 6) Moderate Approval
- 7) Strong Approval

How do you think a typical sorority or fraternity member would respond if she found out that her closest friend drank enough alcohol to pass out?

- 1) Strong Disapproval
- 2) Moderate Disapproval
- 3) Mild Disapproval
- 4) Wouldn't Care
- 5) Mild Approval
- 6) Moderate Approval
- 7) Strong Approval

APPENDIX E

Web-based Questionnaire

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i You must answer all questions to successfully submit the survey!

Step 1. Complete the questionnaire.

To create your unique code number please use the following formula

Last 3 digits of social security number -- birth month -- birth date

(For example, if your social security number is 123-45-6789 and your birth date is Feb. 17, your unique code number would be 789-02-17.)

Unique code number: - -

Age:

Greek Affiliation:

Ethnicity: (choose one)

Year in college:

Page 1 of 3 | continue

Alcohol Use

For the following questions, *one drink* equals:

- 4 ounces of wine
- 1 wine cooler
- 12 ounces of "3-2" beer
- 8-10 ounces of "6-point" beer, malt liquor, ice beers, or "microbrew" beers
- A mixed drink with 1 ounce of liquor
- A single shot of liquor

Think of the occasion you drank the most this past month. How much did you drink?

On a given weekend evening, how much do you typically drink? Estimate for the past month.

How often during the last month did you drink alcohol?

How much do you believe is the most a typical sorority member drank on an occasion in the past month?

How much do you believe is the most a typical sorority member drinks on a typical weekend evening?

How often do you think a typical sorority member drinks alcohol in a month?

How would you respond if you knew your closest friend drinks alcohol every weekend?

How would you respond if you found out your closest friend drinks alcohol daily?

How would you respond if you found out your closest friend drank enough alcohol to pass out?

How do you think a typical sorority member would respond if she found out that her closest friend drinks alcohol every weekend?

How do you think a typical sorority member would respond if she found out that her closest friend drinks every day?

How do you think a typical sorority member would respond if she found out that her closest friend drank enough alcohol to pass out?

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You're finished!

Click the "Submit" button below to submit your answers. Do NOT click the "Submit" button more than once.

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Step 2. Tell us how to contact you.

Complete and submit the following information. We will use this information to contact you for the third session of the study and go ensure that you get credit for your participation. You will be contacted in five weeks to complete this session. This data is kept separate from your survey data.

*required fields

You will be contacted in five weeks to participate in the third session of this study. Please type in your current working email address in the space below. Remember, you must complete all three sessions of this study to be entered into the raffle drawing.

***Email Address:**

Please reenter your email address

Any comments?

Submit

Clear form

Thank you!

**Your submission has been accepted.
You have just completed Part 2 of this study.**

We will contact you in five weeks for Part 3 of this study.

You may want to print this page for your records
to confirm your participation in this study.

Wednesday, July 28, 2004

ATTITUDES ABOUT ALCOHOL

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Thank you!

Your submission has been accepted.

You have just completed Part 3 of this study.

This concludes the study.

You may want to print this page for your records
to confirm your participation in this study.

Wednesday, July 28, 2004

Table 1

Means and Standard Deviations for Participants Included in and Excluded from the Analyses.

Variable	Participants		<i>t</i>	<i>p</i> =	<i>d</i>
	Included (<i>n</i> = 191)	Excluded (<i>n</i> = 311)			
Peak	2.22 (3.30)	3.63 (4.28)	4.15	.001	.34
Typical	1.21 (2.49)	2.43 (3.66)	4.44	.001	.38
Frequency	.85 (1.09)	1.26 (1.19)	3.87	.001	.36
Perceived Peak	5.27 (4.10)	5.73 (3.94)	1.25	.212	.12
Perceived Typical	3.79 (2.94)	4.15 (3.44)	1.21	.226	.11
Perceived Frequency	2.25 (.77)	2.27 (.88)	.30	.763	.01
Attitude 1	2.53 (1.24)	2.98 (1.36)	3.70	.001	.34
Attitude 2	1.48 (.86)	1.70 (1.19)	2.40	.017	.21
Attitude 3	1.50 (.84)	1.73 (1.19)	2.61	.009	.21
Perceived Attitude 1	2.81 (1.02)	2.92 (1.17)	1.08	.280	.10
Perceived Attitude 2	1.81 (.90)	1.76 (1.09)	-.51	.610	.05
Perceived Attitude 3	1.78 (.99)	1.96 (1.27)	1.74	.082	.16
Age	18.28 (.53)	18.30 (.52)	.46	.644	.04
Classification	1.18 (.42)	1.21 (.47)	.68	.497	.07

Note: Standard deviations are reported in parentheses. Attitude 1 and Perceived Attitude 1 refer to approval of closest friend drinking every weekend. Attitude 2 and Perceived Attitude 2 refer to approval of closest friend drinking alcohol daily. Attitude 3 and Perceived Attitude 3 refer to approval of closest friend drinking enough to pass out.

Table 2

Mean Variable Values for Current Members

Variable	House						<i>F</i>	<i>p</i> =	η^2
	1	2	3	4	5	6			
<i>N</i>	40	42	20	35	17	32			
Peak	4.55 (2.81) _{a,b}	3.02 (3.31) _a	6.70 (5.41) _b	7.05 (4.63) _b	2.29 (2.41) _a	4.92 (4.19) _{a,b}	6.61	.001	.16
Typical	3.56 (2.59) _{a,b,c}	1.70 (2.55) _{a,c}	3.35 (3.47) _{a,b,c}	4.59 (3.77) _b	1.00 (2.30) _c	3.23 (3.39) _{a,b,c}	5.22	.001	.13
Frequency	1.99 (1.01) _a	1.16 (1.08) _b	1.67 (1.32) _{ab}	2.43 (.95) _a	.88 (.93) _b	1.91 (1.28) _{a,b}	7.81	.001	.13
Perceived Peak	7.15 (3.88) _{a,b,c}	5.56 (3.47) _{a,c}	10.28 (4.91) _b	7.89 (3.67) _{a,b,c}	5.53 (2.58) _{a,c}	7.91 (4.97) _{a,b,c}	4.78	.001	.12
Perceived Typical	5.11 (2.42) _{a,b}	4.23 (2.22) _a	6.90 (2.91) _b	5.79 (2.43) _{a,b}	4.35 (2.29) _{a,b}	5.50 (2.54) _{a,b}	4.18	.001	.06
Perceived Frequency	2.68 (.47) _a	2.38 (.70) _a	2.70 (.57) _a	2.83 (.62) _a	2.59 (.51) _a	2.59 (.61) _a	2.38	.040	.06
Attitude 1	3.58 (1.08) _a	2.88 (1.11) _a	3.05 (.89) _a	3.37 (1.61) _a	2.71 (1.10) _a	3.03 (1.38) _a	2.07	.071	.03
Attitude 2	1.38 (.67) _a	1.45 (.74) _a	1.50 (.83) _a	1.66 (1.06) _a	1.12 (.33) _a	1.41 (.84) _a	1.17	.327	.04
Attitude 3	1.55 (.99) _a	1.40 (.83) _a	1.95 (.89) _a	1.89 (1.11) _a	1.76 (1.09) _a	1.75 (1.02) _a	1.47	.203	.04
Perceived Attitude 1	3.48 (.88) _{a,b,c}	3.05 (1.10) _b	4.05 (.89) _c	3.46 (1.29) _{a,b,c}	3.35 (.70) _{a,b,c}	3.06 (1.11) _{a,c}	3.16	.009	.08
Perceived Attitude 2	1.53 (1.65) _a	1.79 (.90) _a	2.20 (.89) _a	2.00 (1.46) _a	1.41 (.71) _a	1.81 (1.03) _a	1.91	.094	.05
Perceived Attitude 3	1.65 (.86) _{a,c}	1.64 (.93) _a	2.75 (1.02) _{b,c}	2.40 (1.26) _c	1.76 (.90) _{a,b,c}	2.03 (1.12) _{a,b,c}	5.29	.001	.14

Note. Means in the same row that do not share subscripts differ at $p < .01$ in the Tukey HSD post-hoc test.

Attitude 1 and Perceived Attitude 1 refer to approval of closest friend drinking every weekend. Attitude 2 and Perceived Attitude 2 refer to approval of closest friend drinking alcohol daily. Attitude 3 and Perceived Attitude 3 refer to approval of closest friend drinking enough to pass out.

Table 3

Chi Square Analyses for Hypothesis One

Match Variable	House Rank						χ^2	$p =$
	1	2	3	4	5	6		
Expected N	31.8	31.8	31.8	31.8	31.8	31.8		
Perceived Peak-Peak	32	32	35	27	30	35	1.47	.916
Perceived Typical-Typical	38	24	30	38	25	36	6.44	.266
Perceived Frequency-Frequency	17	16	52	37	32	37	29.24	.001
Perceived Attitude 1-Attitude 1	26	46	38	27	31	23	11.78	.038
Perceived Attitude 2-Attitude 2	49	20	18	22	24	59	47.56	.001
Perceived Attitude 3-Attitude 3	27	26	40	30	27	42	7.94	.160

Note: Attitude 1 and Perceived Attitude 1 refer to approval of closest friend drinking every weekend. Attitude 2 and Perceived Attitude 2 refer to approval of closest friend drinking alcohol daily. Attitude 3 and Perceived Attitude 3 refer to approval of closest friend drinking enough to pass out.

Table 4

Chi Square Analyses for Hypothesis Two

Match Variable	House Rank						χ^2	$p =$
	1	2	3	4	5	6		
Expected N	31.8	31.8	31.8	31.8	31.8	31.8		
Peak	38	39	24	24	28	38	8.32	.139
Typical	34	39	33	35	17	33	9.07	.106
Frequency	32	38	33	33	19	36	7.00	.221
Perceived Peak	31	41	23	36	29	31	5.93	.313
Perceived Typical	49	38	22	24	37	21	19.94	.001
Perceived Frequency	43	47	15	51	35		21.28	.001
Attitude 1	32	39	32	38	33	17	9.76	.082
Attitude 2	37	9	38	51	20	36	34.90	.001
Attitude 3	33	26	26	43	27	36	7.38	.194
Perceived Attitude 1	39	23	34	39	26	30	7.00	.221
Perceived Attitude 2	31	29	39	29	26	37	4.05	.543
Perceived Attitude 3	32	31	29	33	33	33	.40	.995

Note: For the variable of Perceived Frequency two houses obtained the same score and thus only five rankings were assigned. Attitude 1 and Perceived Attitude 1 refer to approval of closest friend drinking every weekend. Attitude 2 and Perceived Attitude 2 refer to approval of closest friend drinking alcohol daily. Attitude 3 and Perceived Attitude 3 refer to approval of closest friend drinking enough to pass out.

Table 5

Paired Samples T-Test for Hypothesis Three

Variable	Difference		<i>t</i>	<i>p</i> =	<i>d</i>
	Time 1	Time 3			
Peak	3.85 (2.06)	4.19 (2.20)	-2.59	.010	.19
Typical	2.58 (1.75)	2.64 (1.62)	-.56	.579	.04
Frequency	1.24 (.73)	1.30 (.70)	-1.50	.135	.11
Perceived Peak	3.97 (2.49)	3.46 (2.76)	2.07	.040	.15
Perceived Typical	2.68 (1.81)	2.26 (1.39)	3.30	.001	.24
Perceived Frequency	.70 (.47)	1.77 (.97)	-13.57	.001	.98
Attitude 1	1.12 (.79)	1.09 (.78)	.43	.665	.03
Attitude 2	.65 (.59)	.62 (.53)	.73	.464	.05
Attitude 3	.77 (.44)	.75 (.38)	.39	.700	.02
Perceived Attitude 1	.98 (.75)	1.01 (.76)	-.55	.586	.04
Perceived Attitude 2	.81 (.50)	.84 (.46)	-.57	.570	.05
Perceived Attitude 3	.93 (.64)	.91 (.49)	.40	.693	.03

Note: Standard deviations for each time difference are listed in parantheses. Attitude 1 and Perceived Attitude 1 refer to approval of closest friend drinking every weekend. Attitude 2 and Perceived Attitude 2 refer to approval of closest friend drinking alcohol daily. Attitude 3 and Perceived Attitude 3 refer to approval of closest friend drinking enough to pass out.

Table 6

Discrepancy Between Perceived Norms and Actual Norms

Variable	Perception	Actual
Peak	5.27	4.70
Typical	3.79	3.05
Frequency	2.25	1.71
Attitude 1	2.81	3.18
Attitude 2	1.81	1.44
Attitude 3	1.78	1.65

Note: Attitude 1 refers to approval of closest friend drinking every weekend. Attitude 2 refers to approval of closest friend drinking alcohol daily. Attitude 3 refers to approval of closest friend drinking enough to pass out.

Table 7

Independent Samples t-test for Hypothesis Four

Variable	Differences		<i>t</i>	<i>p</i> =	<i>d</i>
	Pledges	Non-Pledges			
Peak	.05 (3.27)	.59 (3.91)	-.73	.469	.16
Typical	.14(2.19)	.05(1.72)	.19	.847	.04
Frequency	.008(.95)	.14(.85)	-.63	.529	.14
Perceived Peak	.88(4.68)	2.38(4.08)	-1.43	.154	.32
Perceived Typical	-.55(2.75)	1.33(4.70)	-1.81	.084	.05
Perceived Frequency	1.84(1.43)	.38(.92)	4.60	.001	1.04
Attitude 1	.03(1.01)	.57(1.03)	-2.19	.030	.53
Attitude 2	-.04(.95)	.09(.54)	-.65	.517	.14
Attitude 3	-.07(.78)	.19(.81)	-1.50	.136	.33
Perceived Attitude 1	.08(1.19)	.62(.80)	-2.04	.042	.47
Perceived Attitude 2	-.13(1.01)	.24(.83)	-1.62	.106	.37
Perceived Attitude 3	-.17(1.13)	.24(.77)	-1.62	.107	.37

Note: Standard deviations for each group are listed in parantheses. Attitude 1 refers to approval of closest friend drinking every weekend. Attitude 2 refers to approval of closest friend drinking alcohol daily. Attitude 3 refers to approval of closest friend drinking enough to pass out.

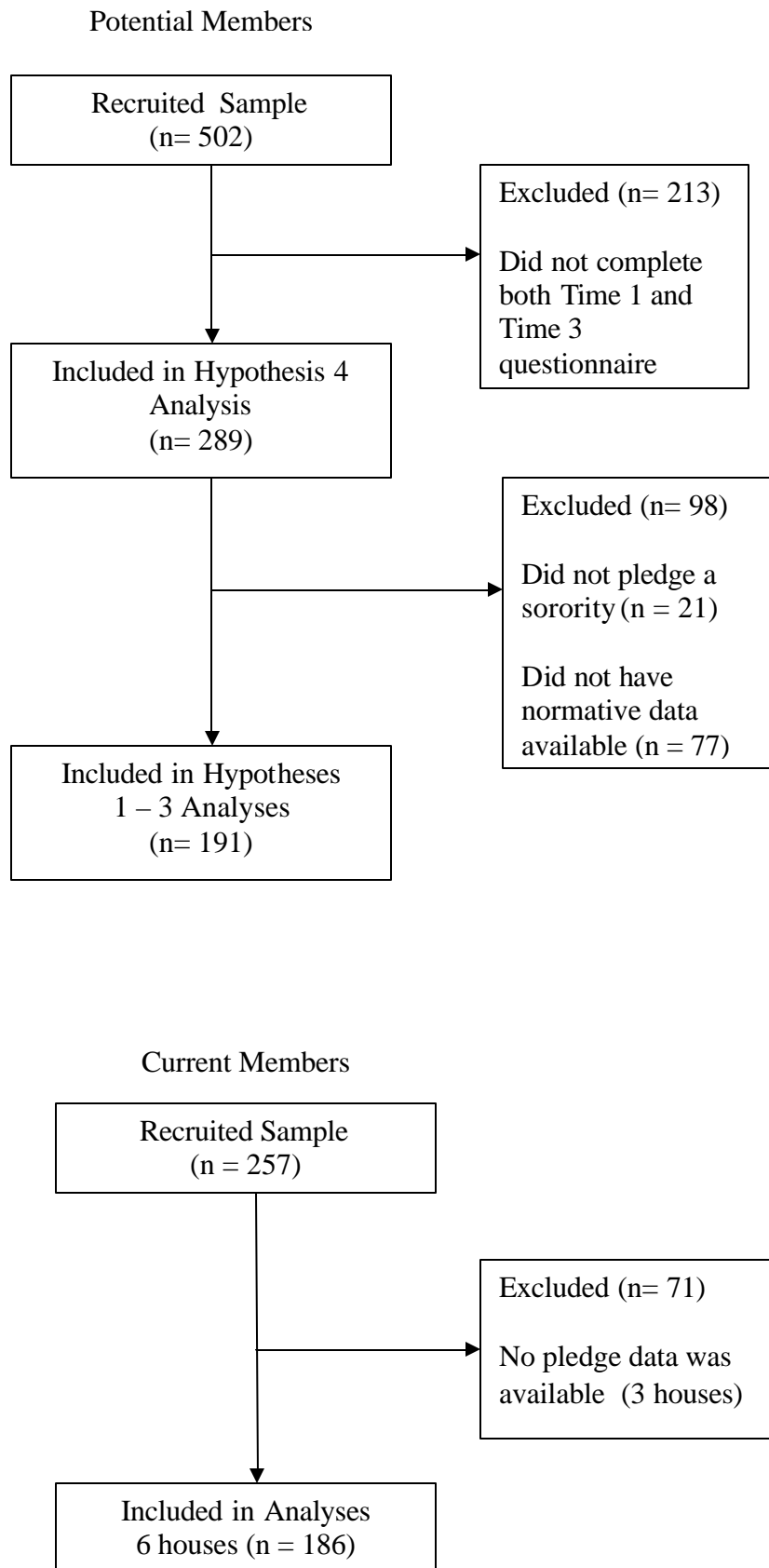


Figure1: Sample size changes as a result of data manipulation.

VITA

Rachael Ann Horton

Candidate for the Degree of

Master of Science

Thesis: SORORITY PLEDGES: A LONGITUDINAL EXAMINATION OF CHANGES IN ALCOHOL ATTITUDES, BEHAVIORS, AND NORMATIVE PERCEPTIONS THROUGHOUT RECRUITMENT AND EARLY PLEDGING

Major Field: Clinical Psychology

Biographical:

Personal Data: Born in Mena, Arkansas on July 29, 1979, the daughter of Randy and Becky Horton.

Education: Graduated from Mena High School, Mena, Arkansas in May 1997; received Bachelor of Arts degree in Psychology from Henderson State University, Arkadelphia, Arkansas in December 2000; received Master of Arts degree in Psychology from Southeastern Louisiana University in May 2003. Completed the requirements for the Master of Science degree with a major in Clinical Psychology at Oklahoma State University in May, 2005.

Experience: Clinical experience includes Oklahoma State University Marriage and Family Clinic, Oklahoma State University Psychological Services Center, Hammond Addictive Disorders Clinic, Southeastern Louisiana University Counseling Center, Courage House Shelter for Women and Children in Crisis, and Covenant House Shelter for Women and Children in Crisis; employed by Southeastern Louisiana University, Department of Psychology as graduate teaching and research assistant, 2001 to 2003; employed by Oklahoma State University, Department of Psychology as graduate teaching assistant, 2003 to present.

Professional Memberships: Association for Behavioral and Cognitive Therapies, Southwestern Psychological Association