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Impact of Alcohol Skills Training Program on College Fraternity Members' Drinking Behaviors

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IMPACT OF ALCOHOL SKILLS TRAINING PROGRAM ON COLLEGE
FRATERNITY MEMBERS' DRINKING BEHAVIORS

by

K. JOY HAMM

(Under the Direction of James Green)

ABSTRACT

The purpose of this study was to assess the impact of the Alcohol Skills Training Program on college fraternity members' drinking behaviors and to attempt to ascertain what elements of the program may lead to change in behavior. A secondary purpose was to try to understand the role that chapter culture might play in the success of the program in changing college fraternity members' drinking behaviors. A mixed methods approach, with the results of quantitative data analysis informing the qualitative portion of the study, was utilized by the researcher.

The researcher in this study did not find evidence to support ASTP as an effective alcohol education program for reducing high-risk drinking and its associated negative consequences among fraternity members. However, the researcher did identify certain elements of the ASTP program which do seem to be viewed as useful by members of college fraternities and that facilitator style was viewed as very important by participants. The findings from this study enabled the researcher to make several recommendations regarding alcohol education within the fraternity and sorority community.

INDEX WORDS: Alcohol Skills Training Program, Fraternities, Alcohol education, College students, Drinking

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A Dissertation Submitted to the Graduate Faculty of Georgia Southern University in
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DOCTOR OF EDUCATION

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2012

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DEDICATION

This work is dedicated to my Nana, Geneva Shepherd, to thank her for the encouragement and love she has always shown me and the appreciation for life-long learning that she instilled in me.

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CHAPTER I

INTRODCUTION

One only has to look toward popular media to see the impact that alcohol use is having on college campuses around the United States in general and within the fraternity and sorority community specifically. One example of this was Joey Upshaw's death on April 2, 2000, due to a lethal combination of alcohol and GHB at his fraternity house at The Ohio State University (Moroney, 2000). In 2004, two lives were lost due to alcohol misuse a few short days apart. Sam Spady died on September 5th due to alcohol poisoning at a fraternity house at Colorado State University (Wagner, 2004), and Gordy Bailey passed away after a night of heavy drinking to celebrate bid night with his fraternity on September 7th (Uricchio, 2009). Gary DeVercelly died on March 30, 2007, due to alcohol poisoning at a fraternity party at Rider University, resulting in university administrators being charged with hazing (Associated Press, 2007). These newspaper headlines only provide additional anecdotal data to support more than 30 years of research that has shown that many college students drink at alarming rates, and that members of social Greek-letter organizations are at an even greater risk for negative consequences as a result of their high-risk drinking than their non-Greek peers.

Researchers have found that fraternity and sorority members drink more heavily and frequently and experience more negative consequences associated with their alcohol use than their non-Greek peers (Cashin, Presley, & Meilman, 1998; Sher, Bartholow, & Nanda, 2001). The rate of drinking of fraternity house members has been found to be 20 drinks per week compared to 8 drinks per week for non-Greek male students while

sorority women consume an average of 6 drinks per week contrasted to 3 drinks per week for other female students (Cashin et al.). According to Wechsler, Dowdall, Maenner, Gledhill-Hoyt, and Lee (1998), “although Greek society members are only a small minority of the national college population, their influence is far greater” (p. 60). For this reason, it is important for college and university administrators to truly understand the use of alcohol within the fraternity and sorority system and to explore effective ways to reduce high-risk drinking within this particular affinity group. Doing so could help to reduce the overall individual, secondhand, and institutional effects of alcohol use within the higher education community.

Although a great deal of research has been conducted to explore ways to reduce high-risk drinking within the general college student population, little research in terms of reducing heavy drinking and its associated negative outcomes has been conducted within the Greek community. In fact, many Greek undergraduates and alumni “claim that too little systematic research on a national scale has been done, that too much of the criticism related to alcohol use by fraternity and sorority members has been based on anecdotes” (Wechsler, Kuh, & Davenport, 1996, p. 263). The absence of greater empirical data makes it difficult to implement effective risk reduction strategies (Wechsler, Kuh, & Davenport, 1996).

Traditional education and prevention efforts, which have focused primarily on behavioral mandates and educational campaigns, have proven to be ineffective at changing the drinking behaviors of Greek members, and confronting current drinking rates can be seen as a personal attack on the organization (Hunnicut, Davis, & Fletcher,

1991). Often these programs and tactics do not take into account the unique alcohol-related risks associated with this population or the individual and chapter contexts in which drinking occurs (Larimer, Anderson, Baer, & Marlatt, 2000). Also, it is important to note that student drinking behavior is going to be most influenced by members of the peer group with whom students most closely identify (Carter & Kahnweiler, 2000; Larimer, Anderson, et al., 2000). Therefore, prevention efforts must focus on the role that the chapter plays in an individual's drinking patterns. Higher education administrators must develop an "understanding of how the environment of the Greek system and its individual members differs from the general college student population to shed light on differences in alcohol consumption and responsiveness to prevention programming exhibited by these groups" (Larimer, Anderson, et al., 2000, p. 54).

The Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism (NIAAA) produced a report in 2002 which stated that one of the most effective ways to challenge students' current drinking patterns is through the use of the Alcohol Skills Training Program (ASTP). ASTP attempts to change drinking behaviors by teaching students skills to moderate their alcohol use (Fromme, Marlatt, Bear, & Kivlahan, 1994). The program's impact, however, on high risk groups such as fraternity and sorority members, has been studied very few times and none of these studies have attempted to determine what aspects of the program lead to its effectiveness or how chapter culture impacts its efficacy. Although ASTP could be just the tool to reduce the number of deaths and other negative consequences associated with fraternity and sorority members' drinking, more study is needed. If ASTP is shown to be effective with this

special population, it could provide important information to higher education leaders as to how to address the issue of high-risk drinking on university campuses in general and Greek organizations in particular.

Background

Before reviewing the literature related to fraternity and sorority members and drinking, it is important to understand the individual and institutional negative consequences that can result on college campuses related to student alcohol use. According to Perkins (2002), “alcohol is routinely cited by researchers, college administrators and staff, and also by students themselves, as the most pervasively misused substance on college campuses” (p. 91). University presidents often define alcohol misuse and abuse as the factor having the greatest negative impact on the campus community and quality of life of individual students (Presley, Meilman, & Leichliter, 2002). This could be accounted for due to the fact that 84.3% of students report having used alcohol within the past year and of those who drink, almost one-half report engaging in binge drinking in the previous two weeks (Southern Illinois University, 2008). Alcohol has been for many years and continues to be today the drug of choice for most college students (National Center on Addiction, 2007).

Alcohol Use among College Students

Individual students who choose to consume alcohol are at risk for a variety of negative consequences, especially when they choose to engage in high-risk drinking behaviors. Some of the consequences experienced include, poor academic performance (Porter & Pryor, 2007; Presley & Meilman, 1992); arrests, accidents, and deaths due to

drinking and driving (Higson, Heeren, Winter, & Wechsler, 2005; Presley & Meilman); negative health costs (National Center on Addiction, 2007; Perkins, 2002); and participation in unplanned and unprotected sex (Cooper, 2002; National Center on Addiction, 2007). All of these outcomes are reasons for educational leaders to be concerned about student alcohol use.

Even those who choose not to consume alcohol can be affected by students' alcohol-related behaviors. Those living in residence halls (Wechsler, Dowdall et al., 1998) and in neighborhoods surrounding college campuses (National Center on Addiction, 2007) are the most likely to be affected by things like noise, litter, damage to property, physical violence, and assaults.

Colleges and universities are also directly affected by students' alcohol use. Academic performance is hindered when students over consume, leading to lowered grade point averages, attrition, and loss of academic reputation (Martinez, Sher, & Wood, 2008; Perkins, 2002). In addition, dealing with the outcomes of student drinking places strain on financial as well as human capital resources (Engs & Hanson, 1994; National Center on Addiction, 2007).

At-Risk Populations

Although “risky drinking behavior may be the cause or an important contributing factor in many different academic, emotional, physical, social, and legal problems experienced by undergraduates” (Perkins, 2002, p. 92), there are a number of student groups that are at higher risk than most for not only engaging in dangerous drinking behaviors but also for increased negative consequences associated with their alcohol use.

These groups include athletes (Breener & Swanik, 2007; Leichter, Meilman, Presley, & Cashin, 1998), first year students living in residence halls (Wechsler & Nelson, 2008; Zamboanga, Olthuis, Horton, McCollum, Lee, & Shaw, 2009), and members of fraternities and sororities (National Center on Addiction, 2007; Wechsler, Dowdall et al., 1998).

Alcohol Use and Associated Negative Consequences among Greek Members

Although this misuse and abuse of alcohol by athletic team members and first year residence hall students should certainly be of concern to university administrators, the group that seems to be the most problematic includes members of Greek-letter organizations. For many years, subjective information indicating that fraternities and sororities engaged in abusive drinking behaviors had been shared (Cashin, Presley, & Meilman, 1998), but when the study of the role that Greek membership plays in alcohol use began, the research demonstrated that members of these organizations actually do drink more heavily and more frequently than non-Greek students (Wechsler, Kuh, & Davenport, 1996). In a variety of studies conducted over the past three decades, researchers have found these facts to be true (Larimer, Anderson, et al., 2000; Lo & Globetti, 1995; National Center on Addiction, 2007). Students who choose to join Greek letter societies have been shown to escalate not only the amount of their drinking but also the rate of their drinking after becoming a member, especially when compared to their non-Greek peers (Lo & Globetti).

These higher levels of drinking mean that fraternity and sorority members experience negative consequences as a result of their alcohol use at a higher rate than

non-Greek students. Many organizations have come under increasing fire because of parties associated with injuries and even fatalities (Goodwin, 1989). Several different studies over the last thirty years have produced similar statistics related to high rates of experiences with negative consequences (DeSimone, 2009; Larimer, Irvine, Kilmer, & Marlatt, 1997; Strano, Cuomo, & Venable, 2004), and “few college professionals would doubt that, as a group, members of college Greek systems (fraternities and sororities) are at increased risk for negative consequences compared to their non-Greek peers” (Larimer et al, 1997, p. 587). The level at which they drink places them at a higher risk for such things as missing class, poor grades, unprotected sex, violence, and even death (Caron, Mosey, & Hovey, 2004).

Promising Solution

The Alcohol Skills Training Program (ASTP), which has been “shown to significantly reduce drinking rates and associated problems at the one-year and two-year follow up periods” (Task Force, 2002a, p. 17), may prove the most effective tool in reducing high-risk drinking among fraternity and sorority members. Because ASTP provides students assistance in developing strategies to reduce their high-risk drinking behaviors by “teaching students the basic principles of moderate drinking and how to cope with high-risk situations for excessive alcohol consumption” (Task Force, 2002a, p.17), it meets the needs identified by Larimer, Anderson, et al. (2000) in changing drinking behaviors within the Greek system.

Limitations in Existing Research

Very limited research has been conducted related to effective prevention

programs within the Greek community. While there has been a tremendous amount of study which shows Greeks to be one of the most at-risk groups on campus, little work has been done to try to determine how to best address this issue. There has been some research to show that ASTP is effective in preventing high-risk drinking and its negative consequences within the college student population, but much of this research has been conducted by the individuals who developed the prevention programs. This leads to concerns over the bias that might be present within these research efforts. Also, while some of these programs could prove to be effective with fraternity and sorority members, the research has shown that this population has very different dynamics associated with their drinking than other college students. Therefore, more study is needed to determine whether or not this program could be effective with the Greek community.

Statement of the Problem

Studies have been conducted indicating that members of social fraternities and sororities drink at higher rates than their non-Greek peers and are at greater risk for negative consequences associated with their drinking. Several different factors within the Greek culture contribute to these alarming statistics; however, few programs have been designed that address the special needs of this population when attempting to reduce their drinking rates and frequencies. As their drinking contributes to the over-all alcohol-related problems faced by college administrators, educational leaders must find ways to reduce the high-risk drinking behaviors of fraternity and sorority members.

Although there is some research indicating that particular interventions can be effective in reducing college student drinking, few of these studies focus specifically on

fraternity and sorority members. In fact, the limited research studies available that do focus on these groups indicate that many traditional approaches to alcohol education and prevention are actually ineffective with this population. Therefore, it is imperative to find different approaches to address high-risk drinking with Greek students.

One program that does seem to show some promise in reducing drinking rates and frequencies and alcohol-related negative consequences within the fraternity and sorority community is the Alcohol Skills Training Program developed at the University of Washington, but more study is needed to determine its effectiveness. This program is currently being delivered in a one-time, two-hour setting to the members of one men's national fraternity. This organization provides an excellent opportunity to test the level of change that can occur in fraternity members as a result of participation in the program as well as attempt to discover what elements of the program and/or the chapter's culture may lead to this change. This research could provide important information to the higher education community as to how to address the issue of high-risk drinking on university campuses in general and fraternities in particular. Therefore, the purpose of this study was to assess the impact of the Alcohol Skills Training Program on college fraternity members' drinking behaviors and to attempt to ascertain what elements of the program may lead to change.

Research Questions

The researcher in this study considered the following overarching question in this study: Does the Alcohol Skills Training Program result in decreased high-risk drinking behaviors and negative consequences for national fraternity members?

In addition, the following subquestions were used to answer the overarching question:

Subquestion 1: To what extent does ASTP reduce high-risk drinking behaviors in fraternity members?

Subquestion 2: To what extent does ASTP reduce negative consequences associated with high-risk drinking in fraternity members?

Subquestion 3: What aspects of ASTP make the program successful for use with fraternity members in addressing high-risk drinking behaviors and associated negative consequences?

Subquestion 4: Is there an association between a chapter culture that promotes alcohol use and the extent to which the skills taught in ASTP are implemented by participants?

Significance of the Problem

Retention, progression, and graduation rates of students are always a concern at the forefront of the minds of higher education leaders. This issue is even more pertinent in light of recent serious reductions in funding for higher education. More than ever, colleges and universities need tuition dollars and student fees in order to remain operational and provide quality services to their students. Students' alcohol use and associated negative consequences play a major role in student academic success and whether or not they stay enrolled in school. In addition, the time and resources invested in dealing with the effects of student alcohol use are a burden to the institution. As leaders, higher education professionals must acknowledge the role that substance abuse plays in attrition rates as well as try to reduce the financial and staffing strains created as

a result of many students' high-risk drinking behaviors. Results of this study should have implications for higher education leaders as student alcohol-related costs, injuries, health and wellness consequences, academic impact, and deaths are of major concern.

Studies have been conducted which have determined that fraternity and sorority members drink more frequently and in higher quantities than their non-Greek peers. In addition, as a result of their alcohol use, they experience more negative consequences associated with their drinking than other students. Despite this large body of research, there is limited information available to help educational leaders address this important public health concern with members of Greek letter organizations. Although the Alcohol Skills Training Program shows some promise in reducing high-risk alcohol consumption and its associated negative consequences within this population, very limited study exists which has tested its impact with this population. The results of this study may provide additional evidence of an effective prevention strategy in addressing this concern.

The national men's fraternity currently using this program stands to benefit from the findings of this study as the results might be helpful in guiding program improvement. If this program is shown to be effective in reducing high-risk drinking and associated negative consequences with fraternity members, it will also be important to know what about the program is leading to its effectiveness.

Finally, those individuals choosing to participate in the study may benefit directly from the educational programming provided. If ASTP is in fact making a change in high-risk drinking behaviors, those students who take part in the program will quite possibly see a reduction in the negative consequences of their drinking as their alcohol-related

behaviors change.

Research Procedures

Research Design

The purpose of this mixed methods design was to determine the impact of Alcohol Skills Training Program on college fraternity members' drinking behaviors and to establish which aspects of the program lead to change in behavior based upon the views of the individuals to participate in the program. A sequential mixed methods (QUAN-qual) approach was used to examine the stated overarching research question and subquestions. In particular, the researcher used surveys, questionnaires, and interviews to gather data for the study.

Population/Sample

The population for this research was composed of all current undergraduate members of the chapters of the men's national fraternity involved in this study throughout the United States. A purposeful sample of convenience was used for purposes of collecting pre-test and post-test survey data as well as questionnaire data. Three chapters from each category received the ASTP intervention (the experimental group) while the remaining three chapters did not (the control group). The interview sample was purposeful and selected from those chapters that received the ASTP intervention.

Instrumentation

The researcher used the Rutgers Alcohol Problem Index (RAPI) (Center for Alcohol Studies), the Daily Drinking Questionnaire (DDQ) (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001), and the Protective Behavioral Strategies Survey (PBSS)

(Marten, Pederson, LaBrie, Ferrier, & Cimini, 2007) to gather pre-test and post-test data. All of these instruments rely upon participants' self-reported data. The use of these instruments and peak blood alcohol level (BAL) calculations aided the researcher in determining the efficacy of ASTP in changing fraternity members' drinking behaviors and attitudes and in reducing the negative consequences associated with their drinking. However, these instruments did not aid the researcher in determining how chapter culture might impact the efficacy of the program or what elements of the program might lead to behavioral change.

Therefore, additional tools were used to address these issues. The researcher adapted the CORE survey (Presley, Meilman, & Lyerla, 1994) questions related to campus culture to ask participants to evaluate chapter culture. In addition, the Satisfaction Survey currently utilized by University of Washington (J. Kilmer, personal communication, June 17, 2011) in evaluating their alcohol education programming efforts was added to the questionnaire to examine the effectiveness of the program itself. Finally, interview questions were used for follow-up and clarification purposes.

Data Collection

After obtaining permission from the Institutional Review Board at Georgia Southern University, selected chapters participated in the Alcohol Skills Training Program. The pre-test was administered immediately prior to the presentation of the program for those chapters participating in ASTP education. The chapters that did not receive the educational intervention were e-mailed the pre-test via e-mail addresses provided to the researcher through collection from the national fraternity. The national

fraternity has a pool of well-trained ASTP facilitators who deliver the educational program. These facilitators were informed of how to deliver the informed consent information and how to administer the pre-test. For those chapters not receiving the intervention, the informed consent was included in an e-mail and the pre-test was contained in a *SurveyMonkey*TM link provided in the same e-mail. All chapter members were e-mailed approximately four weeks after program completion and provided with a URL link that allowed them to access the post-test and the questionnaire. After compiling all quantitative data, subjects who indicated a willingness to participate in interviews were contacted via phone. Interviews were audio recorded.

Data Analysis

The results of all surveys and questionnaires were coded and entered into the Statistical Package for Social Sciences (SPSS) to calculate descriptive and inferential statistics. Statistical differences among chapters within the sample related to scores on the RAPI, the DDQ, and the PBSS were measured using analysis of covariance (ANCOVA). In addition, correlational analysis was performed to determine if a relationship exists between chapter culture and scores on the DDQ. As this was a mixed method study, interviews were the most appropriate method for collecting the qualitative information from participants (Merriam, 2009). After transcribing all interviews, categories were constructed, sorted, and named in order to assist the researcher in finding the themes present throughout the interviews.

Limitations, Delimitations, and Assumptions

This study was restricted by the following limitations. First, the use of a

convenience sample might not permit generalizability of the study; however, the results will provide a foundation for further research in this area. Second, survey respondents who are asked to provide data about highly sensitive issues such as alcohol use may over or under report their usage (Cashin et al., 1998). However, research has demonstrated that when asked about alcohol use, “self-report measures have demonstrated reasonable levels of reliability and validity” (DelBoca & Darkes, 2003, p. 9). Furthermore, the descriptions used in the surveys and questionnaires were perceptual and relied on interpretation on the part of subjects which means that some of the results could be biased (Cashin et al.). Due to the fact that questions from the CORE survey were modified from their original format to apply to the audience of fraternity members, the validity and reliability do not apply to the questions used in this study. The modifications were, however, reviewed by an expert panel prior to their use in the research. Finally, the interview questions could be viewed to lack validity and reliability as they were developed by the researcher.

There are several delimitations to the study as well. The sample involves only one national men’s fraternity. As this is the only fraternity currently using ASTP as an alcohol education tool with chapter members, a sample of convenience existed. Also, the national fraternity already provides trained facilitators to administer the intervention which aided in the researcher’s decision to proceed with this organization. Only fraternity chapters at public institutions were included in the sample as many private colleges and universities have more restrictive policies related to alcohol use. Therefore, the policies themselves could be what impact students’ attitudes and behaviors

surrounding alcohol use. The determination to include only public institutions was made by the researcher in an attempt to control for this external variable.

As the project involves survey data collection and interviews, the researcher assumed that subjects participating in the study were honest in the answers they gave to all questions. In addition, the researcher assumed, based on the psychometric properties and the previous usage of several of the data collection instruments in earlier studies, that the instruments used in this study measured what they purport to measure.

Finally, the presence of extraneous variables could have impacted the outcome of the study. For instance, an ineffective facilitator could account for why no change occurred in chapter members' drinking behaviors. Chapter member's individual backgrounds and family histories can certainly play a role in how effective an educational intervention might be with participants, and individual differences could alter group data. In addition, factors influencing chapter culture, such as the attitude of the chapter leadership toward the program, could impact the effectiveness of the program. Finally, campus events beyond the control of the researcher, including events such as an alcohol-related student death, could have influenced the results of the study.

Key Definitions

Alcohol Skills Training Program (ASTP): ASTP is a prevention tool designed to educate students about alcohol and to teach skills for avoiding, resisting, and setting limits on alcohol use (Kivlahan, Marlatt, Fromme, Coppel, & Williams, 1990).

Binge Drinking: This type of behavior involves drinking at a rate which has been determined to be 5 or more drinks for men and 4 or more drinks for women in one setting (Wechsler, Dowdall, et al., 1998). Also known as *Heavy Episodic Drinking*.

Biphasic Curve: When consuming alcohol, the body experiences a two-part effect. This is first characterized by a positive, perhaps energized feeling, followed by the introduction of the depressant effects of the alcohol (Miller, Kilmer, et al., 2001).

Blood Alcohol Level (BAL): A person's blood alcohol level is the ratio of alcohol to blood in their blood stream (Miller, Kilmer, Kim, Weingardt, & Marlatt, 2001).

Greek-Letter Organizations: These organizations are single-sex in nature and provide social, leadership, and service opportunities to their members (also referred to as fraternities and sororities) (Gehring & Young, 2003).

Heavy Episodic Drinking: This type of behavior involves drinking at a rate which has been determined to be 5 or more drinks for men and 4 or more drinks for women in one setting (Wechsler, Moykens, Davenport, Castillo, & Hansen, 1995). Also known as *Binge Drinking*.

High-Risk Drinking: High-risk drinking includes those situations that may involve but not be limited to: binge drinking; underage drinking; drinking and driving; drinking when depressed or under emotional stress; combining alcohol and other drugs; and use that results in negative consequences (Brenner & Swanik, 2007).

National Advisory Council on Alcohol Abuse and Alcoholism (NIAAA): This is a body which provides leadership in the national effort to reduce alcohol-related problems (National Institute of Health).

Negative Consequences of High-Risk Drinking: These consequences are the results of drinking that place the drinker and others around them in harms' way, including but not limited to: physical effects; property damage; assault; trouble with law enforcement or other officials; and death (Goodwin, 1989).

Social Norms: The use of social norms is a prevention effort that focuses on communicating the truth about what the majority of college students do in terms of their alcohol consumption (Perkins, 2003).

Standard Drink: Any beverage containing ½ ounces of ethyl alcohol (12 oz. of beer, 4 oz. of wine, 1 oz. of 100-proof liquor) is considered to be a standard drink (Miller, Kilmer, et al., 2001).

Chapter Summary

Alcohol misuse and abuse is cited as one of the major problems facing colleges and universities today. As institutions of higher learning become more dependent on recruiting and retaining students in order to offset reductions in state and federal funding for higher education, ensuring that students' alcohol use is not interfering with their academic performance becomes an even greater concern. While it is well known that fraternity and sorority members are some of the most high-risk drinkers on college campuses, little research has been conducted to determine what means, if any, might be effective in reducing alcohol use among this special population.

The purpose of this mixed methods study was to determine the impact of ASTP on college fraternity members' drinking behaviors and to establish which aspects of the program lead to change in behavior. The study used questions from existing surveys to measure changes in behaviors surrounding alcohol use and explored what elements of the program led to these changes through the development of a questionnaire. In addition, the same questionnaire attempted to determine if any elements of chapter culture impacted the effectiveness of the program. Finally, interviews were used for follow-up and clarification purposes. The research included six chapters of the national fraternity.

Statistical analysis was conducted on the quantitative data using SPSS statistical software, analysis of variance (ANCOVA) was conducted for purposes of exploring multi-group comparison data, and Pearson r was utilized to determine if a relationship exists between chapter culture and implementation of program skills. Interview data was transcribed and categories were constructed, sorted, and named in order to assist the researcher in finding the themes present throughout the interviews. The results of this study will provide valuable insight for the national fraternity as well as for higher education administrators across the United States.

CHAPTER II

LITERATURE REVIEW

High-risk drinking behaviors and the resulting negative consequences among members of fraternities and sororities have been long studied. The research consulted for this review revealed that there is a perception among students that the Greek system will support heavy drinking. Borsari and Carey's (1999) work, while helpful in understanding the scope of the problem, is a review of the research conducted between 1980 and 1998 rather than an independent research project. Other studies that draw this conclusion, however, are critical pieces of research (Caron et al., 2004; O'Connor, Cooper, & Thiele 1996). In addition, Wechsler, Kuh, and Davenport (1996) reported that, "fraternity and sorority house environments appear to tolerate hazardous use of alcohol and other irresponsible behaviors" (p. 272) as a result of sampling 194 colleges and universities across the United States using a 20-page questionnaire. All of this information shows the need for university administrators to find appropriate, effective, and creative ways to address the issue of high-risk drinking within the fraternity and sorority community.

In conducting the search of the literature available on this topic, educational databases such as ERIC, Academic Search Complete, and EBSCOHost were utilized. A variety of search terms were tested, and some of the most productive terms used during the research included "college student alcohol use," "secondary consequences of alcohol use," "academic consequences of alcohol use," "health consequences of alcohol use," "high-risk drinking groups," "college athletes and drinking," "first year residence hall students and drinking," "fraternities/sororities and drinking," "alcohol and

fraternity/sorority membership,” “Greek letter societies and alcohol, “alcohol education programs,” “alcohol prevention programs,” and “Alcohol Skills Training Program.”

As this literature review is an attempt to provide an accurate synopsis of the research work in this area, articles from 1986 through 2011 were included to show the depth of information on the topic. Many of the authors of these articles, such as Henry Wechsler, John Baer, Alan Marlatt, George Kuh, Cheryl Presley, and Mary Larimer, are also considered to be experts in their fields, so it was important to include their point of view even when contained in older articles. Finally, the research on this topic seems to be somewhat cyclical in nature. The problem was originally defined quite a few years ago, and while there have been some updates to those original studies, the majority of the work explaining the problem of high-risk drinking is contained in older articles. In addition, each time a new intervention is proposed to address the issue, college student alcohol use will again resurface as a major research area. For these reasons, works published more than five years ago were included to ensure that the topic was thoroughly researched before undertaking this study.

Several landmark documents were reviewed as well. These included *Wasting the Best and the Brightest: Substance Abuse at America’s Colleges and Universities* (National Center on Addiction, 2007), *A Call to Action: Changing the Culture of Drinking at U.S. Colleges* (Task Force, 2002a), *Reducing Alcohol Problems on Campus: A Guide to Planning and Evaluation* (Task Force, 2002b), *Binge Drinking on America’s College Campuses: Findings from the Harvard School of Public Health College Alcohol Study* (Wechsler, 2000), and *What Colleges Need to Know Now: An Update on College*

Drinking Research (Task Force, 2007). In addition to these documents being considered authoritative on the subject of college drinking within the prevention and higher education communities, they were also cited in many of the other articles reviewed.

This review will begin by exposing the impact that college student drinking has not only on the individual students engaging in alcohol use but also on other students suffering from secondhand consequences as well as the entire college or university campus. It will then explore drinking frequency and quantity within the Greek community compared to that of the general college student population and provide several explanations as to why these higher levels may be present among fraternity and sorority members. It will also include information on the types and severity of negative consequences associated with high-risk drinking behaviors among fraternity and sorority members and contrast these to other undergraduates. Information indicating the special role that chapter culture plays in the drinking patterns of Greek members is provided, and prevention efforts that have proven effective in reducing drinking rates and amounts and negative outcomes from alcohol use will be reviewed in comparison to what efforts show promise within the Greek student population. Finally, the review will discuss limitations to the articles included and will conclude by providing direction for future research in this area of study.

College Students and Alcohol Use

The health, safety, and academic well-being of students are always of concern to higher education leaders. As a result, they must be concerned with college student's drinking behaviors, because when students develop patterns of heavy drinking, they place

themselves at risk for experiencing adverse consequences (Borsari, Murphy, & Barnett, 2007). Recently, The National Center on Addiction and Substance Abuse (CASA) released a report that included information from a telephone survey of current college students as well as analyses from six existing data sets and over 800 articles written about substance abuse on college campuses. This research revealed some alarming statistics. For instance, the researchers at Columbia found that between 1993 and 2001, the number of students involved in alcohol-related injuries rose 38%, the amount of students who frequently binge drink rose 16%, the number of students reporting getting drunk 3 or more times in the past month went up 26%, and the percentage of students who drink to get drunk grew 21% (National Center on Addiction, 2007).

The findings included in this important report are supported in other research related to alcohol use and college students. Additional studies have shown that two-thirds of students report drinking in the past month (Johnston, O'Malley, & Bachman, 2004), that the average college student consumes about 5 drinks per week, and as many as 21% of those students report drinking 3 times per week or more (Southern Illinois University, 2008). Wechsler's (2000) work with the Harvard School of Public Health College Alcohol Study demonstrated that 72% of college students are frequent drinkers and 42% of underage students would be classified as binge drinkers. More recent research supports Wechsler's work and shows that the prevalence of heavy episodic drinking has remained fairly constant over the last three decades (O'Malley & Johnston, 2002; Johnston, O'Malley, Bachman, & Schulenberg, 2004). The annual account from the Core Institute in 2008 reported that 46% of students had engaged in binge drinking

and 63% drink 4 to 5 drinks almost every day (Southern Illinois University, 2008). These startling statistics, coupled with the fact that alcohol use is correlated with academic failure, injuries and assaults, property damage, and legal consequences, show the reasons why university administrators should be concerned with the frequency and quantity of alcohol being consumed by college students.

Individual Consequences from Alcohol Use

Students who choose to consume alcohol, especially those that engage in high-risk drinking, are at risk for a variety of negative consequences that may result from their use. They may experience academic difficulties; be involved in accidents or suffer legal costs associated with driving under the influence; endure a range of health consequences, from minor annoyances such as headaches or nausea to more serious issues such as an impaired immune system or death; or engage in unplanned or unprotected sex.

Academic consequences. As students are at college first and foremost to be successful in the classroom, the impact that their rate, frequency, and quantity of drinking have on their academic performance is of tremendous importance to university faculty and administrators. We know from research that students who report drinking heavily tend to have lower GPAs than their non-drinking or more moderate drinking peers (Kremer & Levy, 2003). Porter and Pryor's (2007) work showed that the probability of maintaining an A grade point average decreases as a student's engagement in heavy drinking increases. This fact was supported by research reports that indicate that students who consume seven or more drinks per week have an average GPA of D or F (Presley & Meilman, 1992). This consequence is due primarily to the fact that students who engage

in high-risk drinking typically spend less time studying (Williams, Powell, & Wechsler, 2003). Powell, Williams, and Wechsler (2004), found that with each additional drink a student consumes, the likelihood that they will miss class increases by 9% and their probability of getting behind in academic work increases by 5%.

This lowered academic performance could be accounted for due to the fact that of students who report drinking, 31% admit to having missed a class as a result of their alcohol use and 23% state that they have performed poorly on a test due to their consumption (Presley, Meilman, & Leichliter, 2002). Just the time required to recover from a night of drinking can impact a student's ability to study and perform well in the classroom (Porter & Pryor, 2007). In addition, alcohol use has been linked to difficulty with memory, problem solving, and abstract thinking (National Center on Addiction, 2007). According to Presley, Meilman, and Leichliter (2008), 28% of students report having had memory loss in the last year. The results reported in the CASA study indicate that students who engage in binge drinking are more likely to be suspended from school, while almost 51% have gotten behind in their schoolwork and 68% report missing class (National Center on Addiction, 2007).

Drinking and driving. Another major concern related to college student alcohol use is the high prevalence of drinking and driving that takes place as this behavior can injure not only the drinker but also innocent drivers and pedestrians as well. Approximately 22% of college students reported having driven while under the influence (Southern Illinois University, 2008), and each year more than 1,400 students die from alcohol-related injuries which are primarily due to car crashes (Higson, Heeren, Winter,

& Wechsler, 2005). When compared with other populations, college students have the highest rates of drinking and driving of any age range (National Center on Addiction, 2007). These numbers become even more concerning considering that Blood Alcohol Level (BAL) is not measured in every automobile death (Higson et al.). Therefore, even more alcohol-related vehicular deaths could be occurring each year than have even been measured by the research.

Health consequences and alcohol-related fatalities. Incidents of alcohol poisoning and other serious health issues due to misuse of alcohol are an all too common reason for students to report either to campus health centers or local emergency rooms (Perkins, 2002). While deaths resulting from alcohol consumption are what make local and national media headlines, general health issues such as headaches and stomach problems as well as mental health concerns such as depression and anxiety also result from student drinking (National Center on Addiction, 2007). Some limited study has also shown that students who engage in heavy drinking on a regular basis are more likely than their more moderate drinking peers to have upper respiratory problem (Engs & Aldo-Benson, 1995). This may be because long term drinking can lead to reduced ability to fight infections and illnesses (Perkins, 2002).

Students who drink also report their own health to be poor in higher levels than their non-drinking peers (National Center on Addiction, 2007). More than 62% of students who report drinking recount having experienced a hangover in the past year, and 54% report that their alcohol use has caused them to become nauseated or vomit (Southern Illinois University, 2008). Perhaps one of the most disturbing facts related to

students' health as a consequence of their drinking is the indication that about 1 in 4 college students meet the diagnostic criteria for substance abuse or dependence (Knight, Wechsler, Kuo, & Siebring, 2002).

According to CASA, from 1993 to 2001, there had been a large increase in the number of students injured as a result of their drinking and student deaths resulting from alcohol-related injuries increased 6% from 1998 to 2001 (National Center on Addiction, 2007). Approximately 6% of students report some sort of unintentional self injury resulting from their drinking each academic year (Southern Illinois University, 2008). While some of the data related to the link between suicide and alcohol appears to be anecdotal (Perkins, 2002), other studies show that binge drinkers are also more likely than other students to have considered attempting suicide or made a suicide attempt than other students (National Center on Addiction, 2007). Additional research has revealed that about 1% of college students have actually attempted suicide while they have been under the influence of alcohol (Southern Illinois University, 2008).

Unplanned and unprotected sex. Further health consequences can result when students make poor decisions about sexual activity when consuming alcohol. Students, who engage in drinking activities, especially at high levels, are more likely to engage in unplanned and unprotected sexual activity. This is due to the fact that as the level of drinking increases the likelihood that a person will engage in sexual activity increases as well (Cooper, 2002). When alcohol is involved in a potential sexual situation, such as a date, the level of alcohol consumed can increase the risks that individuals are willing to take and decrease their conversations about the risks associated with their behavior

(Cooper). Of students who report drinking, approximately 21% say that they engaged in unplanned sexual activity while under the influence of alcohol (National Center on Addiction, 2007). Approximately 8% of those having engaged in sexual activity while drinking report that this activity was unprotected (Higson, Heeren, Winter, & Wechsler, 2005), due to the fact that students are less likely to use protection when the sexual activity was unplanned (Klein, Geaghan, & MacDonald, 2007).

Secondhand Consequences from Alcohol Use

Alcohol can disrupt the lives of college students, even if they choose not to drink. In addition faculty, staff, and community members may be impacted by the action of students who consume alcohol. Those that live in on-campus housing and in neighborhoods close to college campuses are the most likely to be effected by the actions related to alcohol use, such as noise, litter, and violence.

Campus environment. Although all students should “expect and deserve a safe environment in which to study and socialize” (Wechsler, 2000, p. 2), even students who do not drink are impacted by alcohol use on college campuses. This is yet another reason for administrators’ concerns regarding student alcohol use. Research has shown that those living in residence halls are at the greatest risk of experiencing secondhand effects of others’ drinking (Wechsler, Dowdall, et al., 1998). Many students, especially those living in on-campus residence halls, are greeted by the remnants of others’ alcohol use in the form of vomit in public locations and litter (Perkins, 2002). Students also report that the noise generated by intoxicated students often disrupts their sleep and study (Wechsler, Lee, Hall, et al., 2002). According to Wechsler (2000), 43% of students have

experienced this type of interruption. Other common secondhand effects include having to care for a friend or roommate who has had too much to drink and being insulted by another student who has engaged in heavy drinking (Wechsler, Lee, Hall, et al.). More than 43% of students report having had to “babysit” an intoxicated friend after a night of heavy drinking (Wechsler, Moeykens, et al., 1995).

The negative effects of alcohol can also be felt by community members, campus visitors, faculty, and staff (Perkins, 2002; Higher Ed Center, 2008), with those who live closest to campus the most likely to experience incidents of public drunkenness, vandalism, noise, and loitering (Wechsler, Lee, Hall, et al., 2002). There is a definite relationship between proximity to a college campus and these experiences (Wechsler, Lee, Hall, et al.). Of those living within one mile of campus, 79% report encountering problems with litter, 71% have been disturbed by noise, 32% have witnessed public episodes of vomiting or urination, and 28% having been the victim of fighting or an assault (Wechsler, Lee, Hall, et al.).

Physical violence. University administrators must also be concerned about the acts of violence against other students as incidents of interpersonal violence increase when students are under the influence of alcohol. More than 31% of students who report drinking also report that they have gotten into an argument or fight when they have consumed alcohol (Southern Illinois University, 2008). Hate-related incidents are also more likely to occur when the perpetrator is under the influence of alcohol (Perkins, 2002). Despite the fact that research has shown that 13% of students have been pushed, hit, or assaulted by someone who was drinking, it is somewhat difficult to determine the

exact rate of physical violence that occurs due to alcohol use as oftentimes studies relates to drinking and violence combine both verbal and physical incidents as “fighting” (Perkins, 2002).

Unwanted sexual advances and sexual assaults. While individual students may make poor decisions regarding their own sexual conduct, sometimes those decisions impact other students as well. Forced sexual activity is frequently associated with high levels of alcohol use (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004), because alcohol causes impairment in cognitive functioning and messages regarding inappropriate sexual advances may be dulled (Perkins, 2002). Students completing the Core Survey indicated that more than 9% have experienced some sort of unwanted sexual advance from another student who had been drinking (Southern Illinois University, 2008). An additional 2% reported that they themselves have taken advantage of someone else as a result of their own drinking (Southern Illinois University).

Institutional Consequences from Alcohol Use

In addition to being concerned about individual consequences resulting from alcohol use, university administrators also have cause for concern related to the institution itself. High-risk drinking can impact drop-out rates, negatively influence academic reputation, and place financial and staffing burdens on the campus because the “consequences of excessive drinking interfere with the academic and social missions of colleges and universities” (Carey, Carey, Maisto, & Henson, 2006, p. 943).

Attrition rates. Just as drinking impacts individual students’ academic performance, the effects of alcohol use on student accomplishments also have negative

implications for college and university campuses. According to the National Center on Addiction (1994), “alcohol is implicated in as many as 41% of academic problems and 28% of all dropouts” (p. 21). As tuition dollars come directly to individual institutions, even those included within larger state-wide systems, retention, progression, and graduation rates are very important to administrators. Therefore, the role that alcohol plays in attrition should be of concern to higher education professionals. Although there have been very few large-scale research studies to provide empirical support for the connection between heavy drinking and college attrition rates (Martinez et al., 2009), there is limited support that shows that alcohol use does contribute to students’ academic failure which ultimately impacts campus dropout rates (Rau & Durand, 2000).

Additional research shows that students convicted of Driving Under the Influence (DUI) are more likely to withdraw from school (Thompson & Richardson, 2008).

Stress on financial resources and staff. Students’ alcohol use places strain on the financial resources of the university as well as on the staff that must deal with the negative outcomes of their drinking. First and foremost, when students do not remain in school due to their alcohol-related problems, the institution loses tuition dollars (Perkins, 2002). Attrition rates can have a negative impact on the reputation of the college or university, leading to future lost revenue when prospective students fail to enroll (Perkins, 2002). In addition, high legal costs associated with the defense of alcohol-related injuries and deaths can place a financial burden on the institution (Perkins, 2002). Finally, institutions must absorb the financial costs associated with damage caused by intoxicated students (Perkins, 2002). As about 6% of students report

engaging in some sort of property damage while they are drinking (Southern Illinois University, 2008), these costs can become quite high over a period of an academic year. Institutions of higher education that fail to act related to alcohol misuse and abuse among students place themselves at risk of damaging their academic reputation and spending millions of dollars on everything from repairing damaged property to being named as a defendant in major lawsuits (National Center on Addiction, 2007).

In addition to the financial implications, many different staff members may be involved in an alcohol-related incident on campus. This can range from security staff responding to complaints to residence life staff dealing with damage in the hall to student conduct staff adjudicating conduct code violations committed by students under the influence to counseling center staff coping with emotional distress in the times that death occurs from student drinking (National Center on Addiction, 2007; Perkins, 2002). Approximately 13% of students who drink report experiencing some sort of trouble with campus police as a result of their alcohol use (Southern Illinois University, 2008), and the number of campus arrests associated with alcohol use increased 21% from 2001 to 2005 (National Center on Addiction, 2007).

High-Risk Drinking Populations

While many college students consume alcohol and a large number of those engage in high-risk drinking behaviors, there are certain groups on campus that are at a greater risk to engage in these behaviors and experience negative consequences as a result of their alcohol use. These groups include student athletes, first-year students who reside in residence hall, and members of social Greek organizations.

Athletes. Students who are involved in college athletics tend to drink more frequently and in higher amounts than their non-athletic peers (Martens & Martin, 2010; Cashin et al., 1998). Although drinking patterns among different athletic teams may vary, the majority of studies involving college athletes present a picture of athletes in general rather than disaggregating the information by sport. As a result of their high levels of drinking, athletes tend to experience more negative consequences associated with their drinking (Leichliter et al., 1998; Turrise, Mallett, & Mastroleo, 2006). This may be due to the fact that athletes engage in risky behaviors such as “driving under the influence, riding with someone under the influence, having a greater number of sexual partners, failure to use contraceptives, and involvement in physical fights” (Brenner & Swanik, 2007, p. 267), more than non-athletes.

First-year residence hall students. Although many students arrive at college having already frequently engaged in binge drinking, an almost equal number begin their involvement with high-risk alcohol use after arriving at college (Bachman et al., 2002; Wechsler & Nelson, 2008). This can be attributed, in part, to the transition into college life itself with its independence and new social possibilities; but where a student lives can play a major role in how much he or she drinks in college (Zamboanga et al., 2009). In addition, the normative behaviors that students perceive from their hallmates can influence their drinking behaviors (Larimer, Anderson, et al., 2000). Students who commute to campus from their parents’ homes have been found to be the lightest drinkers while those who live in on-campus residence halls tend to drink at much riskier levels (Presley et al., 2002), and the number of times a student engages in binge drinking is

higher for on-campus students than those living off-campus (Borsari, Murphy, & Barnett, 2007; Presley et al., 1993).

Fraternity and sorority members. Fraternities and sororities are frequently associated with the extreme drunkenness portrayed in movies like *Animal House*, *Old School*, and *House Bunny* (DeSimone, 2007); and national research indicates that fraternity and sorority members drink more than their non-Greek peers (Cashin, Pressley, & Meilman, 1998; McCabe et al., 2005, Wechsler et al., 2002). Because of their high-risk use of alcohol, educational leaders must seek out ways to effectively intervene in hopes of reducing the frequency and quantity of Greek members' drinking. Reducing alcohol use among this population could have positive effects on the overall individual, secondhand, and institutional effects of high-risk drinking within the higher education community.

Frequency and Quantity of Use among Fraternity and Sorority Members

A report by the National Center on Addiction and Substance Abuse at Columbia University (CASA) (2007) stated that alcohol is the primary substance used and abused by those in the Greek system, and drinking is frequently believed to be a regular activity among members of fraternities (DeSimone, 2009). This could be due to the fact that fraternities are often perceived to be the centers of campus drinking (Goodwin, 1989). As fraternities and sororities are commonly linked to the parties they host, at which alcohol is regularly available to students, Greek houses are often known as party houses and havens for heavy drinking (Caron et al., 2004). Administrators, faculty, and students alike tend to believe that fraternities contribute to, if not encourage, dangerous drinking

practices (Borsari & Carey, 1999). Research has supported this belief by revealing that members of Greek organizations engage in heavy episodic drinking more frequently than their non-Greek counterparts (Larimer, Irvine, Kilmer, & Marlatt, 1997; McCabe et al., 2005; Scott-Sheldon, Carey, & Carey, 2008).

Binge drinking or heavy episodic drinking, which is defined as the consumption of 5 or more drinks in one setting for men and 4 or more drinks in one setting for women, rates are much higher for fraternity and sorority members. In a study conducted by Wechsler, Kuh, & Davenport (2009), heavy drinking episodes in the previous 2 weeks were reported by 86% of Greek house residents and 45% of students in general. Similar results were found by CASA, when researchers at the Center reported that 64% of Greek members participate in binge drinking while only 37% of non-members engage in the same behavior (National Center on Addiction, 2007). Therefore, if university administrators intend to make a change in their alcohol-related problems (Wechsler, Dowdall, et al., 1998), “they must drastically change the drinking culture of their fraternities and sororities” (Caudill et al., 2006, p. 142).

Issues of Greek Chapter Culture that May Contribute to High Levels of Use

The recurring themes surrounding Greek membership and alcohol misuse and abuse have lead researchers to try to determine why fraternity and sorority members tend to drink more frequently and at a higher rate than their non-Greek peers. Several different explanations can be found in the literature.

Selection process. The selection process for joining a Greek organization, in and of itself, partly accounts for these behaviors (Borsari & Carey, 1999; Ham & Hope, 2003;

Park, Sher, Wood, & Krull, 2009). As Caudill et al. (2006) reported, “heavy drinking has become a normative part of fraternity culture, a phenomenon that may selectively attract heavier drinking college students” (p. 141). Because the recruitment process is one of self-selection, in which students select and join fraternities that share similar views and values, including the use of alcohol (Borsari & Carey), many students who are already heavy drinkers when they arrive on campus may search for groups that will continue to support this behavior (DeSimone, 2007; O’Connor, Cooper, & Thiele, 1996). As many of these new students believe that the fraternity system is such an environment (Borsari & Carey), they join Greek organizations in higher numbers than moderate or non-drinking students (DeSimone, 2009; Larimer, Irvine, et al., 1997; Task Force, 2002a).

New member period. After a student joins a fraternity or sorority, the new member education period and process may also contribute to the rate and frequency of alcohol consumption among members. Within Greek organizations, peer pressure has been found to be stronger than in other students groups, which can directly influence choices regarding drinking behaviors (Borsari & Carey, 1999; Borsari, Murphy, et al., 2007). New members “must learn house rituals, demonstrate loyalty to fellow members, and earn a place in the organization” (Borsari, Murphy, et al., p. 8), and this bonding is often accomplished through the use of alcohol (Kuh, 1993). New members quickly learn what will be accepted in terms of frequency, setting, and amount of alcohol within the organization (Wall, Reis, & Bureau, 2006; Wechsler, 1996), and many new members feel strong pressure to drink if they want to be accepted and well-liked (Borsari & Carey)

during their pledge period, which highlights the social advantages associated with alcohol (Borsari & Carey; Sher et al., 2001). Many Greek organizations actually take on the function of “enabler” in relationship to the pledges and their drinking behaviors (Lo & Globetti, 1995). Because such groups are perceived as providing enhanced opportunities to party, as well as encouraging the unregulated use of alcohol, the enabling of heavy alcohol use is continued (Borsari & Carey).

Opportunity and availability. Once a student is a member of a Greek-letter society, continued inappropriate use of alcohol persists unabated (Scott-Sheldon et al., 2008; Wechsler, Kuh, & Davenport, 1996) due to the parties hosted by these organizations which give students increased occasion to drink as well as greater access to alcohol. In addition to the increased opportunity to drink and availability of alcohol provided by fraternities and sororities (Borsari & Carey, 1999; Larimer, Anderson, et al., 2000; Read, Wood, & Capone, 2005), the segregationist nature of these groups can help to shield members from scrutiny and exposure when they are engaging in high-risk behaviors (Borsari & Carey, 1999; Caron, et al., 2004). Fellow chapter members often act as a buffer for each other against the harmful effects of overdrinking (Borsari & Carey; DeSimone, 2007). Rather than seeing alcohol misuse as a problem, these students often care for each other when negative consequences from drinking result and view alcohol simply as a vehicle for friendship, social activity, and sexual opportunity (Cashin et al., 1998).

Peer norms. As peer reference groups play a large role in actual drinking behaviors (Carter & Kahnweiler, 2000), the large amount of time that fraternity and

sorority members spend with each other means that these students have greater chance to influence each other (Caudill et al., 2006). Greek members, like all college students, tend to overestimate how much their peers are drinking (DeSimone, 2007), and they may make decisions related to their own alcohol use as a result of what they believe to be normative drinking patterns among chapter members. Because social approval is highly desirable in tight-knit groups like fraternities and sororities, members of Greek organizations may conform to behaviors they believe to be acceptable among their peers (Larimer, Turner, Mallett, & Geisner, 2004). This factor may contribute to the increased drinking frequency and quantity seen among members of fraternities and sororities.

Reputation. There is often a positive view of organizations that have heavy drinking reputations. Engaging in heavy drinking can actually contribute to a house being positively associated with social status and general prestige (Borsari & Carey, 1999; Larimer, Turner, Mallett, et al., 2004). Larimer, Irvine, et al. (1997) reported that specific organizational attributes may have more to do with drinking behaviors in a particular organization than simply being a part of the Greek system. They found that “men in fraternities with observer-rated reputations for high alcohol use view their house reputation more positively along a number of other dimensions, such as social reputation, attractiveness of members, wealth, and sexual activity” (Larimer, Irvine, et al., p. 595). In addition, both fraternity and sorority members in organizations with reputations for elevated consumption rates believed that this level of drinking was acceptable (Larimer, Irvine, et al., 1997; Sher et al., 2001). The actual environment within a fraternity house may create a culture that increases members’ positive expectancies of alcohol use (Reis

& Trockel, 2003).

Chapter leadership. The leadership of the chapter may influence how much other members drink. Oftentimes, the leaders within the organization drink at higher levels than the rest of the membership and may therefore be contributing to the high-risk drinking culture within the chapter (Cashin et al., 1998; Larimer, Turner, Anderson, et al., 2001). In other words, the leaders set the norm for what is expected within the chapter regarding alcohol use (Higher Ed Center, 2008). This is due, at least partially, to the fact that it has been shown that “modeling influences may be a dominant factor in the development and maintenance of abusive drinking patterns” (Faulkner, Alcorn, & Garvin, 1988, p. 14). Therefore, in order to change the culture associated with high-risk drinking in fraternities and sororities, there must be a commitment on the part of the formal leaders within the chapter to do so (Kuh, 1993).

Negative Consequences Experienced among Fraternity and Sorority Members

Due to their high-risk drinking rates, fraternity and sorority members experience more negative consequences associated with their drinking than their non-Greek peers (McCabe et al., 2005). Seventy-two percent of fraternity members and 66% of sorority members experienced hangovers after drinking while only 57% and 50% respectively of their non-Greek peers reported suffering the same outcome (Cashin et al., 1998). Wechsler, Kuh, and Davenport (1996) found similar results quite a few years later. According to their study, 74% Greek men and 67% of Greek women reported experiencing a hangover as a result of drinking while only 57% of non-Greek men and 50% of non-Greek women reported the same consequence. Comparable statistics were

described for consequences such as missing a class, engaging in unplanned sexual activity, getting hurt or injured, and driving while intoxicated (Lo & Globetti, 1995; Wechsler, Kuh, & Davenport, 2009). For instance in Wechsler, Kuh, and Davenport's (2009) study, 44% of fraternity men and 37% of sorority women report having missed a class due to drinking and another 31% of men and 22% of women engaged in unplanned sexual activity when they had been consuming alcohol. These studies demonstrate how serious the issue of alcohol misuse and abuse within the Greek system really is.

Prevention Efforts Proven Effective with General Student Population

In order for educational leaders to address the problems associated with alcohol use within the Greek system, they must look toward the prevention community for solutions. Some efforts which have shown promise in addressing this issue include helping students to develop skills to reduce their drinking risks, clarifying drinking norms, motivational interviewing, and challenging alcohol expectancies; and when these tools are combined in a program entitled, the Alcohol Skills Training Programming, their effectiveness has been shown to increase.

Risk reduction strategies. One method that has recently gained a great deal of attention for its efficacy in changing college student drinking behaviors is the introduction of self-protective or risk reduction strategies that can be employed by the student on specific drinking occasions (Benton et al., 2004; Delva et al., 2006; Martens, Ferrier, et al., 2005). Protective behavioral strategies are defined as “specific cognitive-behavioral strategies that can be used by an individual to help reduce his or her alcohol use and the negative consequences resulting from such use (Martens, Pederson, LaBrie,

Ferrier, & Cimini, 2007, p. 308). Because students often do not have the skills to refuse offers of alcohol (Gilles, Turk, & Fresco, 2006), incorporating teaching these techniques into alcohol education programs has been shown to reduce both the amount of alcohol consumed on a given occasion and the negative consequences associated with drinking (Martens, Ferrier, et al., 2005; Martens, Pederson, et al., 2007)

Correcting normative beliefs. Because students' behaviors related to alcohol are often influenced by not only observations of peers but also by perceptions of peers' alcohol use, correcting misperceptions can be key in changing high-risk drinking (Larimer, Turner, et al., 2004; Reis & Riley, 2000). Those students who drink the heaviest often tend to believe others' attitudes toward high-risk drinking to be very lenient (Perkins & Berkowitz, 1986), and students who overestimate peer norms are more likely to consume alcohol at higher levels themselves (Agnostinelli, Brown, & Miller, 1993). Therefore, students who receive norms clarification messages are likely to decrease the frequency of their drinking (Neighbors, Larimer, & Lewis, 2004), change their attitudes about drinking norms (Peeler, Far, Miller, & Brigham, 2000), demonstrate reductions in their peak BAC (Walters, Vader, & Harris, 2007), and reduce the number of drinks consumed per week (Neighbors et al.).

Brief motivational interviewing. Another technique that shows promise in changing college students' drinking behaviors is the use of brief motivational interviewing. Motivational interviewing is a counseling approach that creates a supportive, nonjudgmental environment in which students can explore behavioral change (Miller & Rollnick, 2002). Students are not engaging in high-risk drinking due to lack of

knowledge about its consequences, rather educational efforts need to focus on the motivational factors associated with their alcohol use (Larimer & Cronce, 2002). Therefore, the use of Brief Motivational Interviewing (BMI), which addresses these factors, has been shown to reduce consumption and participation in high-risk drinking behaviors (Borsari et al., 2007). These approaches, which focus on “expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy” (Michael, Curtin, Kirkley, Jones, & Harris, 2006, p. 630), have shown promise as a prevention tool with college students, and are even effective with the heaviest of drinkers (Carey, Henson, Carey, & Maisto, 2010). Students who have participated in programs that incorporate BMI have been shown to have reduced their drinking rates one month following the intervention (Carey et al., 2010).

Challenging alcohol expectancies. Alcohol expectancies, which are students’ beliefs about the positive or negative effects that alcohol might have on them, have been shown to play a role in the quantity and frequency of their drinking (Gilles, Turk, & Fresco, 2006). Often, those students who engage in high-risk drinking are doing so because they have more positive expectancies about alcohol use than their non-drinking or more moderate drinking peers (Ham & Hope, 2003). Students exposed to information about alcohol expectancies reduced the number of drinks consumed per week (Musher-Eizenman & Kulick, 2003) and incidents of heavy episodic drinking (Weirs, van de Luitgaarden, van den Wildenberg, & Smulders, 2005)

The Alcohol Skills Training Program

The Alcohol Skills training program, which combines many of the effective

prevention elements mentioned previously into one intervention, “engages students who would otherwise ‘just say no’ to alcohol programs that emphasize complete abstinence” (Miller, Kilmer, et al., 2001, p. 183). Many of the programs offered in an attempt to change college students’ drinking focus only on increased knowledge, but the goal of ASTP is to give students the tools to actually change their behaviors through its primary use of motivational interviewing techniques to move students through the stages of change (Miller, Kilmer, et al., 2001).

In 2002, the Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism (NIAAA) produced a report geared at changing the culture of college student drinking. This report provided higher education professionals with a framework to guide their prevention efforts. Within this “3-in-1 Framework,” only 3 strategies have been shown to be effective in reducing the frequency and quantity of alcohol consumption and its negative consequences among college students (Task Force, 2002a). These strategies include “combining cognitive-behavioral skills with norms clarification and motivational enhancement intervention, offering brief motivational enhancement interventions in student health centers and emergency rooms, and challenging alcohol expectancies” (Task Force, 2002a, p. 25). The effectiveness of these strategies has been supported in additional research and recommended to college campuses through a variety of official reports (Task Force, 2002b).

The report further stated that only one program, the Alcohol Skills Training Program (ASTP), has been successful in combining these components into a program for college student administration (Task Force, 2002a). ASTP attempts to change drinking

behaviors by teaching students skills to moderate their alcohol use (Fromme, Marlatt, Bear, & Kivlahan, 1994). The program, which originally began as eight 90-minute sessions, has been shortened by researchers and shown to be effective in two one-hour sessions (Fromm et al., 1994; Kivlahan, Marlatt, et al., 1990; Palmer, 2004). The effectiveness of the program has been tested in several different studies and been shown to reduce self-reported drinking (Baer, Kivlahan, Fromme, & Marlatt, 1989; Kivlahan, Coppel, Fromme, Miller, & Marlatt, 1990; Palmer).

However, it is important to note that all of these studies have been conducted at the University of Washington by researchers who helped develop the program curriculum. Therefore, the data could be skewed by personal bias. In addition, the program's effect on the students at this particular university may not be generalizable to other campuses in other parts of the country. These initial studies were also conducted more than 15 years ago. Finally, the program's impact on high risk groups, such as fraternity and sorority members, has only been studied once.

Prevention Efforts Proven Ineffective with Fraternity and Sorority Members

Although there is evidence that certain programs seem to be more effective at reducing high-risk drinking within the general college student population, these same programs have not produced similar results within the Greek community. Traditional approaches, which have included things such as “alcohol awareness weeks, wrecked car exhibits, and educational campaign” (Michael et al., 2006, p. 629), do not seem to have had any impact on changing the alcohol use patterns of Greek members. Research has shown that fraternities contribute to the maintenance of excessive drinking behaviors at

colleges and universities, and that what is typical for most college students may not be significant to fraternity and sorority members (Carter & Kahnweiler, 2000). Therefore, different strategies must be employed to address the needs of this population in order to influence the impact that chapter culture can have on members' drinking behaviors (DeSimone, 2007), and these strategies should focus on the environmental factors that contribute to high-risk drinking within social Greek-letter organizations (Park et al., 2009).

Prevention Efforts that Show Promise with Use within the Greek System

Administrators must begin to explore ways to incorporate those programs that do have the possibility of reducing high-risk drinking within the Greek community if they want to make an impact on the overall health of their campuses. The contextual factors that influence Greek members' alcohol use must be addressed in order for prevention efforts to be effective with this population (Larimer, Anderson, et al., 2000; Turner, Larimer, & Sarason, 2000). Members of fraternities and sororities may benefit from programs that challenge their expectancies about alcohol use and clarify their norms associated their peers' drinking while learning how to employ moderate drinking strategies (Larimer, Anderson, et al., 2000). In addition to their effectiveness with the general college student population, prevention efforts that combine these techniques have been shown to be very effective at changing drinking behaviors among Greek members (Larimer, Anderson, et al., 2001).

Small group social norms. According to Sher and associates (2001), "peer alcohol norms at least partially account for the relation between Greek membership and

heavy drinking” (p. 49). The perception among Greek members is that their own drinking rates are higher than those of the average college student, and as students are most influenced by the people within their own social circle sharing chapter specific normative data with fraternity and sorority members has shown some change in behavior (Berkowitz, 2001). Although fraternity and sorority members do drink more than their non-Greek peers, their perceptions of how much their Greek peers drink are still often much higher than actual behavior. If these misperceptions can be corrected, high-risk drinkers often reduce their own drinking to fall more in line with organizational norms (Perkins, 2003; Park et al., 2009). Therefore, the use of small-group social normative information has shown some success in reducing fraternity and sorority members’ alcohol use. Providing chapter specific social norms messages can help to alter expectancies related to alcohol use among members (Wall et al., 2006).

Because the perception among Greek members is that their own drinking rates are higher than those of the average college student, efforts that attempt to correct students’ perceptions’ of reference group drinking norms could help in reducing fraternity and sorority members’ drinking behaviors (DeSimone, 2007). Students who believe that drinking is an important part of the chapter’s social life are more likely to drink at high-risk levels than those that do not (Wall et al., 2006), therefore, when small group social normative messages are combined with personalized feedback as a component of the program, students have been shown to have more realistic perceptions about alcohol use within their own organizations and exhibit behavior changes related to their drinking behaviors (Maurer & Gillian, 2006).

Social learning theory. Due to the special role that leaders can play in the establishment of drinking norms within a chapter, researchers have recommended targeting them to examine the effects that their individual behavior has on group behavior (Borsari & Carey, 1999; Cashin et al., 1996). Leaders must be engaged in the prevention work conducted by higher education professionals in order to impact overall alcohol use within the chapter (Borsari, Hustad, & Capone, 2009). Utilizing Social Learning Theory in working with Greek leaders may show them the impact that modeling has on actual behaviors with their organizations' members (Larimer, Anderson, et al., 2000; Larimer, Turner, Anderson, et al., 2001).

Bandura's Social Learning Theory, which emphasizes the impact that group dynamics have on individual behavior, can be utilized to help Greek leaders see the role that their own behavior plays in the group norms, modeling, and support of environmental risk factors associated with alcohol use within their organizations (Capone, Wood, Borsari, & Laird, 2007; Larimer, Anderson, et al., 2000). Additionally, affirming healthy drinking behaviors and assisting in determining appropriate standards for alcohol use can help to reduce high-risk drinking among Greek members (Hunnicut, Davis, & Fletcher, 1991). Providing members with knowledge about how to reduce their consumption, including how to self-regulate their usage, can improve the effectiveness of alcohol education programs for Greeks (Wall et al., 2006), and teaching students to monitor the number of drinks they consume on a typical drinking occasion is a popular method of self-regulation (Delva et al., 2004).

Alcohol Skills Training Program and Fraternity and Sorority Members

Due to the belief that “effective interventions for Greek drinking should target motivation to change, increased accuracy of norms and perceptions, decreased peer influence to drink heavily, decreased perceptions of alcohol’s socialization value, and increased visibility of light or non-drinking peers” (Larimer, Turner, Anderson, et al., 2001, p.371), the use of the Alcohol Skills Training Program may be an effective intervention with fraternity and sorority members. Because this program combines evaluating the negative experiences associated with personal use with attempting to challenge normative drinking behaviors while using motivational interviewing techniques, it effectively addresses all of the unique cultural factors that impact alcohol use within the Greek system (Larimer, Turner, Anderson, et al.). In addition, ASTP provides students with moderate drinking guidelines as well as information on how to incorporate these into their lifestyles (Kivlahan, Coppel, et al., 1990). Finally, the program is designed for group administration, which makes it ideal for use with fraternities and sororities. Although there are some limitations to the research related to this intervention (Larimer, Turner, Anderson, et al.), there is promise in its use with members of social Greek-letter organizations.

In 2005, Dennis conducted a study with 148 members of a men’s national fraternity to determine the efficacy of the Alcohol Skills Training Program in reducing drinking rates among college fraternity men. After the completion of the ASTP program participants “anticipated consuming alcohol fewer nights per week and less alcohol over the weekend” (Dennis, 2005, p. 128). In addition, students participating in the study

responded that the program would “make them think differently about their drinking and . . . had given them insights into reducing risks while drinking” (Dennis, p. 129).

Although the results of this study seem to show promise in terms of its effectiveness in reducing alcohol use and its associated negative consequences with fraternity men, there are some limitations to the study as well.

While ten different chapters from various parts of the country were included in the study, the response rate per chapter was rather low. The largest percentage of respondents from any chapter was 16.9%. Due to these low response rates, the findings are difficult to generalize even within the chapter and the generalizability to the larger fraternal community is even more challenging. Also, the research only looked at reactions to the program and intentions to change. As the pre-test involved in the study was administered immediately after the intervention, actual long-lasting change was not measured.

Limitations of Research to Date

There are several limitations to the research that has been conducted to date as it relates to fraternity and sorority members and alcohol use. Oftentimes, the research studies only involved one institution (Caron et al., 2004; Goodwin, 1989; Larimer, Irvine, et al., 1997). While different types of institutions, private versus public and small versus large, could be found in the studies, it could be difficult to generalize the information from one campus to the situation of other campuses, even those similar in nature. Furthermore, the students included in each of the studies were often only a small portion of the Greek houses on a particular campus (Larimer, Irvine, et al., 1997). The students

who were ultimately recruited and took part in the surveys may not have been characteristic of the entire Greek system (Caron et al, Bear, & Marlatt, 2000).

Another limitation of the studies to date was the fact that many of the instruments used in the studies relied on self-report (Caron et al., 2004; Larimer, Irvine, et al., 1997). Therefore, the responses were “subject to underreporting and overreporting, faulty recall, and outright denial and exaggeration” (Cashin et al., 1998, p. 69). This combined with the fact that categories and descriptions used in the surveys were “perceptual in nature and there may have been some interpretation on the part of subjects with regard to the categories” (Cashin et al., p. 69) means that some of the results could have been biased.

Several studies also noted the fact that it is difficult to truly determine cause and effect when trying to study this issue (Goodwin, 1989; Task Force, 2002a). In many cases, cross-sectional studies were utilized, and while they can be helpful in providing information, when “correlating two factors such as heavy drinking and fraternity membership, these ‘cross sectional’ snapshots cannot specify the nature of the causal relationship between the two” (Task Force, 2002a, p. 30). This seems to indicate that more research needs to be done to determine whether or not fraternity and sorority membership causes students to drink more or whether or not some other factors, such as the self-selection process associated with joining a Greek organization, have more direct relationship to the prevalence of high-risk drinking among members.

Most importantly, very limited research has been conducted related to effective prevention programs within the Greek community. While there has been a tremendous amount of study that shows Greeks to be one of the most at-risk groups on campus, little

work has been done to try to determine how to best address this issue. There has been some research to show what is effective in preventing high-risk drinking and its negative consequences within the college student population, but much of this research has been conducted by the individuals who developed the prevention programs. This leads to concerns over the bias that might be present within the research efforts. Also, while some of these programs could prove to be effective with fraternity and sorority members, the research has shown that this population has very different dynamics associated with their drinking than other college students. Therefore, more study is needed to determine whether or not these programs could be effective with the Greek community. This limited research is especially true of the Alcohol Skills Training Program, despite its endorsement by the NIAAA as an effective prevention tool among the college population.

Recommendations for Future Research

After conducting an assessment of the research available on the topic of alcohol and Greek membership, it is impossible not to see the fact that the “frequency of binge drinking by fraternity men and sorority women is cause for great concern and immediate action at every institution that hosts such groups” (Wechsler, Kuhn, & Davenport, 1996, p. 276). The higher rates of consumption, greater frequency of drinking, and elevated reports of resulting negative consequences show that there is great need for higher education professionals to develop effective programming to address this important issue, particularly within the Greek-letter community.

As there is a great deal of research available as to why fraternity and sorority

members may engage in more high-risk drinking behaviors than non-Greek students, interventions that deal directly with these factors may be one of the best ways to reduce these behaviors. Although alcohol education is taking place on most college campuses, it does not seem to be reducing high-risk drinking among Greek letter organizations. These groups have continued, at least for the past three decades, to experience the same risks associated with their drinking and to drink at higher rates than their non-Greek peers. Only by exploring the things that make these organizations unique can prevention experts begin to make a difference in behavior for these students.

Finally, those programs that have shown effectiveness with the general student body in reducing not only the amount and frequency of drinking but also the negative consequences associated with alcohol use need to be applied to with fraternity and sorority members in effective research studies. This population has special needs and therefore needs special attention. As the members of these organizations contribute significantly to the problem drinking on college campuses, finding a way to reduce the frequency and quantity of drinking within this population could positively impact this important public health concern.

Chapter Summary

Although much research has been conducted related to the prevalence of high-risk drinking among fraternity and sorority members, a review of the literature shows that only a limited number of programs targeting prevention efforts within the Greek community have been successfully produced and reported. Programs that could potentially have positive results in reducing drinking rates and frequency among

fraternity and sorority members as well as decreasing the negative consequences associated with their alcohol use need additional research. While the Alcohol Skills Training Program appears to address the specific cultural issues that may result in higher rates of drinking among Greek students, the only previous study exploring its effectiveness contained considerable limitations. Sound research study to determine the efficacy of this program with fraternity and sorority members is much needed.

CHAPTER III

METHODS

Finding a way to effectively reduce college students' high-risk behaviors is a primary concern for higher education leaders. As fraternity and sorority members contribute significantly to the overall alcohol use and abuse on college campuses, targeting this population is of special concern. If the drinking rates and associated negative consequences of this group can be reduced, one important step in changing the damage caused by alcohol use on college campuses would be achieved.

Research Questions

The researcher in this study considered the following overarching question in this study: Does the Alcohol Skills Training Program result in decreased high-risk drinking behaviors and negative consequences for fraternity members?

In addition, the following subquestions were used to answer the overarching question:

Subquestion 1: To what extent does ASTP reduce high-risk drinking behaviors in fraternity members?

Subquestion 2: To what extent does ASTP reduce negative consequences associated with high-risk drinking in fraternity members?

Subquestion 3: What aspects of ASTP make the program successful for use with fraternity members in addressing high-risk drinking behaviors and associated negative consequences?

Subquestion 4: Is there an association between a chapter culture that promotes alcohol

use and the extent to which the skills taught in ASTP are implemented by participants?

Research Design

The researcher in this study examined the impact that ASTP can have on college fraternity members' drinking behaviors by using a sequential mixed methods approach, with a quantitative segment preceding the qualitative segment. Mixed methods approaches incorporate both quantitative and qualitative inquiry in order to help the researcher gain a broader perspective of the research phenomenon (Creswell, 2009). This method allowed the researcher "to obtain statistical, quantitative results from a sample and then follow up with a few individuals to help explain those results in more depth" (Creswell, p. 121). According to Creswell (2009), this method was the most appropriate to use in this study due to the fact that the researcher intended to use data gathered through one method to inform how additional research was conducted. The addition of a qualitative component to this researcher's study allowed for interpretation of "meaning of the experience by those being observed" (Trochim & Donnelly, 2008, p. 179).

Quantitative design. A two-group (ASTP and no-ASTP), pre-test, post-test design was used for the quantitative segment of the investigation. A quasi-experimental design was selected as the best means to collect this data as the researcher cannot employ random assignment of subjects but desires to study the effects of a program on research subjects (Trochim & Donnelly, 2008). Although quasi-experimental designs can lack internal validity, by using intact fraternity chapters that are similar in nature (Trochim & Donnelly), the researcher was able increase the validity of the results.

Qualitative design. In order to obtain the qualitative data, interviews were used. Key informant interviews took place as the researcher selected interview candidates based on the behavioral changes indicated by quantitative data (Gall, Gall, & Borg, 2007), and interviews took place one at a time rather than in focus group format. Interviews were conducted by phone in order to increase participation rates and reduce costs (Gall et al.).

The Intervention: Alcohol Skills Training Program

During the course of the study, the researcher attempted to determine if ASTP is an effective intervention for changing fraternity members' drinking behaviors and reducing the negative consequences they experience as a result of their alcohol use. The goal of the Alcohol Skills Training Program is to "educate students about alcohol-related behavior while increasing the student's interest in critically examining their drinking patterns and eventually implementing the skills they learn" (Miller, Kilmer, et al., 2001, p. 184). It is different from many traditional forms of alcohol education which focus only on providing information as it acknowledges that college students drink and attempts to teach participants how to reduce their alcohol-related risks if they do not already abstain from alcohol use (Miller, Kilmer, et al., 2001).

The program is designed to be delivered in two sessions which cover ten components. These components, according to Miller, Kilmer, and colleagues (2001), are as follows:

1. Orientation and Building Rapport: focuses on an introduction to the course itself and establishing a positive relationship with participants.

2. Assessment of Use: helps participants to compare their drinking to that of most college students and learn how to calculate what constitutes a “standard drink.”
3. Alcohol and the Body: provides participants with factual information about how alcohol is processed and eliminated by the body.
4. Blood Alcohol Level: explains how to accurately calculate BAL and what factors might influence an individual’s blood alcohol level.
5. Biphasic Effects of Alcohol and Tolerance: describes the two-part effect that alcohol can have on an individual as well as what tolerance is and how it can become problematic.
6. Monitoring Drinking Behavior: informs students of the importance of monitoring their consumption and teaches them how to do so.
7. Drinking Feedback: explains the self-monitoring process to students and provides them with personalized BAL charts.
8. Expectancies: provides students with information on how psychological expectations influence the effects that alcohol can have.
9. Risk Reduction Tips: provides students with information on what self-protective behaviors are and how to implement them.
10. Goals and Wrap Up: gives students an opportunity to ask final questions and provide feedback about the program; referral information may be shared.

The administration of this intervention by the national fraternity involved in this study differs slightly from what is described above. For purposes of use with chapter members, the program is delivered in a one-time, two-hour setting. As a result, information about

self-monitoring is somewhat limited. In a two-session administration, participants would be asked to self-monitor between sessions (Miller, Kilmer, Kim, Weingardt, & Marlatt, 2001). This is not possible during the fraternity's administration as there is only one session. However, while delivering all "ten components in a sequential fashion is recommended, the components are designed to allow for customization (e.g., unusual scheduling demands)" (Miller et al., 2001, p. 187).

Population/Sample

The target population for this study was all current undergraduate members of the national fraternity's chapters throughout the United States. However, as many private schools have stricter policies regarding alcohol use on their campus, the university rules restricting or prohibiting alcohol use could influence chapter members' behaviors and attitudes related to alcohol. In order to help control this variable, only chapters at public institutions were selected for participation in the project. The Chief Executive Officer for the national fraternity provided written commitment to allow the researcher access to these chapters and individual members for the purposes of this study.

Quantitative data. The researcher was able to reach 257 members of the fraternity for purposes of survey and questionnaire completion. According to Gay, Mills, and Airasian (2009), this is an adequate sample size based on the population size. This purposeful sample of convenience included six chapters from various parts of the country. The ASTP chapters (the experimental group) included were selected randomly from the all the chapters that were required to participate in the program by the national headquarters during the fall semester in which the study took place. Non-ASTP chapters

(the control group) were selected from all remaining chapters throughout the country. The chapter demographics of those selected were as similar as possible to the chapters included in the experimental group.

Qualitative data. Four interviews were conducted in order to ensure that appropriate statistical inferences could be made from the data. Individuals from chapters who received the intervention had the option of indicating their willingness to participate in the interview process at the end of the questionnaire. This sample size was selected based on recommendations for qualitative sample size according to Gay et al. (2009), and the sample was purposeful in nature. In selecting candidates to interview, the researcher attempted to interview subjects who showed varying degrees of change on the quantitative measures in the study.

Instrumentation

Both quantitative and qualitative means of data collection were used. In order to collect quantitative data, a variety of survey and questionnaire instruments were employed. In addition, demographic information combined with responses to the Daily Drinking Questionnaire was used to determine peak Blood Alcohol Level. For the qualitative portion of the study, interviews were completed. Permission to use these instruments is contained in Appendix A, and copies of all instruments are provided in Appendix B.

Quantitative data. A variety of surveys and questionnaires were used to collect quantitative data. The first of these is the Rutgers Alcohol Problems Index (RAPI). The RAPI uses a five- point Likert Scale to determine how many times during the past year a

participant has experienced negative consequences from a list of 23 items. This instrument has been shown to be a valid measure of alcohol related problems (White & Labouvie, 1989), and has also been shown to have a great deal of internal consistency when used in research studies (Martens, Ferrier, et al., 2005). The RAPI uses a total score to determine the degree to which a participant experiences problems associated with their drinking. A score is determined “across items from a scale ranging from 0 to 69. It can be normed on any sample. In a clinical sample (age 14 to 18) means ranged from 21 to 25 and in a nonclinical sample (age 15 and 18) means ranged from 4 to 8 depending upon age and sex” (Center for Alcohol Studies, n.d.).

The Daily Drinking Questionnaire (DDQ) is commonly used to examine drinking behaviors in college students (Baer et al., 2001; Larimer, Turner, Anderson, et al., 2001), and was used in previous ASTP studies (Kivlahan, Marlatt, et al., 1990). The DDQ was used to help the researcher answer questions related to changes in alcohol related behaviors. In addition, the researcher also asked for gender and body weight information. This information combined with responses to the DDQ was used to calculate peak blood alcohol level (BAL). Reductions in this helped to validate behavioral changes.

As one of the things that differentiates ASTP from other alcohol education programs is its incorporation of a skills training piece (Miller, Kilmer, et al., 2001), determining whether or not participants actually use these skills to reduce their alcohol use is key to determining what elements of the program might lead to behavioral change. Therefore, the Protective Behavioral Strategies Survey (PBSS) was used to evaluate whether or not those participants who show change in drinking behaviors incorporated

any or all of the skill set into their daily lives. The PBSS consists of 15 self-protective behaviors that can reduce risk associated with alcohol use (Martens, Pedersen, et al., 2007). The instrument has been shown to have strong internal consistency and construct validity (Martens et al., 2005). The scoring of the instrument can be divided into subscales in categories of limiting/stopping drinking, manner of drinking, and serious harm reduction (Martens et al., 2005).

The CORE survey was originally designed by a group of US Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE) grantees “to examine the nature, scope, and consequences of the use of alcohol and other drugs among college students” (Presley et al., 1994, p. 248). This survey asks questions about campus climate as it relates to alcohol use. The questions that address this area within the CORE were adapted to address chapter-related rather than campus-related issues. Although adapting these questions could reduce the validity and reliability of the survey instrument, the adaptations were reviewed and approved by an expert panel in order to ensure that the questions could be applied in a meaningful way to a specific targeted audience. Finally, the researcher used the Satisfaction Survey currently utilized at the University of Washington to evaluate programmatic elements of the ASTP presentation. Information gathered from this questionnaire assisted the researcher in ascertaining whether the program itself or other aspects of chapter life may have led to members’ behavioral changes related to alcohol use and help to answer subquestion three. Those chapters that receive the ASTP intervention were given questions to determine what elements of ASTP led to the program’s success in changing members’ behaviors

surrounding alcohol use. Those chapters that do not receive the ASTP intervention were only asked questions related to chapter culture.

Qualitative data. In order to collect the qualitative data in the study, the researcher conducted interviews. The interviews were structured as a specific set of predetermined questions was asked (Creswell, 2009). The purpose of conducting interviews was to explore in greater detail the information contained in the questionnaire, including responses to items from the Satisfaction Survey, such as facilitator skill and personality and useful elements of the program, as well as questions related to chapter culture adapted from the CORE survey. For instance, while the questionnaire indicated to what degree participants felt the facilitator was prepared, interviews allowed the researcher to gain more in depth information as to why participants gave the facilitator a specific rating on the Likert scale. Information gained through the interview process helped the researcher address subquestion three. A list of interview questions is provided in Appendix C. An expert panel was employed to assist in ensuring that appropriate interview questions were included and revisions were made as necessary.

Data Collection

After obtaining permission from the Institutional Review Board at Georgia Southern University, selected chapters participated in the Alcohol Skills Training Program. Both ASTP chapters and non-ASTP chapters received pre-tests and post-tests as a means of data collection. In addition, members from the experimental group who indicated a willingness to participate were interviewed.

In order to increase the validity of the self-report data throughout the study,

participants were assured of their confidentiality and of the measures taken to protect the information collected. They were also assured that, regardless of their responses to survey, questionnaire, and interview questions, that neither they nor their chapter would face any negative repercussions. Finally, they were informed that their participation would assist the fraternity in improving alcohol education efforts for future members. In order to keep the data as pure as possible, chapter members were asked to withdraw themselves from the process if they have participated in ASTP prior to the current administration.

Lists of subjects agreeing to participate in the interview portion of the study and their contact information were stored separately from any audio recordings or transcriptions to protect subject's confidentiality. All surveys, questionnaires, and other data obtain as a result of this project were stored at the researcher's home office and kept in a locked filing system.

Quantitative data. For the experimental group, pre-test data, from the RAPI, the DDQ, and the PBSS, was collected by the facilitator immediately prior to beginning the ASTP presentation. Members in the control group received their pre-test requests via e-mail. All post-test surveys and the questionnaire were sent via e-mail to chapters approximately four weeks after the presentations are complete. According to Carey, Scott-Sheldon, Carey, and DeMartini (2007), who conducted a meta-analysis of 62 studies focused on interventions to reduce college student drinking, "results for the short-term follow-up (4-13 weeks post-intervention) showed that intervention participants reduced their quantity of drinking, quantity for specific time intervals/drinking days,

frequency of heavy drinking, peak BAC, and alcohol-related problems” (p. 2475).

In addition to the three standardized instruments, participants were also given a questionnaire composed of adapted questions from the CORE Survey and the University of Washington Satisfaction Survey. Those chapter members participating in ASTP received all of the questions in order to help the researcher determine what factors, if any, contributed to the success of the program in changing behaviors related to alcohol. Those who did not receive the intervention were only asked questions related to chapter culture, those taken from the CORE Survey. The questionnaire also asked for demographic information, mostly to aid in determining peak blood alcohol content. The calculation of peak BAL was used to add validity to the results of the other quantitative measures.

For those receiving the pre-test in person via a facilitator, the informed consent was read and signed in the facilitator’s presence. For those receiving the pre-test via e-mail, the informed consent was included in the e-mail requesting that they participate in the study. All post-test data was collected through e-mail. Therefore, informed consent at this point in the study was in writing. Participants had the option to immediately opt out of responding after reading the informed consent statement. In addition, the informed consent notified subjects that they had the right to refuse to complete any question or participate in the completion of the surveys and questionnaires. Even though most college students are eighteen or older, the informed consent also included a clause which stated that subjects under the age of 18 could not participate in the research project. Facilitators involved in this process were required to sign a confidentiality statement prior

to administering any type of data collection instrument.

A deadline was set for subjects to complete the electronic survey and questionnaire. Chapter incentives were provided to the organizations for participation in the project in addition to support from the national fraternity in encouraging chapter participation. No individual responses to any instruments were shared with the national fraternity. All data is presented in aggregate form only. A notation was made in the instructions asking participants to complete the survey on their own, using only their own experiences related to alcohol.

Qualitative data. As the researcher intended to interview participants who exhibited differing levels of change, links between individual pre- and post-tests were required. Therefore, participants were asked to provide the last four digits of their institutions' student identification number as a way to link data during the analyses phase of the study. In addition, chapter members who participated in the program were asked to provide contact information if they were willing to take part in a follow-up interview.

Interview subjects were provided with informed consent prior to beginning any interview questions. The reading of the informed consent and the subject's response became a part of the audio recording. Subjects were told that they could stop the interview at any time during the process or not answer any questions that made them feel uncomfortable. Participants were provided with a copy of the transcribed interview for their review and approval prior to the inclusion of any information obtained through this process in the study's data. After approval, all audio recordings, minus the recording of the informed consent, were destroyed.

Data Analysis

Due to the fact that a sequential mixed-methods approach was utilized, data was collected in two phases. First, quantitative data was collected using surveys and questionnaires and then analyzed. Based upon results from the quantitative portion of the study, interview questions were developed in order to collect and analyze qualitative information.

Quantitative data. In order to answer research subquestions one and two, the researcher entered data from the RAPI, the DDQ, and the PBSS into the Statistical Package for Social Sciences (SPSS) 19 to obtain descriptive and inferential statistics. Descriptive statistics included mean and standard deviation for each instrument while comparisons in post-test data were made using analysis of covariance (ANCOVA) so that the researcher was able to ascertain whether or not the use of ASTP made a difference in chapter members' drinking behaviors. This statistical measure was selected in order to compare ASTP and non-ASTP groups on post-test data, adjusting for pre-test data (Gay et al., 2009). Research subquestion three was answered by coding information into SPSS from the PBSS and providing mean and standard deviation data. Finally, to aid in answering research subquestion four, the researcher entered data into SPSS from the CORE survey and the PBSS in order to calculate Pearson r values. The researcher attempted to determine if there is an association between a chapter culture that seems to promote high-risk drinking as measured by the CORE and the extent to which participants implement the strategies taught during ASTP as measured by the PBSS.

Qualitative data. All qualitative data was collected through individual telephone

interviews. After transcribing all interview responses, the researcher constructed categories and sorted and named data in order to find themes that were presented throughout the interviews. Responses to interview questions helped the researcher more thoroughly answer research questions three by providing insight into the perspectives, thoughts, and feelings of the research participants (Merriam, 2009).

Reporting the Data

Data was reported in two distinct phases as both quantitative and qualitative data were collected and analyzed. The quantitative results included both descriptive and inferential statistics to determine change in behavior as a result of participation in ASTP while qualitative results were presented in terms of themes which support reasons for behavioral change, impact of chapter culture, and influence of the program.

Chapter Summary

The purpose of this mixed methods study was to determine if the Alcohol Skills Training Program impacted fraternity members' drinking behaviors. The study involved six chapters of the national fraternity, including 257 undergraduate members of the organization. Participants were asked to complete surveys, questionnaires, and interviews in order to assist the researcher in answering several questions related to the program. The quantitative data informed the researcher's collection of qualitative data in order to further explain the results found during the study.

CHAPTER IV REPORT OF DATA AND DATA ANALYSIS

This chapter will include a brief overview of the purpose of the study and a summary of the research methodology. Each research question is provided with results, presenting an analysis and interpretation of the data gathered throughout the course of the study. Results including both quantitative and qualitative responses and analyses are provided.

Introduction

While researchers have been able to identify the high-risk drinking behaviors and resulting negative consequences associated with fraternity and sorority members, little work has been done to evaluate effective education and prevention programs for this special population. Therefore, the purpose of this study was to assess the impact of the Alcohol Skills Training Program on college fraternity members' drinking behaviors and to attempt to ascertain what elements of the program may lead to change. The researcher wished to explore what aspects of the program led effectiveness or ineffectiveness as well as try to understand the role that chapter culture might play in success of the program in changing college fraternity member's drinking behaviors.

Sample Characteristics

Quantitative Data

For the purposes of collecting quantitative data, six chapters of the national fraternity were divided into an experimental and a control group. The experimental group consisted of three chapters that were already slated to receive ASTP during the fall semester in which the study was conducted. All of these chapters belong to public

institutions of higher education that are located in the Southeastern United States and range in size from 5,000 – 25,000 undergraduate students, making up the target population and including 120 undergraduate members of the fraternity. The control group consisted of three chapters that matched as closely as possible the demographics of the chapters in the experimental group in terms of campus type and size and size of chapter as well as overall chapter characteristics. The target population within this group consisted of 137 undergraduate members of the fraternity. Response rates, based on sample population, for participation in the study are provided below.

Table 1
Response Rates

	Experimental Group		Control Group	
Pre-Test Completion	n = 65	54%	n = 58	42%
Post-Test Completion	n = 57	48%	n = 64	47%

Qualitative Data

The sample for the qualitative portion of the research study consisted of four members from the experimental group. Three of the members were from Experimental Chapter 3 and one was from Experimental Chapter 2. Despite the researcher’s efforts and the assistance of the national fraternity, no members from Experimental Chapter 1 offered to participate in the interview process. A brief description of the quantitative characteristics of each of the interview participants is provided.

Fraternity Member 1 is a member of Experimental Chapter 3. Between pre-test and post-test, he reduced his average number of drinks per week from 13 to 11 and his peak BAL from .125 to .032. He did not respond to the RAPI questions at post-test, so

no comparison data for this measure was available.

Fraternity Member 2 is a member of Experimental Chapter 3. Between pre-test and post-test, he decreased his average number of drinks per week from 7 to 2 and his RAPI score from 3 to 0. However, his peak BAL increased from .018 to .033.

Fraternity Member 3 is a member of Experimental Chapter 3. Between pre-test and post-test, he reduced his average number of drinks per week from 10 to 5 and his RAPI score from 7 to 4. However, his peak BAL increased from .013 to .024.

Fraternity Member 4 is a member of Experimental Chapter 2. Between pre-test and post-test, he experienced reductions in his average number of drinks per week, from 23 to 15; his peak BAL, from .169 to .108; and his RAPI score, from 36 to 7.

Research Questions

The researcher in this study considered the following overarching question in this study: Does the Alcohol Skills Training Program result in decreased high-risk drinking behaviors and negative consequences for national fraternity members?

In addition, the following subquestions were used to answer the overarching question:

Subquestion 1: To what extent does ASTP reduce high-risk drinking behaviors in fraternity members?

Subquestion 2: To what extent does ASTP reduce negative consequences associated with high-risk drinking in fraternity members?

Subquestion 3: What aspects of ASTP make the program successful for use with fraternity members in addressing high-risk drinking behaviors and associated negative

consequences?

Subquestion 4: Is there an association between a chapter culture that promotes alcohol use and the extent to which the skills taught in ASTP are implemented by participants?

In order to answer these research questions, the researcher used a mixed methods approach, collecting both quantitative and qualitative data, with the quantitative findings informing the qualitative data collection. A variety of surveys and questionnaires were used to collect quantitative data, while the qualitative data was collected by the use of interviews.

Findings

The results of this study were used to answer each of the research subquestions in an attempt to thoroughly answer the overarching research question. The findings are organized as they relate to each of the four subquestions and the data related to each subquestion is divided into quantitative and qualitative data analysis sections as appropriate. The overarching research question is answered based upon the data results related to each subquestion and is provided in the summary at the end of this chapter. All quantitative data is presented in aggregate form with no identifying information included. In order to protect the confidentiality of the interview participants, each participant has been identified as Fraternity Member One, Fraternity Member Two, etc.

Subquestion 1: To what extent does ASTP reduce high-risk drinking behaviors in fraternity members?

Quantitative data. In order to answer this subquestion, the researcher calculated both the average number of drinks per week as well as peak Blood Alcohol Level for each chapter at both pre-test and post-test for the experimental and the control group

chapters. A reduction in the number of drinks consumed per week and the peak BAL within the experimental group would indicate that ASTP had some impact in reducing high-risk drinking behaviors in fraternity members. Mean and standard deviation scores were computed using SPSS and details of this analysis are provided in the tables below.

Table 2
Pre-Test Data: Drinks per Week and Peak BAL

Chapter	Average # of Drinks Per Week		Peak BAL	
	Mean	SD	Mean	SD
Experimental 1	12.13	14.69	.070	.054
Experimental 2	12.84	8.65	.155	.118
Experimental 3	21.40	15.55	.100	.062
TOTAL	16.95	14.44	.096	.059
Control 1	13.59	10.80	.097	.037
Control 2	15.54	15.15	.099	.059
Control 3	11.21	9.18	.075	.047
TOTAL	13.24	11.02	.091	.047

Within this data set, the researcher noted that Experimental Chapter 3 had a much higher rate of consumption than the other chapters in both the experimental and the control group. In addition, the researcher noted the elevated peak BAL for the members in Experimental Group 2.

Table 3
Post-Test Data: Drinks per Week and Peak BAL

Chapter	Average # of Drinks Per Week		Peak BAL	
	Mean	SD	Mean	SD
Experimental 1	7.89	10.71	.049	.030
Experimental 2	20.50	14.81	.072	.043
Experimental 3	14.94	13.92	.070	.039
TOTAL	14.44	14.02	.064	.070
Control 1	16.22	13.64	.098	.052
Control 2	12.27	8.32	.066	.044
Control 3	7.38	7.43	.039	.046
TOTAL	13.12	11.42	.074	.054

When reviewing this table, the researcher noted that Experimental Chapter 2 had an increase in the average number of drinks per week between pre-test and post-test despite the fact that the other chapters within this group had a reduction in this area. In addition, even with the increase in average number of drinks per week, the mean score for peak BAL ($M = .072$) was a decrease from the score for peak BAL ($M = .155$) at the time of pre-test.

It is important to note that the facilitator from Experimental Chapter 2 indicated to the researcher and a national fraternity staff member that the group presented some behavioral issues during the ASTP presentation. Although 80% of the chapter is required to attend the presentation, many fewer were present. Those who did attend were disruptive throughout the presentation and made inappropriate comments about the

information shared during the presentation. This could have impacted the overall results of the research study.

In order to determine if changes in average number of drinks per week and peak BAL levels could be attributed to ASTP, the researcher conducted an ANCOVA. Results of the analysis of covariance did not indicate any significant difference between the experimental and control groups for average number of drinks per week, $F(1, 48) = .39$, $p = .54$; or for peak BAL, $F(1, 31) = .001$, $p = .98$. Therefore, as no significant difference existed between the experimental and the control group, reductions in these two variables cannot be attributed to the participation in ASTP by the experimental group.

Subquestion 2: To what extent does ASTP reduce negative consequences associated with high-risk drinking in fraternity members?

Quantitative data. The RAPI was the instrument utilized by the researcher to determine whether or not ASTP reduces negative consequences associated with high-risk drinking in fraternity members. The RAPI is scored on a range from 0 – 69, the higher the score on the instrument, the greater number of negative consequences experienced by the drinker. The researcher calculated the mean and standard deviation scores for the RAPI for each chapter participating in the research project using SPSS. A reduction in mean scores for the chapters in the experimental group would indicate that ASTP reduced negative consequences associated with high-drinking in fraternity members. Scores for all chapters at pre-test and post-test are reported below.

Table 4
Pre-Test Data: Rutgers Alcohol Inventory Scores

Chapter	RAPI	
	Mean	SD
Experimental1	8.00	5.55
Experimental 2	12.20	10.73
Experimental 3	11.97	8.34
TOTAL	8.33	8.06
Control 1	6.14	7.61
Control 2	6.31	5.60
Control 3	7.65	7.41
TOTAL	7.18	7.27

Table 5
Post-Test Data: Rutgers Alcohol Inventory Scores

Chapter	RAPI	
	Mean	SD
Experimental 1	3.75	4.48
Experimental 2	11.44	13.31
Experimental 3	5.73	5.99
TOTAL	7.18	9.53
Control 1	7.83	9.63
Control 2	8.45	6.30
Control 3	9.73	15.06
TOTAL	8.42	10.33

When reviewing these data, the researcher noted that all chapters within the control group had an increase in their RAPI scores between pre-test and post-test. A higher RAPI score would indicate that the members of these chapters had experienced an increase in the number of negative consequences as a result of their alcohol use between pre-test and post-test.

To ascertain whether or not changes in RAPI scores could be attributed to ASTP, the researcher conducted an ANCOVA. Results of the analysis of covariance did not indicate any significant difference between the experimental and control groups for RAPI scores, $F(1, 45) = .39, p = .34$. Therefore, as no significant difference existed between the experimental and the control group, reductions in these scores cannot be attributed to the participation in ASTP by the experimental group.

Subquestion 3: What aspects of ASTP make the program successful for use with fraternity members in addressing high-risk drinking behaviors and associated negative consequences?

Quantitative data. As one of the features of ASTP that sets it apart from other alcohol education programs is its incorporation of a skills development component, determining whether or not those skills are later utilized by members participating in the program would indicate that this element of the program does, in fact, make it successful for use with fraternity members. In order to help determine the degree to which members incorporated these skills into their lives, the researcher utilized the PBSS. The PBSS consists of 15 questions that are divided into three scales: stopping/limiting drinking, manner of drinking, and serious harm reduction. A high score within a scale would indicate that members are frequently using these strategies. For the stopping/limiting drinking, the high score would be 42. Within the manner of drinking scale, the highest possible score would be 30; and in the serious harm reduction scale, a score of 18 would indicate frequent usage of these self-protective behaviors. An increase in the scores within the scales within the experimental group would indicate that members were implementing these strategies and would show this to be a successful element of the program. The researcher calculated mean and standard deviation scores for each of the scales for all chapters participating in the study using SPSS. The results of this analysis are provided in the tables below.

Table 6
Pre-Test: Protective Behavioral Strategies Survey

Chapter	Stopping/Limiting		Manner of Drinking		Harm Reduction	
	Mean	SD	Mean	SD	Mean	SD
Experimental 1	25.24	7.07	16.47	3.81	15.76	1.86
Experimental 2	22.80	8.26	16.07	2.89	15.07	2.91
Experimental 3	20.59	6.02	17.09	3.65	14.16	3.50
TOTAL	19.86	8.84	18.27	5.64	15.03	3.09
Control 1	23.95	8.45	18.09	5.70	14.55	3.32
Control 2	21.62	8.89	16.77	4.99	15.46	2.30
Control 3	18.13	8.62	15.80	5.37	12.03	3.48
TOTAL	20.91	8.82	15.54	5.43	14.86	3.78

Table 7
Post-Test: Protective Behavioral Strategies Survey

Chapter	Stopping/Limiting		Manner of Drinking		Harm Reduction	
	Mean	SD	Mean	SD	Mean	SD
Experimental 1	23.44	10.58	14.69	5.94	13.31	4.70
Experimental 2	21.22	10.13	16.78	4.54	13.67	4.16
Experimental 3	22.12	12.11	14.55	7.17	8.86	5.55
TOTAL	22.21	10.09	15.30	6.06	11.68	5.32
Control 1	17.41	9.05	13.79	6.21	7.56	3.71
Control 2	19.88	9.78	13.88	5.71	7.42	3.86
Control 3	18.00	10.75	13.73	7.06	7.00	3.95
TOTAL	18.39	9.59	13.81	6.13	7.40	3.76

When reviewing this information, the researcher noted that all chapters, both in the experimental and the control groups, experienced a decrease in usage of at least some of the self-protective strategies. As ASTP teaches these skills as a way to reduce high-drinking and its associated negative consequences, an increase in their utilization by the experimental group was expected.

In order to determine if changes in PBSS scale scores could be attributed to ASTP, the researcher conducted an ANCOVA for each of the three scales. Results of the analysis of covariance did not indicate any significant difference between the experimental and control groups for stopping/limiting drinking, $F(1, 52) = .12, p = .73$; for manner of drinking, $F(1, 52) = .12, p = .73$; or for harm reduction, $F(1, 51) = 2.35, p = .13$. Therefore, as no significant difference existed between the experimental and the

control group, changes in these three variables cannot be attributed to the participation in ASTP by the experimental group.

In addition to reviewing whether or not chapter members incorporated the self-protective behaviors taught in ASTP as a way to answer subquestion three, the researcher also utilized the Satisfaction Survey to determine member satisfaction with both the program itself and with the program facilitator. Individual item analysis was conducted and the mean and standard deviation for each item is provided below.

Table 8
Responses to Satisfaction Survey (Likert Scale of 1 to 5)

Item	Experimental 1		Experimental 2		Experimental 3		TOTAL	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
The workshop was thorough and complete.	4.06	1.95	4.61	1.20	2.95	1.91	3.80	1.84
The facilitator seemed well-organized.	3.88	2.13	4.89	1.23	2.91	1.85	3.82	1.93
The facilitator seemed competent and well-trained.	3.88	2.13	4.94	1.21	3.00	1.93	3.88	1.95
The facilitator seemed warm and understanding.	3.88	2.13	3.83	1.38	3.00	1.98	3.52	1.86
The facilitator seemed well-informed about what goes on in a college setting.	3.81	2.07	4.67	1.24	2.96	1.99	3.75	1.91

When reviewing this table, the researcher noted that although Experimental Chapter 2 was reported to have been a behavioral problem during the presentation, members gave the program and its facilitator fairly high scores in all areas analyzed from the Satisfaction Survey. Based on responses from all three chapters, it would seem as though the items that had the most influence over member satisfaction were that the facilitator was well-organized and seemed competent and well-trained.

Qualitative data. In order to more fully explain what aspects of ASTP might lead to the program’s success in changing college fraternity members’ drinking

behaviors, the researcher also collected qualitative data. First, the Satisfaction Survey contained two open-ended questions which asked participants what they believed to be the most and least useful elements of the program. Forty-four responses were coded by the researcher in an attempt to find themes. Two major categories, programmatic elements and facilitator style, emerged. Within these two categories, several themes became readily apparent. A table detailing these themes and their occurrence rates is provided below.

Table 9
Themes/Categories Emerging from Satisfaction Survey

Programmatic Elements	Facilitator Style
Alcohol's effect on body and mind = 9	Knowledge of college alcohol use = 3
Information related to BAL = 7	General demeanor/personality = 2
Program provided real life information = 2	
Information related to drug interaction = 2	

In reviewing these responses compared to the quantitative data collected and reviewed above, the researcher noted that the two seemed to differ slightly. For instance, facilitator knowledge of what goes on in a college setting and general demeanor were mentioned in the open-ended questions as being the most useful part of the program. However, these two items received lower mean scores than some other facilitator characteristics when the researcher completed the quantitative analysis from the Satisfaction Survey. Results of this analysis yield the following mean scores for well-organized, ($M = 3.82$) and competent and well-trained, ($M = 3.88$) versus mean scores for warm and understanding, ($M = 3.52$) and informed about what goes on in a college

setting, ($M = 3.75$).

Finally, the researcher conducted interviews in order to more fully explore what impact programmatic elements and/or facilitator style might have had on the success of the program. Interviews were transcribed and coded to find themes. Programmatic elements and facilitator style both emerged as categories once again. Within these two categories, several themes became readily apparent. In addition to these categories, which related directly to program impact and effectiveness, two additional themes emerged. The first was the impact that individual chapter members' behavior has on chapter culture and the second was the fact that members felt as though they had heard similar information or participated in a similar program before. A table detailing these themes and their occurrence rates is provided below.

Table 10
Themes/Categories Emerging from Interviews

	Fraternity Member			
	1	2	3	4
Programmatic Elements				
Alcohol's effect on body and mind		X	X	X
Program teaches responsible drinking	X	X	X	
Facilitator Style				
Knowledge of college alcohol use	X	X	X	
General knowledge about alcohol	X			X
Individual Member Behaviors	X	X	X	X
Previous Similar Experience	X			X

Alcohol's effect on the body and mind. During the course of the interviews, the participants responded to several of the questions asked by referencing that the information shared about the effects that alcohol can have on the body and mind had impacted their response to the program as well as their behaviors and attitudes related to alcohol since participating in ASTP. Fraternity Member 2 felt that the information he received during the course did cause him to change his drinking behaviors. He stated that what he learned about the effects that alcohol can have on the body accounted for this change. He said,

Um, at one point, we discussed the amount of alcohol and its effect on the body and how much alcohol is in one drink and how much damage it does to you. . . And, I guess the information that was provided was a factor in [changing my drinking behaviors].

Fraternity Member 3 also felt that learning about the effects alcohol can have on the body was the most useful part of the program. He stated,

[The facilitator] was talking about how, like, various settings can affect your mood, like, a lot when you are, like, drinking. So, I really liked that part because I didn't really know it beforehand.

Program teaches responsible drinking. One of the hallmarks of ASTP is the fact that it teaches responsible drinking habits rather than approaching alcohol education from an abstinence only manner. This seemed to resonate well with the participants who

were interviewed. Fraternity Member 1 said that he would recommend the program to a friend because,

I just feel that it is beneficial that everyone understands the risks and understands, like, if they do decide to drink, when to stop, and, like, what can, like, the risks and everything. That's why I would recommend it.

Fraternity Member 2 responded that this element of the program was not only why he would recommend it to a friend but that it also impacted his decision to change his drinking behaviors. He stated, "I think it is good. Um, it teaches responsibility and is very informative. So, I would recommend it." He continued to say,

I have cut back. And, I just don't see it as a good, responsible thing to do any more. I don't need to just party all the time. I need to promote a good image and show that I am responsible.

Fraternity Member 3 stated that he would recommend the program to a friend because it teaches responsible drinking. He said,

Just to make sure they don't abuse alcohol. So, that they don't, they don't hurt themselves. So, that if they do decide to drink, then they would have, they would be safe with it at least.

Facilitator knowledge about college alcohol use. Those who were interviewed indicated that they appreciated a facilitator who was knowledgeable about college

students and their alcohol use and seemed to be understanding of what it is like to be a fraternity member. Fraternity Member 1 stated the following about the facilitator.

He seemed like he knew how to, like, act around college kids.

Um, you know what I mean. And, uh, he just, to me it felt like he understood what we were like at our age. And, I really liked that about him because I felt like I could relate to him even though he was older and he was a person of, like, um, and he had a lot more experience than we had. But, I felt like he was down to earth and he could understand where we were coming from.

He went on to say that he felt like this had a positive impact on the chapter's response to the program. He stated,

It was easier, as a whole for us, I believe, and I can't talk for everyone, but I felt like it was easier for us to be truthful and honest with him. When he would ask us questions, we didn't feel like we had to hold anything back, you know, without fear of judgment.

Fraternity Member 2 said that this factor made the facilitator seem more warm and understanding overall. He stated,

He was able to, he was in a fraternity when he was our age. So, he knows how it goes. He understands . . . he said he has been there. It was never whoa. It was never,

you know, negative.

Fraternity Member 3 said that the facilitator was,

Understanding. Um, he listened to us when we, when we had to ask something or know something. He basically took our input also. So, instead of just telling us what he was told to tell us, he responded.

Facilitator general knowledge about alcohol. In addition to being understanding about fraternity membership and how that impacts alcohol use, participants also appreciated knowing that the facilitator was knowledgeable about alcohol use in general. Fraternity Member 2 felt that the facilitator was competent and well-trained. He stated,

He was knowledgeable, not only of what was provided, but he gave us other examples, and, um, details that were not on the sheets but were from the same sources. So, I found him to be very credible and very knowledgeable.

Fraternity Member 4 also found the facilitator to be competent and well-trained. He said, “He just gave a really coherent presentation. It was easy to follow. I figured he knew what he was talking about.”

Individual member behavior and its impact on chapter culture. During the course of the interviews, participants frequently made reference to the role that they felt individual behavior has on the chapter culture surrounding drinking and members’ adherence to chapter policies related to alcohol use. Fraternity Member 1 felt that

individual chapter members' backgrounds and behaviors impacted his responses to many of the questions asked during the post-test survey. He responded to the survey question, I believe that my chapter is concerned about the prevention of alcohol abuse, with "neutral." During the interview, he elaborated on this response, stating,

I guess because our chapter is full of different type of people from different backgrounds that either understand, like, what, about the dangers of alcohol and those that, like, don't fully understand or really care, I guess. But, I am not saying as a whole we don't. I am just saying that this chapter is full of many different kinds of people from so many different types of backgrounds that I just feel like it is somewhere in the middle.

When asked if he believed the chapter atmosphere promotes alcohol use on the survey, his response was again neutral. When asked to more fully explain his response during the interview, he said,

It's like I said, uh, there are so many different types of people in our chapter, from different backgrounds and everything. It's kind of like you'll have one person who does drink and another who doesn't, who doesn't even like being around alcohol. That kind of stuff, you know. It's in the middle.

Fraternity Member 1 also felt that his own background influences his behaviors and attitudes surrounding alcohol. When asked why he was motivated to follow chapter

policies and regulations related to alcohol use, he stated,

I have seen people struggle with alcohol. Um, I have had family members struggle with alcohol abuse and everything. And, I don't want to go down that path, you know, like, I have seen some other people do. That's not really what, that's probably why.

Fraternity Member 2 also felt that individual member characteristics play a role in chapter culture. He, too, responded neutral to questions about the prevention of alcohol abuse and the promotion of alcohol use. When asked to explain his response to the question of concern about the prevention of alcohol abuse, he had the following to say during his interview.

Well, there are a lot of guys that are under the age of 21, and I guess a handful of guys that are over the age of 21. And, where the guys that are over the age of 21 understand the consequences of and, um, I guess the problems with underage drinkers at the house and may want to keep it to a minimum, all the guys that just got out of high school want to experience it.

When answering the question of chapter culture, he explained his response by saying,

It would be similar to the first question and first response to that. High schoolers, well, recent graduates of high school, walk around drinking and they see the social life of fraternity as an

opportunity to drink again.

Fraternity Member 2 also attributed his own background to why he chooses to follow the chapter's policies and regulations that concern alcohol use. He stated, "I have strong beliefs and, um, I guess strong morals that help me follow rules."

Fraternity Member 3 and Fraternity Member 4 both said that their individual characteristics account for why they follow chapter policies and regulations as well. Fraternity Member 3 stated, "I know that they are there for a reason basically. They are there for safety. So, um, I just do it." Fraternity Member 4 said,

I am just usually like, like drinking and driving is, like, a huge thing. And, that is just, like, something I wouldn't normally do. So, I don't know. I was just raised that way.

Previous similar experiences with alcohol education courses. Several of the fraternity members interviewed made reference to having participated in a similar alcohol education course prior to their ASTP experience. This experience impacted their responses to some of the survey questions posed. Fraternity Member 1 stated that he was undecided when asked whether or not the information he received in the program would change his drinking behaviors. When asked about this response during the interview, he stated,

I was undecided because . . . I know most of the information that was given during the training program. And, um, I guess I understand the risks and everything. And, um, cause in high school, I took some classes that were offered from alcohol

education and all that kind of stuff. I understood what the risks are, so to me, and of course, it was beneficial and I would go again or whatever, but I already knew the risks and everything, so I was kind of stuck in the middle of whether it was beneficial to me, as a, to me personally.

Fraternity Member 2 stated that he was undecided when asked about whether or not the information he received in the program would change his drinking behaviors. During the discussion of this question at the time of the interview, he said, “I have been to courses like this before . . . and, I feel like I am pretty responsible as it is.” He went onto state that he felt that the information about drinking games during the program was the least helpful part of the program because, “when he was talking about, like, drinking games and how it is, like, bad to do that, like, I just heard that so many times before.”

Interview summary. Interview data seemed to support some of the information found through the quantitative portion of the study. Members felt that the programmatic element related to information about alcohol’s effect on the body and mind as well as the facilitator’s apparent understanding of what college alcohol use is like were key components of the program’s success. In addition to support for these factors, the researcher also found that the fact that the program teaches responsible drinking habits and the facilitator’s general knowledge about alcohol were important to the participants of the study and influenced their reactions to the program. Through the interviews, the researcher also saw two new themes emerge. The first was that many of the interview participants noted that individual members’ behaviors and attitudes about alcohol

influenced their responses to survey questions and their own individual backgrounds impacted how they responded to chapter policies regarding alcohol use. Finally, the researcher learned that some responses to the program were based on members' previous experiences with other alcohol education courses.

Subquestion 4: Is there an association between a chapter culture that promotes alcohol use and the extent to which the skills taught in ASTP are implemented by participants?

Quantitative data. In order to answer this subquestion the researcher explored the impact that chapter culture, as measured by the CORE survey, has on individual members' implementation of self-protective behaviors, as measured by the three PBSS scales. As the first three questions on the CORE call for a yes, no, or don't know response, the researcher attempted to determine if those students who responded yes to questions were more likely to implement the skills taught in ASTP than those who did not. Mean and standard deviation based on participant response were calculated and those items are provided below.

Table 11
Descriptive Statistics from CORE and PBSS Scores

CORE Item	Response N	Stop/Limiting		Manner of Drinking		Harm Reduction	
		Mean	SD	Mean	SD	Mean	SD
Does your chapter have an alcohol policy?	Yes = 51	22.04	10.74	14.98	5.95	11.67	5.45
	No = 0						
	Don't Know = 5	24.00	13.78	18.60	6.06	11.80	2.27
If your chapter has an alcohol policy, is it enforced?	Yes = 41	22.24	10.84	15.05	5.87	11.73	5.37
	No = 2	23.50	16.26	16.50	3.54	12.50	4.94
	Don't Know = 12	22.00	11.98	15.83	7.48	11.67	5.79
Does your chapter have an alcohol prevention program?	Yes = 34	21.76	11.63	14.88	6.25	11.21	5.77
	No = 6	26.17	7.05	18.00	2.28	13.50	3.27
	Don't Know = 16	21.69	10.76	15.18	6.60	12.00	5.03

In reviewing these responses, the researcher noted the large number of "don't

know” responses. Although the researcher expected that those who knew that the chapter had a policy that was enforced and that a prevention program was in place would be more likely to use self-protective behaviors, this was not the case. The mean scores on all three scales for those who responded “no” or “don’t know” were actually higher than for those who responded “yes,” meaning that those who responded “no” or “don’t know” were implementing more of the skills taught in ASTP.

The remaining questions on the CORE utilize a Likert scale, therefore, the researcher employed a correlational test to determine if there was a significant relationship between responses to these items and the scales of the PBSS. A Pearson r was calculated and these scores as well as significance values are reported in the table below.

Table 12
Correlation of CORE and PBSS Data

PBSS Item	Stop/Limiting		Manner of Drinking		Harm Reduction	
	r	p	r	p	r	p
I believe my chapter is concerned about the prevention of alcohol abuse.	.111	.422	.295	.029	.194	.155
I am actively involved in efforts to prevent alcohol abuse in my chapter.	.193	.158	.340	.011	.291	.031
I abide by the chapter policy and regulations that concern alcohol.	-.095	.492	.094	.495	.204	.135
The social atmosphere in this chapter promotes alcohol use.	.193	.158	.110	.425	.154	.261
Compared to other fraternities with which I am familiar, this chapter's use of alcohol is less than other fraternities, about the same as other fraternities, or greater than other fraternities.	-.138	.323	-.046	.741	.071	.613

The results of the Pearson r indicated a positive correlation for three of the items from the CORE as related to the three PBSS scales. There was a positive correlation between believing that the chapter is concerned about the prevention of alcohol abuse and manner of drinking, ($r = .295, n = 55, p = .029$). In addition, there was a positive correlation between members being actively involved in efforts to prevent alcohol abuse in their chapter and manner of drinking, ($r = .340, n = 55, p = .011$). Finally, there was a positive correlation between members being actively involved in efforts to prevent

alcohol abuse in their chapter and serious negative consequences, ($r = .291, n = 55, p .031$).

Summary and Overview of Findings

Results of this study have been organized into quantitative and qualitative results. A final overview of all data is provided at the end of the section.

Quantitative Data

For purposes of collecting quantitative data, a variety of surveys and questionnaires were utilized. For all quantitative instruments, data analysis was conducted at the chapter and the group level. Descriptive statistics, including mean and standard deviation at pre-test and post-test, were reported for information from the DDQ, which helped to determine average number of drinks per week and peak BAL; the RAPI, which helped to determine the number of negative consequences experienced by members; the PBSS, which measured the number of self-protective behaviors employed by participants; the CORE, which examines issues of chapter culture; and the Satisfaction Survey, which asked members to give feedback regarding the program material as well as the program facilitator.

In addition to descriptive statistics, various inferential statistics were utilized as well. The researcher performed an analysis of covariance in order to determine if, accounting for pre-test scores, there was a significant difference between the experimental group and the control group in their scores on the DDQ, the RAPI, and the PBSS. Although mean scores indicated that there was a decrease in the average number of drinks per week, the peak BAL, and the RAPI scores for chapters in the experimental

group, the ANCOVA results revealed that these scores were not significant; and therefore, changes cannot be attributed to participation in ASTP by the experimental group. Mean scores from the PBSS actually showed a reduction in the number of stopping and limiting behaviors used by the experimental group. This was different from the researcher's initial belief that participation in ASTP would lead to an increase in the implementation of these behaviors. There was an increase in mean scores for manner of drinking and serious harm reduction. ANCOVA results, however, did not demonstrate a significant relationship.

The researcher used correlational data analysis to determine if there was a relationship between chapter culture, as measured by the CORE, and the implementation of the skills taught during ASTP, as measured by the PBSS. A Pearson r was calculated, and three items from the CORE emerged as having a positive correlation to the implementation of PBSS items. Members who believe that their chapter is concerned about the prevention of alcohol use are more likely to use strategies that address their manner of drinking (e.g., avoid drinking games, avoid mixing types of alcohol), and members who are actively involved in prevention efforts within their chapter are more likely to use both strategies that address their manner of drinking and strategies to reduce the negative consequences associated with their drinking (e. g., use a designated driver, know where their drink has been at all times).

Qualitative Data

The researcher was able to gather some qualitative data from the open-ended questions on the Satisfaction Survey. During the analysis of this data, two themes

emerged: programmatic elements, and facilitator style. The most cited categories within these themes were: 1) alcohol's effect on the body and mind, 2) information related to BAL, 3) program provided real life information, 4) program provided information related to drug interaction, 5) the facilitator was knowledgeable about college alcohol use, and 6) the facilitator's general demeanor. All of these factors were described by participants as being the "most useful" elements of the program.

After completing all quantitative data analysis, the researcher conducted four telephone interviews to more fully explore what elements of ASTP might have lead to any changes that occurred in members' behaviors. After transcribing all of the interviews, the researcher coded the information to find themes. From these interviews, several themes emerged, some which complemented the data from the Satisfaction Survey and some which provided additional information. The themes from the interviews included: 1) alcohol's effect on the body and mind, 2) program teaches responsible drinking, 3) the facilitator was knowledgeable about college alcohol use, 4) the facilitator had good general knowledge about alcohol, 5) individual members' behavior within the chapter influenced how members responded to survey questions, and 6) previous experience with similar alcohol education programs influenced their survey responses and reactions to the program.

Chapter Summary

This study began with a single overarching research question: Does the Alcohol Skills Training Program result in decreased high-risk drinking behavior and negative consequences for national fraternity members? In brief, the quantitative data do not

support ASTP as a program which can reduce high-risk drinking behaviors or negative consequences for national fraternity members. However, the quantitative data do provide some insight into issues of chapter culture which might impact individual members' implementation of the self-protective behaviors taught during ASTP. Finally, the qualitative data provide feedback which can be used to improve the quality of alcohol education programs for fraternity members.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is a conclusion of the study *Impact of Alcohol Skills Training Program on College Fraternity Members' Drinking Behaviors*. It includes an analysis and discussion of the research findings, the researcher's conclusions resulting from these findings, the implications that the findings have, and recommendations for implementation of the results of the study as well as for future research.

Summary

The purpose of this study was to assess the impact of the Alcohol Skills Training Program on college fraternity members' drinking behaviors and to attempt to ascertain what elements of the program may lead to change. The primary goal of the research was to determine whether or not ASTP decreases the rate and frequency of fraternity members' drinking, reduces the consequences associated with their alcohol use, and leads to the incorporation of self-protective strategies in order to cause reductions in use and negative outcomes. In addition, the researcher wished to explore what elements of the program might increase or inhibit the success of the educational intervention as well as what impact chapter culture might have on the program's effectiveness.

The researcher in this study considered the following overarching question in this study: Does the Alcohol Skills Training Program result in decreased high-risk drinking behaviors and negative consequences for national fraternity members?

In addition, the following subquestions were used to answer the overarching question:

Subquestion 1: To what extent does ASTP reduce high-risk drinking behaviors in fraternity members?

Subquestion 2: To what extent does ASTP reduce negative consequences associated with high-risk drinking in fraternity members?

Subquestion 3: What aspects of ASTP make the program successful for use with fraternity members in addressing high-risk drinking behaviors and associated negative consequences?

Subquestion 4: Is there an association between a chapter culture that promotes alcohol use and the extent to which the skills taught in ASTP are implemented by participants?

In order to answer these questions, the researcher employed a mixed methods approach that consisted of collection and analysis of survey and questionnaire data followed by interviews with members from chapters within the experimental group.

Analysis of Research Findings

Through the use of quantitative data collection and analysis, the researcher identified that changes in average number of drinks per week, peak BAL, experiences of negative consequences, and implementation of self-protective factors cannot be attributed to participation in ASTP by the experimental group. However, the researcher did determine that there is a relationship between items from the CORE, which measures chapter culture, and the implementation of PBSS strategies.

By conducting interviews and analyzing the data collected, the researcher identified elements of the ASTP program that participants found useful. This included information related to the following items: 1) alcohol's effect on the body and mind, 2)

Blood Alcohol Level, 3) drug interaction, and 4) responsible drinking habits. In addition the researcher identified facilitator characteristics that were important to participants. This included the following items: 1) being knowledgeable about college alcohol use, 2) having good general knowledge about alcohol, and 3) having a warm and understanding personality. The researcher also learned that individual members' behavior within the chapter influenced how members felt about the chapter's concern about the prevention of alcohol abuse and whether or not the chapter culture promoted alcohol use. Finally, the researcher identified that members' experiences with similar alcohol education programs influenced their survey responses and reactions to the program.

Discussion of Research Findings

The Alcohol Skills Training Program has been identified as a strategy which can reduce the frequency and quantity of alcohol consumption and its negative consequences within the college student population (Task Force, 2002a). However, the result of this study did not support that finding. Unlike the work conducted at the University of Washington (Baer et al., 1992; Fromme et al., 1994), the researcher in this study found no significant differences between the experimental and the control group in terms of reducing high-risk drinking and its associated negative outcomes.

However, the researcher did note that some of the major components of ASTP were identified by participants as useful parts of the program. The Alcohol Skills Training Program incorporates ten components, which include Building Rapport, Alcohol and the Body, and Blood Alcohol Level (Miller, Kilmer, et al., 2001). The researcher identified each of these themes in both the quantitative and the qualitative analysis of

data.

In addition, one of the things that makes ASTP unique compared to some alcohol education programs is the fact that it does not take an abstinence only approach (Miller, Kilmer, et al., 2001). Rather, it incorporates moderate drinking guidelines (Baer et al, 1992; Fromme et al., 1994). Teaching these techniques has been previously shown to reduce the amount of alcohol consumed as well as negative consequences experienced (Martens, Ferrier, et al., 2005; Martens, Pederson, et al., 2007), and Dennis (2005) stated that fraternity members in her study indicated that participation in ASTP had given them insights into reducing risk associated with drinking. Participants in the current study did identify that teaching responsible drinking was a useful part of the program. However, when studying the implementation of these strategies by subjects, the researcher found no significant differences between the experimental and the control group.

Expressing empathy, which is another key component of ASTP (Miller, Kilmer, et al., 2001), has been shown to reduce drinking rates (Cary et al., 2010; Michael et al., 2006). Although participants in this study did identify facilitator warmth and understanding of college alcohol use as important elements of the program, based on the fact that there was no significant reduction in drinking rates by the participants, this study does not support previous research.

When reviewing previous literature related to effective prevention and education programs for use with college students, the researcher noted that students are oftentimes very knowledgeable about alcohol use and its negative consequences (Larimer & Cronce, 2002). According to Larimer and Cronce, this lack of information does not account for

why they are engaging in high-risk drinking. However, in the current study, several participants noted that some of the program elements they found most useful were those related to alcohol's effect on the body, BAL, and alcohol's interaction with other drugs. The results of the current study seem to support continuing to provide this information to students during alcohol education programs.

Finally, although the number of individual members in the study would be considered an adequate sample size according to Gay and colleagues (2009), the fact that the individuals in the study comprised clusters left the analysis vulnerable to the impact of one outlier chapter. While the researcher cannot, with certainty, attribute the study outcome to the behavioral issues that existed in Experimental Chapter 2, this factor could have influenced the overall results of the study. In order to control for this influence, more individual members were needed. By including more chapters, which would have involved collecting data from more individual members, the impact that this outlier group possibly had might have been controlled.

Conclusions

The researcher in this study did not find evidence to support ASTP as an effective alcohol education program for reducing high-risk drinking and its associated negative consequences among fraternity members. However, several key pieces of information were identified.

Some of the elements of the ASTP program do seem to be viewed as useful by members of college fraternities. These include: Building Rapport, Alcohol and the Body, and Blood Alcohol Level. When sharing alcohol information with college students, and

fraternity members in particular, the use of these elements will be well received by participants and could lead to changes in behavior. In addition, teaching responsible drinking is viewed positively by fraternity members and will have more impact than an abstinence-based program in changing drinking behaviors.

In addition, facilitator style was viewed as very important by participants. Those providing the alcohol education must be able to express empathy. In other words, they must have a warm personality and be able to convey that they understand alcohol use on a college campus, and especially in fraternities.

Implications

This study has implications for the national fraternity involved in the study. They have invested a great deal of time and money into training facilitators, providing materials, and developing educational programs based on ASTP and its principles. As the research did not show that that program was creating change in high-risk drinking or its associated negative consequences among the fraternity's members, the organization should evaluate continuing the program in its present form. In addition, if the program is to be continued within the organization, it will be critical that they evaluate their facilitators to ensure that these individuals are not only well-trained but also capable of building rapport with students and providing understanding of alcohol use in a college setting.

In addition, this research has implications for the larger national Greek community. As high-risk drinking has been attributed to members of fraternities and sororities, finding effective risk-reduction programs is very important to both national

organizations and campus-based Greek Life professionals. While this study did not show ASTP to be a significant factor in changing the drinking behaviors of the participants, it did provide some useful information that can guide future research and the development of alcohol education programs.

Finally, as fraternity and sorority members contribute to the overall problem of college drinking, this study has implications for all higher education leaders. In order to reduce the institutional consequences associated with alcohol use, effective intervention strategies must be found. Again, this study can provide insight into future research as to how best to address this important public health concern.

Recommendations

The findings of this research lead the researcher to make the following recommendations for implementing the results of the study as well as for future research.

Recommendations for Implementing the Results of the Study

1. National Greek organizations as well as university campuses should consider utilizing alcohol education programs that teach responsible drinking habits and include information related to alcohol's effect on the body and mind, BAL levels, and drug interactions as these could prove useful in reducing high-risk drink behavior and its associated negative consequences.
2. Institutions must carefully consider who is providing alcohol education programs to students. Facilitators of these programs should have warm and understanding personalities, be able to relate to college students and be understanding of their alcohol use, and possess good knowledge about alcohol

use in general.

3. Alcohol education programs should carefully consider the role that individual backgrounds have on members' response to those programs. While group programs are good in terms of reaching a large number of students and may be cost and time efficient, individual interventions might be appropriate for some chapter members.
4. Alcohol education programs should also take into account whether or not members have previously participated in similar intervention efforts and how receiving repeated information might impact responsiveness to the program.
5. The national fraternity involved in this study should explore why members do not know if there is an enforced alcohol policy or an alcohol prevention program for the group. Increased education about these strategies might be required.
6. National Greek-letter organizations should explore ways to capitalize on the relationship that exists between members that feel their chapter is concerned about the prevention of alcohol abuse and those that are actively involved in prevention efforts and the implementation of self-protective behaviors. These factors could lead to improved alcohol education programs that do lead to the reduction of high-risk drinking behavior and its associated negative consequences.

Recommendations for Further Research

1. As the national fraternity involved in this study has been using this program

with its members for over ten years, the long-term effects of their comprehensive alcohol education program could have influenced the outcome of this study. Therefore, conducting the study with a national fraternity whose members have never been exposed to ASTP could produce different results.

2. The relatively small sample size, combined with the reported behavioral issues with Experimental Chapter 2, could have impacted the results of this study. Using a larger sample, with more chapters in both the experimental and the control group could produce different results. The larger sample size would improve the generalizability of the results. In addition, it could possibly help to control for any outlier chapters who participate in the program.
3. All of the chapters participating in the research were located within the Southeastern United States. Previous research reports have indicated that students in the northeast drink more and engage in binge drinking more frequently than in other part of the country (Wechsler, Lee, Kuo, & Lee, 2000). As the highest-risk drinkers are often the most resistant to alcohol education efforts, the study should be replicated in other part of the country to see if similar results are produced.
4. The study only involved one all-male national fraternity. As men tend to drink more frequently and in higher quantity than their female counterparts (Kapner, 2003), and very few studies related specifically to sorority women alone have been conducted, the implications for utilizing the results of this

study might not be applicable to women's groups. Therefore, more research should be conducted with national sororities in order to test the effectiveness of ASTP with this group.

5. In addition, most of the men involved in the study were Caucasian. Many previously conducted research studies have found that white students drink more than non-white students (Kapner, 2003); therefore, as more research is needed related to sororities, additional study involving culturally-based groups such as member organizations of the National Pan-Hellenic Council and the National Association of Latino/Latina Fraternal Organizations is warranted.
6. Although issues exploring chapter culture were addressed in this study, the researcher did not investigate individual life circumstances. As the drinking behaviors of individuals impact the culture of a chapter, future research might consider the impact that individual differences such as family history of alcoholism, previous treatment for substance abuse, participation in previous alcohol education programs, or traumatic life events could have on overall drinking habits of a fraternity chapter.
7. While the researcher chose to limit this study to only state supported institutions, conducting this study at smaller, private institutions could provide additional insight to the effectiveness of ASTP. As Wechsler, Lee, Kuo, and Lee (2000), reported, drinking rates are often higher at smaller colleges and universities (less than 2,500 students), but the universities involved in this study ranged from 5,000 – 25,000 students; therefore, conducting a similar

study with fraternity and sorority chapters at smaller institutions could add to the body of knowledge on this subject.

8. As a relationship seems to exist between members' belief that their chapter is concerned about the prevention of alcohol abuse and those that are actively involved in prevention efforts and the implementation of self-protective behaviors, further research into how to reshape chapter culture as a way to reduce high-risk drinking is needed.

Dissemination

There are several venues that would be appropriate for dissemination of the findings of this study. The first is within the field of fraternity and sorority advisement. This can be accomplished by the researcher applying to present at the Association of Fraternity and Sorority Advisors' Annual Meeting. In addition, this association publishes a research journal, *The Oracle*. The researcher can submit an article for publication to this journal that focuses specifically on the implications for the national fraternity and sorority community as well as on-campus practitioners in this field.

The study could also prove useful to the higher education community at large. Two professional associations exist within this field, NASPA, Student Affairs Administrators in Higher Education, and ACPA, American College Personnel Association. Both of these groups host a variety of professional meetings and produce research publications. The researcher can apply to present at these meetings and submit findings related to the higher education community for publication in these journals.

Finally, there is usefulness for college health programs as well. The members of

the American College Health Association would be interested in the findings related to how to improve alcohol education initiatives for college students. The researcher can apply to present at their annual meeting as well as submit articles for publication to their journal, *The Journal of American College Health*.

Final Thoughts

The researcher in this study has been a volunteer chapter advisor for thirteen years, a campus-based Greek Life professional for eleven years, and an on campus alcohol educator for six. As a result, the researcher was very interested in exploring this topic and attempting to identify a program that would reduce high-risk drinking and its associated negative consequences among fraternity members. Although the results were not as positive as the researcher might have hoped, the results of the study do provide positive information that can guide future research into this critical area.

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Appendix A

Georgia Southern University Mail - Use of RAPI in Dissertation Study

Page 1 of 1



Joy Hamm <kjhamm@georgiasouthern.edu>

Use of RAPI in Dissertation Study

2 messages

Joy Hamm <kjhamm@georgiasouthern.edu>
To: hewwhite@rci.rutgers.edu

Tue, Jul 5, 2011 at 12:55 PM

Dr. White.

My name is Joy Hamm and I am a doctoral student at Georgia Southern University. My dissertation, "Impact of Alcohol Skills Training Program on Fraternity Members' Drinking Behaviors," focuses on evaluating the impact of ASTP on changing drinking behaviors and reducing negative consequences with Pi Kappa Phi fraternity members. I am interested in using the RAPI as a part of my questionnaire to assist in determining changes in negative consequences between pre- and post-test. I am writing to request permission to use the survey as a part of my research. Can you please direct me as to how to go about securing this permission?

Thanks!
Joy

--

K. Joy Hamm
Assistant Dean of Students & Director of Fraternity and
Sorority Relations
Georgia Southern University
(912)478-5185

hewwhite@rci.rutgers.edu <hewwhite@rci.rutgers.edu>
Reply-To: hewwhite@rci.rutgers.edu
To: Joy Hamm <kjhamm@georgiasouthern.edu>

Tue, Jul 5, 2011 at 1:11 PM

Hi Joy, the RAPI is free for anyone to use. You do not need my permission. You can find it on the Center of Alcohol Studies at Rutgers U website. If you need more information, let me know. Good luck with your dissertation. Helene White

Sent from my Verizon Wireless BlackBerry

From: Joy Hamm <kjhamm@georgiasouthern.edu>
Date: Tue, 5 Jul 2011 12:55:09 -0400
To: <hewwhite@rci.rutgers.edu>
Subject: Use of RAPI in Dissertation Study
[Quoted text hidden]

<https://mail.google.com/mail/?ui=2&ik=f46bc6d627&view=pt&cat=Personal&search=cat...> 9/20/2011

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Joy Hamm <kjhamm@georgiasouthern.edu>

Use of PBS Scale

2 messages

Joy Hamm <kjhamm@georgiasouthern.edu>
To: martensmp@missouri.edu

Fri, Jul 1, 2011 at 1:33 PM

Dr. Martens,

My name is Joy Hamm and I am a doctoral student at Georgia Southern University. My dissertation focuses on evaluating the use of ASTP as an alcohol education tool in Pi Kappa Phi fraternity. In speaking with Dr. Jason Kilmer about my project, one of my concerns related to effective evaluation tools. As one of the things that sets ASTP apart from other education programs is its focus on risk reduction through the use of protective behaviors, he suggested the use of your PBS Scale. He provided me with your contact information so that I could ask your permission to use the scale.

Can you please let me know if this would be possible? If you would like more information about my study or to speak with me before you grant permission, please let me know.

Thank you for your consideration!
Joy

--

K. Joy Hamm

Assistant Dean of Students & Director of Fraternity and
Sorority Relations

Georgia Southern University
(912)478-5185

Martens, Matthew P. <martensmp@missouri.edu>
To: Joy Hamm <kjhamm@georgiasouthern.edu>

Fri, Jul 1, 2011 at 9:58 PM

Here you go Joy. Please let me know if you need anything else.

Matthew P. Martens, Ph.D.

Associate Professor

Department of Educational, School, and Counseling Psychology

308 Noyes Hall

University of Missouri

<https://mail.google.com/mail/?ui=2&ik=f46bc6d627&view=pt&cat=Personal&search=cat...> 9/20/2011

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September 1, 2011

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Permission applies to the:

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Limitations of the permission are:

- *Permission applies only to scholarly work relating to her dissertation titled "Impact of Alcohol Skills Training Program on Fraternity Members' Drinking Behavior".*

If you have any questions or need additional information please do not hesitate to call. I can be reached at 618.453.4390.

Sincerely,
Laura A. Rowald, Ph.D.
Researcher III
Core Institute, SIUC

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From: Joy Hamm [kjhamm@georgiasouthern.edu]
Sent: Monday, June 06, 2011 9:16 AM
To: Jason R. KILMER
Subject: ASTP Items

[Quoted text hidden]

4 attachments

-  satisfaction_survey_for_groups.doc
25K
-  Martens Protective Behavioral Strategies 2007.pdf
75K
-  Martens Protective Behavioral Strategies 2005.pdf
60K
-  MC2 Survey 2003-2004.pdf
1451K

Joy Hamm <kjhamm@georgiasouthern.edu>
To: "Jason R. KILMER" <jkilmer@u.washington.edu>

Tue, Jun 21, 2011 at 4:16 PM

Jason,

Completely understandable, but there are a few things that I still need.

- A copy of the Protective Behavioral Strategies scale and permission to use it. I am happy to contact Matt Marten myself, but need his contact information if you would prefer that I do so.

- Links to or the references for the two articles you mentioned by Mary Larimer that have the meta-analysis information about the ASTP studies.

Finally, I am assuming since you sent me the satisfaction survey and MC2 survey that I have permission to use those?

Thanks again for all your help!
Joy

[Quoted text hidden]

Jason R. KILMER <jkilmer@u.washington.edu>
To: Joy Hamm <kjhamm@georgiasouthern.edu>

Tue, Jun 21, 2011 at 4:19 PM

The PBS scale is in the articles I sent – you can contact Matt Martens at martensmp@missouri.edu

Mary's articles are attached.

You have permission to use the Satisfaction Survey...MC2 survey has some stuff we needed to get

<https://mail.google.com/mail/?ui=2&ik=f46bc6d627&view=pt&cat=Personal&search=cat...> 9/20/2011

Appendix B

RUTGERS ALCOHOL PROBLEM INDEX RAPI (23-item version)

Different things happen to people while they are drinking ALCOHOL or because of their ALCOHOL drinking. Several of these things are listed below. Indicate how many times each of these things happened to you WITHIN THE LAST YEAR.

Use the following code:

- 0 = None
- 1 = 1-2 times
- 2 = 3-5 times
- 3 = More than 5 times

HOW MANY TIMES HAS THIS HAPPENED TO YOU WHILE YOU WERE DRINKING OR BECAUSE OF YOUR DRINKING DURING THE LAST YEAR?

- 0 1 2 3 Not able to do your homework or study for a test
- 0 1 2 3 Got into fights with other people (friends, relatives, strangers)
- 0 1 2 3 Missed out on other things because you spent too much money on alcohol

- 0 1 2 3 Went to work or school high or drunk
- 0 1 2 3 Caused shame or embarrassment to someone
- 0 1 2 3 Neglected your responsibilities

- 0 1 2 3 Relatives avoided you
- 0 1 2 3 Felt that you needed more alcohol than you used to in order to get the same effect
- 0 1 2 3 Tried to control your drinking (tried to drink only at certain times of the day or in certain places, that is, tried to change your pattern of drinking)

- 0 1 2 3 Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking
- 0 1 2 3 Noticed a change in your personality
- 0 1 2 3 Felt that you had a problem with alcohol

- 0 1 2 3 Missed a day (or part of a day) of school or work
- 0 1 2 3 Wanted to stop drinking but couldn't
- 0 1 2 3 Suddenly found yourself in a place that you could not remember getting to

- 0 1 2 3 Passed out or fainted suddenly
- 0 1 2 3 Had a fight, argument or bad feeling with a friend
- 0 1 2 3 Had a fight, argument or bad feeling with a family member

- 0 1 2 3 Kept drinking when you promised yourself not to
- 0 1 2 3 Felt you were going crazy
- 0 1 2 3 Had a bad time

- 0 1 2 3 Felt physically or psychologically dependent on alcohol
- 0 1 2 3 Was told by a friend, neighbor or relative to stop or cut down drinking

DAILY DRINKING QUESTIONNAIRE (DDQ), Modified

INSTRUCTIONS

For each day of the week, fill in both the number of drinks consumed and the number of hours you typically drink.

Please be sure to fill out the information regarding your gender, weight, and height.

QUESTION 1

For the *past month*, please fill in a number for each day of the week indicating the *typical number of drinks* you usually consume on that day, and the *typical number of hours* you usually drink on that day.

Number of Drinks	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Hours							

Weight _____ Gender _____ Height _____

The Protective Behavioral Strategies Scale

Instructions: Please indicate the degree to which you engage in the following behaviors when using alcohol or “partying.”

	Never	Rarely	Occasionally	Sometimes	Usually	Always
1. Use a designated driver	1	2	3	4	5	6
2. Determine not to exceed a set number of drinks	1	2	3	4	5	6
3. Alternate alcoholic and non-alcoholic drinks	1	2	3	4	5	6
4. Have a friend let you know when you have had enough to drink	1	2	3	4	5	6
5. Avoid drinking games	1	2	3	4	5	6
6. Leave the bar/party at a predetermined time	1	2	3	4	5	6
7. Make sure that you go home with a friend	1	2	3	4	5	6
8. Know where your drink has been at all times	1	2	3	4	5	6
9. Drink shots of liquor	1	2	3	4	5	6
10. Stop drinking at a predetermined time	1	2	3	4	5	6
11. Drink water while drinking alcohol	1	2	3	4	5	6
12. Put extra ice in your drink	1	2	3	4	5	6
13. Avoid mixing different types of alcohol	1	2	3	4	5	6
14. Drink slowly, rather than gulp or chug	1	2	3	4	5	6
15. Avoid trying to “keep up” or “out-drink” others	1	2	3	4	5	6

Note: Item #9 is reverse-scored.

Limiting/Stopping Drinking = items 2, 3, 4, 6, 10, 11, 12

Manner of Drinking = items 5, 9, 13, 14, 15

Serious Harm Reduction = items 1, 7, 8

Adapted CORE Survey Questions

- | | yes | no | don't know | | | |
|---|-----|----|------------|---|----|----|
| a. Does your chapter have an alcohol policy? | | | | | | |
| b. If so, is it enforced? | | | | | | |
| c. Does your chapter have a alcohol prevention program? | | | | | | |
| | SA | A | N | D | SD | DN |
| d. Do you believe your chapter is concerned about the prevention alcohol abuse? | | | | | | |
| e. Are you actively involved in efforts to prevent alcohol use on your chapter? | | | | | | |
| f. I abide by the chapter policy and regulations that concerns alcohol and use. | | | | | | |
| g. The social atmosphere in this chapter promote s alcohol use? | | | | | | |

Compared to other fraternities with which you are familiar, this chapters' use of alcohol is . . .

- Less than other fraternities
- About the same as other fraternities
- Greater than other fraternities

SATISFACTION SURVEY

I would greatly appreciate feedback from you about this group. Below are a few questions regarding the presentation and process. Your candid responses will help refine our procedures for the future.

Presentation Date: _____

Please circle the number that best signifies your answer.

	N/A	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. I would recommend this program to a friend.	0	1	2	3	4	5
2. The information I received will cause me to change my pattern of substance use.	0	1	2	3	4	5
3. The information I received will cause me to think differently about my pattern of substance use.	0	1	2	3	4	5
4. The program was what I expected.	0	1	2	3	4	5
5. The workshop was thorough and complete.	0	1	2	3	4	5
6. The facilitator seemed well-organized.	0	1	2	3	4	5
7. The facilitator seemed competent and well-trained.	0	1	2	3	4	5
8. The facilitator seemed warm and understanding.	0	1	2	3	4	5
9. The facilitator seemed well-informed about what goes on in the college setting	0	1	2	3	4	5
10. I left the presentation with a specific goal in mind about changing my substance use.	0	1	2	3	4	5

11. Have you been to this program from this presenter before? _____

12. What part of the program was **MOST USEFUL**?

13. What part of the program was **LEAST USEFUL**?

Please write any additional feedback on the back – any comments are appreciated.

Appendix C

Interview Questions

1. You responded that you (use participant's response to CORE question d) that your chapter is concerned about the prevention of alcohol abuse. Can you please give examples that demonstrate why you responded in this manner?
2. You indicated that you (use participant's response to CORE question f) abide by the chapter policy and regulations that concern alcohol use. What motivates you to abide by these policies and regulations?
3. You stated that you (use participant's response to CORE question g) believe the atmosphere in the chapter promotes alcohol use. Why do you believe this to be the case?
4. You indicated that compared to other fraternities, your chapter's alcohol use is (use participant's response from CORE). Can you please explain what lead you to this conclusion?
5. You indicated that you would recommend/not recommend this program to a friend. Why would you do/not do so?
6. You stated that the information you received in the program would/would not cause to change your drinking behaviors. Was there something specific about the program that caused you to do/not do so?
7. You responded that the facilitator was/was not competent and well-trained. What about the facilitator made you believe this to be/not to be true?
8. You stated that the facilitator did/did not seem warm and understanding. How did this factor impact your response to the program?
9. (Based on response to Satisfaction Survey question 12) Can you elaborate more on why _____ was the most useful part of the program?
10. (Based on response to Satisfaction Survey question 12) Can you elaborate more on why _____ was the least useful part of the program?