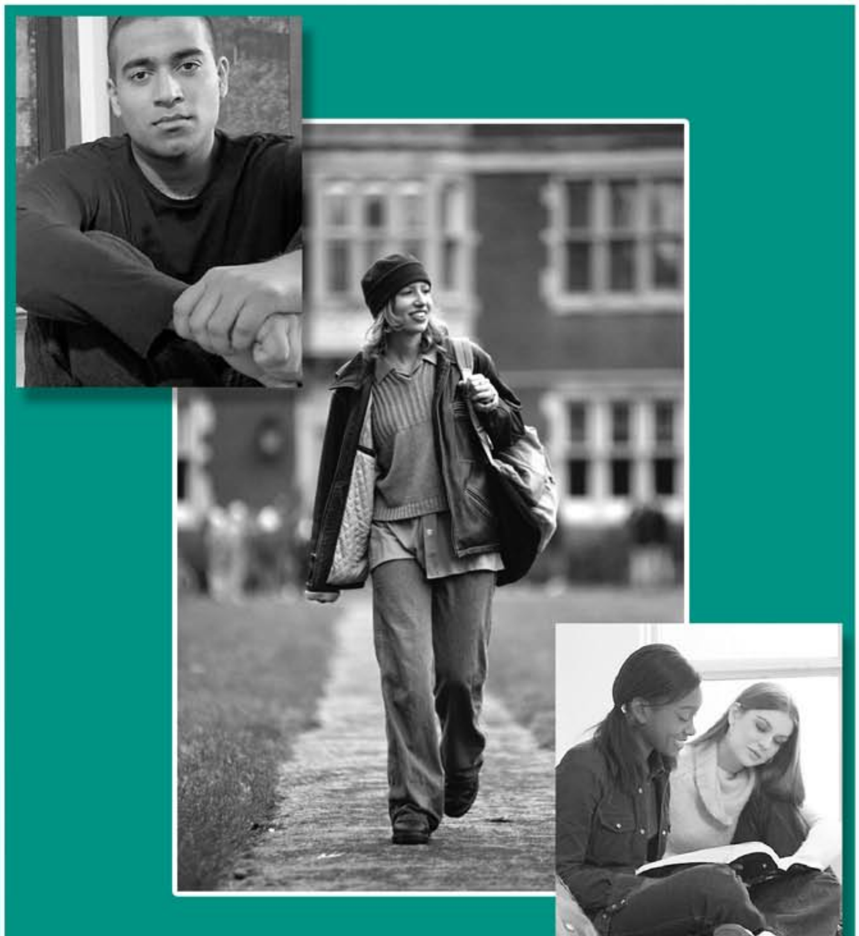
ORACLE

The Research Journal of the Association of Fraternity Advisors



afa

VOLUME 3 ✧ ISSUE 1 ✧ MARCH 2008

TABLE OF CONTENTS

iii **EDITORIAL TEAM**

iv **GENERAL INFORMATION**

vi **EDITORIAL: THE STRUGGLES OF RESEARCH IN FRATERNITY AND SORORITY LIFE**
Eric Norman, Ph.D.

1 **LEADERSHIP DEVELOPMENT THROUGH THE FRATERNITY EXPERIENCE AND THE RELATIONSHIP TO CAREER SUCCESS AFTER GRADUATION**
Danny R. Kelley, Ph.D.
Promoting student leadership development has been an objective of higher learning since the inception of colleges and universities and is also a major tenet espoused in the mission statements of inter/national fraternities. The aim of this study was to evaluate the leadership impact that service as a fraternity chapter president has on students' self- perceived leadership development. More specifically, this study addressed the self- perceived leadership impact the fraternity experience has on students' careers.

13 **DEVELOPING, IMPLEMENTING, AND EVALUATING INNOVATIVE SORORITY SUBSTANCE ABUSE PREVENTION IN THE EVIDENCE-BASED ERA**
Andrew Wall, Ph.D., Logan Hazen, Ed.D., Mickey Trockel, M.D., Ph.D., and Becky Markwell
This article describes the development, implementation, and evaluation of a pilot, multi-faceted, and multi-session alcohol abuse prevention program conducted in conjunction with two sorority chapters. The process and product of the pilot program are illustrative of the use of theory and evidence-based practices in the creation of innovative substance abuse prevention efforts among fraternal organizations within higher education. Findings point to practical implementation challenges and to promising evidence of program impact. Recommendations inform practitioners in implementing evidence-based practices with fraternal chapters.

27 **USING COST-BENEFIT ANALYSIS FOR FRATERNITY AND SORORITY AFFAIRS ASSESSMENT: CREATING A BUSINESS CASE FOR STUDENT SUCCESS IN FRATERNAL ORGANIZATIONS**
Michael D'Arcangelo and Jessica R. Berner
Cost-benefit analysis can be an effective method for programmatic assessment, evaluation, and validation in fraternity/sorority affairs. This article provides an overview of a model cost-effectiveness assessment strategy outlined by Kennedy, Moran, and Upcraft (2001) and a cost-benefit study of the Rochester Institute of Technology fraternity/sorority program. Special attention is given to providing

credible methods for fraternity/sorority professionals to measure programs using data related to organizational efficacy and student retention and applying that data to guide public perception. Recommendations for application on other campuses are provided in an effort to improve assessment practices and aid institutions in assessing the value of fraternal organizations.

40 **HAZING IN STUDENT ORGANIZATIONS: PREVALENCE, ATTITUDES, AND SOLUTIONS**
Stephen S. Owen, Ph.D., Tod W. Burke, Ph.D., and David Vichesky
This article reports the results of a survey exploring hazing in student organizations. First, a typology of hazing behaviors was constructed through factor analysis. Second, respondents reported the prevalence of hazing, and results were compared across type of student organization. Third, respondents indicated their attitudes about hazing, and results were compared between perpetrators of hazing and their victims. Finally, respondents assessed the efficacy of various solutions to hazing, and results were compared between those who had perpetrated acts of hazing and those who had not. The results were used to construct a theoretical model of hazing behavior on college campuses, with recommendations for solutions.

59 **COMPARING FRATERNITY/SORORITY PROFESSIONALS' KNOWLEDGE OF EATING DISORDERS WITH OTHER STUDENT PERSONNEL ADMINISTRATORS**
Michelle L. Nicopolis, Ph.D.
This study examined disordered eating behaviors in regard to detection, prevention, intervention, and referral by college student personnel professionals. A survey was used to assess the level of knowledge pertaining to eating disorder among administrators of two of the largest at-risk student groups on campus: fraternity/sorority affiliated students and student athletes. ANOVA and correlation analyses were used to evaluate eating disorder knowledge levels. Recommendations include encouraging college student personnel professionals to seek out educational materials and training to educate themselves about eating disorders to help refer students who may be struggling with this health concern.

GENERAL INFORMATION

Oracle: The Research Journal of the Association of Fraternity Advisors advances the study of college fraternities and sororities through a peer reviewed academic journal promoting scholarly discourse among partners invested in the college fraternal movement. The vision of *Oracle: The Research Journal of the Association of Fraternity Advisors* is to serve as the premier forum for academic discourse and scholarly inquiry regarding the college fraternity and sorority movement.

Oracle: The Research Journal of the Association of Fraternity Advisors is published biannually. Members of the Association receive the current issue *Oracle* as a benefit of membership; past issues of *Oracle* are available to the public on the AFA website.

Copyright:

Subscriptions:
Subscriptions may be purchased by contacting the Central Office. Single issues are available for $20; a one-year subscription is $35; a two-year subscription is $50.

Submissions:
Oracle: The Research Journal of the Association of Fraternity Advisors accepts submissions focused on articulating research involving fraternity and sorority members at the collegiate, alumni, inter/national organization, and volunteer advisory levels. Manuscripts should be written for the student affairs generalist who has broad responsibility for educational leadership, policy, staff development, and management. Articles on specialized topics should provide the generalist with an understanding of the importance of the program to student affairs overall and fraternity/sorority advising specifically.

Research articles for *Oracle: The Research Journal of the Association of Fraternity Advisors* should stress the underlying issues or problems that stimulated the research; treat the methodology concisely; and, most importantly, offer a full discussion of results, implications, and conclusions. In the belief that AFA readers have much to learn from one another, we also encourage the submission of thoughtful, documented essays or historical perspectives.

Visit http://www.fraternityadvisors.org/Oracle.aspx for more detailed submission guidelines.

THE STRUGGLES OF RESEARCH IN FRATERNITY AND SORORITY LIFE

Eric Norman, Ed.D.

As I enter into the second year of my role as *Oracle* Editor, I have found myself reflecting on the lifecycle for research in fraternity and sorority life. Having been involved in the discussion of *Oracle* since its inception, I understand the need to make informed decisions with credible research and theory. This is obviously not a new thought, as Upcraft noted in 1993,

> There is a suspicion, usually felt by the researchers in our field, that our theories are not used enough by practitioners as they develop policy, make decisions, solve problems, deliver services and programs, manage budgets, and in general do their jobs. (p. 260)

Once the journal began, I anticipated the floodgates would be opened as articles would pour in from across a wide variety of disciplines. However, when I accepted the position in the fall of 2006, I was informed that because there were so few submissions of quality, there were not enough articles to publish a journal for the spring of 2007 and concentrate on the solicitation of research for the fall 2007 issue. This caused me to ponder why there was a lack of articles. Over the next few months as Editor, I discovered that the publication timeline for a peer-reviewed journal (from submission to publication) takes considerably longer than I expected. This editorial will help demystify the process and better explain how an article submission is transformed into a published journal article along with a better comprehension of the anticipated timeline.

Oracle receives submissions from a number of sources. We receive articles from faculty, students (both at the master's and doctorate level), and practitioners from every level in student affairs, including entry level professionals and vice presidents. The topics submitted vary, however many articles tend to study similar themes, including recruitment, alcohol use and abuse, hazing, leadership, image and marketing, assessment, deviance, multicultural chapters, governance, and identity development.

The *Oracle* Peer Review Board proactively seeks out research to create a robust, diverse, and high quality collection from which to draw. For example, Peer Review Board members contact graduate programs and institutions with fraternity/sorority communities. We also seek out presenters at various conferences whose programs involve fraternity/sorority life (either as a subject matter or as a sample population). This has included the fields of higher education, psychology, anthropology, nutrition, sociology, criminal justice, management, women's studies, African American studies, Latina/o studies, and history. We have highly encouraged research in areas where there appears to be a need to confirm anecdotal evidence, where findings and recommendations conflict, where the existing research has become antiquated, or where there is a need for a broad-based multi-campus evaluation. These preferred topics would include leadership development, hazing interventions, honor codes and their effectiveness, self governance models, optimum chapter sizes, National Survey of Student Engagement (NSSE) data with regard to fraternal affiliation, alcohol programs, deferred recruitment, character development, retention, and engagement (as identified through *Oracle* planning meetings). We have also worked with other journals for submission referrals that may not parallel their mission, but would benefit *Oracle*'s readership. Lastly, we partner with the Center for the Study of the College Fraternity (CSCF) to help identify areas of needed research in the field.

When recruiting articles, we hear about a number of issues that impede submissions. For example, we fight the misperception that submissions are limited to faculty or those with a doctorate. In fact, this journal is an outstanding opportunity for master's students to utilize their thesis to become published. We have received high quality papers written for graduate courses that are currently being prepared for future issues.

Some researchers struggle to gain permission from the chapter, inter/national organization, or governing council in order to conduct their studies. If you are experiencing such barriers, feel free to contact us so we can assist you in writing a proposal to gain approval. In some cases, the individuals conducting research are also looking for post-masters or post-doctorate employment and have little time to shape an article out of their research. This is unfortunate, as the research is generally conducted under the tutelage of an experienced faculty or administrator. *Oracle* Peer Review Board members may be able to assist researchers in finding a co-author who can help develop an article based on the researchers' findings. Lastly, we hear from potential authors that their writing abilities may not be as strong as they feel necessary to construct a good article. The editors are dedicated to aid in the development of any article that is grounded in research and theory. Writing is a process, and should be viewed as an ability to learn and to accept constructive criticism to improve your abilities as a writer and researcher.

Once *Oracle* receives a submission, the reviewing and editing process begins. First, the article is reviewed by either the editor or associate editor. In many cases, the lead researcher is asked to clarify areas and/or make modifications. If the article is well structured, has a grounded methodology, and is well written, it is forwarded on to the Peer Review Board for comments and editing. Here, the Review Board makes a determination as to whether the article is a good fit for *Oracle*. In some cases, the article may be better placed in *Perspectives*, and will be referred to that editor. In other cases, the article may need some additional content work and would be returned to the researcher for corrections. Or, the article may not be organized as a research article, in which case it may be rejected with suggestions for rewriting.

There are a few areas where the vast majority of articles tend to need assistance. First, methodology and sampling are frequently not explained to the degree necessary, or the methods used are inadequate. We are fortune to have a number of professionals who can work with the author to help refine these areas. Nomenclature is another area typically in need of correction. For example, it is critical to move away from the term "Greek" and instead use fraternity/sorority both to differentiate fraternal organizations from the country of Greece and to be inclusive of fraternal organizations that are not named with Greek letters. It is of great aid to consult the most recent edition of the American Psychological Association (APA) publication manual when writing so that citations are done correctly, but also to aid in structuring a document that is grammatically correct and clear in organization. Frequently, a term needs to be operationally defined for clarity. Lastly, additional citations may be requested to bolster arguments and points.

If the Peer Review Board feels the article is research-based and is written well, typically the article will be accepted with revisions. These revisions may be global in comment or may request specific areas be retooled and rewritten. The process to go from submission to review can take, on average, two months. The article is then sent to the lead researcher for revisions. From my experience, it takes the author(s) at least one month to make the necessary changes and to clarify and points that are in need of clarification by the Peer Review Board. In many cases, it can take up to three months for the areas to be re-addressed. The article is then resubmitted to the Editor to check the revisions. If the requested changes have been accomplished, the work is sent to back to the Peer Review Board for final refining.

The Peer Review Board will make further edits during this stage. These typically involve building transitions, moving sections, eliminating redundancy, and improving wording. This is then given to the Editor to compile and then typically returned to the researcher for final clarification. This process can take two months or more depending upon the quantity of changes requested by the Peer Review Board. From there, the article is given a final edit and formatting occurs.

The process from when the researcher first submits the article through to the point where it is ready for publication usually takes about six months. The Editor and Associate Editor then decide the order and compilation of articles for an issue. With a robust pool of articles, the typical lead time can be over one year.

With the process detailed and demystified, we are very pleased to have a fine compilation of articles to resume the publication of *Oracle*. In this issue, we have an article on leadership by Dr. Danny Kelly, focusing on the leadership experience of being a fraternity president and its impact on one's career. We have an article from Dr. Andrew F. Wall, Dr. Logan Hazen, Dr. Mickey Trockel, and Ms. Becky Markwell, examining a pilot program for sororities to address substance use prevention efforts. To broaden our topic base, we have a submission by Dr. Michelle Nicropolis, who examines the knowledge of eating disorders of fraternity/sorority life professionals, as compared to other student affairs professionals. Michael D'Archangelo and Jessica Berner used a cost benefit model to analyze the effectiveness of assessment and evaluations in fraternity/sorority life. Lastly, Dr. Stephen S. Owen, Dr. Tod W. Burke, and David Vichesky examine hazing behaviors, attitude, and solutions between hazers and non hazers. With this variety of topics and researcher backgrounds, there is a deep pool of information that can be used to guide decision-making and practice. We hope you enjoy the articles presented in this issue and that you consider submitting a research article yourself in the near future.

Reference

Upcraft, M. L. (1993). Translating Theory into Practice. In M. J. Barr& Assoc. (Eds.), *The Handbook of Student Affairs Administration* (pp. 260-273). San Francisco: Jossey-Bass Publishers.

Dr. Eric Norman serves as the Oracle *Editor. He is the Associate Dean of Students and Director of Judicial Affairs at Louisiana State University. Previously, Dr. Norman was the Director of Fraternity and Sorority Life at Virginia Tech, as well as the Assistant Director of Fraternities, Sororities, Registered Student Organizations, and Leadership at the University of Delaware. He received his Ed.D. in Education Leadership in Administration and Policy from the University of Delaware; his Master of Education in Student Affairs Practice in Higher Education from the University of Delaware; his Master of Arts in Psychology from Washington College; and his Bachelor of Art and Science from the University of Delaware.*

LEADERSHIP DEVELOPMENT THROUGH THE FRATERNITY EXPERIENCE AND THE RELATIONSHIP TO CAREER SUCCESS AFTER GRADUATION

Danny R. Kelley, Ph.D.

Promoting student leadership development has been an objective of higher learning since the inception of colleges and universities and is also a major tenet espoused in the mission statements of inter/national fraternities. The aim of this study was to evaluate the leadership impact that service as a fraternity chapter president has on students' self- perceived leadership development. More specifically, this study addressed the self- perceived leadership impact the fraternity experience has on students' careers.

To conduct this evaluation, participants submitted a basic demographics questionnaire, the Leadership Acquisitions Form (LAF), and the Leadership Practices Inventory (LPI; Kouzes & Posner, 2001). While participants rated themselves high on the LAF and indicated a strong belief that the leadership skills they developed as chapter presidents were useful in their careers, participants did not have high scores on the LPI as compared to the normative sample.

Historically, higher education has prepared students to be future leaders and informed citizens. Changing times throughout the history of American higher education have impacted the role of student development. While dynamics of college life have changed over the years, leadership development has always been a positive value associated with higher education. Today, the focus on developing students' leadership potential has remained a primary university mission. With an increase in student interest in leadership development over the past two decades, colleges and universities have placed more emphasis on programming related to leadership. Out of classroom experiences, such as involvement in fraternities, have often been the vehicles to provide students with leadership opportunities, and new generations of college students have been able to mold these experiences to fit their needs. While promoting student leadership development is an important objective that universities and fraternities share, little is known about the extent to which fraternities are useful in developing leadership skills in chapter officers over the long term after graduation.

Review of Literature

Defining leadership and the characteristics and traits an individual must possess to be considered a leader is a challenge because of the many theories and definitions of leadership that have been developed. Yukl (1994) suggested that no general leadership theory adequately explains this concept. Rost (1991) reviewed over 200 definitions of leadership, but was unable to uncover one definition he believed comfortably defined leadership. Komives, Lucas, and McMahon's (1998) review of leadership research yielded similar results.

Astin (1991) contended that students can and do learn and develop leadership abilities through their involvement with extracurricular activities. Kuh (1995) estimated that over 70 percent of what students learn occurs through their out-of-class experiences. Cress, Astin, Zimmerman-Oster, and Burkhardt's (2001) study of the influence of leadership involvement on student development revealed that students who engage in campus leadership activities demonstrate improved leadership skills, increased civic responsibilities, and clarified societal values. Pascarella and Terenzini (1991) reported that undergraduate leadership involvement has modest implications for one's career; however, alumni consistently report that their college leadership experience significantly enhanced the interpersonal and leadership skills critical to future job success. A study by Schuh (1983) concluded that students who engaged in college leadership activities had more positive perceptions regarding their abilities to make future career choices as compared to students not involved with leadership activities. Additionally, fraternity/sorority leadership roles have been positively related to personal growth opportunities and leadership training (Astin, 1991, 1996; Winston & Massaro, 1987).

Kouzes and Posner (1987) developed the Leadership Practices Inventory (LPI) as a tool for businesses to use in creating employee leadership development programs. The instrument is comprised of five functional areas based on behaviors and actions managers reported they exhibit when at their personal best. The five functional areas are Challenging the Process (Challenging), Inspiring a Shared Vision (Inspiring), Enabling Others to Act (Enabling), Modeling the Way (Modeling), and Encouraging the Heart (Encouraging). The Leadership Practices Inventory (LPI) has been used in a number of studies for a variety of purposes, some of which are the identification of effective leaders, the educational curriculum necessary to train effective leaders, and the validity of the instrument itself, including its applicability across cultures and gender.

Posner and Brodsky (1992) adapted the instrument for use with college students, and it was validated in a survey of one national fraternity and its chapter officers on 100 college campuses. Slater et al. (2002) investigated the cross cultural effectiveness of the LPI (Kouzes & Posner, 1995) by administering the LPI to 28 graduate students studying educational administration at a Southwestern university in the United States and 28 graduate students studying at a university in Mexico. Their results revealed that the American students scored significantly higher than their Mexican counterparts on all five of Kouzes and Posner's (1995) leadership practices. In addition, the rank order of the five dimensions was relatively distinct. The authors concluded that the leadership behaviors measured by the LPI seemed to be firmly rooted in American culture, but not in Mexican culture. As a result, they suggested that the LPI may not have universal application across cultures because successful leadership may be defined differently in different cultures. Different leadership practices may succeed in different cultural contexts.

Leadership practices of students have also been the subject of research. Posner and Rosenberger (1997) examined the leadership of students who worked as orientation advisors at a higher education institution. Enrolling university students were asked to complete both the 1995 Student LPI Observer and a second assessment of the behavior of their orientation advisors. The authors pointed out (a) that the students and their orientation advisors only functioned together for a few days, and (b) that the leader (orientation advisor)/subordinate (new student) relationship was not due to self selection. However, the results of the study indicated that the effectiveness of the orientation advisors was strongly correlated with the degree to which the advisors' behavior matched the five leadership practices. The self perceptions of the student leaders also demonstrated a strong positive relationship between their view of their own efficacy and the amount of times they reported practicing the leadership behaviors.

Other studies have examined the way in which leadership practices might be impacted by several elements of the group or situations in which students participate. For example, Posner and Rosenberger (1998) found that student compensation did not affect the results of the LPI. In addition, Posner and Rosenberger noted that student leaders who collaborated with colleagues in a non-hierarchical situation did not exhibit these leadership practices more or less than those students who were elected by their peers to be leaders or held an official post like the presidency of a student organization. Regarding other student characteristics, Edington's (1995) research revealed that the behavior of student leaders was not correlated with gender, race, age, employment, full- or part-time attendance at an educational institution, or semester in college.

Posner and Rosenberger's (1998) research also demonstrated that student leadership practices were not affected by whether the student participated in a short, one-time leadership program or one with the duration of a whole academic year. Nevertheless, students who began a second year as a leader exhibited the five practices more frequently than those who were beginners in the same position (Posner & Rosenberger, 1998). The results of Baxter's (2001, cited by Posner, 2004) study that compared students who were Reserve Officers' Training Corps (ROTC) unit instructors with other students at the same school supported Posner and Rosenberger's (1998) conclusions. The ROTC students had better LPI scores than the other college students. Thus, longer time spent as a leader may be correlated with more frequent use of the five leadership practices.

Adams and Keim (2000) examined leadership practices of fraternally-affiliated student leaders at three public, Midwestern universities and measured their effectiveness as determined by chapter presidents, executive council members, and general members of fraternities and sororities. Participants completed the Student Leadership Practices Inventory and the Leadership Effectiveness Survey (Posner & Brodsky, 1992). The results of their study showed that women rated their chapter presidents as more effective leaders than the men did for their chapter presidents. However, both men and women agreed that presidents effectively represented their organizations to external groups.

More recently, Kouzes and Posner (Posner, 2004) tested the psychometric elements of their newest version of the Student LPI-Self (SLPI) instrument using information obtained from 604 fraternity chapter leaders in more than 200 American colleges and universities. The one international fraternity chosen was the same as the subject of the original study (Posner & Brodsky, 1992). Similar to the original study (Posner & Brodsky, 1992), many of this international fraternity's chapters were chosen to lessen the possible impact of diverse institutional policies and procedures as well as variations in the quality of student services among campuses. The fraternity selected seemed representative of the largest inter/national fraternities in terms of scope of services provided and membership size.

The SLPI was given to each of the chapter leaders participating in one of six area leadership programs held throughout the academic year. These leaders represented more than 75 percent of the chapter leaders in this international fraternity (Posner, 2004). After completion of the leadership program, all surveys were collected and scored. The self report scale contained eight standards of efficacy on which each fraternity leader rated his performance (Posner, 2004).

Analysis of the responses demonstrated that the presidents perceived themselves as using the five leadership practices more frequently than did the other chapter leaders. The distinction was statistically significant for the practices of Modeling, Enabling, and Encouraging, but was not significant for Inspiring and Challenging. For all leaders, Enabling was most often practiced, followed by Encouraging, Inspiring, Modeling, and Challenging. In addition, chapter officers who saw themselves as more effective also told of using each of the five leadership practices more than their peers who saw themselves as less effective.

Like Posner and Brodsky (1992), who developed the SLPI for use with college students, the researcher in the present study developed the Leadership Acquisitions Form (LAF) to measure 14 areas of leadership—Goal-Setting, Delegation, Motivating Others, Decision-Making, Problem-Solving, Organizational Skills, Meeting Management, Financial Management, Risk-Taking, Presentation Skills, Teamwork, Conflict Management, Social Skills, and Interpersonal Skills—in two separate scales, effectiveness and usefulness. Because the LAF is a new test, no reliability or validity information is available. However, the identification and legitimacy of the leadership behaviors included in this instrument are supported in the literature. For example, Yukl and Fu (1999) verified the importance of leadership behaviors such as delegation and consultation. Decision-making skills were confirmed by House and Aditya (1997), in addition to high achievement motivation. According to their findings, McClelland (1985) confirmed that leadership success is affected by the extent to which leaders effectively delegate, motivate, and coordinate subordinates in organizations. Archer's (2005) study supported the ability of leaders to manage differences between and among subordinates, signifying the need for ability in conflict management.

Purpose of the Study

The purpose of this study was to assess the self-perceived impact that serving as a fraternity chapter president has on one's leadership development ten years after the experience. It was believed that while much research shows that leadership development can be acquired through the fraternity experience, there has been a dearth of research on the relationship between leadership development through the fraternity experience and leadership skills and career success after graduation. This study was guided by five research questions: (1) Does serving as a fraternity chapter president have a self-perceived, positive impact on specific leadership skills?; (2) Are the leadership skills utilized in one's fraternity chapter presidency subsequently useful in one's career?; (3) To what extent do former chapter presidents perceive that they currently exhibit Kouzes and Posner's (1995) five leadership practices (Enabling Others to Act, Encouraging the Heart, Modeling the Way, Inspiring a Shared Vision, and Challenging the Process) more frequently than others?; (4) What are the relationships between length of service and time since service as a fraternity president and scores from the LAF and LPI?; and (5) What are the relationships between scores on the LAF and LPI? Specifically, do scores on the effectiveness and usefulness dimensions of the LAF predict scores on the LPI?

Method

Procedures

Individuals who served as chapter presidents of three international fraternities at different institutions between 1991 and 1993 were invited to participate in the study. Data was obtained through mailing the instruments to participants, whose names and contact information were obtained through each inter/national fraternity headquarters. Participants were asked to complete a packet of survey questionnaires that included a background questionnaire to provide information about demographics, the university the respondent attended, fraternity service, and current occupation; the LAF; and the SLPI.

Participants

A total of 134 former fraternity presidents participated in this study. The majority of respondents (56.7%) held a bachelor's degree; just over three-quarters of the sample attended public institutions. Respondents came from 105 different colleges and universities. Most of the respondents indicated that they were either juniors or seniors when they held the position of fraternity president. Respondents had held a variety of positions within the fraternity prior to the presidency, with the most common being vice president, social director, and rush chairman. Similarly, there were a variety of positions held after the presidency, with president or vice president of the interfraternity council being most common. The most common current employment categories were managers, attorneys, vice presidents, and CEOs/owners/presidents. Respondents' companies were distributed across a wide variety of industries; the most common were finance or banking, law or law enforcement, and medicine or pharmaceuticals. Most of the respondents were initially hired by someone who did not share their fraternal affiliation. Almost 80% of the respondents were currently in supervisory positions, and almost all reported that they had some leadership responsibilities in their current position.

Instruments

Participants completed the 30-item SLPI and the 28-item LAF. The SLPI measures leadership practices in five areas: Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way, and Encouraging the Heart. The instrument contains six items in each category and uses a 5-point Likert scale (rarely to very frequently). Scores can range from 6 to 30 on each of the five areas. The LAF measures Goal-Setting, Delegation, Motivating Others, Decision-Making, Problem-Solving, Organizational Skills, Meeting Management, Financial Management, Risk-Taking, Presentation Skills, Teamwork, Conflict Management, Social Skills, and Interpersonal Skills in two separate scales: effectiveness (on a four-point scale from very effective to very ineffective) and usefulness (on a four-point scale from not useful to very useful).

Findings

The results of the study showed that respondents perceived having served as a fraternity chapter president did have a positive impact on their leadership skills. Table 1 presents the percentage of responses in each of the four categories, as well as the χ^2 values and associated *p*-values. As can be seen, the distributions of responses for each of the 14 items were not uniform, as each of the significance tests was associated with a *p*-value less than .05.

Table 1
Specific Responses to the Effectiveness Items of the LAF

	Response				χ^2
	Very Ineffective	Not Very Effective	Somewhat Effective	Very Effective	
1. Delegation	.0	4.5	43.3	52.2	51.82
2. Motivating Others	.0	3.0	35.8	61.2	68.48
3. Decision-Making	.0	3.0	38.1	58.2	63.26
4. Problem-Solving	.8	7.5	41.4	50.4	96.02
5. Goal-Setting	.7	14.2	50.7	34.3	78.00
6. Organizational Skills	.7	6.7	42.5	50.0	99.43
7. Meeting Management	.0	1.5	29.9	68.7	91.40
8. Financial Management	2.3	27.1	45.1	25.6	49.29
9. Risk-Taking	1.5	29.1	40.3	29.1	43.97
10. Presentation Skills	1.5	14.9	45.5	38.1	66.78
11. Teamwork	.0	.7	37.3	61.9	76.22
12. Conflict Management	.0	2.2	29.1	68.7	89.75
13. Social Skills	.0	7.5	29.9	62.7	62.03
14. Interpersonal Skills	.0	3.7	31.3	64.9	75.51

All responses were significant at the $p < .0005$ level

Respondents perceived the leadership skills they had learned as fraternity chapter president to have been useful. Table 2 presents the results of this analysis and shows that the tests were significant.

Table 3 indicates respondents did not have particularly high scores on the SLPI scales compared to the normative sample. Kouzes and Posner (2001) provided the percentile rank for each of the five leadership practices scales for their database, which includes more than 18,000 respondents. They further indicated that scores at or above the 70th percentile should be considered high, while scores at or below the 30th percentile should be considered low. Table 3 presents the average scores on each of the five dimensions of the SLPI. In no case did the mean score from the respondents in this study exceed the 70th percentile score.

Table 2
Specific Responses to the Usefulness Items of the LAF

	Response				χ^2
	Not Useful	Not Very Useful	Somewhat Useful	Very Useful	
1. Delegation	.0	10.4	37.3	52.2	36.06
2. Motivating Others	.0	9.0	26.9	64.2	63.82
3. Decision-Making	.0	.0	14.2	85.8	68.78
4. Problem-Solving	.0	.7	14.9	84.3	160.85
5. Goal-Setting	.7	4.5	35.1	59.7	124.09
6. Organizational Skills	.0	1.5	23.1	75.4	115.99
7. Meeting Management	3.7	5.2	38.8	52.2	95.19
8. Financial Management	3.7	19.4	31.3	45.5	50.66
9. Risk-Taking	3.7	25.4	35.1	35.8	35.97
10. Presentation Skills	.0	2.2	29.9	67.9	87.42
11. Teamwork	.0	4.5	25.4	70.1	90.51
12. Conflict Management	.7	9.7	26.9	62.7	120.39
13. Social Skills	1.5	3.0	27.6	67.9	154.66
14. Interpersonal Skills	.0	3.0	18.7	78.4	127.18

Table 3
Descriptive Statistics for LAF and SLPI Scales

	Minimum	Maximum	Mean	SD	Reliability
LAF					
Effectiveness	35.00	56.00	47.78	4.54	.78
Usefulness	32.00	56.00	49.75	4.77	.81
SLPI					
Challenging the Process	19.00	56.00	43.39	7.46	.72
Inspiring a Shared Vision	17.00	59.00	41.19	9.40	.82
Enabling Others to Act	23.00	59.00	48.22	5.69	.64
Modeling the Way	18.00	60.00	48.15	6.13	.66
Encouraging the Heart	14.00	60.00	44.67	8.13	.82

In terms of the relationship between length of service and time since service as a fraternity president and scores from the LAF and SLPI, there was only one statistically significant correlation. Length of service was positively correlated with the Inspiring a Shared Vision scale from the SLPI. The Pearson correlations between length of service and scores on the LAF and SLPI are presented in Table 4.

Table 4
Correlations between Length of Service and the LAF and SLPI Scales

	Length of Service
LAF	
Effectiveness	.16
Usefulness	.16
SLPI	
Challenging the Process	.06
Inspiring a Shared Vision	.24*
Enabling Others to Act	.12
Modeling the Way	.10
Encouraging the Heart	.08

* $p < .01$

The effectiveness and usefulness scales from the LAF were predictive of each of the scales on the SLPI with one exception. Effectiveness scales were not predictive of Enabling Others to Act scores. Results of the regression analysis are contained in Table 5.

Table 5
Results of Regression Analysis with LAF Scores Predicting SLPI Scores

	B	SE_B	β	t	p
Challenging the Process					
Effectiveness	.37	.14	.22	2.56	.012
Usefulness	.54	.14	.34	3.94	.000
Inspiring a Shared Vision					
Effectiveness	.47	.19	.23	2.51	.013
Usefulness	.56	.18	.29	3.17	.002
Enabling Others to Act					
Effectiveness	.21	.12	.16	1.72	.088
Usefulness	.26	.11	.21	2.25	.026
Modeling the Way					
Effectiveness	.25	.12	.18	2.00	.048
Usefulness	.38	.12	.29	3.19	.002
Encouraging the Heart					
Effectiveness	.45	.16	.25	2.71	.008
Usefulness	.38	.16	.22	2.43	.016

In the regression analysis with Challenging the Process scores from the SLPI as the outcome variable, both the effectiveness and usefulness scores from the LAF were statistically significant predictors, and the model was also statistically significant, $R^2 = .24$, $F(2,131) = 21.06$, $p < .0005$. In the analysis with Inspiring a Shared Vision scores from the SLPI as the outcome variable, both scores from the LAF were again statistically significant, as was the model as a whole, $R^2 = .20$, $F(2,131) = 15.89$, $p < .0005$. When the Enabling Others to Act scores from the LPI were examined as the outcome variable, only the usefulness scale from the LAF was statistically significant, but the model as a whole was also significant, $R^2 = .11$, $F(2,131) = 7.80$, $p = .001$. Using Modeling the Way scores from the SLPI as the outcome variable, both scores from the

LAF were statistically significant, and the model as a whole was statistically significant, $R^2 = .17$, $F(2,131) = 13.48$, $p < .0005$. Finally, when Encouraging the Heart scores from the SLPI were employed as the outcome variable, both the effectiveness and usefulness scales from the LAF were statistically significant, and the model as a whole was statistically significant, $R^2 = .17$, $F(2,131)=12.97$, $p < .0005$.

Discussion

The respondents in this study indicated they perceived having served as a fraternity chapter president did have a positive impact on their leadership skills. While there are many opportunities for undergraduate students to serve in co-curricular leadership roles, serving as a fraternity chapter president can provide unique leadership benefits that are not available to other student leaders. Participating in out-of-class experiences was advocated by Astin (1991) and Kuh (1995) as important to student learning and for achieving a balance between academics and co-curricular activities.

For presidents who live in their fraternity houses, there is the responsibility of running the day-to-day operations of the chapter house. In many cases, this involves managing food service, house maintenance, collecting room and board payments, ensuring house fire codes and safety requirements meet local standards, and establishing and maintaining business relationships with various contractors. It is common for a fraternity president to be responsible for the oversight and management of hundreds of thousands of dollars. In addition, there is an immediate access to the membership. In some cases, this allows for more interaction with members and officers of the organization and opportunities to impact the development of members in their living environments, which is uncommon in other student organizations.

While respondents in this study indicated that they perceived that the leadership skills they learned as fraternity chapter president were useful, being a fraternity chapter president is not a guarantee or prerequisite for success in one’s post collegiate career. Undergraduates can be successful even if they do not serve in such a position, but the experience does provide a certain amount of focus. A fraternity chapter president is provided an opportunity to embrace several leadership roles that are not available to other student leaders, simply based on the uniqueness of fraternities.

This perception is consistent with the views of a number of researchers. Pascarella and Terenzini (1991), for example, noted that undergraduate leadership involvement, while having only modest implications for one’s career, did enhance interpersonal and leadership skills that were critical to future job success. Schuh (1987) and Cress et al. (2001) also reported that undergraduate leadership experiences helped students learn leadership skills such as teamwork and communication skills that added to post-graduate career success.

Respondents in this study indicated that the leadership skills at which they felt most effective were meeting management, conflict management, teamwork, and interpersonal skills. Skills at which they felt least effective were financial management, risk-taking, goal-setting, and presentation skills. Leadership skills at which respondents felt most competent in their current positions were decision-making, problem-solving, interpersonal skills, and organizational skills, while they felt least competent at delegation, meeting management, financial management, and risk-taking skills. This suggests that college and university administrators, as well as inter/national fraternity leaders, have an opportunity to build structures and programs in fraternities that will enhance the likelihood of leadership learning taking place. Both can tailor opportunities for fraternities to build skills in the areas identified as least effective based on the needs of their specific population and climate. Partnerships among universities, inter/national organizations, local fraternity alumni boards, and fraternity chapter advisors in creating intentional leadership development opportunities for fraternity members could assist in meeting this objective.

As colleges and universities focus more attention on preparing students for leadership roles in society, fraternal organizations have an obligation to think about the role they need to play in the lives of their undergraduate members to assist in meeting this objective. In order to present fraternity membership as an attractive option to undergraduate students and colleges and universities, fraternities need to be intentional about providing strong leadership programming for their undergraduate members and demonstrating that membership provides opportunities for leadership development that will position their members to be successful in their post-collegiate careers.

Recommendations

Based on the findings and conclusions of this study, several recommendations for further study are made. This study examined fraternity leadership. It is recommended that further study be conducted comparing and contrasting leadership practices of fraternity presidents and sorority presidents to build on the existing literature that examines the influence of gender on leadership and leadership development.

The LAF and SLPI survey results provide insight into the leadership strengths and challenges that respondents self reported. It is recommended that further research be conducted to determine precise ways in which the LAF and SLPI can be used by university administrators, fraternity personnel, and alumni boards in devising leadership programming that will enhance these skills in future fraternity members. Since the LAF results report on how useful or not useful specific leadership skills are to one’s career, this information can further enhance the development of leadership programming. Additionally, since the SLPI assesses respondents’ current leadership practices, other possible approaches can be gleaned from these survey results. For example, many fraternities host alumni associations in cities across the country and, in some cases, internationally. These associations and local fraternity alumni in general have opportunities to assist in the leadership development of their undergraduate members in structured ways. Opportunities could include developing summer intern programs at their places of business, establishing mentoring programs between alumni and undergraduates, assisting undergraduates in career searches, and hosting networking receptions to connect undergraduates with fraternity alumni who work in fields that the students are pursuing after graduation.

References

Adams, T. C., & Keim, M. C. (2000). Leadership practices and effectiveness among Greek student leaders. *College Student Journal, 34*(2), 259-261.

Archer, J. (2005). Management writer applies principles to K-12 education. *Education Week, 25*(14), 12.

Astin, A. W. (1991). Student involvement: A development theory for higher education. *Journal of College Student Personnel, 25*(4), 297-308.

Astin, H. S. (1996). Leadership for social change: Enriching the student learning experience. *About Campus, 3*, 4-10.

Cress, C. M., Astin, H. S., Zimmerman-Oster, K., & Burkhardt, J. C. (2001). Development outcomes of college students' involvement in leadership activities. *Journal of College Student Development, 42*(1), 15-27.

Edington, L. M. (1995). College classroom leadership practices: What gender has to do with it. Unpublished doctoral dissertation, Ball State University, Indiana. Retrieved March 17, 2006, from http://www.bsu.edu/libraries/virtualpress/student/dissertations/pdfs/E35_1995AbstractEdingtonL.rtf

House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo vadis? *Journal of Management, 23*(3), 409-473.

Komives, S. R., Lucas, N., & McMahon, T. R. (1998). *Exploring leadership.* San Francisco: Jossey Bass.

Kouzes, J., & Posner, B. (1987). *The leadership challenge: How to get extraordinary things done in organizations*. San Francisco: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (1995). *The leadership challenge: How to keep getting extraordinary things done in organizations*. San Francisco: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (2001). *Leadership practices inventory* (2nd ed.). San Francisco: Jossey Bass/Pfeiffer.

Kuh, G. D. (1995). Other curriculum: Out-of-class experiences associated with student learning and personal development. *The Journal of Higher Education, 66*(2), 123-155.

McClelland, D. C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman.

Pascarella, E. T. & Terenzini, P. T. (1991). *How college affects students.* San Francisco: Jossey Bass.

Posner, B. Z. (2004). A leadership development instrument for students: Updated. *Journal of College Student Development, 45*(4), 443-456.

Posner, B., & Rosenberger, J. (1997). Effective orientation advisors are leaders too. *NASPA Journal, 35*(1), 46-56.

Posner, B., & Rosenberger, J. (1998). The impact of situational factors on students' leadership behaviors. Working paper, Leavey School of Business, Santa Clara University.

Posner, B. Z. & Brodsky, B. (1992). A leadership development instrument for college students. *Journal of College Student Development*, *33*(3), 231-237.

Rost, J. C. (1991). *Leadership for the twenty-first century.* New York: Praeger Publishers.

Schuh, J. H. (1983). The perceived long-term influence of holding a significant student leadership position. *Journal of College Student Development, 24*(1), 28-32.

Slater, C. L., Boone, M., Price, L., Martinez, D., Alvarez, I., Topete, C., & Olea, E. A. (2002). Cross-cultural investigation of leadership in the United States and Mexico. *School Leadership & Management, 22*(2), 197-209.

Winston, R. B., & Massaro, A. V. (1987). Extracurricular involvement inventory: An instrument for assessing intensity of student involvement. *Journal of College Student Personnel*, *28*, 169-182.

Yukl, G., & Fu, P. P. (1999). Determinants of delegation and consultation by managers. *Journal of Organizational Behavior, 20*(2), 219-232.

Yukl, G. A. (1994). *Leadership in organizations.* Englewood Cliffs, NJ: Prentice Hall.

Dr. Danny Kelley is the Coordinator of Greek Life and Leadership Development at American University. Danny received a Ph.D. in Educational Management and Leadership from American University; a master of science degree in College Student Personnel Services Counseling from the University of Dayton; and a bachelor of arts degree in Communications from Wright State University. Danny previously served as Program Advisor at the University of Maryland-Baltimore County and as the Director of Risk Management and Insurance Services for Phi Kappa Tau Fraternity. As an undergraduate, Danny served Phi Kappa Tau as chapter president. Dr. Kelley recently received the National Advisor of the Year Award from the Alpha Lambda Delta National Honor Society for First Year Students.

Oracle: The Research Journal of the Association of Fraternity Advisors
Vol. 3, Iss. 1, March 2008

DEVELOPING, IMPLEMENTING, AND EVALUATING INNOVATIVE SORORITY SUBSTANCE ABUSE PREVENTION IN THE EVIDENCE-BASED ERA

Andrew Wall, Ph.D., Logan Hazen, Ed.D., Mickey Trockel, M.D., Ph.D., and Becky Markwell

This article describes the development, implementation, and evaluation of a pilot, multi-faceted, and multi-session alcohol abuse prevention program conducted in conjunction with two sorority chapters. The process and product of the pilot program are illustrative of the use of theory and evidence-based practices in the creation of innovative substance abuse prevention efforts among fraternal organizations within higher education. Findings point to practical implementation challenges and to promising evidence of program impact. Recommendations inform practitioners in implementing evidence-based practices with fraternal chapters.

Despite the best efforts of fraternities and sororities and their advisors, the image of alcohol use as a core component of the fraternal experience pervades in higher education (Workman, 2001). Increasingly, targeted interventions show promise in addressing the short-term harm associated with heavy college student alcohol use, and a few studies suggest brief interventions can help enact lasting changes in use among college students (Hunter & Mazurek, 2004; LaBrie, Pedersen, Lamb, & Quinlan, 2007; Larimer et al., 2001; Larimer, Kilmer & Lee, 2005; McNally & Palfai, 2003). Problematic for leaders interested in addressing alcohol abuse among fraternity and sorority members are persistent cultures that cede social status to those who abuse alcohol (Cashin, Presley, & Meilman, 1998; Kuh & Arnold, 1993; Plucker & Teed, 2004; Thombs & Briddick, 2000). This article reports on the development, implementation, and evaluation of a pilot program intended to alter individual use and the culture of alcohol consumption among sorority chapters on two different campuses.

The description of fraternity and sorority affiliated students as heavy alcohol users is portrayed throughout the media and supported by empirical inquiry (Caudill et al., 2006; Presley, Meilman, & Leichliter, 2002; Wechsler, Kuh, & Davenport, 1996; Workman, 2001). In a review of literature on fraternity drinking, Borsari and Carey (1999) found that members self-select into heavy drinking cultures, alcohol remains central to fraternity socialization, and fraternal environments support use and abuse. Indeed, recent research suggests that chapter consumption expectations are strongly predictive of consumption behavior, indicating strong social orientation of members (Trockel, Wall, Williams, & Reis, in press). A comprehensive study of 98 chapters of one national fraternity found that 97% reported being drinkers, and 83% met the criteria for heavy drinking (Caudill et al., 2006). This recent empirical work reinforces the existing images of fraternal organizations as pervasive cultures of alcohol use.

Fraternal organizations, as well as higher education institutions and student affairs leaders, should utilize prevention programs that are theory driven and validated by meaningful outcomes assessment (Larimer et al., 2005). Unfortunately, while the existence of alcohol and other drug programs is prevalent on many campuses, the evidence of the efficacy of these efforts is limited (Licciardone, 2003; Werch, Pappas, & Castellon-Vogel, 1996). Larimer and colleagues (2005) pointed to a series of promising strategies for college alcohol abuse prevention in their review of individually-oriented prevention programs. They specifically noted: (1) cognitive-behavioral skills training that includes norms clarification and motivational elements; (2) brief motivational enhancement interventions; and (3) social norming programs that challenge alcohol expectancies. Each of these program options has been evaluated in programmatic form and found to be useful among college students. Brief motivational enhancement and cognitive-behavioral skills training have proven specifically effective among fraternal organization members (Larimer et al., 2000).

A major limitation of the aforementioned interventions is the limited focus on individuals as opposed to environmental factors contributing to a culture of alcohol use. Efforts to shift policy or implement multi-faceted prevention programs on college campuses are difficult to apply and evaluate (Larimer et al., 2005). As such, multi-faceted programs show mixed empirical evidence of support (Larimer et al., 2005; Weitzman, Tobin, Lee, & Wechsler, 2004). This article describes and evaluates a multi-faceted effort to alter individual behavior and the culture of alcohol use among sorority members.

Project Need

A campus imperative to proactively address fraternity and sorority member alcohol use is challenged by the lack of clear program and policy efforts that are broadly and effectively implemented (Licciardone, 2003; Mitchell, Toomey, & Erikson, 2005; Werch et al., 1996). Digesting and then operationalizing the emerging literature on cognitive-behavior strategies, brief interventions, and expectancies challenges is taxing for researchers, let alone practitioners for whom alcohol education is only a fraction of their job responsibilities (Wall, 2005). The need to have programs theoretically grounded, as well as soundly implemented and evaluated, can be prohibitive, even to those with the best of intentions. This pilot project sought to work with modest resources to develop, implement, and evaluate a multi-dimensional alcohol abuse prevention program with sorority members.

The pilot effort, titled “Culture Shift,” is an example of utilizing existing research in an innovative and practical manner. The program was designed to be substantive and palatable for students. The project is an example of both process and product: (1) a process example in the project’s development, implementation, and evaluation; and (2) a product example in terms of likely or probable program impact as evaluated using a basic quasi-experimental outcome evaluation design. The findings highlight the challenges and opportunities associated with implementing theory to practice, implementing good basic programming, and conducting evaluation in applied settings with modest resources.

Theoretical Framework

The Culture Shift program was grounded in social cognitive and social network theory. From a social cognitive perspective, Bandura (1977, 1986) describes how self and collective efficacies are important to individual and group feelings about the ability to accomplish a particular task. Social cognitive theory points to five different mechanisms for advancing self and collective efficacy, noting that mastery experiences remain the most powerful mechanisms for developing self and collective efficacy. Mastery experiences related to setting goals, performing service, and setting alcohol consumption limits were part of the core elements of this program development.

The second conceptual framework utilized in Culture Shift centered around the cognitive-behavioral, norm clarification, and motivational approaches to the prevention of alcohol abuse (Bertkowitz, 2005; Larimer & Cronce, 2002). The cognitive-behavioral approach works to reframe thinking about alcohol use and then build individual skills related to alcohol consumption. Specific peer group data was presented to challenge past thinking and norms related to the safety of high alcohol consumption. Individuals were challenged with the task of examining harmful behaviors they felt should be prevented. Finally, researchers discussed strategies and policies for motivating the adoption and practice in their chapters' social environment.

Third, the Culture Shift program worked to tap into the strong social network that is a part of the collegiate fraternal experience (Borsari & Carey, 1999; Trockel, Williams, & Reis, 2003; Trockel et al., in press). Researchers targeted second-hand consequences of alcohol consumption in the pilot program implementation (Trockel, Wall, & Reis, 2002; Reis, Trockel, & Wall, 2003). The social networks of fraternal organizations compose an environment that limits the negative consequences of consumption due to the bonds of friendship that are a stated core value (Trockel et al., 2003).

The pilot program answered three critical questions: (1) Does the current pilot intervention design have efficacy in preventing alcohol abuse and related behaviors?; (2) How can the program be improved to have better efficacy?; and (3) Can the current intervention design be replicated and institutionalized throughout an inter/national women's organization?

Method

Implementation of the Culture Shift program was conducted with two sorority chapters. Chapter A consisted of approximately 100 members at a public research university in the Midwestern United States. Chapter B consisted of approximately 70 members at a selective private research university campus also in the Midwestern United States. In each setting, a focus group was conducted prior to program implementation to explore organizational culture. Information from the focus groups was used to guide program development and implementation at each site. In addition to the focus group, facilitators met on several occasions with chapter leaders to outline the purpose for the project, set a program schedule, and develop a relationship with organizational leaders. Two sets of facilitators delivered the program at the two intervention institutions. Different facilitators were necessary for logistical reasons. Chapter C, the comparison group of this study, was a chapter with approximately 85 members at a selective private liberal arts university in the Midwestern United States.

The program evaluation utilized a pre- and post-test comparison group design. Prior to program implementation, a researcher-developed survey instrument was administered to members at regularly scheduled chapter meetings at Chapters A, B, and C. Previous analysis of the survey instrument using exploratory and confirmatory factor analysis established the validity of the measures of the instrument including self-reported use, behavior, individual and peer expectations, second-hand consequences, perceived desire to prevent negative consequences of alcohol use, self-efficacy, and collective efficacy (Trockel et al., 2003; Trockel et al., in press). Chapter A and Chapter B served as intervention chapters, while Chapter C was the comparison group. Post-test data was collected after completion of the final program session at Chapter A and Chapter B, and from Chapter C at the end of the academic semester.

The final evaluation element included a researcher-developed process evaluation tool where chapter members rated satisfaction and participation in the program to depict how the program was delivered and received by participants. The process evaluation instrument was given at intervention chapters only. The process evaluation information was used to critically examine how to improve the pilot program. Table 1 outlines program and evaluation elements, delivery sequence, participation, and element description.

The Cultural Shift Program

The conceptual underpinnings of the program were operationalized through five elements, including three group meetings with instruction and discussion, and two activities organized by the sorority members (see Table 1). The first session of the program centered on members exploring their personal and organizational values, roles, and actions. The intention of this session was to engage participants in the program and to discuss how alcohol use fits with individual and collective organizational values. At the end of this session, individuals were paired and asked to develop goals for limiting their personal alcohol consumption until the next meeting.

The second core program element was a session focused on understanding the negative impact of alcohol consumption on others. Normative data from sorority member pre-tests was described and used as a springboard for discussion about members' interest in reducing negative alcohol consequences in their chapters. This session included follow-up on members' individual consumption limit goals from the previous meeting and setting new behavior limits related to personal alcohol consumption until the third meeting.

The third meeting period connected individual and collective values. Community service was specifically utilized as a discussion point for how the chapter can put their values and beliefs into action. Plans were solidified for a chapter service project and individuals were challenged to set new two-week alcohol consumption limit goals.

The fourth core program element was also a chapter activity. Each chapter planned a social event, which incorporated alcohol limits. Alcohol limits refer to members identifying and documenting drinking consumption intentions and limits prior to each event.

The fifth program element was a meeting with elected leaders of each chapter to discuss policy efforts to reduce the risk of alcohol use among members. This meeting focused on the leaders developing a statement for the organization that calls for responsibility. Informal and formal notions of policy were introduced and discussed to try to close the gap between formal organizational policy and the operational definition of how the chapter approaches alcohol use.

Results

Program Outcome Evaluation

Data from the pre- and post-tests were entered into SPSS v. 14 for Windows and analyzed descriptively using *t*-test analysis. Analysis examined the pre- to post-test changes comparing valid intervention (Chapter A) with comparison group (Chapter C) responses. Chapter B was not included in the pre to post-test analysis as the chapter did not complete the post-test (See Table 1). On average, intervention program participants in Chapter A decreased alcohol consumption slightly during the time between pre- and post-test administration, while comparison respondents increased alcohol consumption slightly. These differences were similar across all measures of change in alcohol use, including the following: (1) change in number of drinks consumed during a typical week; (2) the number of drinks consumed during the week before post-test data collection compared to the number of drinks consumed during the week before pre-test data collection; and (3) the largest number of drinks consumed at one time during the two weeks preceding post-test administration compared to the largest number of drinks consumed at one time during the two weeks preceding pre-test administration. In addition, intervention group participants experienced an increased perception of the impact of secondhand consequences, while comparison group participants experienced a decrease in the perception of secondhand consequences.

Changes in Self-Reported Alcohol Measures

Differences between intervention and comparison group respondents' change in alcohol consumption, measured by comparing number of drinks consumed during the one week previous to both data collection points, approached statistical significance, $t(64) = 1.50$, $p = .07$. Intervention group respondents, on average, reported drinking 2.3 drinks fewer during the week before follow-up versus the week prior to the baseline assessment, while comparison group participants consumed an average of 0.6 drinks more during the week before post-test than during the week before pre-test data collection.

The difference between intervention and comparison group respondents' change in alcohol use, measured by post-test versus pre-test reported number of drinks consumed during a typical week, also approached statistical significance, $t(65) = 1.34$, $p = .093$. Intervention group respondents, on average, reported drinking 1.3 fewer drinks during weeks at follow-up than at baseline. In contrast, comparison group respondents reported drinking 1.0 more drinks during weeks at follow-up than at baseline. The sample average reported alcohol consumption was 15.3 drinks per week at baseline, and 13.3 drinks during the week previous to data collection. These descriptive statistics suggest program impact on participants' alcohol use was in the anticipated direction, but modest in magnitude. The finding that change in alcohol use was in the desired direction following the pilot study intervention is encouraging.

Perhaps even more encouraging is that participants' intent regarding future alcohol consumption trended toward statistical significance when contrasted to the comparison respondents, $t(47) = 1.73$, $p = .045$. As with measures of current alcohol behavior, the impact on participants' intended future behavior was modest but encouraging.

Measure of Second-Hand Consequences of Alcohol Use

The only direct alcohol education module of the intervention focused primarily on second-hand consequences of alcohol use. Examples of second-hand consequences include sexual assault, person-to-person violence, and residential disturbances. As expected, second-hand consequence expectancies were favorably impacted by participation in the intervention. Each second-hand consequence expectancy item was measured via participants' rating of the likelihood of a specific second-hand consequence occurring when alcohol is used heavily, multiplied by their rating of the importance of preventing its occurrence in their chapter. Each respondent's average response on all individual item scores was calculated to derive scale scores used as the measure of participants' second-hand consequence expectancies for subsequent analysis. Factor analysis and internal consistency reliability estimates suggest the scale has reasonable reliability and (to the extent assessable with a single measurement method) reasonable construct validity (Trockel et al., in press).

Among intervention group participants, second-hand consequence expectancies increased between pre- and post-test data collection. Among comparison group respondents, second-hand consequence decreased. The difference between intervention and comparison group change in second-hand consequence expectancies over time was statistically significant, $t(62) = 2.11$, $p = .02$.

No other measured benefits of program participation were statistically significant. Of particular note was the lack of program effect on measures of self efficacy and collective efficacy. Several intervention components were aimed at increasing participants' self efficacy in areas of service and academic performance. Qualitative feedback from participants on the value of individual modules further underscores the lack of utility of some of these intervention components as they were designed and delivered during the pilot program. To some, the overall program was viewed as just an overly-long alcohol education program, while others reported greater satisfaction with the program content.

As program materials instructed, Chapter A did create a positive chapter mission statement, and a promising chapter alcohol misuse prevention statement following the third program meeting. The value of education on second-hand consequences was most observable in support for formal chapter policy and informal chapter standards – as reflected by the chapter statement. Study of longer term changes in support for policy and for changes in chapter culture reflected through informal chapter policy, standards, and other communication required follow-up time beyond that available for the pilot study. The post-test measure was administered only days after the chapter alcohol use standards development exercise took place.

Table 1
Program by Participation and Element

Program Element	Chapter A	Chapter B	Chapter C	Description and Underlying Theory
Pre-Test	73	52	70	Paper and pencil survey focused on attitudes, beliefs, and behavior of members related to alcohol.
Session One	45	32	Comparison	Presentation related to assessing one's values and life roles, followed by individual goal setting. Session guided by social cognitive theory.
Session Two	38	30	Comparison	Presentation related to the consequences of alcohol use for self and others (significant focus on consequences to others). Support for prevention efforts and continued individual goal setting solicited. Session guided by social cognitive and network theory and research on second-hand consequences.
Session Three	31	29	Comparison	Presentation (in conjunction with chapter leaders) that included a review of goal-setting efforts; depicted the positive relationship between best organizational values and service; and showed that high alcohol use does not conform to the aspired organizational values. Creation of chapter mission and vision statements. Session guided by social cognitive theory.
Social Activity	100	~10	Comparison	Chapter planned social event where members adhered to a self-determined alcohol limit. Guided by idea of group mastery experience of social cognitive theory.
Volunteer Activity	Rained Out	~15	Comparison	Chapter planned service activity. Session guided by idea of group mastery experience of social cognitive theory.
Session Four	12	~9	Comparison	Policy review conducted by chapter executive officers. Session guided by social network theory idea of group norm setting.
Process Evaluation	52	29	Comparison	Paper and pencil survey with questions about each session of the program. General feedback about facilitators and overall impressions were also collected.
Post-Test	52	NC	36	Paper and pencil survey of attitudes, beliefs, and behavior of members related to alcohol (identical to pre-test).
Pre and Post Matches	43	NC	22	

NC = Not Completed

Process Evaluation Results: Lessons Learned in Implementation

The process evaluation summary presented in Table 2 represents feedback from presenters at Chapters A and B, as well as written and verbal comments from members who participated at both campuses. All feedback from written transcripts was examined and organized by two separate researchers; first by theme, then by session, and finally by overall themes. The two data reviews were combined and reconciled in an iterative fashion following individual analysis.

Table 2
Process Evaluation Summary

Program Element	Findings
Pre-Test	Instrument was long, and while well received, would be a concern for broad implementation completion.
Session One	Session described as well received at both sites; content related to values clarification was characterized as useful. Goal setting was completed, but described follow through was limited.
Session Two	Session described positively at Chapter A, but not well received at Chapter B in part due to logistical challenges and to what students described as lack of comfort of the facilitators with the information on consequences of alcohol use.
Session Three	Session to connect service, group values, and goal setting, along with setting up social event was positively described, but ran short of time in both sites. Time was needed by both chapters to fully facilitate service and social activities.
Social Activity	Activities selected did not push women to challenge themselves to not consume in typical high alcohol consumption environments, as they selected social events where alcohol was not typically present. Both groups were successful in completing their selected alcohol alternative events.
Volunteer Activity	Logistical challenges (rain) impacted one group's plans. The other group was very successful in completing service projects in the community.
Process Evaluation	Written feedback was honest and often quite direct (i.e., when someone or something was not positively received, comments reflected it). Process feedback was collected once. Feedback opportunities should be offered following each session.
Post-Test	There were significant problems at two sites in getting post-test responses at the end of the academic year. End of the year survey administration must be reconsidered.

Process evaluation elements indicate the program was generally well-received, but that there were important differences in the perception of individual program elements. Items positively described by participants included the session focused on individual and chapter values clarification, the setting of consumption limit goals, and the group alcohol-free service and social activities. Elements less positively regarded included the session on second-hand consequences, follow-up of consumption limit goal setting, and the implementation of service and social activities. The program elements enjoyed most by participants also reflected elements with which participants felt the most comfortable (i.e. reflected on chapter values, goal setting, planning activities). Sessions that challenged participants the most directly, be it to fit alcohol free activities into their busy lives or challenging their current behavior patterns, received less positive feedback.

Important overall themes that emerged from the implementation evaluation elements included: the need to engage chapter leadership in program implementation; facilitator follow-up being essential to successful program delivery; significant program engagement for students and facilitators; the need for normative alcohol feedback information to be locally salient; and the implementation setting inside sorority houses as a barrier to success. Each of these findings points to the practical challenges of implementing alcohol abuse prevention programs with fraternal organizations. In particular, the intensity of engagement required to deliver a multi-faceted and multi-session program is of note. For both facilitators and chapter leaders the commitment to engage in a multi-session effort is a scheduling, energy, and organization challenge. The typical format for alcohol efforts has not been multi-faceted or multi-session, but rather single time meetings or events. It is a cultural change for students or professionals to participate in sustained alcohol abuse prevention efforts.

Recommendations and Discussion

Recommendations are based on the answers to three critical questions: (1) Does the current pilot intervention design have efficacy in preventing alcohol abuse and related behaviors?; (2) How can the program be improved to have better efficacy?; and (3) Can the current intervention design be replicated and institutionalized throughout a women's inter/national organization? The intervention as implemented worked on two concurrent levels where activities functioned to impact (1) individuals through cognitive skills training and presentation of information on second-hand consequences of alcohol use, and (2) the organization through change in chapter social culture. Table 4 reflects study recommendations organized around individual level determinants of alcohol use; chapter social culture determinants of alcohol use; and organizational considerations for development of effective and sustainable interventions.

Results of the evaluation indicate that the current intervention design has efficacy in preventing individual alcohol use and associated problem behavior. Individual focused elements of the program included raising awareness of personal values and negative consequences of excessive drinking, setting personal consumption limits, and self-monitoring. The evaluation results are limited in that there are few direct measures that were statistically significant, but the general trend of results was positive. Of specific interest in the results was the significant decrease in acceptability of second-hand consequences. The decrease in acceptability of second-hand consequences can be seen as support for preventing sexual assault, person-to-person violence, and residential disturbances. Direct individual behavior measures trended positively but demonstrated only modest change of significance in actual alcohol consumption amounts, which is a potential area of growth in the current program format.

Collective attitudes and norms associated with the chapter and alcohol use were targeted through discussions of tolerable and intolerable negative second-hand consequences of alcohol use and group participation in alcohol-free social and service activities. Recent research indicates that approaching alcohol use on both the individual and collective level of dense social networks (like sororities) is important to achieve lasting behavior change (Trockel et al., in press).

Table 4
Evaluation Study Recommendations

	Recommendation Description
Area One	*Individual Level Determinants of Alcohol Use*
Individual Recommendation A	Utilize brief screening and feedback for all members of the organization to occur on an individual level. Brief screening involves each chapter member taking a brief alcohol use assessment and receiving specific feedback via e-mail or mail about individual consumption, as compared to a pre-selected norm. In the context of future intervention, a recommendation would be to challenge participants to record their alcohol use for two weeks and then complete a brief screening. Participants who choose not to complete the self-monitoring exercise can still complete the brief screening and receive feedback.
Individual Recommendation B	Peer-group attitudinal normative feedback should be provided to all members of participating chapters. This attitudinal feedback should be chapter specific and should be worded to challenge chapter members' exaggerated perceptions that their sorority sisters expect them to drink alcohol. Data here indicate chapter specific data will consistently show that many chapter members believe other members "expect" them to drink, whereas very few chapter members report that they do expect other members to drink. The disconnect in perception of peer pressure will provide an opportunity for intervention in most chapters.
Area Two	*Chapter Social Culture Determinants of Alcohol Use*
Chapter Recommendation A	Raise individual awareness of second-hand consequences through the use of Web-based instruction that could occur in an asynchronous fashion. Although individual perceptions of second-hand consequences are a weak predictor of alcohol use, the greater potential value of increasing perception of second-hand consequences among student chapter members resides within influence on informal group standards of conduct via altered communication de-glorifying alcohol use over time (Trockel et al., in press). For example, a group-level increase in second-hand consequence expectancies could reduce prevalence of bragging about alcohol use. Reduced bragging is likely to reduce exaggerated alcohol benefit expectations among members of the group and lead to concomitant reductions in alcohol use.
Chapter Recommendation B	Continue to utilize the second-hand consequences session in a group format with chapter specific data. Shift the focus of the session to determine what negative alcohol uses group members want to prevent paired with associated prevention strategies.
Chapter Recommendation C	Work directly with chapter leaders in planning service activities that require meaningful sustained engagement in service, as opposed to episodic opportunities. Service should focus on community engagement and chapter member reflection, rather than one-time fundraisers or a few hours of manual labor.
Chapter Recommendation D	Share collective behavioral and attitudinal data with chapter leaders for their use in policy development and review. Allow for problem identification and problem solving to be driven at the local level by organizational leaders in consultation with inter/national organization staff. Have the policy review process be a part of each year's leadership expectations.
Area Three	*Organizational Considerations for Development of Effective and Sustainable Interventions*
Implementation Recommendation A	The organization must make whatever alcohol prevention program it selects its own. Ownership must rest with the organization for the program to be successful. The program should be evaluated yearly as a part of a monitoring of effectiveness and continuous improvement process.
Implementation Recommendation B	There should be an organizational commitment to gathering chapter level responses to alcohol and other drug uses to target services for chapters at the highest risk for problems. In the current evaluation, there was significant variance in alcohol use at the chapter level; therefore the need for prevention activities is not evenly distributed across chapters.

While the current program design produces desired individual attitudinal and behavioral change, some real questions exist as to whether the pilot program format can be replicated and institutionalized. In their implementation of the program, program developers exerted significant time and effort with just two chapter sites. These limitations suggest that multi-site replication of the current program format with limited resources may not be successful. While the group format remains an important way to deliver certain types of information, pilot feedback would indicate that different delivery modalities such as asynchronous learning via the Internet, direct feedback via e-mail or mail, and working in concert with organizational leaders (potentially at a distance) are important. The evolution of this program should include efforts to alter delivery modalities that specifically address the challenges in replication and institutionalization.

Conclusions

Alcohol use and abuse remain a continuing problem for college students in general, and fraternity/sorority affiliated students in particular. Effective intervention programs cannot be one-dimensional; they must be responsive to both individuals and group cultures surrounding alcohol use. Specific strategies cannot be developed piecemeal, rather they have to be driven by theory and the significant body of emerging research, and then validated by meaningful outcomes evaluation. Within today's fraternal organizations, successful programs will need to utilize a variety of delivery modalities to reach students with both salient and palatable messages associated with alcohol. This study provides a framework for such strategies, albeit the challenge remains for inter/national fraternal organizations, higher education institutions, student organizations, and interested partners to innovatively refine and expand the process and products herein to produce concrete, effective, and readily duplicated intervention programs.

References

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Berkowitz, A. D. (2005). An overview of the social norms approach. In L. C. Lederman & L. P. Stewart (Eds.), *Changing the culture of college drinking: A socially situated health communication campaign* (pp. 193-214). Cresskill, NJ: Hampton Press.

Borsari, B. E., & Carey, K. B. (1999). Understanding fraternity drinking: Five recurring themes in the literature, 1980-1998. *Journal of American College Health, 48*(1), 30-38.

Cashin, J. R., Presley, C. A., & Meilman, P. W. (1998). Alcohol use in the Greek system: Follow the leader? *Journal of Studies on Alcohol. 59*, 63-70.

Caudill, B. D., Crosse, S. B., Campbell, B., Howard, J., Luckey, B. & Blane, H. T. (2006). High-risk drinking among college fraternity members: A national perspective. *Journal of American College Health, 55*(3), 141-155.

Hunter, F. J., & Mazurek, M. B. (2004). The effectiveness of intervention studies to decrease alcohol use in college undergraduate students: An integrative analysis. *Worldviews on Evidence-Based Nursing, 1*(2)*,* 102-119.

Kuh, G. D., & Arnold, J. C. (1993). Liquid bonding: A cultural analysis of the role of alcohol in fraternity pledgeship. *Journal of College Student Development, 34*(5), 327-334.

LaBrie, J. W., Pedersen, E. R., Lamb, T. F., & Quinlan, T. (2007). A campus-based motivational enhancement group intervention reduces problematic drinking in freshman male college students. *Addictive Behaviors, 32*(5)*,* 889-901.

Larimar, M. E., & Cronce, J. M. (2002). Identification, prevention and treatment: A review of individual-focused strategies to reduce problematic alcohol consumption by college students. *Journal of Studies on Alcohol, 14*, 148-163.

Larimer, M. E., Kilmer, J. R., & Lee, C. M. (2005). College student drug prevention: A review of individually-oriented prevention strategies. *Journal of Drug Issues, 35*(2), 431-437.

Larimer, M. E., Turner, A. P., Anderson, B. K., Fader, J. S., Kilmer, J. R., Palmer, R. S., et al. (2001). Evaluating a brief alcohol intervention with fraternities. *Journal of Studies on Alcohol, 62*, 370-380.

Licciardone, J. D. (2003). Outcomes of a federally funded program for alcohol and other drug prevention in higher education. *American Journal of Drug and Alcohol Abuse, 29*(4), 803-827.

McNally, A. M., & Palfai, T. P. (2003). Brief group alcohol interventions with college students: Examining motivational components. *Journal of Drug Education, 33*(2), 159-176.

Mitchell, R. J., Toomey, T. L., & Erikson, D. (2005). Alcohol policies on college campuses. *Journal of American College Health, 53*(4), 149-157.

Plucker, J. A., & Teed, C. M. (2003). Evaluation of an alternative methodology for investigating leadership and binge drinking among sorority members. *Addictive Behaviors, 29*(2), 381-388.

Presley, C., Meilman, P. W., & Leichliter, J. S. (2002). College factors that influence drinking. *Journal of Studies on Alcohol, 63*, 82-90.

Reis, J., Trockel, M., & Wall, A. (2003). Promoting student support for alcohol misuse prevention on campus: The role of second hand consequence expectancies. *NASPA Journal, 40*(2), 59-73.

Thombs, D. L., & Briddick, W. C. (2000). Readiness to change among at-risk Greek student drinkers. *Journal of College Student Development, 41*(3), 313-322.

Trockel, M., Wall, A., & Reis, J. (2002). Impact of perceived second hand consequences related to alcohol use on college students' drinking behavior intent: A test of feasibility. *Journal of Drug Education, 32*(3), 179-193.

Trockel, M., Williams, S. S., & Reis, J. (2003). Considerations for more effective social norms based alcohol education on campus: An analysis of different theoretical conceptualizations in predicting drinking among fraternity men. *Journal of Studies on Alcohol, 64*, 50-59.

Trockel, M., Wall, A., Williams, S., & Reis, J. (in press). When the party for some becomes a problem for others: The potential role of perceived second-hand consequences of drinking behavior in determining collective drinking norms. *The Journal of Psychology: Interdisciplinary and Applied.*

Wall, A. (2005). *Alcohol prevention efforts within Illinois institutions of higher education: Assessing the state of prevention.* Charleston, IL: Eastern Illinois University, College of Education and Professional Studies, Illinois Higher Education Center for Alcohol, Other Drug and Violence Prevention.

Wechsler, H., Kuh, G. D., & Davenport, A. (1996). Fraternities, sororities and binge drinking: Results from a national study of American colleges. *NASPA Journal, 33*(4), 260-279.

Weitzman, E. R., Nelson, T. F., Lee, H., & Wechsler, H. (2004). Reduced drinking and related harms in college: Evaluation of the “A Matter of Degree” program. *American Journal of Preventive Medicine, 27*(3), 187-196.

Werch, C. E., Pappas, D. M., & Castellon-Vogel, E. A. (1996). Drug use prevention efforts at colleges and universities in the United States. *Substance Use and Misuse, 31*(1), 65-80.

Workman, T. A. (2001). Finding the meaning of college drinking: An analysis of fraternity drinking stories. *Health Communications, 13*(4), 427-447.

Andrew F. Wall, Ph.D. is an Assistant Professor in the Warner School of Education at the University of Rochester.

Logan Hazen, Ed.D. is a Visiting Assistant Professor in the Warner School of Education at the University of Rochester.

Mickey Trockel, M.D., Ph.D. is completing his Residency and a Post-Doctoral Fellowship at Stanford University.

Becky Markwell, M.A. is the Director of the Illinois Higher Education Center for Alcohol, Other Drug and Violence Prevention.

Oracle: The Research Journal of the Association of Fraternity Advisors
Vol. 3, Iss. 1, March 2008

USING COST-BENEFIT ANALYSIS FOR FRATERNITY AND SORORITY AFFAIRS ASSESSMENT: CREATING A BUSINESS CASE FOR STUDENT SUCCESS IN FRATERNAL ORGANIZATIONS

Michael D'Arcangelo and Jessica R. Berner

Cost-benefit analysis can be an effective method for programmatic assessment, evaluation, and validation in fraternity/sorority affairs. This article provides an overview of a model cost-effectiveness assessment strategy outlined by Kennedy, Moran, and Upcraft (2001) and a cost-benefit study of the Rochester Institute of Technology fraternity/sorority program. Special attention is given to providing credible methods for fraternity/sorority professionals to measure programs using data related to organizational efficacy and student retention and applying that data to guide public perception. Recommendations for application on other campuses are provided in an effort to improve assessment practices and aid institutions in assessing the value of fraternal organizations.

Assessment is well established in higher education and student affairs. However, few fraternity/sorority affairs programs use assessment to its fullest potential (Perlow, 2007). Fraternal organizations are often considered a vulnerable target of critics. Much of the research regarding their value is anecdotal. Many fraternity/sorority professionals collect and provide data about their communities, such as grade point averages achieved, community service hours logged, or philanthropic dollars raised. Even so, they may not be able to bolster the credibility of fraternity and sorority life to faculty, staff, and trustees who are considered valuable stakeholders in the university community. A cost-benefit analysis can provide additional answers to the many questions posed by these stakeholders.

Assessing cost effectiveness "may be the most neglected form of assessment in student affairs" (p.175), according to Kennedy, Moran, and Upcraft (2001), who deemed three questions to be critical when conducting a cost-benefit analysis. The first question to consider is how the service or program contributes to the institutional mission. No program or service exists in isolation from the greater mission of the institution. An assessment allows program managers to explore and document links between departmental services and programs and the institutional mission. Secondly, the professional should investigate institutional budget policies. It is vital to understand that just as institutional environments and student populations have unique characteristics and methodologies, philosophies of accounting, finance, and cost analysis are also influenced by institutional culture (Dill, 2000; Levin & McEwan, 2001). Many student affairs professionals have backgrounds in human services or counseling and, thus, tend to avoid cost-benefit analysis due to its quantitative emphasis and focus on the financial disciplines. However, assistance in understanding and applying many of these measurements may be obtained through experts and allies within the institution who can demystify the cost structuring processes unique to its systems. Finally, it is important to consider the future direction of the institution.

When a cost-benefit analysis is completed, the data must be useable (Levin & McEwan, 2001). Data should help evaluate strengths and weaknesses and point to new directions for program development. If formulated within the cultural and financial framework of the institution, constituents will examine the results and consider outcomes. Each of the three questions reflects a different aspect of the assessment's purpose and were utilized as a framework for analyzing the cost-benefit analysis practices used at Rochester Institute of Technology.

Background

Institutional Budget Process: What is a Cost-Benefit Analysis?

A cost-benefit analysis assigns value to a program from a financial perspective. It uses a standard value (the dollar) as the unit for measurement, theoretically removing subjectivity from the analysis. In its simplest form, a cost-benefit analysis is a comprehensive accounting of all the costs of a program compared to the benefits, summarized as a ratio. Costs reflect dollars invested into the program; benefits are the revenues or financial gains generated by the program that then promote the institution. The ratio of costs to benefits is often referred to as a return on investment or ROI (Fitz-enz, 2000). If the benefits are greater than the costs invested into the program, it is considered to have a favorable (positive) ROI and generally favorable value. If the costs are greater than the benefits, then the program has an unfavorable (negative) ROI and may be considered to be of questionable worth.

Operating Assumptions and Strategies

Before beginning a cost-benefit analysis, it is important to establish key operating assumptions and strategies that facilitate effective completion. The analyst must first specify the exact dates of the analysis to most effectively assess program performance. It is the authors' recommendation that the study be conducted for one budget operating year to coincide with the fiscal year of the institution. However, a caveat is that some fraternity/sorority programs operate on nine or ten month fiscal cycles. In this case, the analysis plan can only consider costs (and even benefits) realized during the months of operation.

The cost-benefit analysis should be completed for the most recent year for which the fraternity/sorority professional has access to a complete set of financial data. This will require some research and outreach to various departments to ensure the availability of data. The type of data required will depend on the university and fraternity/sorority program. Typical data that could be collected includes salaries, benefits, housing costs (when appropriate), administrative costs, and programming expenditures (see Table 2).

Establishing Your Assessment Content

The fraternity/sorority professional should consider campus context prior to enacting any plan. To do so, the authors recommend that the fraternity/sorority professional work closely with his/her immediate supervisor. It may also be helpful to obtain an endorsement from a key administrator near the top of the organizational structure (possibly the senior financial officer). Finding these allies will be pivotal to endorsing the analysis, soliciting the aid of others, and if necessary, rallying people to assist with your data collection. To help gain allies, frequently reiterate the use of the Kennedy et al. (2001) model as a foundation for inquiry. Considering the essential questions posed by the model can also help make the case for conducting the assessment.

When completing a cost-benefit analysis, the assessment team must determine the format, language, and definitions that best suit the program's system of budgeting, cost analysis, and culture. Kennedy et al. (2001) propose a series of income and expense ledgers similar to a budget structure. Expenses are represented as costs. Revenue, or dollars gained, is represented as benefits. This method is especially helpful for professionals who are completing their first analysis. During this process, definitions and language are important. Fraternity/sorority professionals will find it helpful to discuss the language that is used most on their campus and in their division of financial administration. Often-used financial language and generic definitions are listed in Table 1.

Table 1
Definitions of Terms Used in Financial Administration and Accounting

Headcount	Headcount refers to the actual staff person who occupies a position, measured by salary and benefits.
Benefits	Benefits are often an institutional formula or package defined by a person's full or part-time status.
Formulas	Formulas are mathematical equations that factor various costs and revenues together to represent the financial value for an on-campus service.
Chargebacks	Chargebacks represent the costs that are charged back to the recipient of the service, often representing a formula.
Auxiliary Services	Auxiliary Services are departments that serve as profit centers for the university. These profit centers are viewed as efficiency mechanisms that ultimately reduce overhead for the university by producing services internally, thus reducing overall costs for the university.

Defining the Fraternity/Sorority Program's Relation to the Institution's Mission

The vision, mission, and values of the institution should be integrated into the division, department, and program efforts. This is critical for social and cultural congruence from a management perspective (Dill, 2000). Consequently, fraternity/sorority professionals should be similarly certain that the vision, mission, and goals of their respective programs are aligned with those of the institution. Research demonstrates that student involvement outside the classroom influences students' satisfaction, intellectual growth, personal development, and persistence (Floerchinger, 1992; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarellia & Terenzini, 2005). Fraternity and sorority policies directly correlated to these outcomes and could be used when implementing and reporting the assessment.

Student learning and developmental outcomes have been established by the Council for the Advancement of Standards in Higher Education (CAS). The standards outline sixteen learning and development outcomes for fraternity/sorority affairs programs of quality: leadership development, intellectual growth, collaboration, social responsibility, effective communication, enhanced self-esteem, realistic self-appraisal, clarified values, career choices, healthy behavior, meaningful interpersonal relationships, independence, productive lifestyles, appreciating diversity, spiritual awareness, and personal/educational achievement. These learning outcomes uphold the values of scholastic excellence, leadership, civic engagement, friendship, and life-long learning that are embraced by inter/national fraternal organization rituals and theoretically complement the university goals and framework (CAS, 2006).

Assessing a fraternity/sorority program utilizing a variety of methods ensures congruence between theory and practice. Many qualitative measures exist to assess these factors, including self-evaluation through CAS standards, benchmarking studies, surveys, and focus groups. The value of adding a cost-benefit analysis to the overall assessment process is that it helps establish a balance of both qualitative and quantitative data (Shuh and Upcraft, 2001). This blend is necessary to gain a total understanding of program effectiveness.

Case Study

Rochester Institute of Technology (RIT) conducted a cost-benefit analysis of its fraternity/sorority program in 2005 to assess its institutional impact for the 2004-2005 academic year. RIT, founded in 1829, is a private, technical institution enrolling more than 13,000 undergraduate students in eight colleges. It operates on a quarter system, houses one of the largest cooperative education programs in the world, and is home to the National Technical Institute for the Deaf. The RIT student body is approximately 67% male and 33% female.

This report presents data from the 2004-2005 academic year, when 570 students, almost 5% of the RIT student body, were involved in fraternal organizations. During this time, RIT recognized 25 fraternal organizations (16 fraternities and 9 sororities), including five deaf/hard of hearing organizations, four predominantly African-American organizations, and three Latino-based organizations.

Five of the 25 organizations were housed in traditional residence halls and had access to basements, which served as kitchens and recreational/meeting rooms. These facilities were staffed by student resident assistants, who reported to residence life professional staff. Six additional chapters were housed in newly constructed houses (2001) around a fraternity/sorority "circle" located in a different section of campus. The Department of Housing Operations oversaw these facilities, and coordinated housing logistics with chapter presidents and officers. The remaining fourteen chapters were not housed on campus.

The fraternity/sorority program was coordinated by an Assistant Director of Campus Life/Coordinator of Fraternity and Sorority Life, housed in the Center for Campus Life under the Division of Student Affairs. The five governing councils each had an advisor. The Department of Public Safety investigated all misconduct and referred all cases to the Department of Student Conduct (within the Division of Student Affairs) for adjudication, with assistance from the Office of Fraternity and Sorority Life.

This case study follows the same process used by the student affairs and fraternity/sorority professionals at RIT. The financial costs and benefits (see Table 2) are a hypothetical set of figures that demonstrate the principles of the process, approximated costs, and the retention effects. Due to privacy issues, the final figures yielded by the RIT study are not published.

Assessment Teams

The RIT cost-benefit analysis gathered data via two teams comprised of eighteen higher education professionals representing thirteen different campus departments (Fraternity and Sorority Affairs, Campus Life, Student Affairs Assessment, Budget and Financial Planning Services, Institutional Research, Development and Alumni Relations, Public Safety, University News, Residence Life, Housing Operations, Community Service Center, Student Conduct and Mediation Services, and the Student Affairs Vice President's Office).

The first team was an institutional team, comprised of representatives from each department that in some way contributed an expense or resource to the fraternity/sorority program. A cross-functional team of this nature is critical (Gioia & Thomas, 2000), as each participant is a stakeholder who will have a vested interest in seeing the results of the study. All team members contributed data available through their departments.

The institutional team provided four critical functions. First, the team established parameters regarding data use and dissemination. Budget information is often sensitive and guarded. Therefore, the format in which the information is presented and the method of approving final numbers had to be clarified to build stakeholder support. Second, team members ensured that information was accurately represented before it was released. This communication process helped the fraternity/sorority professional better understand the financial subculture within the institution, and develop a sense of camaraderie among the institutional team members. Finally, consistent with the overall goal of a cost-benefit analysis, the institutional team identified all potential costs and benefits for the fraternity/sorority program and provided acceptable guidelines that helped translate those into the appropriate dollar values.

The second team was a sub-group of the institutional team - a smaller, internal work team. This team consisted of staff members from within the Division of Student Affairs who planned the agenda for the upcoming meetings, completed work assignments to support the institutional team, and assisted with data collection and analysis.

Procedure

The institutional team convened at the onset of the analysis to introduce the project, explain its purpose, and develop expectations and deadlines for data retrieval. The institutional team identified staff to provide the data needed. Once expectations were outlined, the majority of communication took place via email and telephone. The team met in person midway through the process and to review the penultimate draft. The internal work team met more frequently to deal with the details and challenges of clarifying, documenting, and formulating information in a consistent manner.

Findings

Costs

The institutional team identified potential costs and benefits for the fraternity/sorority program (Table 2), discussing the particular nuances related to the university. Due to RIT's unique history of housing chapters in campus housing, key decisions were made regarding placement of costs and benefits. For example, room and board were included as costs due to the real expenses associated with the housing system.

When determining Fraternity and Sorority Affairs staff salaries, amounts were determined directly from budget figures, or with calculations for part-time staff based upon time allocations. These included salary and benefits. Public Safety and Student Conduct charges included time for investigation of the cases specifically related to fraternity and sorority chapters including investigation, completion of paper work, and judicial hearing times when staff members were present. Other administrative and programming expenses, many paid for by student activities fees, were listed separately.

Costs were further specified as the analysis process evolved. One example was fraternity and sorority housing. During the 2004-2005 academic year, two departments worked in tandem to administer fraternity and sorority housing: Housing Operations and Residence Life. Each had different responsibilities regarding fraternity and sorority facilities. It is important to note that, during the cost-benefit analysis, extensive discussions occurred regarding what were legitimate charges for the fraternity/sorority program (as listed on the costs ledger depicted in Table 2) as opposed to charges or other expenses, which would have occurred regardless of the existence of the fraternity/sorority program due to pre-existing factors. It was finally decided that costs associated with operations related to fraternity and sorority residence halls would have existed regardless of who lived in the residence halls due to RIT's high demand for on-campus student housing. For example, deferred maintenance of parking lots, general utilities, and amortization of residence halls were considered university costs. This included the standard amount of time, translated into salary dollars, to oversee these areas. However, additional expenses incurred to accommodate fraternity and sorority presence in the halls (e.g., chapters' basement utilities and kitchen maintenance) were accounted for as fraternity/sorority program costs for the purpose of the analysis. Similarly, resident assistants, additional staff time, and other operational expenses were factored into the costs for the residence life staff.

To illustrate further, all expenses in the newly-constructed fraternity and sorority houses were considered costs. This included the amortization of debt of newly-constructed chapter houses, physical plant charges, public safety oversight, waste collection, telecommunications, insurance, grounds, and utilities. Housing Operations staff provided prorated estimates of time dedicated to the fraternity and sorority officers, alumni, and advisors, beyond what normally would have been dedicated to non-member residents. Meal plan costs were provided from Food Services and simply multiplied by the number of students enrolled, with profit being listed as a benefit.

Benefits

Schuh and Upcraft (2001) encourage all cost-benefit studies to examine a thorough listing of all potential benefit sources, regardless of whether they are proven to be benefits. In the RIT analysis, four potential benefits were identified.

Table 2
Cost-Benefit Analysis Template *(Dollar values are not actual figures.)*

Costs		
1. Vice President's Office	Staff from the Office of the Vice President for Student Affairs	$2,000
2. Fraternity/Sorority Affairs Staff *	Coordinator of Fraternity and Sorority Life and percentage of Director's time	$48,229
3. Additional Programming Staff	Stipend for graduate assistants, advisors of governing councils, and programmers	$10,000
4. Student Conduct	Preparation and hearing hours	$11,000
5. Public Safety	Responding to calls, investigations, hearings	$9,500
6. Fraternity/Sorority Affairs Administrative Budget	Student staff, administrative costs, and programming costs	$20,300
7. Greek Council Budget	Programming costs	$20,469
8. Fraternity/Sorority Housing Related Costs		
a. Free-Standing Housing Expenses	Costs to maintain fraternity/sorority free-standing houses	$603,142
b. Residence Hall Expenses	Costs to maintain fraternity/sorority residence halls	$340,000
c. Housing Operations Personnel	Percentage of staff time servicing fraternities and sororities)	$21,000
d. Resident Life: Resident Advisors	Room, board, and stipend for 6 RAs	$46,060
e. Meal Plan Residence Halls		$120,000
f. Meal Plan Free-Standing		$110,000
9. Salaries and Benefits *		
Benefits		
10. Retention Impact	Based on 70% tuition (30% discount)	$1,273,294
11. Public Relations: Newspaper Coverage	Advertising equivalency rate	$23,997
12. Fraternity/Sorority Housing Related Benefits		
a. Free-Standing Housing Revenue and Charges	Rent and other housing related charges	$605,142
b. Residence Halls Revenue and Charges	Rent and other housing related charges	$388,577
c. Meal Plan Free-Standing	Revenue generated from fraternity/sorority meal plan	$112,676
d. Meal Plan Residence Halls	Revenue generated from fraternity/sorority meal plan	$140,000
13. Benefit to RIT and the Community		
Community Service Hours	Based on 6,532 hours @ $17.55/hour	$114,638
Philanthropy	Funds raised	$20,107
Total Costs		**$ 1,447,200**
Total Benefits		**$(2,678,431)**
Final Balance		**$ 1,231,231**

* Some numbers in this table have been changed in consideration of privacy; however, they generally parallel the end result of the study. It is important to note that during the real world practice at RIT, every potential cost and benefit was considered without prior knowledge as to the outcome of the study.

The first potential benefit was public relations. Fraternity/sorority professionals are familiar with the potential impact of positive and negative public attention. Ramifications could include either enthusiasm for or damage to the reputation of the fraternity/sorority community or university. The RIT institutional team felt that a true cost-benefit analysis must consider public relations. The staff of the University News department and University Public Relations Office, agreed that each article about fraternities or sororities had a net value (usually measured by the inch in one inch columns) equal to the cost of an advertisement that the university might otherwise have had to purchase. This value is referred to as the *advertising equivalency rate*. The internal team collected all articles accumulated for the 2004-2005 year from the University Public Relations Office and archives and, with simple calculations, determined a conservative estimate of the net value regarding public relations. During the designated year of this study, RIT did not experience negative press from its fraternity or sorority activities. If RIT had received negative press, the values would have been calculated in the same manner and then applied as negative values into the template in Table 2.

The second potential benefit was revenue generated from room and board associated with university-owned fraternity/sorority housing. When referencing Table 2, it is clear that the total housing and meal benefits (meaning revenue), listed under item 2, exceed the housing and meal costs, which are listed under item 8. Some of these costs will vary according to university systems.

Another potential benefit was philanthropy/community service. While philanthropic dollars were simply totaled and incorporated into the analysis, community service hours were calculated according to the value of labor hours. According to *Independent Sector* (2005), the value of community service hours was estimated at $17.55 per hour. At RIT, when this formula was applied to the total number of community service hours contributed by the fraternity/sorority community, the dollar value exceeded $114,000. In the final cost-benefit report, these benefits were listed in a highlighted section separated from the primary benefits, because they generally served the surrounding communities (i.e., agencies) and thus constituted a secondary benefit to the institution.

The final benefit was alumni giving. The Development Office provided information about fraternity and sorority alumni participation rates, showing that individuals involved in fraternities and sororities contributed to RIT at a significantly greater rate than non-members.

Persistence and Retention as a Financial Benefit

Retention was a critical, but unknown factor in this cost-analysis. However, enough data had been collected to complete a retention study and factor it into the final analysis. The retention study was not a small undertaking. The key component required to develop an effective study was membership information provided by chapters quarterly. In the case of this analysis, the retention study focused not only on persistence, but persistence to graduation. Like all other factors, a program's ability to attract and retain students is critical not only to student success, but also to the financial success of the institution. RIT measured this across a period of seven years, consistent with other retention studies (Pascarella & Terenzini, 2005).

In this case, chapter membership files (including chapter cumulative grade point averages) had been maintained in the Fraternity and Sorority Affairs Office for almost a decade. The study (focusing on the time period of 2004-2005) utilized data from the membership rosters starting from the fall 1999 semester. Once names were collected, the graduation rate was calculated and compared to the overall university graduation rate. The results demonstrated an overall retention rate of 79% for fraternity/sorority members, as opposed to a lower retention rate for all non-affiliated students (which is proprietary confidential information that was not approved for release), thus representing a financial benefit for the institution. This is easy to calculate. For example, if the retention rate for all other students had been 69%, then the difference between fraternity/sorority affiliated and all other students would equal 10%. This would then be multiplied by the size of the fraternity/sorority community, representing the number of students in fraternal organizations who exceeded the graduation rate of their non-affiliated peers. When multiplying the value of tuition (minus room and board) by this number of students for the year of the study, the analysis demonstrated a financial benefit exceeding a million dollars.

During the analysis, it was important to work with staff from Enrollment Management to ensure appropriate adjustment of the charges to reflect tuition discounting. Tuition discounting is a common method used by many universities and colleges (especially private institutions) to reduce tuition costs for students of need and is typically offered as financial aid (K. Rogers, personal communication, October 2006). The discounting factoring used in this study, as shown in Table 4, was 0% percent of tuition.

Summary

After the values of each cost and benefit were entered into the template, the institutional team reviewed the document collaboratively to achieve a final evaluation and validation inclusive of their respective areas. During the process of completing the analysis, many of the team members had been contacted by e-mail or phone with questions and opportunities for feedback. Consequently, little of the information was new or unexpected.

Upon completing the cost-benefit analysis, the question still remains as to how the results can be applied to a fraternity/sorority program or the university. It is important to understand and use the results in a way that helps student affairs and other university professionals identify areas of strength and development for future assessment and program direction.

Implications

Interpreting the Analysis through ROI

Interpreting information on any assessment is critical. There are advantages and disadvantages to analyzing the results of a cost-benefit analysis. One advantage is that the analysis has an easy-to-read bottom line. However, this type of ledger format poses some challenges. Community members, and especially business people who are experts in the field, may be suspicious of tables, ledgers, and summaries that may not portray a complete picture. This suspicion may be amplified if they cannot see how different statistics in the ledger were calculated. Additionally, it can be cumbersome to explain the process used to create the ledger. Such a presentation requires an exacting description of process, numbers, and business rationale. Therefore, presentation of the material and its interpretation becomes a lengthy and special process, which should be pursued with caution, practice, and preparation.

The greatest challenge can be that the bottom line is subject to misinterpretation, particularly if it reads as a negative balance. Consequently, the ROI, discussed previously in this article, becomes an important summary point by which results can be crystallized. In both the RIT scenario and case study using mock data (Table 2), the ROI was positive; benefits exceeded costs. This result would be considered by many stakeholders and economists to be a fortunate outcome in that the fraternity/sorority program is providing a return on the dollars being invested. However, it is not a guarantee of quality. Therefore, the cost-benefit analysis and ROI should be viewed with an analytical and cautious eye, and the limitations of its implications should similarly be addressed with all members of the internal and institutional teams at the beginning of the process. This will help maintain objectivity when interpreting the value of the numbers and outcomes of the assessment.

Specifically, it is important to note that a negative ROI does not necessarily create a bad business case for a fraternity/sorority program. Similarly, a positive ROI does not necessarily validate a positive business case for a fraternity/sorority program, or serve as an indicator of success. Evaluating the meaning of the data requires a discerning eye. Staff should be prepared to emphasize how the analysis acts as a tool for improvement.

Considering a Positive ROI

To demonstrate this concept, the figures in Table 2 reflect how the expenses associated with free-standing facilities are less than the corresponding revenue. The cost-benefit analysis not only confirms this, but quantifies the degree to which it occurs, provides insight, and poses critical questions for the future. These include: “How is cost-setting determined?”, “How can fraternity/sorority leaders maximize their rental fees?”, or “How might this impact future rental increases?” Obviously, some items contributed to creating a positive ROI. For example, public relations represented a single phenomenon that when factored into the equation, contributed positively to the program. However, this should not be taken for granted. Factors such as public relations and retention could change annually and may not be considered stable factors in future reports.

Additionally, it is possible that some factors (e.g., public relations or community service) could have a negative value in the ledger sheets of the analysis that is minimal, but the ROI would have still remained positive. This is because the decreased costs of these factors would not have exceeded the value of the difference between total costs and total benefits. In summary, while a positive ROI is certainly helpful, the cost-benefit analysis should still be used to highlight areas for future assessment and program development.

Considering a Negative ROI

The RIT scenario did not result in a negative ROI where costs exceeded benefits. This helped to demonstrate the educational value of the fraternity/sorority program. However, a negative ROI is not certain to condemn a program.

For example, the study may have demonstrated how the operational aspects of a university-owned housing system contributed to a negative bottom line. Housing costs are often controlled by university factors and have a significant effect on the bottom line of both the operations and the ROI. This is a large administrative burden that does not usually result from student behavioral issues or the health of the fraternity/sorority community.

In the same example, the public relations or community service factors could have shown fiscal benefits to the university and surrounding community. While this number may be impressive, it may be limited in that its positive return is occurring at a significantly lower rate of return than the housing expenditures. Hence, they may be outweighed by the negative impact of other, larger institutional factors. Consequently, the fraternity/sorority program could be very positive, while the study yields a negative ROI.

In other examples, it is possible that programmatic aspects related to behavior, standards, or university relations (i.e., public relations, conduct, and community service) have a negative influence on the ROI. These factors could place the fraternity/sorority program in jeopardy, regardless of the impact on the final ROI. A cost-benefit analysis helps identify these factors as areas for determining appropriate interventions. Hence, factors in the analysis, individually or in related subgroups, need to be scrutinized as studies are completed, shared, and processed.

Because this study served as the first of its kind at RIT, it established an institutional benchmark for future studies and programmatic changes, not only for the fraternity/sorority program, but for the assessment process as well. Applications for future use are still being considered. For example, if behavioral (conduct) issues were perceived to increase during a given year after the analysis was completed, a second analysis could be conducted to measure the amount of time (and subsequent costs) in examining and processing each case. When doing so, it is easier to gain additional insights into the type of time investment required as a result of this phenomena and the seriousness of the problem. Once completed, this study would be relatively easy for any university to replicate, because formulas and templates have been established. Additionally, staff members who participated in the study previously are better able to understand the process, the degree of staff support, and requirements by which to successfully complete it in a more efficient manner.

When considering the assessment process, the process and ledger together comprise a template. An annual or regular reenactment of the process will provide insights into how the assessment and analysis can be improved. Hence, the evaluation process continues in a two-fold manner, each complementing the other: the improving assessment process driving the administration’s assessment of the fraternity/sorority program; the evolving program continually requiring additional assessment.

Dissemination

Regardless of the results, the analysis also provides important opportunities for goal setting. Just as each itemized cost or benefit can provide feedback regarding the value of a particular service to the fraternity/sorority program, it can mobilize student leaders, administrators, and advisors to establish positive goals. It can also serve as an impetus for student leaders who wish to encourage members to reduce behaviors or activities that have a negative impact on the program.

Open forums and discussions regarding the cost-benefit analysis can foster a positive sub-culture, while encouraging accountability through students' governing standard boards.

Conclusion

A cost-benefit analysis is an important assessment strategy through which fraternity/sorority professionals may demonstrate the value of their program through a team-oriented effort. When cross departmental partners are involved, it becomes more manageable to complete such an intensive assessment process. The data can provide staff, students, and other stakeholders with a road map to improve their fraternity/sorority program. The process is time intensive, but can provide information to demonstrate current strengths and areas of improvement for fraternal organizations. Through the application of this model at RIT, stakeholders were able to collect data to shape future practice.

References

Astin, A. W. (1985). *Achieving educational excellence: A critical assessment of priorities and practices in higher education*. San Francisco: Jossey-Bass.

Council for the Advancement of Standards in Higher Education (2006*). The book of professional standards for higher education.* Washington, DC: Council for the Advancement of Standards in Higher Education.

Dill, D. D. (2000). The management of academic culture: Notes on the management of meaning and social integration. In M. C. Brown (Ed.)*, Organization & governance in higher education* (5th ed., pp. 261-272). [ASHE Reader Series]. Boston: Pearson.

Fitz-enz, J. (2000). *The ROI of human capital: Measuring the economic value of employee performance*. New York: AMACOM.

Floerchinger, D. (1992). Enhancing the role of student organization advisors in building a positive campus community. *Campus Activities Programming*, *26*(6), 39-46.

Gioia, D. A. & Thomas, J. B. (2000). Sensemaking during strategic change in academia. In M. C. Brown (Ed.)*, Organization & governance in higher education* (5th ed., pp. 325-378). [ASHE Reader Series]. Boston: Pearson Custom Publishing.

Independent Sector (n.d.). *Research: Value of volunteer time*. Retrieved January 14, 2007, from http://www.independentsector.org/programs/research/volunteer_time.html

Kennedy, K., Moran, L., & Upcraft M. L. (2001). Assessing cost effectiveness. In Schuh, J. H. & Upcraft, M. L. (Eds.), *Assessment practice in student affairs: An applications manual* (pp. 175-195). San Francisco: Jossey-Bass.

Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E. J., & Associates (2005). *Student success in college: Creating conditions that matter.* San Francisco: Jossey-Bass.

Levin H. M. & McEwan, P. J. (2001). *Cost-effectiveness analysis: Methods and applications 2*. New York: Sage Publications.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco: Jossey-Bass.

Perlow, E. (2007, Summer). Refresh, reframe, refocus: Using assessment as an improvement framework. *Perspectives,* 13-16.

Schuh, J. H., & Upcraft, M. L. (2001). *Assessment practice in student affairs: An applications manual* (pp. 175-213). San Francisco: Jossey -Bass.

Ward, H.O. (2006). *Return on investment*. Retrieved September 9, 2007 from http://images.autodesk.com/adsk/files/White-paper-Civil-3D-2006_ROI-R2_FINAL.pdf

Michael D'Arcangelo is the Director of Campus Life at Rochester Institute of Technology. He holds a Masters of Arts in Education (College Student Personnel) from Bowling Green State University and a Masters of Science in Human Resource Development from Rochester Institute of Technology. He is currently a doctoral student, enrolled in the Educational Leadership and Policy program at the State University of New York at Buffalo. Michael is a member of the Association of Fraternity Advisors, National Association of Student Personnel Administrators, Association of College Unions International, New York State College Student Personnel Student Association, and Theta Chi Fraternity. He may be contacted at mndccl@rit.edu.

Jessica R. Berner is the Assistant Director of Campus Life for Fraternity and Sorority Life at Rochester Institute of Technology. She holds a Masters of Science in Education (Counselor Education) from the State University of New York College at Brockport. Jessica is a Nationally Certified Counselor and a member of the Association of Fraternity Advisors, National Association of Student Personnel Administrators, Association of College Unions International, American Counseling Association, and Phi Sigma Sigma Fraternity. She may be contacted at jrbccl@rit.edu.

HAZING IN STUDENT ORGANIZATIONS: PREVALENCE, ATTITUDES, AND SOLUTIONS

Stephen S. Owen, Ph.D., Tod W. Burke, Ph.D., and David Vichesky

This article reports the results of a survey exploring hazing in student organizations. First, a typology of hazing behaviors was constructed through factor analysis. Second, respondents reported the prevalence of hazing, and results were compared across type of student organization. Third, respondents indicated their attitudes about hazing, and results were compared between perpetrators of hazing and their victims. Finally, respondents assessed the efficacy of various solutions to hazing, and results were compared between those who had perpetrated acts of hazing and those who had not. The results were used to construct a theoretical model of hazing behavior on college campuses, with recommendations for solutions.

Between 1970 and 1985, approximately 30 hazing incidents resulted in death (Richmond, 1987). Hollmann (2002) reports that more hazing and initiation ritual-related deaths occurred since 1990 and 2002 than all college and university campus deaths of that nature on record. The practice of hazing has led some universities to ban fraternities and sororities (Trustee Task Force on Greek Life, 2002) and has also led to concerns about liability in higher education (Rutledge, 1998).

While it is difficult to develop an understanding of why hazing occurs, a number of explanations have been proffered. Reese (1993) asserted that hazing is an issue of fraternity and sorority subculture, arguing that the roots of hazing behavior stem from shared cultural values within these organizations. Ritualistic, often esoteric symbolism is the basis of the bond between members of a fraternal organization (McMinn, 1979). Reese (1993) suggested that symbolism and the larger cultural construct are relevant because they explain why new members are expected to suffer a “rite of passage” (p. 37) to enter the sacredness of the group. Promoting toughness, in and of itself, is one value ascribed to hazing by some fraternities (DeSantis, 2007).

A strong predictor of fraternity and sorority membership is the psychological need to belong to a meaningful social group (Shaw & Morgan, 1990). As Ruffins (1998) noted, this need to belong is so powerful that it can cause potential new members to endure the pains of hazing to join the group. Shaw and Morgan (1990) also noted that those who haze may be exercising hostility on their targets stemming from when they themselves were hazed, which may partially explain why hazing is perpetuated as a tool of initiation among fraternal organizations and other collegiate organizations.

Hazing among males has been considered a form of sadomasochistic, homoerotic bonding (Finley & Finley, 2007; Ruffins, 1998) in which the sacrifice asked of new members is their own masculine dominance. Sweet (1999) considered this view from a sociological perspective, suggesting that sadist hazing requires some sort of latent hostility towards the target, while, in fact, those who haze often care greatly for their new members. Sweet pointed to the regret that the in-group feels when a new member is critically hurt during a hazing incident as evidence of this connection. However, it could merely be a regret at the hazing behavior being exposed, or being personally subject to administrative and legal consequences.

The role of alcohol in hazing has received widespread scrutiny (Finkel, 2002; Hollmann, 2002; Rutledge, 1998; Nuwer, 1999), not only because it is commonly used on university campuses, but also because it releases social inhibitions. Kuh and Arnold (1993) referred to "liquid bonding" (p. 327), in which fraternity pledges are socialized through the use of alcohol. This enhances the risk of hazing. Rutledge (1998) suggested that as many as 90 percent of initiation ritual and hazing deaths involved excessive alcohol intake.

Prior Studies of Hazing in Collegiate Organizations

In the academic and professional literature, there have been numerous articles decrying hazing, explaining its origins, calling for reforms and policies to end it, and describing specific incidents. However, few studies have explored student attitudes toward and the actual prevalence of hazing. This led Nuwer (1999) to recommend that researchers "replace anecdotal evidence with hard [data]" (p. 223). A brief review of research follows.

Several studies have examined how students conceptualize or define hazing. Two studies focused only on fraternities, sampling members at single institutions; both presented a list of items and asked respondents to indicate whether or not they believed the items were hazing (Baier & Williams, 1983; Jenson, Poremba, Nelson, & Schwartz, 1980). Forced consumption of alcohol received the highest score in both studies, suggesting that concerns about alcohol are long-standing in the discussions of hazing. In a recent single institution study, Ellsworth (2006) compared how different groups (fraternity, sorority, ROTC, NCAA athletes, and marching band members) perceive hazing. He included physical, psychological, and other forms of hazing in his survey, as well as non-hazing activities. While there were a few areas of disagreement, members of the different groups scored the following items highest:

- Forced to consume excessive amounts of alcoholic beverages;
- Struck by an object, such as a ball, baton, fist, or paddle;
- Handcuffed or tied to a building or structure;
- Receive a brand or tattoo;
- Drink or eat substances not intended for normal consumption;
- Deprived of beverages or food by others;
- Perform sexual acts;
- Participate in streaking or other activities while naked;
- Deprived of sleep by others;
- Steal an item. (Ellsworth, 2006, p. 55)

Previous studies have more closely examined the prevalence of hazing behaviors in fraternities (Baier & Williams, 1983; Gordon, Hall, & Blankenship, 1979), sororities (Gordon, Hall, & Blankenship, 1979; Shaw & Morgan, 1990), and athletic teams (Hoover, 1999). Campo, Poulos, and Sipple (2005) surveyed students at one university and found that fraternity members, males, varsity athletes, student leaders, and upperclassmen were more likely to engage in hazing behaviors.

Previous research has also explored justifications for hazing, in an effort to understand why it occurs (Baier & Williams, 1983; Campo et al., 2005; Gordon, Hall, & Blankenship, 1979; Jenson et al., 1980). A sample of students affiliated with fraternities and sororities at one institution was questioned regarding the value of hazing. The "majority … felt that hazing of any type is not beneficial to an organization" (Gordon, Hall, & Blankenship, 1979, p. 33), while only a minority believed that it was "an important part of the rituals, initiation procedures or policies" (p. 34). Perhaps these results are encouraging, in that they dispel notions that hazing has always been widely accepted. It appears that a desire to build organizational unity is the most consistent attitudinal predictor of hazing (Baier & Williams, 1983; Campo et al., 2005; Jenson et al., 1980), although a sense of tradition was also cited by two studies (Baier & Williams, 1983; Jenson et al., 1980). In a study suggesting a social norming effect, Campo et al. (2005) found a significant correlation between hazing and positive perceptions of friends' attitudes toward hazing.

Finally, research has explored perceived efficacy of solutions to hazing. In 1980, Jenson et al. asked open-ended questions about potential solutions to hazing. The responses centered on the promulgation of rules and their enforcement, which remain common solutions offered today. Indeed, Hoover's (1999) study of NCAA athletes found high levels of support for "strong disciplinary & corrective measures for known cases" (p. 20) and "standards guiding recruitment" (p. 20). Hoover's (1999) respondents also supported "alternative bonding & recognition events for teams to prevent hazing" (p. 20). Interestingly, Campo et al. (2005) found a positive correlation between hazing activities and non-hazing team-building activities, leading the authors to suggest that they "may be supplemental to, and not a replacement for, hazing" (p. 146).

As illustrated above, the empirical data on hazing attitudes and behaviors are limited. Given the paucity of empirical research on hazing, particularly outside of fraternal organizations, this study took an exploratory approach, seeking to address hazing prevalence and attitudes as a foundation for further research.

Methods

Data Collection

An invitation to complete an online survey (approved by the Institutional Review Board) was distributed to the entire population of undergraduate and graduate students (approximately 9,600) at a mid-sized, southern, comprehensive university. Instrument development drew upon the survey design of Hoover (1999; Hoover & Pollard, 2000). Some students provided written comments in a space provided at the end of the instrument.

Respondents were first asked to think about the single organization (if any) in which they were most actively involved and then indicate the type of organization (e.g., religious, professional, fraternity). Organizations included in the survey were: athletic teams (this was not limited to varsity athletics, and could include club sports); honor societies and honor fraternities designed to recognize academic achievement; professional societies and professional fraternities associated with a discipline or vocational field; music or other performance organizations; religious organizations or campus ministries; service societies and service fraternities focusing on community service; social fraternities recognized by the campus Interfraternity Council (IFC); traditionally African-American social fraternities recognized by the campus National Pan-Hellenic Council (NPHC); social fraternities not formally recognized by any campus authority (as such, these are not deemed "official" student organizations); social sororities recognized by the campus Panhellenic Council (PHC); traditionally African-American social sororities recognized by the campus NPHC; social sororities not formally recognized by any campus authority (as such, these are not deemed "official" student organizations); and special interest clubs, focusing on a common interest among members.

Students were then instructed to consider only that organization in answering the remainder of the questions. This allowed respondents to focus on the group that was most important to them, which could likely be a group for which they would be willing to endure hazing experiences. It was also hoped that the approach promoted more thoughtful reflection on the questions. More practically, the strategy permitted an exploration of differences based on type of organization.

Research Questions

This study was designed to examine four broad questions pertinent to hazing in collegiate organizations. First, what specific behaviors do students perceive to be hazing? It was instructive to examine how students, comprising the population of potential hazing victims and perpetrators, operationalized the concept. It was hypothesized that students would not view all behaviors as equally egregious, but rather along a continuum.

All students who completed the instrument were included in the analysis of this first question, regardless of whether they reported an organizational affiliation, as any student has the potential to join groups in which hazing may occur. Survey respondents were presented with a list of 56 behaviors and instructed to rate the degree to which they believed each should be considered hazing, on a scale from 0 ("definitely not hazing") to 10 ("definitely hazing"). To enhance inter-item discrimination, the list included both activities that are (e.g., "forced consumption of alcohol") and are not (e.g., "maintaining a specific GPA") examples of hazing, based on the authors' more than 50 years of combined experience with student organizations. The list of items was compiled by reviewing previous research on hazing, news items, and anecdotal reports. A principal components factor analysis with varimax rotation was conducted to identify common constructs underlying the list of items. In addition, mean ratings were calculated for each item. Two factors identified by the analysis, labeled "Organizational Harassment" and "Harm to Self and Others," were explored in the remaining questions.

The second research question asked, what is the prevalence of hazing*?* The analysis of prevalence focused mainly on frequency of victimization and commission of hazing behaviors and was limited to respondents indicating an organizational affiliation, as these were the individuals likely to be in a context where hazing might occur. It was hypothesized that the amount of hazing would vary across student organization type.

Respondents were asked to indicate how often they had experienced hazing from four perspectives. For each of the 56 hazing behaviors evaluated in the factor analysis, respondents were asked to indicate whether: (1) "Someone did this to me"; (2) "I did this to someone else"; (3) "I saw this happen, but did not participate in it"; or (4) "I've heard about this happening, but haven't seen it or experienced it." Respondents could select all responses that applied to their experiences. Because victimization is arguably the most serious manifestation of hazing (in terms of the harm posed to those who experience it), it was utilized as the hazing measure in this analysis. A Kruskal-Wallis test was conducted to determine whether the various organizations'

means differed significantly.
The third research question asked, what are student attitudes toward hazing? Analysis was limited to those students reporting an organizational affiliation. It was hypothesized that perceptions of hazing would vary based on student experience. Namely, as students were victimized by an increasing number of hazing behaviors, attitudes toward hazing would become increasingly negative; and, as students committed an increasing number of hazing behaviors toward others, attitudes toward hazing would become more accepting.

Respondents were presented with a series of statements regarding their attitudes toward hazing. The purpose of the statements was to ascertain how serious of a problem respondents perceived hazing to be and to determine whether respondents found any utility in hazing activities. Each item was answered on a five-point Likert scale anchored by "strongly disagree" (assigned a value of 1) and "strongly agree" (assigned a value of 5). Spearman correlation coefficients were calculated to test the hypotheses.

The fourth research question asked, what are potential solutions or recommendations to minimize hazing*?* The study explored the perceived efficacy of a number of potential solutions to hazing. It was hypothesized that perpetrators of hazing would view the effectiveness of solutions less favorably than those who had not committed acts of hazing.

Respondents were presented with options for initiatives or actions that could potentially reduce the level of hazing on college campuses. Two options pertaining to reporting (whether respondent would report hazing to somebody inside or outside the organization) were answered on a Likert scale anchored by "strongly disagree" (score of 1) and "strongly agree" (score of 5). For the remaining items, respondents were asked to indicate potential effectiveness on a Likert scale, anchored by "least effective" (score of 1) and "most effective" (score of 5). To test the hypothesis, an independent-samples t-test compared the means for the two groups for each potential solution.

Results

Samples

The first research question was addressed utilizing data from all respondents who completed the instrument (n = 440), regardless of organizational affiliation. Of the 434 respondents reporting gender, 156 were male (35.9%) and 278 were female (64.1%). There was little racial diversity; of the 432 respondents reporting race, 20 were African American (4.6%), 7 were Asian (1.6%), 13 were Hispanic or Latino (3.0%), three were Native American (0.7%), and 389 were Caucasian (90.0%). These results were consistent with the demographics of the total student population of the institution where the survey was administered.

Analysis of the second, third, and fourth research questions utilized data from only those respondents who reported an organizational affiliation (n = 342). Of the 337 respondents reporting gender, 118 were male (35.0%) and 219 (65.0%) were female. The sub-sample was predominantly Caucasian; of the 334 respondents reporting race, 23 were African American (6.9%), six were Asian (1.8%), 11 were Hispanic or Latino (3.3%), three were Native American (0.9%), and 291 were Caucasian (87.1%).

Defining Hazing

Four factors demonstrated high face validity, confirming the hypothesis that respondents would view potential hazing behaviors along a continuum. In addition, Cronbach's alphas indicated sufficient reliability within each factor (per the benchmarks established by DeVellis, 2003). The rotated factor solution accounted for 62.1% of the variance in the sample. Table 1 lists the behaviors that loaded on each factor, as well as the factor score (first column) and the mean rating on the 0-10 scale (second column) for each. Prevalence statistics (third column) will be discussed more fully in the following section.

Factor 1 was titled "Group Obligations and Entry Rituals." This factor contained 18 behaviors that students generally did not perceive to be hazing ($M = 2.34$, $\alpha = .956$), such as maintaining required study hours, paying dues, taking an oath, or wearing letters or other group-related apparel. The common theme uniting these items was that all pertain to basic expectations placed upon new (and in some cases, veteran) members of an organization. Factor 2 was titled "Group Sanctioned Separation" and included suspension for noncompliance with group rules, fines or other penalties for noncompliance with group rules, and barring probationary members from group meetings. On average, students rated the three items on this factor as slightly more serious than the first factor ($M = 4.28$, $\alpha = .794$). The theme uniting these factors was that all involved individuals being punished by and/or denied access to the group. Factor 3, titled "Organizational Harassment," was comprised of 18 behaviors. Students generally found these behaviors to be fairly strong examples of hazing ($M = 6.40$, $\alpha = .949$), including behaviors such as yelling at probationary members or requiring them to do errands for full members, to wear unusual clothing, or to shave their hair. The behaviors in this factor involved inappropriate discomfort, harassment, and incivility, though not necessarily direct harm. Factor 4 consisted of 17 behaviors and was titled "Harm to Self and Others." Items were generally rated as being fairly serious examples of hazing ($M = 8.79$, $\alpha = .957$), including such behaviors as destruction of property, deprivation of food, forced alcohol consumption, or forced sexual contact. Items comprising this factor included the potential for physical harm and/or legal consequences (i.e., misdemeanor or felony criminal charges).

These results proved interesting and may, with further refinement, lead to the development of a classification system for hazing-type behaviors. Clarifying the definition of hazing could help reduce illegal acts, because individuals who discover their conduct is considered hazing may cease problem behaviors, and victims who are more fully aware of hazing laws may be more forthcoming in reporting incidents which they otherwise would not consider to be violations.

The remainder of this article will focus on the behaviors categorized as "Organizational Harassment" and "Harm to Self and Others." These two factors demonstrate face validity (and many overlap with hazing scales and definitions utilized in previous research) as items that are informally or traditionally understood to be illicit or dangerous hazing.

Table 1
Hazing Factor Analysis

Factor 1: Entry Obligations and Rituals

Item	Factor Score [a, c]	Mean [b, c]	% Experienced [d]
Memorizing Organizational Facts	.876	1.90	66.7 (*n* = 228)
Wearing a Pledge Pin or Other Signifier	.857	2.08	58.2 (*n* = 199)
Taking an Oath	.807	2.01	62.9 (*n* = 215)
Completing Required Test of Knowledge/Skill	.799	2.35	61.4 (*n* = 210)
Keeping Entries in a Pledge Book	.790	2.88	46.2 (*n* = 158)
Memorizing the Greek Alphabet	.789	1.93	60.5 (*n* = 207)
Fulfilling Required Study Hours	.735	1.70	60.5 (*n* = 207)
Memorizing Ritual	.733	3.15	49.4 (*n* = 169)
Carrying a Pledge Book or Manual	.731	3.00	38.6 (*n* = 132)
Completing Required Attendance at Events	.724	2.41	70.8 (*n* = 242)
Wearing Letters or Group-Related Apparel	.721	2.27	66.1 (*n* = 226)
Completing Required Community Service	.710	1.20	65.5 (*n* = 224)
Singing, Chanting, or Cheering as a Group	.695	2.47	61.7 (*n* = 211)
Being Called a Pledge	.676	2.42	57.6 (*n* = 197)
Paying Dues	.673	2.22	71.6 (*n* = 245)
Maintaining a Certain GPA	.648	0.86	69.3 (*n* = 237)
Being Required to Carry an Object	.603	4.41	35.1 (*n* = 120)
Participating in Scavenger Hunts	.553	2.92	50.0 (*n* = 171)

Factor 2: Group Sanctioned Separation

Item	Factor Score [a, c]	Mean [b, c]	% Experienced [d]
Suspension for Noncompliance	.604	3.79	8.5 (*n* = 29)
Fines or Penalties for Noncompliance	.548	5.19	28.9 (*n* = 99)
Probationary Members Barred from Meetings	.486	3.86	36.5 (*n* = 125)

Factor 3: Organizational Harassment

Item	Factor Score [a, c]	Mean [b, c]	% Experienced [d]
Required to Do Errands for Members	.711	6.17	29.8 (*n*=102)
Required to Perform Calisthenics	.691	6.64	24.3 (*n*=83)
Addressed with Insulting Language	.687	7.44	19.6 (*n*=67)
Required to Participate in Unplanned Trip	.665	6.71	18.1 (*n*=62)
Required to Stay in Uncomfortable Quarters	.659	7.51	17.0 (*n*=58)
Prohibited from Talking to Other Members	.651	5.87	12.3 (*n*=42)
Required to Sit with Members in Public	.649	6.39	13.5 (*n*=46)
Required to Wear Unusual Clothing	.636	5.38	35.7 (*n*=122)
Prohibited from Talking to Non-Members	.627	7.33	9.4 (*n*=32)
Required to Complete Pranks Against Others	.593	6.05	17.5 (*n*=60)
Ordered to Shave Hair	.590	7.76	10.2 (*n*=35)
Addressed with Unsolicited/Not Chosen Nickname	.571	4.67	30.7 (*n*=105)
Yelled at by Initiated Members	.567	6.80	27.8 (*n*=95)
Blindfolded	.524	5.13	42.7 (*n*=146)
Required to Eat Unusual Food	.520	7.91	17.5 (*n*=60)
Deceived about Initiation	.496	5.37	29.5 (*n*=101)
Required to Participate in Lineups	.478	5.38	29.8 (*n*=102)
Forced to Consume Non-Alcoholic Beverage	.443	6.77	17.0 (*n*=58)

Table 1, cont.
Hazing Factor Analysis

Factor 4: Harm to Self and Others

Item	Factor Score [a, c]	Mean [b, c]	% Experienced [d]
Forced Sexual Contact with Object	.866	9.47	2.3 (n = 8)
Forced Use of Illegal Drugs	.855	9.09	5.0 (n = 17)
Forced Same-Sex Contact	.841	9.46	1.5 (n = 5)
Hitting, Kicking, or Slapping	.813	9.23	7.0 (n = 24)
Deprivation of Food	.809	9.02	6.7 (n = 23)
Being Tied Up or Confined	.794	8.96	11.7 (n = 40)
Forced Act that Violates Law	.773	8.76	9.9 (n = 34)
Forced Destroying or Vandalizing of Property	.771	8.58	5.6 (n = 19)
Forced Opposite-Sex Contact	.762	9.00	3.5 (n = 12)
Paddling	.698	8.58	11.1 (n = 38)
Tattooing, Piercing, or Branding	.681	8.63	4.4 (n = 15)
Forced Alcohol Consumption	.644	8.51	27.8 (n = 95)
Required Stripping of Clothes	.639	8.69	10.8 (n = 37)
Depriving Sleep	.616	8.49	12.9 (n = 44)
Forced Cruelty to Animals	.587	8.46	2.0 (n = 7)
Forbidding Bathing	.575	8.30	8.8 (n = 30)
Forced Insulting/Demeaning of Others	.561	8.16	9.1 (n = 31)

[a] Principal components factor analysis with varimax rotation
[b] On 0-10 scale (0 = "definitely not hazing" and 10 = "definitely is hazing")
[c] Analysis includes all who responded to the complete scale of hazing behaviors; n = 440
[d] Analysis limited to respondents reporting organizational affiliation; n = 342

Prevalence of Hazing

The third column of Table 1 presents the percentage of organizational members who have experienced each behavioral item listed in the survey. Prevalence decreases from Factor 1 to Factor 4. This is logical, as severity generally increases from Factor 1 to Factor 4. Upon further exploration of how respondents experienced hazing, some interesting patterns emerged. In the following discussion, percentages indicate the proportion of respondents involved in at least one hazing behavior classified as "Organizational Harassment" or "Harm to Self and Others."

The most common way that hazing was experienced was indirect, with the largest proportion of respondents indicating that they had heard about but not directly experienced hazing in their group (71.9% heard about "Organizational Harassment"; 66.4% heard about "Harm to Self and Others"). This could be explained in a number of ways. Methodologically, embarrassment or a social desirability bias could cause an underreporting of more direct experiences with hazing (e.g., being victimized, committing, or witnessing). It is also possible that a small number of incidents are communicated to a larger number of members through emails, Facebook, or informal meetings. It is even possible that the respondents heard about hazing that was committed far in the past, even prior to their membership in the organization. Such a finding suggests that the actual prevalence of hazing may be exaggerated. The second most common method of experiencing hazing was by witnessing the behavior (67.3% witnessed "Organizational Harassment"; 46.8% witnessed "Harm to Self and Others"). This could also reflect a social desirability bias and/or a relatively small number of hazing incidents observed by a larger crowd. Finally, the percentage of respondents reporting that they had committed acts of hazing was substantially lower than the percentage reporting victimization (46.5% vs. 67.3% for

"Organizational Harassment"; 22.2% vs. 34.8% for "Harm to Self and Others"). These results suggest that there may be a small number of active perpetrators who are responsible for hazing a larger number of potential victims. This is consistent with criminal studies, where a small number of offenders generated a large volume of criminal activity (Wolfgang, Figlio, & Sellin, 1972; replicated with similar results by Shannon, McKim, Curry, & Haffner, 1988; and Tracy, Wolfgang, & Figlio, 1990). This is also consistent with studies of organizational deviance, such as Sherman's (1974) work on police corruption, which attributed corruption in some agencies to "rotten apples" (deviant individuals) and "rotten pockets" (small deviant groups) (p. 7). This may result in deviant activities that are disorganized and non-pervasive within an otherwise honest organization.

It was hypothesized that differences would exist among organizational types. Table 2 presents the prevalence of victimization, by type of group, for behaviors categorized as "Organizational Harassment" and "Harm to Self and Others." The table lists the mean number of items by which members of each type of group have been victimized. Two findings stand out. First, no group is immune from hazing behaviors. Second, fraternity respondents (especially IFC fraternities) reported being victimized by the highest numbers of behaviors. Significant differences in group means were detected for "Organizational Harassment" (Kruskal-Wallis $\chi^2 = 115.24$, df = 12, p < .001) and "Harm to Self and Others" (Kruskal-Wallis $\chi^2 = 91.48$, df = 12, p < .001) behaviors. This supported the hypothesis of organizational differences.

Table 2
Prevalence of "Serious" Hazing by Type of Organization

Victimization: Mean # of Items Experienced Type of Organization	Org. Harassment [a]	Harm to Self/Others [b]
Athletic Team (n = 37)	M = 4.0, SD = 4.7	M = 1.4, SD = 2.8
Honor Society/Fraternity (n = 38)	M = 2.0, SD = 2.3	M = 0.1, SD = 0.3
Professional Society/Fraternity (n = 35)	M = 2.2, SD = 2.6	M = 0.4, SD = 0.9
Music or Performance Organization (n = 10)	M = 2.9, SD = 5.5	M = 1.8, SD = 5.3
Religious Organization or Campus Ministry (n = 31)	M = 1.3, SD = 4.5	M = 1.1, SD = 4.0
Service Society/Fraternity (n = 18)	M = 2.1, SD = 1.5	M = 0.2, SD = 0.5
Social Fraternity Governed by IFC (n = 46)	M = 10.4, SD = 5.6	M = 4.8, SD = 4.2
Social Fraternity Governed by NPHC (n = 12)	M = 6.5, SD = 6.0	M = 2.5, SD = 2.9
Social Fraternity Not Officially Recognized (n = 14)	M = 7.2, SD = 6.6	M = 3.5, SD = 5.5
Social Sorority, Governed by PHC (n = 35)	M = 3.4, SD = 2.8	M = 0.5, SD = 0.8
Social Sorority, Governed by NPHC (n = 31)	M = 4.2, SD = 2.8	M = 0.6, SD = 0.7
Social Sorority Not Officially Recognized (n = 9)	M = 5.0, SD = 4.8	M = 1.0, SD = 1.3
Special Interest Club or Organization (n = 26)	M = 0.7, SD = 2.1	M = 0.4, SD = 1.5

[a] "Organizational Harassment" includes 18 behavioral items identified in the factor analysis
[b] "Harm to Self/Others" includes 17 behavioral items identified in the factor analysis
Note: Limited to respondents indicating organizational affiliation, n = 342

Fraternity members, on average, experienced the greatest number of hazing behaviors in each category. The low values for members of athletic teams were unexpected, given prior research on collegiate athletes (Hover, 1999). Regardless, it is important to acknowledge that hazing may occur in any college organization.

Attitudes Toward Hazing

Table 3 presents attitudinal statements about hazing. The first column presents the mean response (on the 1-5 Likert scale described previously) for each item. Several interesting patterns emerged. First, respondents found little value in hazing. On average, respondents did not agree that hazing is socially acceptable, that it made probationary members stronger, that it allowed probationary members to bond, that it let probationary members prove their toughness, that it was justified because the respondent was hazed and was not permanently harmed, or that it made people stronger. Second, respondents tended to agree that hazing was a serious problem. These results are encouraging in that they suggest that students do not accept hazing as a healthy part of the college experience.

Respondents did perceive that hazing is a routine practice. This is suggested by moderate agreement that probationary members expected to be hazed and fairly strong agreement that hazing was common on the respondents' campus. Of particular interest is that respondents perceived hazing to be more serious in groups other than their own; indeed, this item yielded the highest average score. This partially corroborates earlier speculation that perceptions regarding the prevalence of hazing are shaped by campus mythology and that inaccuracies in information increase as experiences are retold.

Table 3
Attitudes Toward Hazing

Hazing…	Mean Response [a]	Correlation with Hazing Committed [b]	Correlation with Hazing Victimization [b]
is a serious problem	3.64 (n = 332)	r_s = -.27*** (n = 159)	r_s = -.14* (n = 226)
is common on my campus	3.93 (n = 330)	r_s = .27*** (n = 158)	r_s = .37*** (n = 225)
is more serious in other groups than mine	4.05 (n = 333)	r_s = -.24** (n = 159)	r_s = -.39*** (n = 227)
is socially acceptable	2.40 (n = 332)	r_s = .31*** (n = 159)	r_s = .28*** (n = 226)
makes probationary members stronger	2.59 (n = 325)	r_s = .36*** (n = 156)	r_s = .25*** (n = 222)
allows probationary members to bond	2.39 (n = 326)	r_s = .39*** (n = 156)	r_s = .26*** (n = 221)
lets probationary members prove toughness	2.30 (n = 326)	r_s = .31*** (n = 156)	r_s = .24*** (n = 221)
is OK because I was hazed & came out OK	2.26 (n = 325)	r_s = .30*** (n = 156)	r_s = .29*** (n = 220)
is expected by probationary members	3.15 (n = 326)	r_s = .31*** (n = 156)	r_s = .35*** (n = 221)
makes people stronger	2.17 (n = 326)	r_s = .35*** (n = 156)	r_s = .26*** (n = 221)

[a] On a 1-5 scale (1 = Strongly Disagree, 5 = Strongly Agree); includes respondents with organizational affiliation
[b] Number of "Organizational Harassment" and/or "Harm to Self and Others" behaviors committed/experienced
* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

The second and third columns of Table 3 present correlations to test the hypothesis that those victimized by hazing hold different attitudes than those who commit acts of hazing. The second column includes only respondents who reported an organizational affiliation and who also reported doing to others one or more of the behaviors classified as "Organizational Harassment" and/or "Harm to Self and Others." The third column includes only respondents who reported an organizational affiliation and who also reported being victimized by one or more of the behaviors classified as "Organizational Harassment" and/or "Harm to Self and Others." Each column presents a Spearman correlation coefficient between number of hazing items and responses to each attitudinal statement.

The hypothesis predicting differences in attitudes between those who committed acts of hazing and those who were victimized by hazing was not supported. Respondents who committed acts of hazing reported attitudes as predicted; in every case, as the number of acts committed increased, attitudes toward hazing became more accepting. The correlations were statistically significant. However, contrary to the hypothesis, the attitudes of respondents who were victimized by hazing varied in the same manner; in every case, as the number of acts experienced increased, attitudes toward hazing became more positive. The correlations were also statistically significant.

Results suggest that both perpetrators of hazing and their victims share similar attitudinal patterns toward hazing. There was a positive correlation between the number of items a respondent had experienced and the number that the respondent had committed against another person ($r = .540$, $p \leq .001$, $n = 342$). This suggests that hazing approximates a cycle of violence (Widom, 1989) whereby the high-rate victims (in this case, those who are victimized by hazing) have a greater tendency to become high-rate abusers (in this case, the perpetrators of hazing), both with increasingly positive attitudes toward hazing.

Solutions to Hazing

Taken together, the first two columns of Table 4 summarize how respondents perceived the effectiveness of potential solutions. The first column reports results for perpetrators of hazing (respondents who indicated organizational affiliation and who also reported having committed one or more acts identified in the factor analysis as "Organizational Harassment" or "Harm to Self and Others"). The second column reports results for non-perpetrators (respondents who indicated organizational affiliation and who also reported having committed no acts identified in the factor analysis as "Organizational Harassment" or "Harm to Self and Others"). The third column of Table 4 reports the results of an independent-samples *t*-test comparing the means of the two groups for each potential solution. Several themes emerged.

First, perpetrators of hazing consistently rated each potential solution more negatively than the non-perpetrators. For six of the nine items, the difference is statistically significant. This suggests that perpetrators may see hazing activities as more endemic or normalized, and thus less preventable, than the non-perpetrators. Such a view is consistent with the cycle of violence argument noted above.

Second, the data also suggest that solutions within the group are more likely to be effective than those outside the group. Perpetrators and non-perpetrators alike reported that they would be more likely to report hazing to an authority within the organization (such as an executive board officer, advisor, or alumnus/alumna) than an authority outside the organization. In addition, both perpetrators and non-perpetrators believed that an organizational anti-hazing policy would be more effective than a university anti-hazing policy. Perpetrators and non-perpetrators did not differ in their perceptions regarding the effectiveness of organizational solutions; both shared positive views of internal reporting and internal anti-hazing policies, suggesting consensus regarding their efficacy as potential solutions.

Table 4
Possible Solutions to Hazing

Solution	Mean Effectiveness for Perpetrators of Hazing [a]	*t*-Test for Non-Perpetrators [a]	Group Differences
Would report hazing to authority outside group [b]	2.76 (n = 160)	3.24 (n = 173)	t = 3.286, df = 331**
Would report hazing to someone within group [b]	3.24 (n = 159)	3.27 (n = 172)	n.s.
Written anti-hazing policy (college) [c]	2.25 (n = 159)	2.59 (n = 172)	t = 2.246, df = 329**
Written anti-hazing policy (organization) [c]	3.17 (n = 159)	3.31 (n = 170)	n.s.
Police investigation and prosecution [c]	3.80 (n = 157)	4.26 (n = 171)	t = 3.227, df = 326**
Hazing workshops for all organizations [c]	2.69 (n = 157)	2.88 (n = 171)	n.s.
Report hazing to neutral ombudsman [c]	3.01 (n = 158)	3.37 (n = 172)	t = 2.426, df = 328*
Peer-based anti-hazing activities [c]	2.48 (n = 157)	2.83 (n = 172)	t = 2.271, df = 327*
Signed no-hazing agreement [c]	2.39 (n = 157)	2.86 (n = 173)	t = 2.761, df = 328*

[a] Respondents with organizational affiliation who did/did not commit one or more forms of "Organizational Harassment" and/or "Harm to Self and Others" hazing
[b] On a 1-5 scale (1 = Strongly Disagree, 5 = Strongly Agree)
[c] On a 1-5 scale (1 = Least Effective, 5 = Most Effective)
* $p \leq .05$; ** $p \leq .01$; ***$p \leq .001$

Third, both perpetrators and non-perpetrators believed (though non-perpetrators' beliefs were significantly stronger according to the *t*-tests) that involvement of two outside parties could be effective. Reporting hazing to a neutral person (e.g., an ombudsman representing neither the university nor the respondents' organization) was viewed as moderately effective, and reporting to the police followed by investigation and prosecution was viewed as the most effective solution by both groups.

Accordingly, the results suggest that colleges and universities have little power, on their own, to tame hazing; both hazing and non-hazing respondents indicated that university policies and workshops, for instance, were not likely to be effective. This is consistent with the finding that IFC fraternities indicated the highest levels of hazing – even more than the unrecognized "off campus" fraternities.

Discussion

The results of this research may be summarized as follows. First, students at the study institution viewed potential hazing behaviors along a continuum, with items labeled "Organizational Harassment" and "Harm to Self and Others" most likely to be perceived as hazing. Second, hazing behaviors may occur in any student organization, although members of fraternities reported the highest levels of both hazing victimization and offending. More respondents reported being hazed than reported doing hazing, yet the most common exposure to hazing was through hearing stories from others. Third, respondents believed that hazing is common (though in organizations other than their own) and expected by probationary members, though they did not believe that hazing activities have inherent value. As the number of hazing behaviors experienced increased, attitudes toward hazing became more positive (accepting); this held true for both victims and those who committed acts of hazing. Fourth, respondents reported that the four most effective solutions to hazing would be police investigation and prosecution, reporting hazing to an ombudsman, reporting hazing to somebody within the group, and having an organizational anti-hazing policy. However, perpetrators of hazing were less likely than non-perpetrators to perceive any solutions as effective.

These results may be contextualized in a theoretical model of hazing. The model is best understood as a three-stage cycle that repeats indefinitely. First, *hazing occurs*. As demonstrated above, "Organizational Harassment" and "Harm to Self and Others" hazing behaviors occur across all groups, though in some more than others.

Second, *victims process the hazing through organizational sensemaking*. The sensemaking perspective of organizational analysis was developed by Weick (1995), who defines it tautologically as "the making of sense" (p. 4) of an organization's activities. This process allows individuals to create meanings based on their experiences, group norms, and their interactions with others. Rather than arriving at a final, accurate interpretation of events, individuals reach tentative but changing conclusions that reflect perceived realities. Persons who are hazed engage in sensemaking to understand what they are experiencing.

Sensemaking may be triggered by cognitive dissonance (Festinger, 1957), in which an individual's exposure to hazing is dissonant with his or her self-interest. To resolve the dissonance, the individual may change his or her perception to believe that hazing is good, or beneficial; this occurs when there are peers "who would agree with and support his new opinion" (p. 21). Aronson and Mills (1959) found that severe initiations could produce positive views of a group, supporting Wicklund and Brehm's (1976) observation that, "when dissonance is created through a commitment, subsequent shifts of attitude in a commitment-consistent direction will be in proportion to the dissonance created" (p. 24).

Regardless of the precise psychological mechanism, individuals who are hazed must make sense of their experience, and they appear to do so in a pro-hazing way. While survey respondents generally believed hazing to have little value, perceptions of hazing became more positive with an increase in the forms of hazing experienced. This suggests that hazed persons come to accept the experience. Hazing may then be normalized and accepted by the victims. For anti-hazing policies and laws to be effective, they must acknowledge that consent is not a legitimate defense to hazing behaviors.

Third, *pro-hazing norms become internalized, leading to groupthink*. There is a high correlation between hazing received and hazing committed, suggesting a cycle of violence (Widom, 1989). Given that sensemaking essentially generates a socially constructed vision of an organization, it is instructive to consider Morgan's (1986) metaphor of organizations as psychic prisons. He notes that, "while organizations may be socially constructed realities, these constructions are often attributed an existence and power of their own that allow them to exercise a measure of control over their creators" (p. 199). In other words, internalized organization-level norms have staying power and may, in turn, influence members.

The stage is then set for groupthink to emerge in an organization that has constructed hazing as a normal or even desirable behavior. Groupthink refers to a group's inability to make rational or informed decisions due to its own organizational closed-mindedness. Hazing organizations may fall prey to two criteria of groupthink identified by Janis (1982): "the illusion of invulnerability" (p. 35), as perpetrators of hazing are less likely than non-perpetrators to believe prevention and enforcement strategies are effective, and "self-appointed mindguards" (p. 40), in the form of high-rate perpetrators who rate hazing positively and defend its practice. It is also possible that non-perpetrators may choose to not make an issue of hazing, thereby granting it tacit approval, in order to maintain group harmony. This is what Janis calls "the illusion of unanimity" (p. 37).

What Can Be Done?

The results of this study suggest three potential solutions to hazing, one of which addresses each stage of the cycle. First, *stop the hazing currently being conducted on campus*. As noted by survey respondents, police investigation and prosecution of offenses may be an immediately effective intervention. In addition to interrupting the cycle and exposing current incidents of hazing, enforcement may serve a deterrent function. However, this is unlikely to be an effective long-term solution. Philosophically, it may appear paternalistic to criminalize acts that, while considered hazing, do not violate any other laws. This leads to Nuwer's (1999) observation: "In many states the bottom line is that without bodily harm, there is no hazing" (p. 168). Practically, detection of hazing is difficult (Richmond, 1987), as hazing organizations often have closed cultures. In addition, research has found deterrence to be ineffective, as Kleck, Sever, Li and Gertz (2005) noted. When deterrence is effective, the effect is often short-term, decaying over time (Nagin, 1998).

Accordingly, the lasting impact of enhanced enforcement and prosecution is limited. The goal should be to stop the hazing that is currently happening to facilitate the next two recommendations.

Second, *utilize a social norms anti-hazing strategy*. As victims of hazing engage in sensemaking, they do so with perceptions that hazing is common, and they may be swayed by similar arguments from those who have victimized them. The method of a social norms approach is communicating actual student norms to dispel myths (Perkins, 2002). Students may be more likely to resist a behavior, or to not accept it in the sensemaking process, if they believe that it is a deviation from the norm.

The social norms approach has been used widely, and successfully, in combating alcohol abuse on campus (Perkins, 2002; Perkins, Haines, & Rice, 2005). It would be logical to consider a social norms approach for hazing (as suggested by Campo, et al., 2005), given the perception that hazing is common, especially in groups other than the respondent's own, and the prevalence of hazing in high schools (Hoover & Pollard, 2000) that can establish norms before students arrive at college. A social norms approach could also enhance the ability to effectively deter perpetrators. Research suggests that deterrent effects may be strengthened when social norms oppose, rather than accept, a deviant behavior (Wenzel, 2004).

Third, work to *change the culture of hazing organizations*. If groupthink can be broken, hazing may decrease. However, this is the most difficult recommendation to implement. While it is possible to change organizational cultures (Bernstein, Levitsky, & Itskovich, n.d.; Bureau, 2005), it is difficult to promote or compel such "positive deviance" (Spreitzer & Sonenshein, 2004, p. 828) from delinquent norms. Student affairs administrators must navigate the fine line between allowing organizational autonomy and providing resources and support for positive organizational change.

The three solutions presented above proceed from easier to more difficult, and from largely external to the organization to intimately intertwined with the organization. It is important to recognize several caveats to these recommendations: First, they should focus on all student organizations, not just those stereotypically associated with hazing. Second, student affairs professionals should undertake research in order to understand the specific nature of hazing at their respective institutions. Third, there is not a one-size-fits-all strategy, so even social norms approaches may need to be tailored to the varied needs and expectations of different audiences on the same campus.

Conclusion

Results from this study were both troubling, in confirming that hazing occurs in a variety of organizations, but particularly in fraternities, and encouraging, in noting that students generally perceive hazing negatively and believe some solutions have the potential to reduce hazing. These results were used to posit a theoretical model of hazing and to develop corresponding recommendations to reduce hazing.

Research should continue along a number of lines, utilizing different samples. First, replications should validate the scales and theoretical model, studying different institutions and additional organizations (e.g., Reserve Officer Training Corps, residence hall associations, and student government). Second, future study should focus on organizational culture. In their study of alcohol in fraternity pledging, Kuh and Arnold (1993) note that, "inducing cultural change in fraternities requires familiarity with cultural perspectives" (p. 332). An understanding of organizational culture is important for the success of social norms campaigns and other efforts at organizational change. Third, student affairs professionals and other administrators must recognize the limitations of a deterrence-based, enforcement-only approach to hazing. Pilot programs, subject to careful evaluation, should develop a social norms approach to hazing and investigate how organizational change can be encouraged in high-hazing groups. Inter/national organizations can assist their chapters in these efforts by offering programs, education, and policies.

Hazing is a social problem with potentially severe consequences and one with which college student affairs professionals must contend. As more research is conducted, it may be incorporated into data-driven policies and practices to combat hazing. Doing so will benefit campuses, student organizations, and most importantly, the students themselves.

References

Aronson, E., & Mills, J. (1959). The effect of severity of initiation on liking for a group. *Journal of Abnormal and Social Psychology, 59*, 177-181.

Baier, J. L., & Williams, P. S. (1983). Fraternity hazing revisited: Current alumni and active member attitudes toward hazing. *Journal of College Student Personnel, 24,* 300-305.

Bernstein, J., Levitsky, K., & Itskovich, J. (n.d.). *The changing drinking culture within sorority hazing*. Retrieved December 26, 2007, from http://www.ilr.cornell.edu/smithers/docs/The_Changing_Drinking_Culture_Within_Sorority_Hazing.pdf

Bureau, D. (2005). Culture and student organizations: Invoking change within your group while maintaining the overall identity. *Student Leader.* Retrieved April 22, 2006, from http://www.studentleader.com/orig7.htm

Campo, S., Poulos, G., & Sipple, J. W. (2005). Prevalence and profiling: Hazing among college students and points of intervention. *American Journal of Health Behavior, 29*, 137-149.

DeSantis, A. D. (2007). *Inside Greek U.: Fraternities, sororities, and the pursuit of pleasure, power, and prestige.* Lexington, KY: University Press of Kentucky.

DeVellis, R. F. (2003). *Scale development: Theory and applications*. Thousand Oaks, CA: Sage Publications.

Ellsworth, C. W. (2006). Definitions of hazing: Differences among selected student organizations. *Oracle: The Research Journal of the Association of Fraternity Advisors, 2*(1), 46-60. Retrieved January 28, 2007, from http://www.fraternityadvisors.org/uploads/PublicDocuments/Oracle_vol2_iss1_Ellsworth.pdf

Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson and Company.

Finkel, M. A. (2002). Traumatic injuries caused by hazing practices. *American Journal of Emergency Medicine, 20*, 228-233.

Finley, L. L., & Finley, P. S. (2007). They're just as sadistic as any group of boys! A content analysis of news coverage of sport-related hazing incidents in high schools. *Journal of Criminal Justice and Popular Culture, 14*, 197-219. Retrieved December 24, 2007, from http://www.albany.edu/scj/jcjpc

Gordon, K., Hall, H., & Blankenship, B. (1979). Hazing revisited!? An institutional self study. *Southern College Personnel Association Journal, 2*, 31-38.

Hollmann, B. B. (2002). Hazing: Hidden campus crime. *New Directions for Student Services, 99,* 11-23.

Hoover, N. C. (1999). *National Survey: Initiation rites and athletics for NCAA sports teams*. Retrieved May 3, 2006, from http://www.alfred.edu/sports_hazing/

Hoover, N. C., & Pollard, N. J. (2000). *Initiation rites in American high schools: A national survey*. Retrieved May 3, 2006 from http://www.alfred.edu/hs_hazing/

Janis, I. L. (1982). *Groupthink* (2nd ed.). Boston: Houghton Mifflin Company.

Jenson, W., Poremba, G. A., Nelson, R. B., & Schwartz, R. A. (1980). *Greek student attitudes towards hazing* (Report No. RB-DOS-123080). Grand Forks, ND: University of North Dakota. (ERIC Document Reproduction Service No. ED197676).

Kleck, G., Sever, B., Li, S., & Gertz, M. (2005). The missing link in general deterrence research. *Criminology, 43*, 623-659.

Kuh, G. D., & Arnold, J. C. (1993). Liquid bonding: A cultural analysis of the role of alcohol in fraternity pledgeship. *Journal of College Student Development, 34*, 327-334.

McMinn, B. L. (1979). *A content analysis of the esoteric ritual manuals of national college social fraternities for men*. Unpublished doctoral dissertation, University of Mississippi, Oxford.

Morgan, G. (1986). *Images of organization.* Newbury Park, CA: Sage Publications.

Nagin, D. S. (1998). Criminal deterrence research at the outset of the twenty-first century. *Crime and Justice, 23*, 1-42.

Nuwer, H. (1999). *Wrongs of passage: Fraternities, sororities, hazing, and binge drinking*. Bloomington, IN: Indiana University Press.

Perkins, H. W. (2002). Social norms and the prevention of alcohol misuse in collegiate contexts. *Journal of Studies on Alcohol, 14*, 164-172.

Perkins, H. W., Haines, M. P., & Rice, R. (2005). Misperceiving the college drinking norm and related problems: A nationwide study of exposure to prevention information, perceived norms and student alcohol misuse. *Journal of Studies on Alcohol, 66*, 470-478.

Reese, P. (1993). Addressing hazing in Black Greek organizations through an awareness of organizational culture. *Campus Activities Programming, 26,* 37-39.

Richmond, D. R. (1987). Putting an end to fraternity hazing. *NASPA Journal, 24*(4), 48-52.

Ruffins, P. (1998). The persistent madness of Greek hazing. *Black Issues in Higher Education*, *15*, 14-19.

Rutledge, G. E. (1998). Hell night hath no fury like a pledge scorned… and injured: Hazing litigation in U.S. colleges and universities. *Journal of College and University Law, 25*, 361-397.

Shannon, L. W., McKim, J. L., Curry, J. P., & Haffner, L. J. (1988). *Criminal career continuity: Its social context*. New York: Human Sciences Press.

Shaw, D. L., & Morgan, T. E. (1990). Greek advisors' perceptions of sorority hazing. *NASPA Journal, 28*(1), 60-64.

Sherman, L. W. (1974). Introduction: Toward a sociological theory of police corruption. In L. W. Sherman (Ed.), *Police corruption: A sociological perspective* (pp. 1-39). Garden City, NY: Anchor Books.

Spreitzer, G. M., & Sonenshein, S. (2004). Toward the construct definition of positive deviance. *American Behavioral Scientist, 47*, 828-847.

Sweet, S. (1999). Understanding fraternity hazing: Insights from symbolic interactionist theory. *Journal of College Student Development, 40*, 355-364.

Tracy, P. E., Wolfgang, M. E., & Figlio, R. M. (1990). *Delinquency careers in two birth cohorts*. New York: Plenum Press.

Trustee Task Force on Greek Life. (2002). *Report of the trustee task force on Greek life*. Retrieved May 3, 2006, from http://www.alfred.edu/greektaskforce/docs/greektaskforcefinalreport.pdf

Weick, K. E. (1995). *Sensemaking in organizations*. Newbury Park, CA: Sage Publications.

Wenzel, M. (2004). The social side of sanctions: Personal and social norms as moderators of deterrence. *Law and Human Behavior, 28*, 547-567.

Wicklund, R. A., & Brehm, J. W. (1976). *Perspectives on cognitive dissonance*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Widom, C. S. (1989). The cycle of violence. *Science, 244*, 160-166.

Wolfgang, M., Figlio, R., & Sellin, T. (1972). *Delinquency in a birth cohort*. Chicago: University of Chicago Press.

Stephen S. Owen is an Associate Professor in the Department of Criminal Justice at Radford University. He holds a Ph.D. in political science from the University of Missouri, St. Louis. His research includes the study of interpersonal violence, correctional institutions, and criminal justice pedagogy. Dr. Owen has worked with a number of fraternal organizations and student affairs committees on the Radford University campus.

Tod W. Burke is a Professor in the Department of Criminal Justice at Radford University. He holds a Ph.D. in criminal justice from John Jay College of Criminal Justice at the City University of New York. Dr. Burke has published over 95 articles and book chapters in various academic and professional venues, including Journal of Contemporary Criminal Justice*,* Journal of Criminal Justice Education*,* F.B.I. Law Enforcement Bulletin*,* Homicide Studies*, and* Journal of Police Studies*. Dr. Burke has been a fraternity advisor for 30 years. Prior to becoming a professor, Dr. Burke was a Maryland police officer.*

David Vichesky completed a master's degree in experimental psychology at Radford University and a bachelor's degree at Elon University.

COMPARING FRATERNITY/SORORITY PROFESSIONALS' KNOWLEDGE OF EATING DISORDERS WITH OTHER STUDENT PERSONNEL ADMINISTRATORS

Michelle L. Nicopolis, Ph.D.

This study examined disordered eating behaviors in regard to detection, prevention, intervention, and referral by college student personnel professionals. A survey was used to assess the level of knowledge pertaining to eating disorder among administrators of two of the largest at-risk student groups on campus: fraternity/sorority affiliated students and student athletes. ANOVA and correlation analyses were used to evaluate eating disorder knowledge levels. Recommendations include encouraging college student personnel professionals to seek out educational materials and training to educate themselves about eating disorders to help refer students who may be struggling with this health concern.

Research supports the prevalence of, and epidemic increases in, eating disorders within the college student population (Hoyt & Ross, 2003). Studies have targeted at-risk sub-populations within the college setting, namely women (Schwitzer, Bergholz, & Dore, 1998), student athletes (Johnson, Powers, & Dick, 1999; Sherman & Thompson, 2001), and sorority members (Alexander, 1998; Mehler, Gray, & Schulte, 1997). However, research has not assessed the level of knowledge pertaining to eating disorders among the college student personnel professionals who often work closely with these groups of students.

According to the American Psychiatric Association's (2000) *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision* (DSM-IV-TR), late adolescence/early adulthood is the most diagnosed period of onset among those with an eating disorder. Given the existence of eating disorders across a diverse scope of college students, college student personnel professionals need a familiarity and understanding of eating disorders. Of particular interest in this study are the professionals who work most closely with students considered to be members of high-risk groups for eating disorders.

The focus of this study was to delve beyond the surface knowledge of disordered eating behaviors and to reach toward detection, prevention, intervention, and referral by college student personnel professionals. This study assessed the level of knowledge pertaining to eating disorders among administrators of two of the largest at-risk student groups on campus, fraternity/sorority affiliated students and student-athletes, in addition to psychological services directors.

The following types of professionals were studied in this research project:

Fraternity/Sorority Professional
This professional was identified as the campus advisor for fraternity and sorority life at his/her institution. A fraternity/sorority professional need not have formal education in health, nutrition, or eating-disordered behavior to fulfill job requirements. Professionals in this category have diverse educational backgrounds, and typically at least a master's degree in higher education, college student personnel, or a related field.

Psychological Services Director
This professional was identified as the person in charge of a psychological or counseling services center who oversees student mental health services. A psychological services director may hold licensure in mental health fields, and thus have a more comprehensive educational background for working with students with eating disorders than other student affairs staff. These professionals have typically earned a master's or doctorate degree in psychology, counseling, social work, or a related mental health field.

CHAMPS/Life Skills Coordinator
CHAMPS is an acronym for CHallenging Athletes' Minds for Personal Success; CHAMPS/Life Skills coordinators are typically housed in an institution's intercollegiate athletics area. The National Collegiate Athletic Association (NCAA) developed this program to ensure a well-rounded intercollegiate development experience for member institutions' student athletes. Typically, CHAMPS/Life Skills coordinators are provided information about nutrition and disordered eating by the NCAA. Each coordinator brings his or her diverse educational and professional experiences to the job from the bachelor's to the doctorate degree (NCAA, 2005).

Background

The United States Department of Health and Human Services (USDHHS) estimated that 95% of those diagnosed with eating disorders fall between the ages of 12 and 25 (USDHHS, 2004). Nearly 20% of all women experience some form of eating disorder or disordered eating behavior. The prevalence of eating disorders among American men and women of all ages reaches up to 24 million people, and the number climbs to 70 million worldwide. Beyond those personally affected, half of all Americans know someone struggling with an eating disorder (Anorexia Nervosa and Related Eating Disorders [ANRED], 2006).

Sadly, the death rate of those suffering from anorexia nervosa is up to 20% and is said to be the highest mortality rate of any mental health disorder (ANRED, 2006; Sullivan, 1995). Female anorectics between 15-24 years old have a death rate 12 times greater than all other causes of death among their peers. Typical causes of mortality among anorectics are related complications including starvation, heart ailments, or suicide (Sullivan, 1995).

Review of Literature

Risk Factors During Adolescence
Many factors contribute to disordered eating behavior on college and university campuses, including transitioning to college life, going through developmental life changes, changing social identity, having more freedom, increasing stress levels, losing close social support, and social

comparison to peers (Compas, Wagner, Slavin, & Vannatta, 1986). Some symptoms arise during earlier adolescence that may predict eating disordered behavior during college, including: poor self-image, high levels of negative emotions, early menarche, body dissatisfaction, and dieting (Leon, Fulkerson, Perry, & Early-Zald, 1995). Familiarity with predictor variables, warning signs, and referral processes can help student personnel staff identify problematic behavior.

The Effects of Sorority Membership

No studies to date have focused on fraternity membership as a predictor of eating disorders among males. However, women who join sororities are at higher risk for developing eating disorders and associated risk factors; also, symptoms increase over time (Alexander, 1998; Allison & Park, 2004; Mehler, Gray, & Schulte, 1997). Sorority members report a more elevated desire to be thin, increased distortions of body size perceptions, greater fear of being overweight, more focus on weight, greater prestige and overemphasis on having a smaller body size, and higher levels of body dissatisfaction than non-affiliated students (Allison & Park, 2004; Cashel, Cunningham, Landeros, Cokley, & Muhammad, 2003; Mehler, Gray, & Schulte, 1997; Schulken, Pinciaro, Sawyer, Jensen, & Hoban, 1997). Further, when compared with groups of residential students involved in a variety of other co-curricular activities, a group of sorority members living together were at the highest risk for developing eating disorders (Hoerr, Bokram, Lugo, Bivins, & Keast, 2002).

Undergraduate sorority members are considered at-risk due to their increasingly persistent attitudes and behaviors toward dieting and attaining thinness, even when there is no physical or health-related need to lose body weight, while their non-affiliated peers focus on dieting was shown to decrease (Allison & Park, 2004; Ash & McClelland, 2001). It has also been found that sorority members prefer peer consulting and support over professional discussion regarding their disordered eating (Martz, Graves, & Sturgis, 1997; Prouty, Protinsky, & Canady, 2002).

Student Personnel Staff Knowledge

Limited research exists that demonstrates student personnel staff knowledge of eating disorders. No research was found that specifically addressed fraternity/sorority advisors' knowledge of eating disorders. The majority of prior studies consist of personnel involved with intercollegiate athletics, specifically coaches (Heffner, Ogles, Gold, Marsden, & Johnson, 2003; Turk, Prentice, Chappell, & Shields, 1999) and athletic trainers (Vaughan, King, & Cottrell, 2004). The results of such knowledge-based studies suggest that though professionals may have frequent contact with students displaying eating disorder pathology, they are not confident in approaching, identifying, or properly referring students. Further, there is limited accurate knowledge among professionals, rarely breaking the 50% accuracy mark on items involving eating disorder signs and symptoms.

Since many students with eating disorders may first approach peers, it is important that all students have someone with whom they are able to consult. The consultants may be campus professionals with whom they have already built a strong relationship. It is the professionals' responsibility to be knowledgeable in as many diverse areas as possible; at minimum, they should know proper referral services to best serve students.

Method

Sample

Participants responded to an email request sent to the Association of Fraternity Advisors, Association for University and College Counseling Center Directors, and CHAMPS/LifeSkills professional listservs. The survey was conducted online, and all responses were anonymous. At the conclusion of the survey, participants were automatically directed to the National Eating Disorder Association's Web site from which numerous supportive documents were accessible. A total of 292 participants responded to the survey. Specific demographic information can be found in Table 1.

Instrumentation

Participants responded to a brief, anonymous demographics questionnaire followed by a self-report instrument, the *Eating Disorders and College Students [Athletes]* survey (Vaughan, King, & Cottrell, 2004). The survey was a mixture of Likert-type and direct response items assessing professionals' levels of perceived and actual knowledge of eating disorders. Also explored were participants' sources of educational and professional experiences related to eating disorders.

The *Eating Disorders and College Students [Athletes]* survey is based upon Bandura's (1977) self-efficacy theory (Vaughan, King, & Cottrell, 2004). There were three subscales of the survey, including descriptions quoted below for Efficacy Expectation, Outcome Expectation, and Outcome Value. Efficacy Expectation indicated the professionals' belief that they were able to "effectively take steps to help [students] with eating disorders;" Outcome Expectation noted professionals' "beliefs that performing specific steps will increase chances that the [student] will receive the help that he or she needs;" and Outcome Value pertained to the professionals' "perceived importance in increasing the chances that [students] with eating disorders receive help" (Vaughan et al., 2004, p. 72). In addition, there were three actual knowledge subscales used, which included:

1. Risk factors (e.g., being a perfectionist, involvement in a sorority, participating in sports demanding leanness)
2. Warning signs (e.g., losing menstrual cycles, having brittle/dry hair and/or nails, avoiding eating in public)
3. Long term problems (e.g., osteoporosis, dental problems, death)

Reliability and Validity

The *Eating Disorders and College Students [Athletes]* survey has established content validity through a panel of respected national experts in the eating disorder field (Vaughan, King, & Cottrell, 2004). In the current study's pilot of 10 professionals from each of the three professional groups, fraternity/sorority professionals showed the highest reliability measures across the three subscales of Efficacy Expectation, Outcome Expectation, and Outcome Value.

Results

ANOVA and correlation statistical analyses were conducted to test for significance in perceived and actual knowledge level scores across job affiliation, gender, educational level, and professional development participation. Also assessed was the level of awareness among student service professionals. Higher scores indicated greater perceived knowledge levels of eating disorders and more accurate actual knowledge levels on their respective scales.

Table 1
Survey Participants' Demographic Information

Demographic Variable	N	Percent
Gender		
Female	198	67.8
Male	94	32.2
Primary job (spend most of work day in this area)		
Fraternity/Sorority Life	100	34.2
CHAMPS/Life Skills (Student-Athlete Services)	99	33.9
Psychological/Counseling Services	93	31.8
Age (in years)		
0-30	100	34.2
31-40	96	32.9
41 and over	93	31.8
Not reported	3	1.0
Ethnicity		
White	252	86.3
African American	22	7.5
Other	18	6.2
Highest educational degree		
Master's	193	66.1
Doctorate	72	24.7
Bachelor's	20	6.8
Not reported	7	2.4
Year most recent degree completed		
2000 and after	138	47.3
1990-1999	91	31.2
Prior to 1990	60	20.5
Not reported	3	1.0
Concentration area of highest degree		
Psychology/Counseling	108	37.0
Education/Physical Education	76	26.0
Other	62	21.2
College Student Personnel	46	15.8
Licensed mental health professional		
No	204	69.9
Yes	85	29.1
Not reported	3	1.0
Institution location		
Suburban	104	35.6
Urban	101	34.6
Rural	85	29.1
Not reported	2	0.7
Institution enrollment		
9000 or more	120	41.1
3000-8999	88	30.1
Fewer than 3000	84	28.8

Psychological services directors scored significantly higher than fraternity/sorority professionals and CHAMPS/Life Skills peers on the Efficacy Expectation and Outcome Expectation subscales

($p \leq .001$). Considering Outcome Value, the psychological services directors scored significantly higher than fraternity/sorority professionals ($p \leq .001$). The scores on the Outcome Value subscale did not differ significantly between psychological services and CHAMPS/Life Skills professionals, though psychological services directors scored higher.

Psychological services directors recorded significantly more accurate scores than peers on the Warning Signs and Long-Term Problems subscales at $p \leq .001$. Scores on the Risk Factors subscale were not significantly different, however, those in the psychological services scored slightly higher than both other groups. Results of the ANOVA analysis of professionals' perceived and actual knowledge levels can be found in Table 2. Further, a Tukey's Post Hoc analysis showed actual subscale scores across jobs on all subscales.

Table 2
ANOVA by Primary Job Responsibility Testing Significance of Perceived and Actual Subscale Scores

	df	Mean Square	*F*
Perceived Knowledge Subscales			
Efficacy Expectation	2	648.40	55.06*
Outcome Expectation	2	195.37	8.74*
Outcome Value	2	69.34	7.38*
Actual Knowledge Subscales			
Risk Factors	2	2.02	1.19
Warning Signs	2	51.68	8.30*
Long-Term Problems	2	118.23	10.03*

* $p \leq .001$

In relation to participants' gender, no significant difference existed between men and women on perceived knowledge subscales. Non-significant differences did exist: men scored higher on Outcome Expectation and Outcome Value areas, and women scored higher on Efficacy Expectation. Findings revealed that women had a greater knowledge level of eating disorders than male counterparts. The female participants knew significantly more than males about warning signs and long-term problems associated with eating disorders ($p \leq .001$). Table 4 displays the ANOVA analysis across gender and knowledge subscale scores. Table 5 shows how male and female participants' mean scores compared across subscales. However, results should be interpreted with caution because of the gender imbalance represented in the overall sample (women = 67.8%) and among job title where women comprised 53.0% of fraternity/sorority life participants, 74.2% of those in psychological services, and 76.8% in CHAMPS/Life Skills. Differences also could have been caused by interaction effects of other variables (e.g., amount of experience on the job, date of degree attainment, job title).

Next, groups were divided by job affiliation to identify whether any group knew proper responses when finding out a student had an eating disorder. There were significantly different scores on two of the five possible responses.

Table 3
Mean and Standard Deviation Tables Across Participants' Primary Job by Scores on Perceived and Actual Knowledge Subscales

	N	Mean	SD
Perceived Knowledge Subscales			
Efficacy Expectation			
Fraternity/Sorority Life	100	27.46	3.49
Psychological Services	92	31.96*	2.84
CHAMPS/Life Skills	99	27.37	3.85
Outcome Expectation			
Fraternity/Sorority Life	100	25.81	5.22
Psychological Services	93	28.59*	4.41
CHAMPS/Life Skills	99	26.62	4.49
Outcome Value			
Fraternity/Sorority Life	100	20.50*	3.29
Psychological Services	93	22.18	3.09
CHAMPS/Life Skills	99	21.49	2.80
Actual Knowledge Subscales			
Risk Factors			
Fraternity/Sorority Life	100	10.15	1.44
Psychological Services	93	10.22	1.17
CHAMPS/Life Skills	99	9.94	1.27
Warning Signs			
Fraternity/Sorority Life	100	12.48	2.63
Psychological Services	93	13.92*	2.32
CHAMPS/Life Skills	99	12.97	2.51
Long-Term Problems			
Fraternity/Sorority Life	100	12.51	3.85
Psychological Services	93	14.62*	2.60
CHAMPS/Life Skills	99	12.96	3.67

* Area where the mean was significantly different than the others according to a Tukey's Post Hoc analysis, where □= .05

Table 4
ANOVA by Gender to Show Any Significance in Perceived and Actual Knowledge Subscale Scores

	df	Mean Square	*F*
Perceived Knowledge Subscales			
Efficacy Expectation	1	29.21	1.81
Outcome Expectation	1	46.73	1.99
Outcome Value	1	0.98	0.10
Actual Knowledge Subscales			
Risk Factors	1	0.45	0.26
Warning Signs	1	179.55	30.20*
Long-Term Problems	1	161.78	13.48*

* $p \leq .001$

Table 5
Mean and Standard Deviation Across Gender by Perceived and Actual Knowledge Subscale Scores

Subscale	N	Mean	SD
Perceived Knowledge Subscales			
Efficacy Expectation			
Female	197	29.07	4.12
Male	94	28.39	3.79
Outcome Expectation			
Female	198	26.70	4.99
Male	94	27.55	4.53
Outcome Value			
Female	198	21.33	3.24
Male	94	21.45	2.89
Actual Knowledge Subscales			
Risk Factors			
Female	198	10.13	1.27
Male	94	10.04	1.36
Warning Signs			
Female	198	13.65*	2.22
Male	94	11.97	2.85
Long-Term Problems			
Female	198	13.85*	3.28
Male	94	12.26	3.82

* Area where the mean was significantly different than the other, where □= .05.

The CHAMPS/Life Skills coordinators indicated that they were more likely than the psychological services directors to, "be caring and tell him/her that I will get them help" ($p \leq .05$) and agreed more with one inaccurate response, "talk with his/her parent, coach, advisor, or like figure" ($p \leq .001$). The CHAMPS/Life Skills professionals were also in more agreement with the "talk with his/her parent, coach, advisor, or like figure" item ($p \leq .01$) when compared to directors of fraternity/sorority life.

Psychological services professionals scored the lowest on the "be caring and tell him/her that I will get them help" item and in the middle on the "refer him/her to a psychologist or nutritionist" point. This may be because they may have already been introduced to the student in a therapeutic setting. In this case, the mental health professional already was the person helping the student, thus the student had already been referred to a professional.

There was a significant difference supported at the $p \leq .001$ level on one dimension where the CHAMPS/Life skills directors scored higher than the fraternity/sorority life and psychological services directors on an improper response: "talk with his/her parent, coach, advisor, or like figure". This result was likely influenced by the fact that mental health professionals are bound ethically to keep the client-clinician relationship confidential unless the client is personally in imminent danger or is threatening to harm someone else.

Psychological services directors responded appropriately to their profession's ethical codes, namely, they disagreed the most with both "ignoring the eating disorder" and "telling others" (e.g., parent, advisor, like figure). These professionals then agreed most with agreeing to keep the disorder a secret (i.e., not break confidentiality). Table 6 details the ANOVA analysis results of responses by job type, while Table 7 shows how the professional groups compared with one another across responses.

Table 6
ANOVA by Primary Job to Show Any Significance in Participants' Responses to What They Would Do if They Found Out a Student Had an Eating Disorder

If I found out a student had an eating disorder, I would…	*df*	Mean Square	*F*
Promise him/her I would keep it a secret	2	0.32	0.68
Be caring and tell him/her I will get help	2	0.95	3.94*
Talk with his/her parent, coach, advisor, or like figure	2	8.36	4.76**
Ignore it	2	0.07	0.91
Refer him/her to a psychologist or nutritionist	2	0.02	0.32

* $p \le .05$, ** $p \le .001$

Table 7
Mean and Standard Deviation Tables of Primary Job Participants' Responses to What They Would Do if They Found Out a Student Had an Eating Disorder

If I found out a student had an eating disorder, I would…	N	Mean	SD
Promise him/her I would keep it a secret			
Fraternity/Sorority Life	100	2.69	0.65
Psychological Services	93	2.58	0.74
CHAMPS/Life Skills	99	2.67	0.66
Be caring and tell him/her I will get help			
Fraternity/Sorority Life	100	2.82	0.52
Psychological Services	93	2.73	0.59
CHAMPS/Life Skills	99	2.93*	0.33
Talk with his/her parent, coach, advisor, or like figure			
Fraternity/Sorority Life	100	3.01	1.39
Psychological Services	93	2.87	1.09
CHAMPS/Life Skills	99	3.43*	1.46
Ignore it			
Fraternity/Sorority Life	100	2.94	0.34
Psychological Services	93	2.96	0.25
CHAMPS/Life Skills	99	2.95	0.22
Refer him/her to a psychologist or nutritionist			
Fraternity/Sorority Life	100	2.96	0.24
Psychological Services	93	2.95	0.27
CHAMPS/Life Skills	99	2.93	0.30

* Area where the mean was significantly different than the others according to a Tukey's Post Hoc analysis, where α = .05

When considering knowledge differences related to educational level, an ANOVA test supported that those with a doctoral degree scored higher than others at $p \le .001$ on the Efficacy Expectation and Outcome Expectation subscales, while Outcome Value was supported at $p \le .05$. It is important to note that 86.1% of those with a doctorate degree were from the psychological services field. Table 8 provides results of the ANOVA testing effects of educational degree attained with eating disorder knowledge scores. Results of the Tukey's Post Hoc analysis, found in Table 9, note where significance existed across educational level and knowledge level subscale scores.

Table 8
ANOVA by Highest Educational Degree to Show Any Significance in Perceived and Actual Knowledge Subscale Scores

	df	Mean Square	*F*
Perceived Knowledge Subscales			
Efficacy Expectation	2	476.05	36.86**
Outcome Expectation	2	261.18	11.72**
Outcome Value	2	46.25	4.86**
Actual Knowledge Subscales			
Risk Factors	2	0.83	0.49
Warning Signs	2	24.31	3.78*
Long-Term Problems	2	39.98	3.19*

* $p \leq .01$ ** $p \leq .001$

Table 9
Mean and Standard Deviation Tables Across Participants' Highest Educational Degree Obtained by Scores on Perceived and Actual Knowledge Subscales

	N	Mean	SD
Perceived Knowledge Subscales			
Efficacy Expectation			
Doctorate	72	31.94*	2.78
Master's	192	27.84	3.82
Bachelor's	20	27.00	3.95
Outcome Expectation			
Doctorate	72	29.22*	4.26
Master's	193	26.27	4.87
Bachelor's	20	25.20	4.86
Outcome Value			
Doctorate	72	22.21*	3.04
Master's	193	20.93	3.11
Bachelor's	20	21.90	3.01
Actual Knowledge Subscales			
Risk Factors			
Doctorate	72	10.24	1.30
Master's	193	10.07	1.30
Bachelor's	20	10.00	1.34
Warning Signs			
Doctorate	72	13.75*	2.40
Master's	193	12.93	2.59
Bachelor's	20	12.30	2.45
Long-Term Problems			
Doctorate	72	14.22*	2.74
Master's	193	12.99	3.79
Bachelor's	20	13.10	3.64

* Area where the mean was significantly different than the others according to a Tukey's Post Hoc analysis, where □= .05.

Regarding the effect of professional development participation on professionals' eating disorder knowledge levels, a correlation analysis yielded significant relationships at $p \leq .01$ between the frequency of professional development experiences and scores on both the Efficacy Expectation and Outcome Expectation subscales. The more professionally involved (related to eating disorders) the participants were, the greater their scores on the Efficacy Expectation and Outcome Expectation subscales. Table 10 outlines the correlations across professional development participation and perceived eating disorder knowledge subscale scores.

Table 10
Correlation Table Showing Relationship Between Frequency of Participants' Professional Development (PD) and Scores on Perceived Knowledge Subscales

	Efficacy Expectation	Outcome Expectation	Outcome Value
Efficacy Expectation			
Outcome Expectation	.382**		
Outcome Value	.273**	.474**	
Frequency of PD	.158**	.172**	.089

* $p \leq .01$ (2-tailed)

When testing the actual knowledge subscales, results yielded no significant relationships between frequency of professional development and actual knowledge levels, suggesting that information sought by participants could either be misleading or inaccurate. Table 11 shows the correlations across professional development participation and actual eating disorder knowledge subscale scores.

Table 11
Correlation Table Showing Relationship Between Frequency Level of Participants' Professional Development (PD) and Scores on Actual Knowledge Subscales

	Risk Factors	Warning Signs	Long-Term Problems
Risk Factors			
Warning Signs	.161*		
Long-Term Problems	.026	.454*	
Frequency of PD	.038	-.031	.031

* $p \leq .01$ (2-tailed)

Summary and Conclusion

Overall, the group of participants in this study appeared very interested in the topic of eating disorders, likely because of personal vestment noted in the following results. The majority (61.9%) of those completing the survey noted that someone close to them had suffered from an eating disorder. Forty-five participants (14.3%) reported that they personally have struggled with an eating disorder. The results of these two items, along with professionals' high engagement levels in professional development related to eating disorders and their great desire to learn more to better assist students in need, indicated great promise.

The desire to learn more may help increase professionals' confidence in approaching students who display risk factors suggesting possible disordered eating or eating disorder pathology. One hundred and five professionals (36%) reported that they had never asked a student if he/she had an eating disorder. The remaining group had approached at least one student about a suspected eating disorder.

The sample of professionals also proved to be proactive in nature by affirming in great numbers (77%) the importance for colleges and universities to establish an eating disorder treatment policy. Those who agreed may need help formulating an effective policy or benefit from receiving sample policies to best protect their students' health. A team of physicians, mental health professionals, nurses, nutritionists, athletic trainers, and student affairs professionals would be most effective in considering all students' needs.

Only when student personnel professionals take action to learn more about eating disorders and how to most effectively identify, approach, and refer students suspected to have eating disorders can progress be made and lives saved. The professionals in this study were promisingly aware (n = 253; 86.6%) that their professional organizations provided educational materials on eating disorders. Upon completion of the study, the participants were directed to downloadable and reproducible educational information from the National Eating Disorders Association's Web site (www.nationaleatingdisorders.org). With further awareness comes hope for action, and with action comes change.

References

Alexander, L. A. (1998). The prevalence of eating disorders and eating disordered behaviors in sororities. *College Student Journal, 32,* 66-75.

Allison, K. C., & Park, C. L. (2004). A prospective study of disordered eating among sorority and non-sorority women. *International Journal of Eating Disorders, 35,* 354-358.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Anorexia Nervosa and Related Eating Disorders, Inc. (2006). *Athletes with eating disorders.* Retrieved August 30, 2006, from http://www.anred.com/ath.html

Ash, S. L., & McClelland, J. W. (2001). Exploring attitudes towards body weight and eating behaviors of women in college. *The Forum for Family and Consumer Issues,* 6. Retrieved October 7, 2006, from http://www.ces.ncsu.edu/depts/fcs/pub/2001sp/ash.html

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Cashel, M. L., Cunningham, D., Landeros, C., Cokley, K. O., & Muhammad, G. (2003). Sociocultural attitudes and symptoms of bulimia: Evaluating the SATAQ with diverse college groups. *Journal of Counseling Psychology, 50*, 287-296.

Compas, B. E., Wagner, B. M., Slavin, L. A., & Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology, 14,* 241–257.

Heffner, J. L., Ogles, B. M., Gold, E., Marsden, K., & Johnson, M. (2003). Nutrition and eating in female college athletes: A survey of coaches. *Eating Disorders, 11,* 209-220.

Hoerr, S. L., Bokram, R., Lugo, B., Bivins, T., & Keast, D. R., (2002). Risk for disordered eating relates to both gender and ethnicity for college students. *Journal of the American College of Nutrition, 21,* 307-314.

Hoyt, W. D., & Ross, S. D. (2003). Clinical and subclinical eating disorders in counseling center clients: A prevalence study. *Journal of College Student Psychotherapy, 17*(4), 39-54.

Johnson, C., Powers, P., & Dick, R. (1999). Athletes and eating disorders: The National Collegiate Athletic Association study. *International Journal of Eating Disorders, 26,* 179-188.

Leon, G. R., Fulkerson, J. A., Perry, C. L., & Early-Zald, M. B. (1995). Prospective analysis of personality and behavioral vulnerabilities and gender influences in the later development of disordered eating. *Journal of Abnormal Psychology, 104,*140–149.

Martz, D. M., Graves, K. D., & Sturgis, E. T. (1997). A pilot peer-leader eating disorders prevention program for sororities. *Eating Disorders: The Journal of Treatment and Prevention, 5,* 294-308.

Mehler, P.S., Gray, M.C., & Schulte, M. (1997). Medical complications of anorexia nervosa. *Journal of Women's Health, 6*, 533-541.

National Collegiate Athletic Association. *CHAMPS Life/Skills program history.* Retrieved May 27, 2005, from http://www1.ncaa.org/membership/ed_outreach/champs-life_skills/index.html

Prouty, A. M., Protinsky, H. O., & Canady, D. (2002). College women: Eating behaviors and help seeking preferences. *Adolescence, 37,* 353-362.

Schulken, E. D., Pinciaro, P. J., Sawyer, R. G., Jensen, J. G., & Hoban, M. T. (1997). Sorority women's body size perceptions and their weight-related attitudes and behaviors. *Journal of American College Health, 46,* 69-74.

Schwitzer, A. M., Bergholz, K., & Dore, T. (1998). Eating disorders among college women: Prevention, education, and treatment responses. *Journal of American College Health, 46,* 199-207.

Sherman, R., & Thompson, R. (2001). Athletes and disordered eating: Four major issues for the professional psychologist. *Professional Psychology: Research and Practice, 32,* 27-33.

Sullivan, P. F. (1995). Mortality in anorexia nervosa. *American Journal of Psychiatry, 152,* 1073-1074.

Turk, J. C., Prentice, W. E., Chappell, S., & Shields, E. W. (1999). Collegiate coaches' knowledge of eating disorders. *Journal of Athletic Training, 34,* 19-24.

United States Department of Health and Human Services. (2004). *National health information center's center for mental health services: Eating disorders.* Retrieved April 4, 2003, from http://www.mentalhealth.samhsa.gov/publications/allpubs/KEN98-0047/default.asp

Vaughan, J. L., King, K. A., & Cottrell, R. R. (2004). Collegiate athletic trainers' confidence in helping female athletes with eating disorders. *Journal of Athletic Training, 39,* 71-76.

Michelle Nicopolis, Ph.D., PC, NCC, is a Counselor/Instructor at Cuyahoga Community College in Parma, Ohio. She has worked as a professional for over 10 years in a variety of higher education settings and student affairs positions including: directing student-athlete services, coordinating counseling outreach services, heading fraternity/sorority life leadership events, creating and restructuring orientation programs, teaching numerous workshops and classes, and advising student organizations. Dr. Nicopolis earned her Ph.D. in Urban Education/Counseling from Cleveland State University, her M.A. in Counseling/Social Psychology from Ball State University, and her B.A. from Hiram College in Communication, Exercise/Sport Science, and Psychology. Her research interests include: transition to college life, eating disorder education, and sports psychology applications.