

THE SORORITY LIFE: SORORITY WOMEN'S PERCEPTIONS OF THEIR EXPERIENCES
AT A POLYTECHNIC INSTITUTION

by

CYNTHIA LAUREN LUNK

CLAIRE MAJOR, COMMITTEE CHAIR
NATHANIEL BRAY
MARGARET KING
ARLEENE BREAUX
CHRISTOPHER HOLLAND

A DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of
Doctor of Education in the Department of
Higher Education Administration
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2013

Copyright Cynthia Lauren Lunk 2013
ALL RIGHTS RESERVED

Abstract

The purpose of this qualitative research study was to understand women's perceptions of their experiences as sorority women at an institute of technology. Ultimately, this research strove to determine in what way sorority women at a polytechnic institution perceived their college experiences, including; how they perceive the general campus climate, the climate on campus for women, their perceptions of the Greek community, and how they characterize other members of their sororities. I found that most women expressed an atmosphere of loneliness for women on campus in an environment that is "boring" to most students. In addition, the women expressed the opportunities they feel were provided to them through their membership in the Greek community. Lastly, the women classified their relationships with the other women in the Greek system as those of a family relationship, a role model relationship and a helping relationship. Most of the women in this study did describe an overall positive academic and personal growth experience associated with their sorority membership on the Southern Polytechnic State University Campus.

Dedication

For my PawPaw, Harold Norton who always wanted to say there was a doctor in the family. I miss you every day.

May 2, 1938 – October 15, 2012

For Lizzie, may you grow up to be a strong, vibrant and interesting woman with passion for whatever life may hold.

Acknowledgments

Many thanks to the faculty of the UA Higher Education program for your time and efforts to expand our minds and make us better researchers, educators and administrators. To Dr. Claire Major I offer my extended thanks for your patience with me and your willingness to help me succeed. In addition, a great deal of thanks goes to my committee who gave their time, expertise, and encouragement to make this possible. For my colleagues in the Executive Cohort V, I thank you for the time, the adventures, the tears, and the joys.

In addition I would like to thank the staff, students and administrators at Southern Polytechnic State University for your enthusiasm for my study. Your willingness to work with me, give me a place to write, interview, and evaluate allowed me to feel that what I was doing had value. To the sorority women, you are amazing women, your willingness to share your experiences with me allowed me to put faces with data and to remind me of the excitement that comes with being an undergraduate student.

Finally, to my amazing husband Ron, thank you for everything, words cannot describe all you have done for me. To my Mom and the rest of my family, I cannot express enough my thanks for the support encouragement and belief in me. Thank you for the pushes, the quiet, the help and the shoulders to lean on.

Contents

Abstract.....	ii
Dedication.....	iii
Acknowledgments.....	iv
Chapter 1.....	1
Technical Institutes	2
Women at Technical Institutes.....	5
Women in Greek Letter Organizations	7
Purpose.....	9
Research Questions	9
Importance of the Study/ Significance	9
Chapter 2.....	13
Women in Science, Technology, Engineering, and Mathematics Education and Careers	14
Women’s Enrollment in STEM Education.....	14
<i>A “Chilly Climate”</i>	15
Greek Community and Greek Organizations	25
Diversity	27
Alcohol and Sexual Activity.....	28
Involvement of the Greek population.....	30
Academic Achievement of the Greek Population.	32
Support relationships.....	36
Conceptual and Theoretical Framework	39

Gaps in the Literature	41
Chapter 3.....	44
Basic Qualitative Study.....	44
Research questions	46
Site selection and rationale.....	47
Subject selection and rationale.....	49
Data collection.....	50
Table 1	53
Data analysis	54
Theoretical Framework.....	54
Ethical Considerations.....	55
Quality Considerations.....	56
Delimitations	57
Chapter 4.....	59
Demographics of the participants.....	60
The SPSU College Climate.....	61
Typical SPSU	61
Like a Unicorn, being a woman at SPSU	64
SPSU Sorority Experience	69
Because I know people	69
<i>Networking</i>	70
<i>Leadership</i>	73
<i>Academics</i>	78

Sisterhood	83
Summary	95
Chapter 5	98
Answering the research questions	99
Chart 1	100
Question 1	101
Question 2	102
Question 3	102
Question 4	103
Implications	105
SPSU Greek System	106
Southern Polytechnic State University	107
Women in STEM	109
Recommendations for practice	110
Recommendations for Future Research	112
Summary	113
References	116
Appendix A	127
STEM	128
Greek Organizations	128
Appendix B	129
Appendix C	132
Appendix D	136

List of Tables

1. Breakdown of Research Design.....	52
2. Summary of Research Findings.....	101

Chapter 1

Introduction

Science, Technology, Engineering and Mathematics or STEM [a term coined in 2001 by Dr. Judith Ramaley, then director of the National Science Foundation's Education and Human Resources division, to describe the Science, Technology, Engineering and Mathematics fields (NSF Advisory Meeting, 2003; Winona Daily News, 2011; Pittsburgh Post-Gazette, 2009)] provides society a backbone of innovation and creativity. Our modern society, modern medicine and modern technology allow us to live longer and healthier lives, preserve our environment through 'green' technological innovations, and stay connected over long distances. The U.S. Department of Commerce found that science and technological innovation and advancement have been responsible for almost 75 percent of growth in the American economy since World War II (Glassman, 2010). Between 1959 and 2005 some measurement tools attribute between 55 and 90 percent of our nation's productivity growth to scientific and technological innovation (Atkinson and Mayo, 2010). President Barack Obama once stated "Today, more than ever before, science holds the key to our survival as a planet and our security and prosperity as a nation. It's time we once again put science at the top of our agenda and work to restore America's place as the world leader in science and technology" (*Obama, 2009*).

In order for our nation to obtain a position as a leader in science and technology, effort and focus must drive the production of highly qualified individuals prepared to lead the laboratories and think tanks of the future. Atkinson and Mayo (2010) state

“Just as we would be unable to expand industry if we lacked the natural resource materials to build the factories (e.g., cement), or energy to power the plants, we cannot expand our technology economy without the needed human resources, in this case high-quality STEM graduates” (p. 22).

Recent data indicates that the growth rate in students pursuing bachelor’s degrees in the STEM fields has slowed since 2003. Of those who do complete their degree, 25 percent do not continue on in jobs that are STEM focused, 74 percent do not pursue graduate education in the STEM fields which may lead to research and innovative practices (National Science Board, 2010). Currently, almost half of graduate students in the STEM fields in the U.S. are non-citizen students, specifically those fields most central to the U.S. economic and industrial competitiveness (National Science Board, 2010). As economies such as China and India grow, these highly qualified and trained students/graduates may choose to leave for better paying opportunities overseas. Colleges and Universities often labeled as technical institutes provide one potential method to strengthen the STEM programmatic pipeline in producing innovators and domestic STEM workers who may remain in the U.S.

Technical Institutes

The U.S. higher education system offers a plethora of institutions with differing missions, purposes, and environments. These differing types of institutions allow prospective students the opportunity to determine the atmosphere in which they wish to obtain their education. Each college provides a unique experience depending on campus culture and the focus of the individual institution (Umbach & Kuh, 2003). Umbach and Kuh (2003) describe how a small private liberal arts institution offers a different experience to a student than that of a large, public, flagship institution through greater exposure and experiences with diversity. In addition, Kuh

(2005) indicates that the means by which an institution chooses to deploy its resources, provide learning opportunities and support student participation in activities that will lead to student success such as persistence, satisfaction and graduation, stands essential to student engagement. Technical institutes, universities offer an emphasis in the science, technology, engineering, and mathematics fields or STEM. These institutions provide a different perspective than their liberal arts counterparts and differ from the community and technical colleges which offer vocational education to the local community. Technical institutes define themselves as institutions whose missions focus on the education of students in the fields associated with science and engineering, providing more qualified workers in these fields to the state and region.

Institutes of technology remain a small segment of the college and university systems around the country and provide high quality, specialized education to students expressing interest in the STEM fields; while polytechnics, a small subset of the technical institutes, exist in even smaller numbers with only nine in the nation (California Polytechnic State University Pomona, 2012). Often, technical institutes utilize a competitive admissions process and select students thought to be the most academically advanced and high achieving. For example, Massachusetts Institute of Technology's acceptance rate for 2012 was as low as 10.1% (US News, 2012).

Technical institutions around the United States have been established for the promotion of scientific and industrialized education for students. One historic and predominant figure in technical institutions is the Massachusetts Institute of Technology (MIT). It states they were created as a vision "to establish a new kind of independent educational institution relevant to an increasingly industrialized America" (MIT, 2011). Their first admission of students in 1865 followed a time of historical unrest in the United States and a time in which great industrial

progress began. It desired to lead the nation in technological and scientific research, a goal they have, with time, achieved.

For technical institutes in the southeastern United States, establishing these institutions allowed the region to promote a more industrial economy in a place where agriculture was the dominant force. The Georgia Institute of Technology, founded in October of 1885, provided an outlet in the south to train men for careers in industry rather than the traditional options in agriculture (Georgia Institute of Technology, 2011). The state legislature saw the creation of a state institution for technology in the capital of the state as a way to provide the south and Georgia with the needed educated individuals it would take to recover from the Civil War. In addition, as the nation progressed through the Industrial Revolution it was hoped that Georgia Tech would prevent the south from being left behind by the more progressive north.

From the large institutes such as MIT and Georgia Tech, grew another type of institution which serves to educate students in the sciences, technology, and engineering fields- the polytechnic institution. Polytechnic institutions do not have a universal definition, but often embrace a description as comprehensive institutions that focus on active, applied learned, theory and research. These colleges and universities focus on a more hands on approach to learning and practice versus the more theoretical track often taken by the larger technical institutes, such as MIT and Georgia Tech. The first polytechnic institute, established in 1875 in New York City, sought to attract a different base of students and provide opportunities to a larger population to obtain a focused education in the STEM fields. By 1922, only 13 such institutes in the United States, mostly in the northeast, existed. Currently the nation holds only nine institutes scattered from coast to coast (Bennett, 1997; California Polytechnic State University Pomona, 2012).

Technical institutes and specifically polytechnic institutes provide hands on experiential learning in preparing graduates in the STEM fields to apply the concepts and theories of science to real world experience and practice. These institutions provide a gateway to STEM jobs around the nation and world. As predominantly public institutions, these colleges and universities face many of the same challenges comprehensive institutions face of declining budgets and increased scrutiny of graduation and retention rates.

Women at Technical Institutes

As expressed by President Obama and others, the need for graduates in the STEM fields is crucial to the success of our nation (Obama, 2009; Atkinson & Mayo, 2010). Colleges, the community, researchers and practitioners must seek ways to identify women with an aptitude for STEM in order to increase the number of individuals pursuing these fields. In addition, a way must be found to nurture and encourage women to pursue these areas of focus. A desire to grow the population of students seeking STEM careers requires reaching out to the large majority of women who choose to pursue higher education. Women comprise more than fifty percent of all college students in the United States. However, of the students enrolled in college STEM programs, women remain a small minority compared to their male counterparts. Federal Representative Vernon Ehlers, a Republican from the state of Michigan states in an article by Eisen (2009)

"The jobs of the future are going to require of workers a basic understanding of the principles of math and science. If we do not persuade women to pursue these fields, they are already [risking] cutting themselves out of a great job future".

Changes in the economic system and an increase in the desirability for the STEM fields to recruit women around the country indicate a need for a contemporary study on female's belongingness

at an institution where they enroll as a minority population. Better understanding the experiences of women who choose to pursue STEM careers may be crucial to furthering science education in America.

Placing women into the STEM fields has proven a challenge historically as societal perceptions often perpetuate long standing stereotypes. Mead and Metraux's (1957) study asked respondents to describe a scientist, the common responses indicated

“a man who wears a white coat and works in a laboratory. He is elderly or middle aged and wears glasses. He is small, sometimes small and stout, or tall and thin. He may be bald. He may wear a beard, may be unshaven and unkempt. He may be stooped and tired. He is surrounded by equipment: test tubes, Bunsen burners, flasks and bottles, a jungle gym of blown glass tubes and weird machines with dials” (p.386-387).

Historical belief in the sciences as masculine, hard, complex, and demanding fields limits the ability to fit women into the societal perceptions of the science, technology, engineering and mathematics worlds (Hughes, 2002).

In 1982, researchers Hall and Sandler concluded that the science, technology, engineering, and mathematics fields have not traditionally been friendly to women; many of the institutions which strive to educate in these fields remain predominately male institutions. In 1995, Ginorio confirmed Hall and Sandler's perspective that the culture of academic sciences has been an unwelcoming environment for women. As women continue to make their way into the STEM programs and institutions that specialize in STEM, women may not feel accepted by their peers as well as by the institution itself, prompting declaration by some to indicate that STEM focused academic programs exhibit a “chilly climate” towards women (Whitt, Edison, Pascarella, Nora, Terenzini, 1999).

Women's success in a "chilly" environment relies heavily on the support networks established to support one another through their educational processes (Perna, Lundy-Wagner, Drezner, Gasman, Yoon, Bose, & Gary, 2009). Women do succeed at technical institutes where they have selected to enter into an academic field where their gender places them in the minority regardless of race, ethnicity, socioeconomic status, sexual preference and regardless of institutional type (National Science Foundation, 2007). However, the degree to which a woman feels she belongs and receives support from her environment at the institution is indicative to this success (Fabert, Cabay, Rivers, Smith, & Bernstein, 2011; Rosenthal, London, Levy, & Lobel, 2011). One such way to receive support from the environment and institution is through peer to peer interactions and activities, often extracurricular activities. The perceptions women hold of their environment and their extracurricular experiences may prove useful to help practitioners enhance the college experience for these women and future women. In addition, obtaining understanding of their experiences may provide the women themselves a better understanding of their own experiences and the experiences of other women in the same situation.

Women in Greek Letter Organizations

Time spent outside of the classroom, how students choose to spend it, and who they choose to spend it with may determine more about who the students become and how they achieve success in college more so than the notes they take in class or the manner in which they study for their next test. Spanard (1990) indicated that students choosing to leave college prior to completion showed less involvement in college life and activities than those who did persist. The activities that a student participates in outside of the classroom and outside of class time have a positive effect on persistence and attainment (Astin, 1984, Pascarella & Terenzini, 2005). For women at a technical institute, the importance of their participation outside of the classroom

may prove more important than previously expected. Kinzie, Gonyea, Kuh, Umbach, Blaich, Korkmaz (n.d) expressed that “gender gaps expose qualitatively different undergraduate experiences for men and women,” regardless of the type of institution (p.21). Maslow (1943) and more recently Baumeister and Leary (1995) indicate that the ability to belong is fundamental and essential to the growth and development of an individual.

Women in institutes of technology have created systems of social, psychological and financial mutual support to encourage persistence and success for other women (Bix, 2004). One particular tactic women choose to engage outside of the classroom at technical institutes has been through participation in social Greek letter organizations or sororities. When Georgia Tech opened its doors to women in 1952, fewer than two years passed before a national sorority arrived on campus. The Gamma Eta Chapter of Alpha Xi Delta was founded in 1954. Not only did Alpha Xi Delta arrive at Georgia Tech first, but it was the first national sorority chartered an engineering school (Alpha Xi Delta, 2012). Support relationships between peers and student interaction outside of the classroom provide one benefit to extracurricular involvement for students. This involvement is noted by some as an important part of the development and success of students in college (Astin, 1984).

Understanding the benefits associated with the social Greek system remains crucial to understanding the perspective of the sorority women at technical institutes. The social sorority system provides an established female support system for those women who choose to participate. Women who participate in the social Greek system often take on greater roles as student leaders at the campus level influencing financial decisions made by student affairs offices, as well as influencing the needs for housing, discipline, and policies and procedures related to the activities of a Greek letter system. In addition the Greek system as a whole plays

an important role in the culture of campus. Greek-letter members are “the key to maintaining campus traditions and hold many of the student leadership roles” (Whipple & Murphy, 2004, p. 313). Women participating in the social Greek system, regardless of academic focus, obtain opportunity to create and prompt change in campus culture.

Purpose

The purpose of this qualitative research study was to understand women’s perceptions of their experiences as sorority women at an institute of technology. This study sought to better understand the small population of women at a Polytechnic institution who have chosen to participate in the Greek life program.

Research Questions

Previous research does not investigate the comprehensive experiences of sorority women at predominantly male institutions. This study desired to understand the women’s perceptions of their college experiences and the experiences gained through their participation in a sorority at an institute of technology. Understanding how women describe and perceive the general campus climate, the climate for women, membership in the Greek community, and their relationships with the women in their own sororities should provide administrators the perspective to better understand the female students they serve on a daily basis.

Importance of the Study/ Significance

Previous quotes from the President of the United States as well as the current economic climate suggest that the nation benefits from the continued production of STEM graduates willing to continue in the field as researchers and innovators (Obama, 2009). The potential for new creations and discoveries cannot be underestimated; but in order to educate individuals in these needed fields we must first get them in the door. As the percentage of college students

who are women grows, their willingness to enter STEM fields gains importance. Effort must be exerted to recruit women to the STEM fields and in doing so, time must be spent to understand the experience of those women who choose to pursue this educational path.

Opportunities and positive relationships inside the STEM fields and specifically at institutes of technology must be promoted in order for women to overcome negative perceptions and stereotypes often conveyed by the STEM community. Institutions must understand the needs of their female students in order to meet them. Women must be provided opportunities or they must seek out opportunities to belong in the often unfriendly community of STEM. By studying the experiences of sorority women at an institute of technology and reviewing their perceptions of these experiences, administrators may obtain a greater understanding of the atmosphere in which this one particular, highly involved group of women live, attend class and socialize.

Once women enter STEM programs, we must find a way to retain, educate and graduate these women. Rep. Vernon Ehlers also expressed this deep need to focus on education of STEM graduates, and more importantly expressed the need to retain women in STEM (Eisen, 2009). This research hopes to enable and assist administrators in understanding how the climate of campus, how women perceive their Greek community and characterize their fellow sorority members contributes to a positive collegiate experience. Additionally, better understanding of the positive and negative aspects of their experiences can provide college administrators knowledge to enhance current resources for women in the STEM fields, and information on how to provide women the support they may need in order to remain enrolled.

As we enter a new age in higher education, student graduation rates hold greater weight on the operations of the university as funding streams shift toward a model based on completion

rates rather than enrollment numbers. As described in a Time article in 2012 “public universities and colleges were largely given money based on how many students they enrolled, not how many actually graduated”. For administrators at institutes of technology, this tie to funding indicates an even greater need to better understand the women on their campuses. In addition, obtaining greater understanding of women’s perceptions of the campus climate, the current climate for women and how the Greek community and fellow sorority members may enhance or detract from a woman’s college experience may provide greater substance to efforts designed to retain women in the STEM fields.

Research indicates the value of student involvement and belonging (Astin, 1984; Hayek, Carini, O’Day, & Kuh, 2002; Tinto, 1983; Kuh, Hu, & Vesper, 2000). In addition, involvement specifically in Greek organizations can improve students’ likelihood of academic success (Pascarella, Flowers, & Whitt, 2001; DeBard, Lake, & Binder, 2006). However, previous research falls short in discovering how women deal with academic atmospheres that may feel “chilly” towards women such as found in many STEM fields. Also, research has not examined women’s perceptions of the atmosphere and the individuals perpetuating the “chilly” environment. Belongingness research has yet to examine the Greek experience and how this belongingness may alter women’s perceptions of the university or college atmosphere. Additionally, research has not explored the individual students’, and specifically, the sorority woman’s perceptions of her Greek involvement and how she perceives her involvement impacting her growth and development. Previous research provides a comprehensive understanding of Greek systems and the role that Greek participation may play on student social and academic growth and achievement, it does not address how the women in the sororities specifically describe their own perceptions of their experience. Additionally, previous research limits its

scope to liberal arts and comprehensive institutions rather than focusing on the unique atmosphere of an institute of technology and the women attending these schools and participating in the Greek system. Past research does not expand into understanding how membership in a social Greek organization may provide support relationships or how the women within these organizations describe the relationships they have with other members and how these relationships provide support systems.

Sororities provide an established network of support for participating female college students. Understanding how the Greek community and sororities on campus contribute to women's feelings of belongingness in an environment where they are a minority allows administrators to collaborate with the corresponding sorority inter/national offices and the university's Office of Greek Life to retain and graduate those women who choose to participate in sorority life. Additionally, they can isolate strengths and weaknesses of the system which may identify potential needs or opportunities for women not in the system. Through this study, professionals who serve to promote retention at technological institutions will obtain a better understanding of this particular subpopulation that is important to the continued success of all women in the STEM fields. Understanding women's experiences in technical institutes can help all educators understand persistence for both men and women in the STEM fields (Holloway, Reed-Rhoads, & Groll, 2011).

Chapter 2

Review of the Literature

Over time, gains have been made in women's access to and representation in higher education. In 1988, the percentage of female undergraduate college students met or exceeded half of the total college population and by 2007-2008, women comprised 60 percent of the students in graduate and professional programs (King, 2010). Although these numbers indicate an increase in the population, this information does not provide an accurate picture of how women actually report working or studying in college climates that have long favored men (Martinez Aleman, 2008; Cooper & Stevens, 2002; Glazer-Raymo, 2008a; Mason, Goulden, & Frasch, 2009; Valian, 1998; Valian 2005; Zhao, Carini, & Kuh, 2005). Historically, there exists a longstanding resistance to female equal participation in higher education and Nidiffer (2002) shares that the realities for women's experiences today are a direct legacy of this historic precedent.

Research on Greek letter organizations and the individuals who participated in them, most often study men's and women's groups collectively rather than focusing specifically on sorority groups or systems. Furthermore, information on women in male-dominated educational environments exhibits limitations. Most importantly, little or no research looks at each of these areas together to compile an inclusive understanding of this small yet important population of women.

Limits exists on understanding how women at institutes of technology perceive their own experiences as such an institution, how they perceive the Greek community, and how they characterize their relationships with the women in their sororities. In order to frame how we

understand this population of women, previous research can be grouped into four relevant categories: women in STEM education and careers; the growth and development of students; Greek community and Greek organizations; and support relationships. Each of these areas may help readers to understand more clearly the picture of sorority women at a predominantly male institution and allows us to establish a baseline understanding of the experience for women at a STEM focused institute of technology.

Women in Science, Technology, Engineering, and Mathematics Education and Careers

Women's Enrollment in STEM Education. The sciences, technologies and engineering fields have not traditionally been a field where women aspired to attain education credentials and career placement. In the late 1800s and early 1900s women began venturing into the male dominated world of engineering studies, mostly at land-grant institutions (Goff, 1946). Three such women entered Cornell University to study engineering garnered attention from a 1937 newspaper stating "Three Coeds Invade Engineering Courses and Compete With Men at Cornell University: Stand Well in Their Studies" (Cornell Dailey Sun 1937, 1). Historically, women who expressed interest in the technical fields experienced discouragement by family and teachers (Bix, 2000). Language such as "invade" described the prevailing societal view of women entering the more traditionally male fields. As women have increased the rate at which they attend institutions of higher education, women continue to enter the STEM fields at lower rates than they have chosen to enter into other academic programs (National Science Foundation, 2007; Thorn, 2001).

The continued low enrollment numbers for women in these fields has not gone unnoticed. Huang, Taddese, and Walter (2000) found that although many groups such as counselors and recruiters have tried to encourage women into these fields and into the institutions which

specialize in the science, technology, engineering and mathematics programs, they have had little success in actually increasing the number of female students enrolling. Institutions offering programs in the STEM areas, as well as high school counselors, seek women who show affinity for the sciences in order to encourage them to pursue this career path. Unfortunately, though some success has been achieved, a significant number have not entered higher education to study STEM. Institutions of higher education seem unable to meet the increasing demand of the economy for engineers and those with an academic background in the STEM areas. Despite activities to recruit and retain women in the engineering field specifically the United States and Australia have seen an actual decline in the number of female engineering students (Grose, 2006; Mills, Ayre, & Gill, 2008).

A “Chilly Climate”. Some research indicates that a lack of ability is not a hindrance to women entering the STEM fields. A much more complicated barrier may stand in the way of women’s success. Additionally, research indicates that rewards structures, students’ value system, pedagogical approaches and the lack of role models pose potential barriers for women in the STEM fields (Goulden, Frasch, & Mason, 2009). In 1982, Hall and Sandler introduced the labels “classroom climate” and “chilly climate.” Their study gave voice to a problem which had long existed yet without a name, a “chilly climate” for women in the classroom. In addition, Hall and Sandler gave voice to gender discrimination and gender bias in the classroom. Their findings were not specific to women wishing to study a particular field but rather women attending classes alongside their male counterparts. In 1995, Ginorio completed a work revisiting the concept of the “chilly climate” for women and confirmed the original 1982 hypothesis by Hall and Sandler in her findings that the culture of academic science is a chilly environment for women, ethnic minorities and people with disabilities. Duncan and Zeng (2005)

also noted through a qualitative research project with the National Center for Engineering and Technology Education, that the students persisting through an engineering program and those who choose to leave engineering programs indicate “the department environment as a negative force that was restraining the success of retaining female engineering students” (p. 25, 2005).

The behavior of faculty towards women as it differs from their male classmates proves most telling in creating a “chilly climate” for women. Behavior such as calling on male students more frequently than their female classmates; asking follow-up questions of men and not women; focusing more on a woman's appearance rather than her accomplishments; paying more attention when men speak; and attributing women's achievements to something other than their abilities, minimizing the ability for women to ask questions, and reinforcing sexist expectations which decrease women's overall sense of self-competence (Allan & Madden, 2006; Duncan & Zeng, 2005; Ginorio, 1995; Hall & Sandler, 1982). Allan and Madden (2006) indicated that 25 percent of undergraduate women surveyed indicated they had experienced behaviors characteristic of a “chilly climate” including males students taking more time in class than their female counterparts [41 percent]; men making negative remarks about their female classmates' behavior [37 percent]; and men ignoring female's remarks and ideas [28 percent]. This existence of an unwelcoming university climate for women in the STEM fields was again confirmed in 2008 by Handelsman et al.

Though Hall and Sandler (1982) observed the general environment of higher education for women, the existence of a “chilly climate” may prove most significant in the world of STEM which continues as a male dominated arena of education. This “chilly climate” towards women may prevent women from actively seeking education and career paths in the STEM fields. The “chilly climate” found at many institutions indicates that women may not always feel accepted

by their peers as well as by the institution itself; producing a cycle which reinforces the myth about who belongs in the STEM fields (Duncan & Zeng, 2005; Maher & Tetreault, 2001; Whitt, Edison, Pascarella, Nora, & Terenzini, 1999; Tonso, 1998). Cress (2002) describes “climate” as “common member perceptions, assumptions, beliefs, feelings or attitudes” (p. 391). A “chilly climate” implies the unwelcome feeling, poor communication, as well as a sometimes overall negative experience that many women have described of their faculty, staff, and their male classmates. This “chilly climate” led Whitt et al (1999) to conclude that this climate could actually have cognitive effects on the women in these programs, where their male counterparts had long been dominant and remain the majority of students. This negative atmosphere may actually affect a women’s opportunity to succeed academically as well as develop socially in the fields. But, findings indicated that the women find ways to deal with the existence of a “chilly climate” in order to find success (Zhao, Carini, & Kuh, 2005).

Steele, James, and Barnett (2002) determined that women in traditionally male dominated fields, such as the STEM fields, indicate greater likelihood of contemplating changing majors as compared to their counterparts in the traditionally female dominated academic programs. In addition, a 1997 study indicated that female undergraduates showed a greater rate of leaving the STEM majors as compared to their male colleagues, leaving at a rate of two and a half times that of men (Seymour and Hewitt, 1997).

In 2005, Lisa McLoughlin introduced the concept of “spotlighting” as a conceptual framework for understanding the various biases women face while in undergraduate engineering education. Her qualitative study sought to understand the progression of women within their undergraduate program and how their experiences were reflective of their choice to enter a traditionally male dominated field of study. In using semi-structured interviewing techniques

along with participant-observation, she created the term “spotlighting” to describe the “singling out of women based on gender, in ways that make them uncomfortable” (p. 374, McLoughlin, 2005).

A 2004 study by Garvin-Doxas and Barker found that when the teaching is male dominated it may create a defensive culture for women. This culture remains predominant in the computing and engineering fields that still see a large proportion of male professors and instructors. In fact, data indicates that only 10% of Industrial Engineering faculty, 8% of Chemical Engineering faculty, 19% of Mathematics faculty, 8% of Physics faculty, 11% of Computer Science faculty and 6% of Aerospace and Mechanical engineering faculty are women nationally (Harris, Rhoads, Walden, Murphy, Meissler, & Reynolds , 2004; Knapp, Kelly-Reid, Whitmore & Miller, 2007). In addition, a 2008 study found that only 41 percent of all women faculty were tenured as compared with 55 percent of their male counterparts (Snyder, Dillow & Hoffman, 2008). A 2005 study indicated that women may often find themselves excluded from activities with faculty which enhance connectedness to other students in their field such as “gossip, strategies for advancement, and assessments of performance” (Zhao, Carini & Kuh, 2005, p. 515). These connections seem unimportant, but male students connected with their faculty and received a greater level of advisement beyond course work and the traditional academic advising duties than the female students in their academic program. This comprehensive advisement allowed the male students the benefit of networking that it denied the women. Whitten et al (2004) suggest that healthy, supportive and respectful relationships between faculty and students attract and retain male and female students in the engineering fields.

The concept of the “chilly climate” helps shed light on the relationship between women and their choice of education in the STEM fields. Tonso (1998) completed an in-depth study of women as engineers and discovered negative perceptions of women in engineering programs by their male classmates as well as the continued inability for women to be accepted by their male counterparts in the same capacity as the other male students in the same programs. The males in Tonso’s study did not view women in the same light or with the same descriptive terms as they would their fellow male students. More recent research indicates the exclusion of women in relevant informal exchanges between students as well as between faculty (Zhao, Carini, & Kuh, 2005). Male engineering students had a much more difficult time describing their female classmates with the term engineer than they did their other male classmates (Tonso, 1998). In addition, a female STEM student may attempt to make herself less visible in order to avoid discomfort that comes from being the ‘token’ woman in her classes (Zhao, Carini, & Kuh, 2005). Though perception by male students of women indicate minor flaws inside the classroom interaction, Valian (2002) explains that small male advantages in great numbers are “mole-hills that accumulate over time to produce a mountain of advantage for men” (Valian, 2002, p.2). McLoughlin (2005) further expands on the concept of “spotlighting” by distinguishing two types of “spotlighting” uncovered in her research. She defines Type I spotlighting as the use of sexism to single out women and make them uncomfortable. Type II spotlighting in which women are “singled out by gender in ways that make them uncomfortable without intention to harm or help” occurs in engineering education programs through the tacit sexism that often exists in academic programs.

Unfortunately, Tonso also found how this inability to connect women with the engineering classroom often expanded into the women’s experience in the working world

(Tonso, 1998). Often women successfully obtain a position after graduation equal to that of her male classmate, but female STEM graduates report lower gains in obtaining the work-related skills such as networking and creating relationships with others in the field needed for success as compared to their male classmates (Tonso, 1998). Ten years into their career, the female engineer was more likely to be found in the lower ranks of engineering than the male (Zhao, Carini, & Kuh, 2005).

Counter arguments to the concept of a “chilly climate” believe that there is no evidence to support the idea of a “chilly climate” or that evidence is weak (Crombie, Pyke, Silverthorn, Jones & Piccinin, 2003; Drew & Work, 1998). These studies relied on quantitative data, observed behavior, and surveys in order to reach their conclusions in the application of the “chilly climate” to today’s college classrooms. Their results have indicated equalization in the classroom and lack of concern by men and women regarding the gender of the student sitting in the next desk (Drew & Work, 1998). A student’s sensitivity to the issue may guide the degree that the characteristics of a “chilly climate” effects a student (Crombie et al, 2003, Janz & Pyke, 2000). Salter (2003) acknowledged the conflicting classroom climate research by studying the interactions between learning style, gender, and educational climate. He found that classroom fit and classroom experiences may relate more to the interaction of the above variables rather than gender alone (Salter, 2003). Those who still feel that a “chilly-climate” exists argue that the activities causing a “chilly climate” prove intrinsic and immeasurable through standard means. Layers of denial and cultural barriers impede interpretation, suggesting the existence of a “chilly climate” through what have been acceptable social thoughts and actions by the community (Bem, 2001; Brady & Eisler, 1999; Valian, 1998).

Zhao, Carini, & Kuh (2005) also found that female students in STEM programs felt as satisfied with their experience in college, if not more so, than their male colleagues. Their research also implies that this “chilly climate” may not impede upon women’s ability to succeed in the collegiate atmosphere and they must be “finding ways to deal with it, including putting forth more academic effort” (Zhao, Carini, & Kuh, 2005, p. 515). This academic effort reflects on the ability of the female engineering student, yet does not indicate their further success in the field. Ability plays minimal role in success, as the women who have entered these more male dominated fields prove to be as competent and committed to the field as their male counterparts (Huang, Taddese, & Walter, 2000). The women who make it through their formal education process and obtain professional employment show abilities equal to those of their male counterparts. In addition, they are able to establish successful careers, but there exists some factor which creates a discrepancy in numbers between men and women in the fields.

Growth and Development of Students

Research previously studied the academic effects of student participation and how students choose to engage outside of the classroom. How involvement assists in promoting and encouraging growth of the whole student has been of interest to researchers. Proven interesting to scholars, this research opened questions of the importance of student development and the extent to which higher education should feel responsible in assisting students in this growth. Student development encompasses the student experience; what students “get” out of their college experience outside of the academic knowledge and a degree. The literature consistently shows that how students participate outside of the classroom enhances this experience and generally helps the student to mature.

Women who select to participate in extracurricular activities provide themselves with the opportunity to develop personal and social growth (Busseri & Rose-Krasnor, 2008; Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001; Foubert & Grainger, 2006). New students to college experience much change in their first year at school and opportunity to expand their world outside of what they have always known. In 2008, Michael Busseri and Linda Rose-Krasnor conducted a study looking at the subjective experiences of extracurricular activities in relationship to personal growth. They found particularly interesting the experiences of first-year female university students. Using the results from 196 survey responses from female students at a university in Ontario, Canada, Busseri and Rose-Krasnor analyzed the data by comparing statistical means, using restricted maximum likelihood estimation, and principal components analyses (2008). They found that the young women in the study “indicated high levels of positive experiences in their activities, particularly: enjoyment, personal importance, competence, commitment, and (to a lesser degree) perceived control” (Busseri & Rose-Krasnor, 2008, p. 435). However, more importantly, Busseri and Rose-Krasnor (2008) found that the involvement in extracurricular activities by these women contributed to healthy development including their ability to integrate into adult society. As first year students, these young women expressed the benefit of participation as it helped to integrate them into the culture of the college and into the much larger and diverse world of adults and the working professional.

Interest also exists in finding the effects that involvement has on the development of students from various race/ethnic backgrounds. Mary Jane Fischer’s data analysis of the *National Longitudinal Survey of Freshman* (Fischer, 2007) found that students of all racial and ethnic backgrounds involved outside of the classroom show greater satisfaction with their college experiences, and that students (other than white students) who fail to participate and create

formal social connections through involvement are significantly more likely to leave than students who do create those formal bonds. Race also appears as a significant factor in research by Lamont Flowers (2004) in his analysis of the College Student Experiences Questionnaire. He found that student involvement does directly affect African American student development, sometimes negatively (Flowers, 2004). For example, Flowers (2004) shares that engagement such as attending social events in the student union negatively affected African American students. This negative affect on the students' overall development can then reflect on their academic and social development.

As students' progress through their time in college, an observer would expect to perceive changes in the individual students as they progress through their program and obtain different experiences that may shape who they become. In John Foubert and Lauren Grainger's 2006 research, they focused on the effects of student involvement on students as it relates to the students' year in school. Analyses of data collected at the beginning of students' first year, the beginning of their sophomore year and the end of their senior year showed statistical differences between those students involved in extracurricular participation and those not involved. Specifically, those students who were involved in extracurricular activities by either attending a meeting, joining, or leading an organization exhibited greater development than those not involved at all in student organizations (Foubert & Grainger, 2006). By their senior year, those students who chose to be involved outside of the classroom showed a strong psychosocial development (Foubert & Grainger, 2006). Those students who chose to involve themselves at all levels, were more socially developed and more socially aware than those students, of the same year in college, who chose not to participate outside of the classroom.

George Kuh (1995) sought to discover the relationship between out-of-class experiences and personal development and learning. In a qualitative study using interviews from 149 students of various ages, genders, and races/ethnic background, Kuh found that participants often viewed the life outside of their classrooms as the “real world” laboratory (Kuh, 1995, p. 145). This “real world” laboratory was thought by students to be the stage for the true learning experience, it is where they learned cooperation with one another, team work, understanding and tolerance. By participating in organizations outside of the classrooms, students obtain an opportunity to make decisions without direct faculty influence but with an opportunity for guidance from older students, mentors, and faculty/staff. This chance to interact outside of the classroom also allows them the space to discover and choose to learn those things they find most interesting or applicable to their own lives. Skills applicable to a student’s own life may also deviate from the academic and into those implicit skills needed to be socially successful and to reach professional achievements.

In their analysis of the *College Student Experiences Questionnaire* from 51,155 undergraduate students from 128 institutions, Kuh, Hu and Vesper (2000) corroborated previous research that students’ in class and out of class activities and experiences contributes to their social and intellectual development. They were able to connect particular clubs and organizations as well as other engagement activities with peers and faculty to specific gains in intellectual development.

Employers seek the skills developed by students in college when making hiring decisions. These soft skills assist students with: obtaining their first job, being successful in that position, and possibly earning promotions or greater rank in their chosen professions (Harvey & Mason, 1996). Specifically, employers may seek interpersonal skills and communication skills

in hiring decisions (Harvey & Mason, 1996). Interactions with others and the skills applicable to the real world, regardless of an individual's academic or professional goals, help the development of an individual from student to professional and citizen (Cress, Astin, Zimmerman-Oster & Burkhardt, 2001; Harvey & Mason, 1996).

Those skills applicable to their own life may also deviate from the academic into those implicit skills needed to be socially successful and to reach professional achievements. The Greek letter system provides one particular form of formalized social networks available at many four year colleges and universities. These organizations allow women, especially on a campus dominated by male students, to live with, study with, socialize with, and connect with on a more personal level inside and outside of the classroom with, other women. In addition, on campuses where the female population may be the minority, all female Greek letter organizations allow women the opportunity to serve in leadership roles and develop skills through the planning and organization of a large group.

Greek Community and Greek Organizations

The activities, purposes, and effects of fraternities and sororities have been of interest to researchers in student involvement studies as these groups play such a large role in the social interactions of students at many four year universities. As explained in the historical account by Helen Horowitz (1987), historically white fraternities and sororities set the tone for social engagement and campus life at an institution. The role of the Greek letter system plays an important part in establishing the campus culture of an institution and maintaining the traditions of an institution (Whipple & Murphy, 2004). The Greek letter organization provides a connection for students, an opportunity to bond with like-minded individuals while joining an established support network. Callais (2002) defined a sorority as a “women’s Greek letter

fraternal organization that has a multi-part mission, including aspects such as sisterhood, academic enhancement, social, philanthropy/community service endeavors and lifelong friendships” (p. 23).

Scholars have raised significant questions about the value of fraternities and sororities. Critics reference the dysfunction of the Greek letter system including: alcohol abuse (Elkins, Helms, & Pierson, 2003); cheating and problems with academic integrity and low academic achievement (McCabe & Bowers, 2009; Pike, 2000); and problems with hazing, in particular violent acts of hazing (Nuwer, 2001, 2004). Despite these negative aspects of the Greek letter system, in October of 2009, it was estimated that there were more than 750,000 undergraduate members in more than 12,000 chapters on more than 800 campuses throughout North America (North American Interfraternity Conference, 2011; National Panhellenic Conference, 2011; National Pan-Hellenic Council, 2011). Astin, Oseguera, Sax and Korn (as cited by Gohn & Albin, 2005) indicated that despite these impressive numbers, interest in joining these organizations has declined steadily over the past four decades. Pryor, Hurtado, Saenz, Korn, and Mahoney (as cited by Gohn and Albin, 2005) estimated that 10.4% of freshmen enrolling in the fall of 2005 expressed interest and expectation in joining a Greek organization. This indicates a significant decrease from 1967 when it was estimated that 34.7% of freshman expressed interest and desire to join a Greek organization.

Under the guise of research on Greek letter organizations there exist subcategories of research which provides a better picture of the positive and negative attributes often associated with social organizations. Studies have found the way in which Greek letter organizations affect a student’s experience with diversity, the way in which alcohol use and abuse relates to membership in a Greek organization, the realistic picture associated with sexual activity among

members of the Greek community, and especially how student's involvement in Greek letter organization enhances or is a detriment to a student's level of engagement.

Diversity. Exposure to diversity (ideas and cultures) appears decreased in members of Greek organizations as compared with their non-Greek counterparts (Pike, 2002). Before Pike's 2000 study Byers (1997) found that members of Greek organizations often originate from similar backgrounds but have different backgrounds than their non-Greek peers. Byers found that Greek students had parents with higher incomes, greater levels of education, and a greater level of involvement in clubs and organizations as compared to the parents of non-Greek students. This similarity between Greek members encourages a lack of diversity and may limit the ability for those different from the base membership to join.

Understanding the culture of Greek organizations requires discussions on the racial differentiation within Greek letter organizations. Historically, as colleges around the nation became less homogeneous in their makeup, the admission of various non-whites to previously all white institutions required many organizations in the Greek letter system to incorporate racially diverse membership policies into their processes as all Greek letter organizations (historically white and black) faced accusation of racial membership practices (Hughey, 2007a, 2007b). Today, traditionally white Greek letter organizations do not constitutionally exclude individuals of color and traditionally black Greek letter organizations do not constitutionally exclude whites, and when a non-traditionally raced individual chooses to join an organization, they are treated haphazardly as complete and full members by their fraternal "brothers" and "sisters" (Chen, 1998; Hughey, 2007b). Unfortunately, their membership may cause problems with members of their own racial group who may see them as a "sellout" (Thompson, 2000:7; Hughey, 2007b).

In 2005 a study by Case, Hesp, and Eberly regarding members of Greek organizations indicated a connection to the gay, lesbian, bisexual, and transgendered community. In the process of their research they found a limited body of research on this population of students. The proposed reasoning behind this was the unwillingness of many GLBT Greek students to self-identify (Case, Hesp, & Eberly, 2005). Through the process of their study they discovered that approximately 5-6% of the fraternity and 3-4% of the sorority population self-identified as homosexual. This low representation within the Greek population was proposed by Case et al. to be due to fear of often strong homophobic feelings often expressed by their fellow Greek students. A 2002 study indicated that a cultural premium exists on college campuses in favor of the romantic heterosexual relationships which prompt women particularly to place romantic heterosexual relationships over their female solidarity and friendly relationships (Gilmartin & Sax, 2002). This choice to prioritize traditional heterosexual relationships over platonic female friendship may alter the perceptions and experiences of the straight and GLBTQ sorority woman.

Alcohol and Sexual Activity. Stereotypes and images of sorority and fraternity life often relate the membership in these organizations with the use and often abuse of alcohol. Greek populations have been shown to use and misuse alcohol as well as drink in larger quantities and more often than their non-Greek peers (Pace & McGrath, 2002; Eberhardt, Rice, & Smith, 2003). Pace and McGrath (2002) found that despite the high rate of alcohol consumption in fraternities and sororities, acceptance of this practice indicates that the negative effects of drinking appear less harsh for fraternity and sorority members than for other students. Asel, Seifert, and Pascarella (2009) indicate that first year students affiliated with a Greek letter organization showed a significantly greater likelihood of participating in binge drinking than their unaffiliated peers.

In addition to the opinion that Greek members exhibit heavy alcohol usage, common perceptions indicate a sexual promiscuity of Greek organization members. For all women on a college campus and in particular, sorority women, research supports alcohol and sexual ideologies that support common negative stereotypes. LaBrie, Huchting, Lac, Tawalbeh, Thompson, and Larimer (2009) found many female students, including those that are members of sororities, consume alcohol due to their assumption that male students may find them more attractive if they participate in consumption.

A 2008 book by Bogle indicates that women, along with men, misconstrue the level of sexual activity among their classmates, interpreting others as more sexually active than is reality. The findings by Holland and Eisenhart, 1992, and more recent findings by Bogle (2008) indicate more negative perspectives associated with sexually active women in college among other women. Sexually active women, as opposed to men, often received a greater extent of negative feedback from their female classmates than sexually active received from their male classmates. In addition, Holland and Eisenhart (1992) claimed that this culture expected women to place themselves in a position for their worth to be determined based on sexual attractiveness, pushing aside academic pursuits and same-sex friendships such as those found in a women's Greek letter organization. Interestingly though, Bogle (2008) also found through her qualitative assessment of the term 'hooking up' that students involved in sorority life, generally 'hooked' up more than other students. Bogle (2008) continues to explain that a perceived level of competition exists among sorority women in order to obtain status as sexually attractive.

Some research indicates that the men and women in fraternities and sororities show a greater propensity for using safe-sex practices than their non-Greek classmates (Lynch, Mowrey, Nesbitt & O'Neill, 2004). In their 2004 study, Lynch et al studied 7000 students at a mid-sized

institution and their actual sexual practices. They found that 82% of the sexually active Greek men and women reported abstinence or the consistent use of a condom as compared to 63% of the non-Greek population. Additionally, Lynch et al (2004) and Bogle (2008) indicate that the perceptions of high sexual activity by members of fraternity and sorority life on campus inflates reality as students typically assume other students are more sexually active than is reality.

Involvement of the Greek population. In 2000, Pike found that students who participated in Greek letter organizations also proved to be more involved in other organizations. Pike's study looked at one institution and the approximately 826 students who responded to the *MU Freshman Survey*, which was modeled after items of the nationally accepted CSEQ (*College Student Experiences Questionnaire*) (Pike, 2000). These students' responses indicated the important role that involvement in Greek letter organizations can have on students' both inside and outside of the classroom. Students involved in Greek letter organizations indicated a high rate of participation in other types of extracurricular as well as academic activities outside of the classroom and students who participate in a greater number of academic activities outside of the classroom show greater level of academic achievement (Kuh, 1995).

The men and women participating in sorority and fraternity life indicated their willingness to not only spend time outside of the classroom with members of their own Greek organizations, but also with other extracurricular activities and organizations that could be found on their college campus. Asel, Seifert, and Pascarella (2009) also found a strong relationship between membership in a Greek letter organization and higher rates of involvement in social and developmental activities than non-Greek affiliates.

Certain demographics of students also show connection between involvement in the Greek society and involvement in other organizations. As suggested by Brown, Parks, &

Phillips (2012), Kimbrough and Hutcheson (1998) found that black men and women involved in Greek letter organizations were more involved in other campus activities and organizations than other black students who were not in a Greek letter organization. Statistical analyses run on various data gathering instruments such as *The Student Involvement and Leadership Scale*; *The Competing Values Managerial Skills Instrument*; and *The Leadership Assessment Scale* assisted them in their discovery of this positive relationship between Greek letter organization involvement and students' increased participation. This positive relationship indicates the perceived benefit for students participating in the Greek letter system, and their likelihood to engage in other areas that may provide additional benefit to the student. Since involvement outside of the classroom proves beneficial for all students, this increased advantage gained by women is important in an institution where they may be facing adversity. For black women, being elected to office in any extracurricular activity provides benefit and for Caucasian women, just being active in various activities proves beneficial (Astin, 1984; Kezar & Moriarty, 2000; Pascarella & Terenzini, 2005).

The Greek letter system offers implicit and explicit opportunities for students to interact with other students through social, leadership, and service bonds. Pascarella and Terenzini (2005) found that women taking on leadership roles in extracurricular activities may select careers traditionally dominated by men. However, in institutions of specialization such as an institute of technology, the close relationship formed through sorority participation may additionally serve as a method of connecting women academically as they share courses, academic goals, and academic interests. These bonds allow women at institutes of technology the support networks needed to be successful in the face of "chilly climates" and value systems

detrimental towards women as a minority in the STEM fields (Goulden, Frasch, & Mason, 2009; Hall & Sandler, 1982).

Academic Achievement of the Greek Population. The relationship between students' involved in Greek letter organizations and academics has been one of great interest for scholars and practitioners alike. Pascarella, Flowers and Whitt (2001) found interest in the cognitive effects of participation, and discovered that women involved in Greek letter organizations reported higher levels of cognition in the sciences than those women not involved in a Greek letter organization. This may be particularly interesting if applicable to those women attending schools where the STEM programs dominate or just for women interested in a future in these fields. Their research also showed that for all demographics, including gender and ethnicity, students involved in Greek letter organizations in their second and third year showed similar cognitive development (Pascarella, Flowers, & Whitt 2001). Data gathered in their study examined a sample of 18 four year institutions located in 15 states and used the National Study of Student Learning (NSSL) and the Collegiate Assessment of Academic Proficiency (CAAP) indicating a strong relationship between their findings and the application to other women and other students around the country (Pascarella, Flowers, & Whitt 2001). In addition, Greek women exhibited "significantly greater growth in understanding science after 3 years of college" (Pascarella et al., 2001, p. 293). Their research concluded that Greek membership had a negative influence on men, but an overall positive influence on women.

Pike (2000) found that students in Greek letter organization show cognitive development because of their social involvement that comes from participation in these groups. Existing campus data and the 1997 *MU Freshman Survey* was analyzed using three phases of analysis utilizing variance-covariance matrixes to show this positive relationship between Greek letter

organization participation and student academic achievement. As students interact with one another in this type of organization, they provide academic support in addition to the expected social and emotional support. They also provide a mechanism for assisting and motivating students to be academically successful for the benefit of the student as well as for the group. The respondents who identified themselves as participants in Greek organizations were statistically more likely to be female than those who did not claim membership in a Greek letter organization (Pike, 2000, p. 125). This cognitive effect of participation in fraternity and sorority life indicates the kind of positive outcome that these types of organizations can have for men and women. In addition, the significant response rate in this survey by sorority members places greater strength in Pike's argument for women.

The academic success of students is not just about their grades or academic achievement as measured by grades or standardized testing. In a unique finding, it was discovered that students who selected to join a fraternity or sorority, also have shown to have different educational philosophies than students not involved in a Greek letter organization (Wilder, McKeegan, Midkiff, Skelton, & Dunkerly, 1997). Wilder et al found when they surveyed 4,119 students at a selective, medium-sized, private institution, that "Greek affiliation yielded significant change effects in all but the vocational philosophy, either independently or in interaction with other variables" (Wilder et al, 1997, p. 157). Their work shows that involvement in the social Greek system, may affect academics in an unexpected way. Students involved in this system change the way in which they learn and the way in which they think about learning. This connection with other peers may provide greater impetus to a student than any faculty member could provide and may provide an outlet for discovery of new ways to learn and new appreciation for the content of their education.

Lake (2005) found in his study of Bowling Green University's Greek system that becoming a member of a Greek letter organization did not have negative effects on first year grade point averages, cumulative grade point averages or credit hours earned. Also, Lake (2005) found that women in Greek letter organizations graduated in fewer semesters than their male colleagues and as a whole, Greeks enrolled in fewer semesters than non-Greek students suggesting that Greeks graduate in less time than non-Greek affiliated students. In addition, those students who chose to join their respective Greek letter organizations in their second semester of college indicated a greater level of academic success. In a 2006 study to evaluate the success rate of students new to a Greek organization, DeBard et al found that "Greeks who joined during their first semester of college underperformed, while the Greeks who joined in their second semester over performed as compared to their predicted GPA" (DeBard, Lake, & Binder, 2006, p.59). However, Asel, Seifert, and Pascarella (2009) found that members in a Greek letter organization in the first or senior years were less academically engaged than their non-Greek peers.

Underrepresented students at various institutions experience extracurricular activities differently and reap the results of their participation differently. Christina Baker (2008) sought to discover the effect extracurricular involvement had on the academics of under-represented college students. Under-represented college students can be defined predominantly as racially or ethnically diverse groups, gender groups or socioeconomic classifications. Baker found that the type of organization a student chooses to participate in does affect their overall academic performance, but that the amount of time a student chooses to spend involved in those groups does not show a significant effect on the various gender and racial groups studied. Baker analyzed 3,924 students' data from the *National Longitudinal Survey of Freshman*, which

follows students from freshman year to graduation, using Ordinary Least Squares (OLS) regression analysis for each race and gender group which “predicted grade point average based on involvement in different types of extracurricular involvement” (Baker, 2008, p. 287). Certain organizations benefited students academically more positively than other groups. Baker addressed specific organizations such as athletic organizations, Greek letter organizations, political groups, religious groups, and art organizations. Greek letter organizations showed a significant negative effect on students’ grades for all students except Latinas. Hispanic sororities provide an outlet for Latinas to preserve cultural heritage, but also may not provide benefit to these women academically (Schneider & Ward, 2003). Black women showed significantly poorer grades when they are involved in Greek letter organizations. For Black women, Greek involvement was the only type of involvement Baker (2008) found that had a negative effect on academic performance. In addition, research in 2012 (Brown, Parks, & Phillips) indicates that membership in a National Pan-Hellenic Council (NPHC) organization may not assist black students in achieving higher grades than their non NPHC member black classmates. This does not indicate that black students participating in NPHC organizations are suffering academically however. Research indicates that these students are still strong students (Brown, Parks, & Phillips, 2012).

Despite the demonstrated positive and negative effects of participation in Greek letter systems, one important point remains, how do women perceive this community and their sorority experience? How do these women characterize the relationships they form with other women in the community?

Support relationships

In 2009, Perna, Lundy-Wagner, Drezner, Gasman, Yoon, Bose and Gary designed and executed a case study on female students at Spelman College, a historically black all female college, to see how the support network of having all women could influence the completion rate of women from the science, technology, engineering, and mathematics fields. They found that the supportive peer relationships the women found at the institution promoted academic achievement. The women at Spelman had the opportunity to attend a successful and well-connected institution as well as work toward a degree in what has been a male dominated field. They had the benefit of female support systems automatically in place because of the nature of the institution. This type of support is not intrinsic to a traditional co-ed institution. The institution was able to provide a supportive yet academically respected and challenging environment which allowed the women in the STEM programs to have a natural support system in place (Perna et al 2009). The nature of a smaller, private, all female institution as well as the institution making a concerted effort to support the women in the STEM programs through academic and programmatic activities sponsored by the college, promoted academic success among the students enrolled in STEM courses.

Downing, Crosby, and Blake-Beard (2005) emphasized the importance of mentors, defining mentors as those who provide social support. A good mentor for a woman in the STEM fields it was shown had the strongest effect on a women's decision to pursue a science related field (Downing, Crosby & Blake-Beard, 2005). In 2002, Aluede, Imahe and Imahe found that strong social support networks provide one of the greatest influences in encouraging the pursuit of a technical or technological field. The ability to create strong peer relationships proves significant to intellectual and social development as well. Pike, Kuh, and Gonyea (2003) sought

to find the relationship between an institution's mission and student's involvement and educational outcomes. They found that "[g]ains in learning and intellectual development were directly related to integration of diverse experiences and perceptions of the college environment", the students' gain this diverse experience and perception of the college environment through interaction with other students in formal and informal atmospheres (Pike, Kuh, & Gonyea, 2003, p. 256). These peer to peer interactions allows students to develop a perspective outside of their comfort zones and assists them with developing a more colorful horizon of experience and perspective prior to their graduation and integration into the working world.

Duncan and Zeng (2005) found that the existence of formal support programs and networks for women supported the academic success of women in the STEM fields. Their particular sources of support derived from programs such as Society of Women in Engineering (SWE) and Alpha Epsilon Omega sorority – a national engineering sorority. However, Duncan and Zeng (2005) also found some frustration from female students in these support groups who felt that they should not be necessary in order for women to succeed. In addition, the women in this study indicated the important role that peer support provided them academically and personally allowing them to feel successful in their programs.

Thomas (2000) reiterated the value of peer to peer socialization by showing that students who have positive connections with one another and with their institution through participation in extracurricular programming and other interaction outside of the classroom are more likely to persist with that institution of higher education. Data was collected for Thomas's study from all first-time freshmen (322) at a single four-year institution (Thomas, 2000). Using descriptive statistics, Thomas (2000) assessed to what degree students had developed satisfying relationships

with other students that may have played a factor in their own personal growth and attitudes, in addition to information regarding possible subgroups of campus culture which may reflect a students' interpretation of their college experience. Thomas was able to discover how various characteristics of students may determine a student's decision to persist (Thomas, 2000). Certain characteristics of a student may affect the students' level of satisfaction with their educational experience, their academic performance, the commitment to the institution, and their persistence or willingness to continue until completion.

Certain student organizations exist to give support to a particular program of study or academic focus. Hartman and Hartman (2003) studied a specific women's organization, the Society for Women Engineers (SWE) and its ability to encourage women in their academic program and the profession of engineering. They found through analysis of data collected in a National Science Foundation funded survey of engineering students at a single university that the Society of Women Engineers provides a positive influence on the female students who participate (Hartman & Hartman, 2003). In addition they found that those women who choose to participate in SWE show greater commitment to the profession and a greater likelihood of completing their academic program of study (Hartman & Hartman, 2003). Comparably, in 2007, Hazari, Tai, and Sadler found that the presence of social support systems and networks positively impacted student's academic achievement.

Alternatively, Yin and Lei (2007) studied the participation of a group of hospitality students to discover how their extracurricular activities affected those students' academically. They found that the hospitality students, who "regularly participated in campus activities had a lower overall GPA compared to students who were not participating in campus activities" (Yin & Lei, 2007, p. 282). This less favorable perception of campus activities contrast directly to

Hartman and Hartman's (2003) study of the Society of Women Engineers. Both studies may provide interesting contrast as each relied data collection focused on a single university and data collected through a relatively simple survey instrument.

Conceptual and Theoretical Framework

In 1943 Abraham Maslow presented a paper entitled "A Theory of Human Motivation." In this paper Maslow explained a hierarchy of human needs that drive motivation. Within these needs appear the most basic needs of food, shelter, water or the physiological needs. Once these needs have been met Maslow progresses toward more complex needs such as a need for safety, belonging/love, esteem and self-actualization. The third need, Maslow's need for belongingness and love appears appropriate to understanding the experiences of sorority women at a STEM intuition as their organization provides an outlet for individuals to seek this need.

Maslow describes the need for belongingness as a "hunger for affectionate relations with people in general, namely, for a place in his group, and he will strive with great intensity to achieve this goal" (Maslow, 1943). This relationship with others connects an individual with the world around them and provides stability. Maslow goes on to express how important this need seems and that those who lack this need are often defined as having a "psychopathic personality" (Maslow, 1943). In order for an individual to fully develop and achieve higher levels of being, they must feel they belong and accepted. Without this need met, there becomes greater difficulty meeting the needs for self-esteem and eventually self-actualization.

Abraham Maslow is not the only individual to proclaim the significant importance of belongingness to human nature. In 1995, Roy Baumeister and Mark Leary found through empirical evidence support for the hypothesis posing that "the need to belong is a fundamental human motivation...more precisely, the belongingness hypothesis is that human beings have a

pervasive drive to form and maintain at least minimum quantity of lasting, positive, and significant interpersonal relationships” (Baumeister and Leary, P. 497, 1995).

Baumeister and Leary indicated the importance of creating and maintaining positive relationship as a fundamental motivation until they have reached at least a minimum level of social contact and relatedness with others (p. 500). They go on to explain how solidifying social bonds should produce a positive outcome for most individuals while breaking these bonds or not creating them should cause negative outcomes. Baumeister and Leary presented two main factors to belongingness; people need frequent personal contact or interaction with others; and people need to perceive that the relationship remains marked by stability and will continue into the foreseeable future.

Belongingness may provide insight into the way in which sorority women perceive the climate and experiences of college. Their desire to join and participate with a sorority may be evaluated in terms of their attempts to create social connections within a STEM institution. In addition, once members, how these women characterize their relationships with women in their sorority may be interpreted through the lens of belongingness theory. Baumeister and Leary indicated that “people who do not have adequate supportive relationships experience greater stress than those who do” (p. 508). This concept may be seen in how the sorority women perceive their environment differently as sorority women. Finally, in an atmosphere that has been described by previous researchers as a “chilly climate” for women, belongingness theory had provided evidence that just being a part of a supportive social network reduces stress and provides support even without explicit actions to do so (p. 508).

The concept of belongingness (Baumeister & Leary, 1995; Maslow, 1943) provides a lens by which to interpret data collected in this study and guide the questions of the researcher.

Many of the intrinsic values of participation in Greek life in some way relate to the relationships between students and their peers as well as faculty (Allan & Madden, 2006; Foubert & Grainger, 2006; Perna et al, 2009; Pike, Kuh, & Gonyea, 2003; Thomas, 2000). Positive relationships and the ability for students to feel accepted and they belong will drive their ability to feel the benefits possible from participation in the Greek system. Evaluation of data collected will focus on the degree at which belongingness plays a role in their perceptions of their experiences as a sorority woman at an institute of technology.

Gaps in the Literature

“Chilly Climate” research focuses on the general atmosphere women describe on campuses and in fields of Science, Technology, Engineering and Mathematics which are traditionally dominated by males (Allan & Madden, 2006; Duncan & Zeng, 2005; Ginorio, 1995; Hall & Sandler, 1982). This research discusses how women feel about this environment and the factors that may inhibit learning and growth in the field. In addition, this research has shown that women are often viewed differently than their male counterparts in these fields (Tonso, 1998). Although opponents of “chilly climate” ideas find that women are just as satisfied with their college experience and that women are as capable as their male classmates (Zhao, Carini, & Kuh, 2005; Huang, Taddese, & Walter, 2000). The research stops short of discovering how women deal with atmospheres that may feel “chilly” towards women pursuing education in the STEM fields and their perceptions of the “chilly” environment. In addition, research does not examine how belongingness through Greek participation may alter women’s perceptions of the atmosphere and if a “chilly” climate exists.

Research on the growth and development of students provides information regarding the importance of extracurricular participation for students. Women in particular who participate

outside of the classroom find opportunity for growth (Busseri & Rose-Krasnor, 2008; Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001; Foubert & Grainger, 2006). The research indicates that students of all races and ethnic backgrounds and specifically women who participated indicated a more positive college experience than women who do not participate in extracurricular activities (Fischer, 2007; Busseri & Rose-Krasnor, 2008). Other research indicates the importance that “real life” experiences has on student’s social and intellectual development (Kuh, 1995; Kuh, Hu, & Vesper, 2000). This research does not explore the individual students, and specifically, the sorority woman’s perceptions of her involvement outside of the classroom and how she perceive her involvement impacting her growth and development.

There is a great deal of research on Greek organizations and Greek communities at college and universities. Much of this research focuses on the value of the Greek system to students and colleges. This research indicates the dysfunction of the system through alcohol abuse, sexual activity cheating and academic integrity, and hazing (Pace & McGrath, 2002; Eberhardt, Rice, & Smith, 2003; Elkins, Helms, & Pierson, 2003; McCabe & Bowers, 2009; Pike, 2000; Nuwer, 2001, 2004). Previous research also investigates the lack of diversity traditionally found in Greek systems (Byers, 1997; Pike, 2002). Research also indicates the significant level of involvemnt outside of the Greek system by members of sorority and fraternities (Pike, 2000; Asel, Seifert, & Pascarella, 2009; Kimbrough & Hutcheson, 1998). In addition, conflicting findings suggest that participation in the Greek experience by women has a positive impact on cognition and academic achievement (Pascarella, Flowers & Whitt, 2001; Pike, 2000; Wilder, McKeegan, Midkiff, Skelton & Dunkerly, 1997; Lake, 2005; DeBard, Lake, & Binder, 2006) and other findings suggest a negative impact on academics (Asel, Seifert &

Pascarella, 2009; Baker, 2008; Schneider & Ward, 2003; Brown, Parks, & Phillips, 2012). This previous research provides a comprehensive understanding of Greek systems and the role that Greek participation may play on student social and academic growth and achievement, it does not address how the women in the sororities specifically describe their own perceptions of their experience. Additionally, previous research limits its scope to liberal arts and comprehensive institutions rather than focusing on the unique atmosphere of an institute of technology and the women attending these schools and participating in the Greek system.

Research on support relationships created by students in college indicates the importance these relationships have on the ultimate academic and social success of students as they progress through their studies. Some of this research indicates that the existence of formalized support system enhances their experience and allows for a greater level of success, especially in Science, Technology, Engineering, and Mathematics fields (Perna et al, 2009; Aluede, Imahe & Imahe, 2002; Duncan & Zeng, 2005; Hartman & Hartman, 2003). This research however does not expand into understanding how membership in a social Greek organization may provide support relationships or how the women within these organizations describe the relationships they have with other members and how these relationships provide support systems.

Though previous research provides a hazy picture of women in sororities and a hazy picture of women in STEM, the lack of focus on sorority women specifically majoring in the STEM fields and their experiences suggests a need for further investigation. Technical institutes provide an untapped resource of information for studying women in the STEM education pipeline.

Chapter 3

Methods

Qualitative research seeks to understand how people interpret experiences, how their world and environment are structured, and the meaning attributed to these experiences (Merriam, 2009). Questions asked through qualitative research seek to understand individuals and the situations under evaluation. The paradigm of qualitative research indicates that through questions, observations, and interactions a researcher can better understand the meaning of a situation rather than just the correlation and/or existence of a relationship between two or more issues as is discovered through quantitative analysis. Smith (1987) indicates that qualitative research considers the particular physical, historical, material, and social environment important to how individuals think and act. In addition, Creswell (2003) indicates the importance of qualitative research as it allows the researcher to grow and develop in detail an understanding about an individual or place.

Basic Qualitative Study

In order to best understand women's perceptions of their comprehensive experience as a sorority woman at a technical institution, a basic qualitative study allowed for gathering data and best understanding how these women "interpret their own experiences" and the "meaning they attribute to their experiences" as indicated by Merriam (2009, p. 23). Merriam (2009) and Smith (1987) explain that this becomes appropriate for usage in bounded systems such as research at a single institution. By using a basic qualitative study to examine the Greek women at the chosen institution and their experiences, this study allowed me to understand the women's perceptions of the general climate at the STEM institution, their perceptions of the climate for women, how

these specific women interpreted their experience as members of the Greek community and how they characterize the relationships they form with the women in their respective sororities.

Basic qualitative methods were chosen as the form in which to best answer questions associated with sorority women's perceptions of their experiences at a STEM institution. In formulating the research questions with 'how' Yin (2009) suggests that these questions are exploratory in nature and would best be answered with a qualitative study. Yin (2009) provides direct criteria for determining if a qualitative study is the best method for answering a research question; if the research question is a "how" or "why" question, or if it deals with a contemporary set of events over which the investigator has little or no control (p. 13).

Qualitative research allows us to establish an understanding of a complex issue or situation and can add strength to what knowledge exists through previous research. It allows an in depth analysis of a particular instance under study. The use of qualitative research allowed me to use multiple sources of data collection strengthening any argument that the researcher may be seeking to prove or understand. For this study, using interviews with individual sorority women, focus groups with small samples of these women, and data from literature and the web about the Greek system, provided a cross section of data allowing me to understand the comprehensive perceptions of the environment, the Greek system and the relationships the women form through their sorority membership.

For the questions established in this study, the desire to understand women's perceptions of their experiences, the general climate of the university, the climate for women, the Greek community and the relationships with the women in their sorority, all called for the use of a descriptive qualitative study. Very unique in academic focus, the chosen institution provided an excellent opportunity to better understand women's experiences and women's education in the

STEM fields using existing theory and literature to describe and explain the situation taking place at this institution.

Treating this study as a descriptive qualitative study allowed theory to guide the process of exploration and inquiry (Savin-Baden & Major, 2012). Data were gathered and analyzed in such a way as to avoid interfering with the actions taking place but to describe the situation and the interactions taking place. One advantage to this type of study is that it provides an opportunity to look at the situation holistically rather than from a limited perspective. A descriptive study allows a better understanding of existing conditions. A descriptive qualitative study, however limits the ability for the researcher to understand the relationship between ongoing actions. Descriptive studies do not truly allow for comparison or relational analysis between factors but instead permits an opportunity to describe current situations in accordance with theoretical perspectives (Savin-Baden & Major, 2012).

Research questions

As with all research, the methods were dictated by the research questions asked. Much like determining the type of case study best used to approach this case, the questions guided how and what methods were used, the data gathered, and the way in which data was analyzed (Savin-Baden & Major, 2012). Four questions guided this study:

1. How do these women describe the general climate of SPSU?
2. How do they describe the climate for women at SPSU?
3. How do the women describe being a member of the Greek/sorority community?
4. How do these women characterize their relationships with the women in their sorority?

This study endeavored to better understand women's perceptions of their experiences as sorority women at an institute of technology.

Site selection and rationale

The site selected for this study was Southern Polytechnic State University, a middle sized public institution in the southern United States. This particular institution proved unique as one of few institutions with a mission geared primarily toward the science, technology, engineering, and mathematics fields. As enrollment numbers struggled at many other state institutions over the last few years, Southern Polytechnic State University maintained slow positive growth and expects to see continued growth over the coming years. Having such a small population of females, the connections formed by women through gender specific organizations and activities indicated a desire by these women to seek out opportunities to connect with one another as they did not have the same opportunity inside the classroom to connect with other women that they might experience at other colleges or universities.

Understanding the history of this institution was significant to understanding the current atmosphere, the community in which the university resides, and the students who choose to attend. Southern Polytechnic State University was founded in 1948 through the efforts of the President of Georgia Tech at the time, Blake Van Leer (Bennett, 1997). As troops from World War II began returning home from war and returning to the work force, Dr. Van Leer observed that these individuals needed training to help raise the South into a more industrialized economy as opposed to the agrarian society that had so strongly dominated previously. The newly minted Servicemen's Readjustment Act of 1944—commonly known as the GI Bill of Rights—offered returning soldiers from World War II an opportunity to thwart a social and economic crisis that was present post World War I (GI Bill, 2012). After many years (1944-1948) of positioning,

bargaining, and compromises, Southern Tech opened its' doors for registration on March 24, 1948.

When Southern Tech began classes in 1948 they did so under the umbrella of the larger Georgia Tech. Ironically among the 116 students to first enroll for the spring quarter of 1948 was one young woman, Barbara Hudson. Georgia Tech however did not begin admitting women to regular classes until 1952 (Georgia Tech Living History, 2012).

In 1971 Southern Tech had evolved and grown in a manner which necessitated the ability for it to begin awarding 4 year degrees to its students rather than just Associates degrees. Pressure from the newly created vo-tech schools in Georgia along with growth in the state indicated that this need would benefit the state. Still under the auspices of Georgia Tech's College of Engineering, the move to the four year degree indicated the beginning of change for Southern Tech. Problems began to surface between Southern Tech's administration and their policies and those policies established by their "parent institution" Georgia Tech. With support from then Governor- Jimmy Carter, the early and mid-seventies became a time of movement on campus to separate from the parent, Georgia Tech, and form a separate institution. On July 1, 1980 this movement became a reality as Southern Tech assumed independence and begin to function as a new and separate state institution.

Today Southern Polytechnic State University, as it was renamed in 1996, serves approximately 5,500 students, including student representation from 36 states and 64 countries. In 2010, 946 female undergraduate students were enrolled along with 3854 male students (SPSU, 2012a). Of these undergraduate students, 181 males and 147 females are non-resident aliens, originating from outside of the United States. The institution remains in a state of consistent

evolution and growth. Over the past few years, they watched their enrollment grow steadily (SPSU, 2012b).

Subject selection and rationale

Participants were chosen with help from the student activities administrators and Greek life advisors in a purposeful selection to insure a broad-based representation of organization members. These advisors assisted in the initial communication to all groups regarding the need for volunteers. After initial communication, additional outreach was extended to the two Panhellenic sororities and one National Pan-Hellenic Council sorority currently active on campus. Members and student leaders of the sororities assisted with this communication in hopes of ensuring that a representative sample of women from each group to participate in the interviews and focus groups. By seeking representation from all three groups, all women were given the opportunity to voice their perspective in addition to women to encouraging participation which would enhance the racial, socioeconomic, and age diversity of the participants.

The researcher approached two types of sororities in hopes of including data from women in both groups. National Panhellenic Conference sororities currently include two chapters on campus and only one chapter of the National Pan-Hellenic Council sororities is currently active on campus. These two types of sororities differ in historic background and the collegiate expectation of their members. The National Panhellenic Conference sororities are most commonly associated with white and other non-black student members while the National Pan-Hellenic Council members are most commonly associated as historically black women's groups. Members from all three sororities on campus participated in interviews as well as the focus groups. Twenty three women volunteered to participate in the interview process and twelve

women participated in the focus groups with approximately seven women overlapping between the groups participating in both interviews and focus groups.

Data collection

As a component of a case study, multiple sources of information including focus groups and interviews were used to understand the way these young women feel about their university, themselves, and their social organizations and fellow members. These data gathering tools were used to obtain perspectives from individual women privately regarding their experiences, as well as providing the women an opportunity to speak as a group regarding their time as a student at Southern Polytechnic State University. Focus groups and interviews were chosen because of their ability to provide a cross section of opinions from various women as well as a chance for these women to voice their concerns, positive outcomes, and opinions as a group.

Interviews were conducted on 23 women from the three women's social Greek letter associations on campus. The groups have varied number of members available to study and this does cause some skewing of the data toward the perspective of those women involved in the larger National Panhellenic Conference organizations over the few women involved in the National Pan-Hellenic Council organizations. However, though few in numbers, the researcher was able to speak with and have the involvement of a greater percentage of those women from the NPHC organizations. Merriam (2009) explains the use of interviews when we "cannot observe behavior, feelings, or how people interpret the world around them" (Merriam, 2009, p. 88). These interviews allowed participants to share their views and perceptions of the Greek system.

Interviews were conducted on the campus of Southern Polytechnic State University over the course of one week. These interviews took place in the student center, which afforded a

central location for students living on and off of campus as well as providing a neutral location in which the students did not feel singled out or circumspect in their participation of the research. The students were asked to dedicate approximately one hour of time to the interview to ensure time for communication and adequate dialog between the student and researcher. Interviews were designed as semi-structured, allowing the participants the flexibility to express their perceptions outside of the confines of strict questions. The protocol designed for the interviews contained a starting list of ten specific questions which directly address the experiences of each young woman and how she perceives her time and interactions inside her social Greek letter organization as well as with the college community and the Greek community. Additional probing questions were added during the course of the interviews as needed to provide clarification and depth to the responses.

Although just a different form of interview, focus groups allowed each participant the opportunity to listen to the responses of others in the group and comment on those responses. The social element of this allowed the student participants to engage with one another on a topic they live each day but do not openly communicate about. Macnaughten and Myers (2004) describe focus groups as an opportunity for individuals who could talk about the subject in their everyday lives but do not, a chance to do so (p. 65). As explained by Merriam (2009), focus groups must be purposely selected to ensure that the data gathered accurately reflects the feelings and experiences of all members of the group. In addition, focus groups are best used when the subject being discussed is not one of a sensitive nature.

Focus groups were conducted on campus in the student center over a two week time period. This facility provided an opportunity for comfortable communication between students and open communication with the researcher. Utilization of meeting spaces that allowed privacy

for the groups as well as familiar territory for all students encouraged comfort with one another and the researcher. Much like the individual interviews, students were asked to dedicate at least one to two hours of time toward the focus group. In addition, the structure of the focus groups remained semi-structured to insure that the students stuck to the topic and issues being studied yet were given the freedom to explore ideas and reflect experiences to one another and the researcher. Data from the focus groups was collected through note taking as well as through audiotaping.

In addition to interviews and focus groups, document analysis was used to evaluate policies and materials promoting the Greek-life experience and recruitment. Mining data from public sources, such as the internet and recruitment materials distributed to students, allowed the researcher to better understand the public image and public personality of the Greek life system as advertised by the institution and the women to the non-Greek and outside world. A request was issued to the Greek advisor for any additional materials not available through the website that may provide perspective on the Greek system at the institution. The advisor provided a guidebook given to all incoming freshman that described and promoted the Greek life opportunities for men and women on campus. This information provided insight into how the institution has framed the Greek-life experience and better informed the researcher as to the expectations of the women as they enter the system. Below is a chart outlining the research design for this project which consists of twenty-three interviews, three focus groups, and document analysis of university policies, procedures, and promotional materials for the Greek life program.

Table 1 <i>Breakdown of Data collection</i>				
Method	Population	Frequency	Date	Protocol
One on one interviews	23 Active Greek life women	1 interview for each woman	April 2013	A
Focus Groups	3 groups of 4 women	1 one hour session for each of the 3 groups	April 2013	B
Document Analysis	Website and Promotional Materials	3-5 Hours	April 2013	

Data collected through interviews as well as focus groups was transcribed by the researcher and compiled into transcripts ready for review and evaluation. Each transcript was reviewed in conjunction with audio tapes collected and/or compared with notes taken during the course of the interviews and focus groups. The opportunity to review transcripts prior to the analysis of data collected was offered to all participants. The participants did request a summary of the findings provided once data was compiled and evaluated. Once the researcher reviewed and verified the data as accurate, analysis commenced on the content of the transcripts. Data collected through document analysis was derived from the content of notes taken in observation of materials, copies of websites treated as transcripts, and copies of any available brochures or handout materials. In order to ensure accurate information, member checks with individuals from the student life and Greek life offices took place in order to review materials and ensure that the materials used provided up to date and accurate information on the various groups.

Data analysis

All data collected through interviews, focus groups, and document analysis were compiled and reviewed in accordance with content analysis. Information collected was coded according to a set list of symbols established after reading through the data and determining reoccurring themes and concepts, allowing the retrieval and examination of all data units referring to themes related to the study (Merriam, 2009; Rubin & Rubin, 2005). Ongoing revision of categories took place upon further readings of the collected transcripts and multiple review of the data beginning with an inductive and shifting toward deductive readings (Merriam, 2009). Open coding and grouping together of open codes into themes allowed common themes and categories to dictate the final analysis of the data collected and provided a way of describing the phenomenon in all data gathered (Cavanagh, 1997). In addition, using what Saldana refers to as ‘in vivo’ codes, the languages used by participants was preserved in order to discover answers to the research questions (Saldana, 2009). The consistent and repeated presentation of common themes and ideas among the multiple sources provided an opportunity to better understand this small group of women at a polytechnic institution and understand their perceptions of their experiences at Southern Polytechnic State University.

Theoretical Framework. The understanding of the psychological need for all humans to seek out belongingness through creating and maintaining positive relationships guided the interpretation of common themes and ideas expressed by the women and the content of the media analyzed. In analyzing clustered and connected concepts, ideas were reviewed with an eye for better understanding how the women expressed or articulated actions or behaviors that created or prevented feelings of belongingness among the women and the campus community. In an attempt to gain greater understanding of how the women of the study characterized their

fellow sorority members, concepts of relationship establishment and building obtained prominent roles in the interpretation of the data. Further analysis indicated the women's expectations of their sororities, the Greek community and the campus for establishing their own sense of belongingness.

Ethical Considerations

In this study, I served as the main source of data collection and interpretation. As the face of interviews and leader of focus groups, the female researcher sought to provide an open atmosphere of communication between the study and the female research participants. I felt that my presence did not hinder open communication between participants of the focus groups and that by being female among a group of females created a level of comfort and established a more fluid communication to achieve the best results in understanding the students' experiences as Greek women.

Each interview participant had complete confidentiality through a coding system kept private and under lock and key by the researcher. Each individual had the option of declining in their participation and was provided a copy of the final research once completed. Women had the opportunity to opt out of digital recordings and have the interview recorded solely through hand written notes. No women selected this option and all agreed to audio recording. Interviewees were coded according to pseudonyms that disguised identifying information such as name and organization. Each Greek organization that provided participants was also provided pseudonyms to avoid framing one particular group in a more positive or negative light than the others. All coding information was maintained under lock and key in a third party location with limited access provided only to the researcher.

For participants of focus groups, additional pseudonyms allowed for anonymity for all members of the groups. Numerical pseudonyms were provided to each focus group participant to best differentiate her participation in the focus group rather than the one on one interview process.

The researcher does have another connection to the institution which had to be overcome and increased the time it took to establish a level of trust between researcher and participant. Currently the Director of Student Life supervises a Coordinator/advisor for Greek life; this director is the researcher's spouse and made initial communication between the Greek women and researcher a little discomfoting. The researcher desired to provide the women an opportunity to provide feedback on their own system and ultimately the Coordinator/advisor, Director of Student Life, Dean of Students, and Vice President of Student affairs without disclosing their personal identity to these individuals.

Quality Considerations

Rich, thick descriptions of the data were used to ensure that data provided sufficient information to inform conclusions within the context of the research questions. Accurate transcripts and note taking were crucial to ensuring my ability to provide this thick description in the conclusions and findings of the study. As stated by Stake (1995), triangulation becomes important to “gain the needed confirmation, to increase credence in the interpretation, to demonstrate commonality of an assertion” (p. 112). Various forms of triangulation were used in order to ensure this accuracy including data source triangulation and member checks.

Data source triangulation allowed the researcher to “see if the phenomenon or case remains the same at other times, in other spaces, or as persons interact differently” (Stake, 1995, p. 112). This type of triangulation allowed the researcher to compare themes, ideas, and

concepts expressed in the individual interviews with the opinions and expressions of the students in the focus groups. The manner in which students expressed the same ideas varied between the interviews and the focus groups, but by reviewing the content of these ideas and comparing them between the two processes, more credence can be given toward concepts and ideas brought forth through the duration of both methods. In addition, data source triangulation allowed the researcher to discover which particular themes were not of priority or applicable to a larger group yet may arise at the individual level.

Member checks were used throughout this research. These member checks were limited to allowing research participants the opportunity to review common themes and ideas that arose during the course of the interviews, focus groups, and as they appear in the public literature and documents used in analysis. Participants were allowed to request copies of their own individual transcripts, and participants were asked to review concepts as derived by the researcher. By allowing participants the opportunity to review commonalities and themes, the researcher hoped to gain additional insight as to the content of the web and documents analyzed as well.

Delimitations

Delimitations to this research included the limited number of women participating in a social Greek letter organization at the chosen institution. The small population of women at the institution under study limited the options for participants to a small pool of qualified students. Southern Polytechnic State University currently has approximately 70 women actively participating in their social Greek letter organizations, and a total population of women around 1250 (SPSU, 2012a). This small population at a single institution does not provide the ability to apply experiences to the larger population of women at technical institutes. In addition, the size of the female Greek population at this institution remains comparatively small when compared

with the size of the overall female population. Additional delimitations included access to students during times when they indicated availability and obtaining their participation to share their experiences with the researcher and, in the case of focus groups, with one another.

Chapter 4

Findings

The purpose of this qualitative research study was to understand women's perceptions of their experiences as sorority women at an institute of technology. How these women perceive their experiences provides insight into the climate of this institution as well as the climate specifically for women. Additionally, the ways in which they describe their experiences with the Greek community and the women of their sorority allow us to discern how they characterize their relationships with the women in the community and their sorority. For women in the STEM fields and women attending colleges and Universities like Southern Polytechnic State University, this research helps us better understand how we may be able to support women when they are the minority of the population.

This research hopes to discover how this particular group of women, the sorority women of Southern Polytechnic State University, perceives their participation in a social sorority. In addition, how they describe the general climate of SPSU, how they describe the climate for women, how they describe being a part of the Greek community, and how they characterize their relationships with the women in their sorority. Obtaining better understanding of this small population should allow administrators who work with this population, as well as those interested in the recruitment and retention of women, an opportunity to understand their experiences and how those experiences contribute to or restrict the ultimate success of the women they serve.

In order to paint a thorough picture of the experiences of sorority women at a polytechnic institution, data was gathered from print materials distributed to potential new members,

interviews with the women and through small focus groups used to discuss their experiences as a sorority woman at their institution. The materials and the opportunity to speak with women in sororities at Southern Polytechnic State University provided an excellent picture of the sorority experience for these women. The language used in these discussions along with their dispositions and enthusiasm for the research, they describe experiences inside and outside of their sororities. Through the evaluation of media about these women and conversations and meetings directly with the women, the presentation of concepts and themes was determined through the sorting and coding of their language and descriptions of their experiences.

Two large overarching categories of findings can be gleaned from the data collected. The women's perspectives of the Southern Polytechnic college climate and their personal reflections of the climate specifically for women provide the first category. The second category derives from the women's descriptions of their sorority experiences, this includes their perceptions of the Greek community and their descriptions of the specific experiences of being a member of the Greek community on campus, and their descriptions of the relationships formed with the women in their own respective sororities.

Demographics of the participants

The women participating in this study come from various educational, ethnic, and experiential backgrounds. The experiences of these women ranged from traditional first time freshman to women who had transferred from other institutions, ending up at Southern Polytechnic State University. Pursuing various educational paths, these women's interests widely varied, from degrees in: engineering and engineering technology; English and professional communications and psychology; business and accounting, the media arts, game design and information technology; architecture and construction management; apparel and textile

technology. In addition to their varied educational pursuits the participants range in age from first time 18 year old freshman to middle twenties in their fifth year of their bachelors program.

The SPSU College Climate

The women interviewed and those participating in the focus groups indicated a strong opinion of the college climate at Southern Polytechnic State University (SPSU). A few women described their expectation of the basic college atmosphere stating “I would think that [being in college] would be getting involved and just doing as much as you can.” (Kristy) or a more in depth description sharing their ideals on what the college experience should be:

Living on campus, going to class, eating in the cafeteria every now and again, having a small group of friends...that’s typical, that’s doing the bare minimum, that’s making the grades, that’s getting to know a couple of people...so typical is not bad but, I think, you definitely need to reach for the extraordinary so that you can get to the place that you want. (Amy)

This idea of the ideal college atmosphere often makes a quick appearance in the conversations of the women as they frequently described SPSU as “lacking the college experience” and how it “doesn’t offer a normal college experience” or even more harshly, how it “doesn’t have a college experience” (Woman 4, Misty, and Anna). The way in which most of the women do described SPSU provides insight as to the environment in which they must function.

Typical SPSU. Most of the women described SPSU as different from their expectations of the typical college environment. Hannah, a sister of Sorority A described the typical college experience of students at SPSU would:

Probably involve your dorm room, video games and a lot of junk food and a lot of classwork, a lot of homework....going out on Friday nights and having fun with people and Waffle House runs at 2am....little things like that.

Much like Hannah, Erika described the typical college experience at SPSU in a more academic perspective:

Go to class, go to class 5 minutes before you need to be there, get in there, study, don't know what the teacher is talking about, leave, study some more, all-nighters – is kinda what it is for most of the people here.

Hannah's and Erika's descriptions of SPSU provide insight into their perceptions and expectations for college.

Observations of the SPSU college climate often drifted into a synonymous blend with their perspective of the commuter student. The women often blended the climate for resident and commuter students into a shared experience. It was a common theme among the women to explain the climate for non-Greek students has having a “commuter” feel sharing that many of the non-Greek students give the impression that they “just come here for school” (Cathy). In addition Misty went on to describe the commuter experience:

I can see...it's just very class, dorm, class, dorm or class, home, class, home cause it's more like a commuter school than like an on campus housing school...it's just school, school is the only thing then they go back home.

These observations also extended into their own previous experiences as commuter students and their experiences prior to sorority membership as Sharon described below:

When I wasn't involved in a sorority I used to go home, come to school, go home, come to school, go home. I didn't have, well I barely had a social life and I wasn't involved at all.

The women did not limit using their own personal experiences to describe the SPSU college climate to comparing their experiences to that of commuter students; they also expressed sentiment regarding the quality of the college climate at SPSU for the general population of students.

Other women, like Stacy, used their own experiences prior to joining a sorority to describe the climate as "boring" stating:

"I would come to school, go to class and then I would have like two hours in between of nothing to do and I'd go to the game room, it would have nothing...but campus like was so dead at Southern Poly, it was definitely very boring and I couldn't find many friends that I wanted to go hang out with cause they were all men, how was I supposed to hang out with men all the time".

In addition to the description of a "boring" atmosphere the women also indicated what they felt was a "lost" or friendless experience as Carol, sister of sorority A describes "I just kind of felt that every day I saw different people basically and I just got lost in the numbers." Kristy, a sister of sorority C shares this sentiment in her own experiences, "I went to class and went straight home. But I never made a single friend." Sorority A member Stacey described above in greater detail her own pre-sorority experience, her boredom and desire to find friends that eventually led her to sorority life.

The differences between how the women perceived the feelings of non-Greek students and Greek students became more apparent as they continue to compare the experiences and

began to explain their own choices to join the Greek community at SPSU. Joy compared non-sorority women in her freshman dorm with her own experience in describing the Southern Poly experience:

I just noticed that they'd spend a lot of time in their rooms or they'd go home every weekend and they wouldn't be very involved in much of anything. But the ladies that are Greek are definitely involved more, they're on campus, they're around, they're a known face. If I didn't go Greek, I'd probably be one of those students that would just sit in my room all day and not really enjoy being in school because I didn't have a lot of friends.

This overt comparison of Greek and non-Greek women explains the significant difference that the women felt between their own college experiences and those of women who chose not to participate in the Greek experience.

Like a Unicorn, being a woman at SPSU. During the course of the interviews and focus groups, the absence of a large population of women could not go unnoticed or noted by the women; "I knew this school was predominantly male, but I didn't know how bad it was." (Cathy). This sentiment was shared by many of the women as they described their perspective of being in the gender minority. Sharon a senior in Sorority C and Engineering major described her experiences; "Since this is a small school, like 20% women, and before it used to be less, so whenever I went to class were guys, a whole bunch of guys, not a lot of girls to talk to in my classes" (Sharon).

Erika, from sorority B saw the challenges associated with being female, on a campus dominated by men, and for the women studying for traditionally male dominated fields, "I feel like we have to fight harder here because there's only so much of us, so not only are we competing against ourselves we compete against the men" (Erika). The women also articulated

their experiences and perceptions of “sticking out” and the challenges associated. Stacey, sister of Sorority A provided a humorous description of this experience:

Being a woman, I'm looked at like a unicorn, I kid you not. Because there would be times I would be the only girl in class, in the entire class of 30 people I would be the only girl... you know as soon as you walk in through those doors, everyone's like (look of shock), it's a girl.

Another woman, Misty describes this same feeling but provided a greater sense of how it made her feel initially, “It's really nerve wracking whenever you first go in, cause especially some of the freshman classes...it's like I'm the only girl” (Misty). Woman7 from Focus Group B also expressed the unique experience of being a woman on campus and how she felt that she was perceived; “we get a lot of attention, they look at us as though we are from another planet”.

The act of standing out for some is a challenge to their ability as they feel their ability represents women. Erika indicates that this position is “Hard, it's hard, you really try to stick out, you really try to show them that I can do it just as well as a male can do it” yet she looks at the positive perspective of having to stand out,

I think it really pushes us as women here at an engineering school to do more and be more...even once we graduate we're still a small part of the field that we're graduating in to get out there. I'm happy that a lot of times when I do hear about some of my friends getting jobs at some of these places that are mostly male, I guess that's like a real big accomplishment, 'cause you're opening doors for somebody else behind you.

Discrimination/Judgment. A few of the women participating in the study, though not the majority, describe the climate as a woman at SPSU in terms of the judgment they felt they

receive from the faculty or males in their class. In particular, Tricia described her experience in terms of standing out and the perceptions of being judged in her actions within the classroom.

I feel like everyone was staring at me and waiting for me to do something girly or something, so I had like extra focus and stuff, cause I felt like they were judging me because I was the only girl.

Tricia's perceptions of being judged led her to work harder in her coursework. But for a few of the women, this judgment provided a different perspective.

For Chloe, the perceptions of being judged implied not only standing out but an implication that the faculty assumed a lack of ability from the women in their classes by their sheer presence.

We have a lot of sexist teachers at this school, whether or not the faculty knows that or not. They see a woman in their class, they're like 'oh well, they're just here to get their MRS degree,' aka – get married.

The idea that she was only at the institution to find a husband, gave Chloe a visible sign of displeasure as she shared this concept with the researcher. However, it must be noted that Chloe's experiences feeling that the faculty blatantly expressed sexist perspectives is an outlier of the total women's experience at SPSU.

Of the women who commented on the negative perspective many of the males on campus have towards women, a common attitude prevailed in the interviews and focus groups as women expressed ideal such as "boys are just boys" (Woman1) and "[we] can still do what a guy does" (Anna). Kristy described the attitude the males on campus, specifically in the Greek system have toward women:

I feel like sometimes we're looked down upon a little but boys are just boys and they will let you know that you are a girl and so we do get picked on a little bit...they don't think we're capable of competing in things like Greek Week...we're not going to win but it sucks to be put down to that level. .

Though she expressed dismay at their feelings, the common perspective and lack of denigrating effect the comments and actions have toward the women was apparent through her and other's expression of men's attitudes as "silly" and the eye rolls expressed as they described their encounters.

Advantage. Though some of the women expressed clear comments and experiences of judgment or discrimination based on their gender, other women expressed climate of perceived benefit in being a part of a small population of women on a male dominated campus. One woman expressed how she felt some men on campus perceive being a woman as advantage:

Sometimes guys think that because you're a girl you're going to get a better grade than them for some reason, but actually professors don't do that, they do not because you're a girl give you a better grade, they're fair with their grading. Other guys think that girls get whatever they want because other guys would do their work. (Sharon)

Sharon went on to explain that she felt this was not true and that she had to "work just as hard" for her grade as the men, but she was also dealing with her male classmates perceptions that it was easier for her to do well academically because of her gender.

Similarly, Stacey described her own perception of how easy it would be to take advantage of the very opportunities expressed by Sharon, "Most of them are that socially awkward boy who's just like, girl? I mean I don't actually abuse that but you know it does kind of work to my advantage sometimes". This idea that potential exists for women to take

advantage of their position as a minority was expressed in Focus Group B, by Woman 6 in her description of what it was like to be a woman at SPSU; “open doors and free stuff.” In addition Sharon alluded to utilizing the often shy nature of many of the males in her class towards women as a way to get needed assistance or help with her academics. Woman 5 shared this prospective, “in the first few weeks they are so amazed that there are women, and they open doors for you and are very helpful.”

Hannah shared that “being a woman here is like being a piece of meat in the middle of a lion's cage, it's creepy and odd and kinda a self-esteem booster if you thought you weren't like pretty or something” she felt that the uniqueness of being a woman on campus may not just benefit you academically, but may also raise your self-esteem. The idea of a rise in self-esteem was shared by other women as they illustrated that the level of competition and their knowledge that they could compete with the “guys” and that the women at SPSU are not weak.

I feel like the few girls that are here are willing to go, step into a field that's dominated by mostly guys, cause that's what my field is, and you feel like you can hold your head strong and even though this is majority of guys, a woman can still do what a guy does.
(Anna).

In addition, having so few women on campus,

A lot of time we don't have a lot of things in common but at the same time we do have things in common cause we're all at an engineering school which is usually a male thing with engineering, but with everyone here we're proving that wrong. So we do have something in common, so that's like the most important thing. (Sharon)

Sharon described the bond created because they are all women, they are all successful, and they are all standing out which unites them together with a common purpose, making them stronger as a whole.

SPSU Sorority Experience

Being Greek means a great deal to those who belong to the community. There are some aspects to being Greek that the women participating in this study, along with the media pieces, express as commonalities that stem from being Greek rather than specifically a Southern Polytechnic State University experience. Their descriptions of these experiences provided insight into their perceptions. In addition, how their sorority participation altered their college experience from that of the traditional SPSU student.

All of the experiences the women described both as a student as well as a Greek woman began to form a picture allowing us to understand the women's perceptions of their relationships with the other women in the Greek community. As these perspectives came together, the larger picture of what it meant for these women to be a Greek woman at SPSU sharpened and what the relationships they form through participation meant to the women. For these women, their experiences were not defined by being just a student at SPSU or just a Greek woman, but specifically being a Greek woman at this unique institution. They identified experiences, expectations and challenges associated with being Greek at SPSU by sharing their experiences and perceptions of being a part of the Greek community, and the sorority system, the connections they form in the community as well as perceptions of being a sister and the relationships created specifically through their own individual sorority.

Because I know people. The women in this study often described the community as providing them an opportunity to meet many new people and created an instant support network

that provided contacts and helped them grow on campus. In particular, the women described how the system, in addition to their own individual sororities, provided a networking opportunity on and around campus. Additionally, by being Greek at SPSU, the women felt their opportunities to grow as leaders were greater simply because they were a part of the Greek community.

Networking. In addition to leadership opportunities and development, participants discussed social networking provided through their participation in the sorority and Greek community. This emphasis on networking was shared by women in all three sororities through the focus groups and the interviews. The women regularly discussed how the sorority has helped them to build connections around campus and in the community. For shy students such as Tricia, sorority sisters provided an outlet to meet others on campus in a non-threatening way.

It helps someone like me meet people cause I'm not good at meeting people so it's really helpful when one of my sisters say 'T, this is this person' and then I know a bunch of people even if I don't go to their parties and stuff, I still see them around and they say 'hi'...Just wherever you go on campus there's someone that you know and that will want to talk to you.

For women like Woman6, introductions to new people allowed her to make connections, and helps her feel as though she knows many people, "with a sorority even I get introduced to other girls and fraternity guys so I know a lot of people on campus because of it". It's not just knowing just any person around campus that the women described, often they spoke of knowing other people in the community and in their own sorority nationally/internationally.

When asked about the strengths of the Greek program, Amy responded – "networking, absolutely; building that bond of sisterhood and brotherhood among your peers, because it opens your eyes to a lot of things that you probably before didn't see". Sasha also explained these

relationships formed with others in the community because of membership, “It's just a bond that we do have and I guess networking too cause you meet so many people wherever you go”. Erika also explained her own perceptions of the networking in that membership provides a fast track to meeting and getting to know people wherever you go, “I ran into somebody and this person knows this person, you network so fast and don't realize it”. These networks and relationships formed with community members and fellow sisters provide not only opportunity to know people but as described by many of the women, other more tangible opportunities.

Finding opportunity. Some of the women through their own experiences and expectations of the sorority experience expressed tangible results of networking through the sorority and Greek community. Carol explained how one of her expectations for membership was the opportunity to network now as well as the doors that networking might open for her in the future, “I definitely thought it would give me connections once I graduate as a little leeway as to getting, help getting a job”. In fact, another woman –Kristy described how her sorority membership already provides opportunities that may expand once she graduates.

One thing [I gained], I got asked to work...one of my sister's mom runs a bank rec company or something like that. They concentrate on bank reconciliations and she asked me if I would be interested in a full time job there this summer...if it wasn't for the sorority that would never have happened.

Not only did Kristy receive offers for employment, another woman Cathy shared how her dream job may eventually be possible because of connections established through the sorority, “I found out that the Vice President is a [member of her sorority] and she even said for me to let her know when I put my application in and she would be sure to look at it”. Another woman, Joy explained

how her role in the Greek community connected her with college staff and she believes these connections opened the door for her nomination in a local community program.

[Someone] wrote me a recommendation for the young Cobb youth program...I was able to sign up for that, I believe the email said he picked about 20 students on campus and I was fortunate enough to be one of them because I'm so active on campus and because I'm a Greek leader.

Not only did membership potentially open doors for Cathy and Joy, but for Kristy, it made her want to open doors for others,

I've also worked at a tax firm doing individual tax returns and I'm thinking about one of my sisters, I'm going to graduate so I'm not going to go there next tax season, so I'm probably going to be doing that for one of them, asking one of them if they want to go do it.

The willingness to open doors for other sisters and community members exemplified the perception by other women that women without this system may struggle to make similar connections.

The connections and networking opportunities become apparent for some long before graduation. Anna expresses her own perception in obtaining on campus employment and the benefit of being Greek in that process.

I think that a girl that isn't in a sorority, I feel that they might have a harder time trying to get an on campus job, unless they personally know the person or you have someone that can get you in there.

This perception of on campus employment obtainment is similarly shared by Stacey as she discusses her own experiences with the Universities' ambassador program and how her

perception that her contacts and well as other developmental benefits of sorority participation proved beneficial when seeking an ambassador position,

I just think that being involved and the networking that I've got already from being in a sorority, I got to be an ambassador because I knew people in the sorority, I guess just meeting everybody, being involved, putting yourself out there, maybe it's out of your comfort zone maybe it's not...employers like that I guess

The belief that benefits result from the connections the women make while in the Greek community provided an excellent reason for many women to participate in the culture and system. However, for many of the women, the strongest attribute to the Greek experience was the establishment of more personal relationships and a bond between women.

Leadership. Most of the participants expressed that their participation in their sorority benefitted them by teaching them leadership skills and providing them with opportunities to develop and grow as leaders within and outside of their sororities. In the process of developing into leaders, many of the women expressed their own surprise at their willingness and ability to lead. Sharon shared how she never expected to be a leader but how over time in the sorority she grew to know that she could lead.

When I went to my first chapter as a freshman I thought I don't want an exec position or any position in the sorority this looks so difficult, I don't think I'm going to have time for it...at the end of the day I ended up I want this, It's fun I want do it, I know how to do, I know I can improve things, that's why you want to take a leadership position.

Another woman expressed how her sisters had shared with her in a time of frustration that “you're going to be upset until you find your position or your place in the sorority, what you should be doing and so I mean it's hard to find your place” (Sonya) and how she now

understands what they meant as she has found her own leadership niche. Denise explained that her sorority participation not only allowed her to take on leadership opportunities within the sorority but opened doors for other opportunities outside of the Greek community,

But the leadership roles...I'm pretty sure I got my job because I was in _____ and I was, they saw that I was active on campus and I'm pretty sure that's how I've gotten the RA job, the orientation leader job.

The leadership doors opened by their sorority participation not only has provided these women with “lines for their resume” (Woman9) but also helped them develop and grow as leaders for their sorority and their community.

Michaela shared her delight in discovering that the sorority experience encouraged leadership participation and that she would be able to “step up” her leadership skills from high school and progress into more complicated and important roles,

I like that I could come from high school and step up a level and still be going to classes, still working and having the new member orientation chair and now I'm the membership vice president, so I've got that role now, it's really nice to see how I can move up and see what leadership skills I actually have.

The opportunity to grow stronger leadership skills helped Kristy feel that she has grown up by being a leader, “I grew up a lot I feel like this whole time. I did things I never thought I could. I [ran] Greek week this year...and I was like ‘Holy crap, I did that’ you know”. Anna shared that her leadership opportunities have taught her about the real world,

This is the kind of stuff you will have to face in the real world. It has taught me that there are times when not everyone is going to agree with you, it's always going to be hard to

get people to actually want to do the stuff that you need to get done, but it has taught me to always think with a positive attitude and eventually they'll do it.

As a leader, dealing with a variety of individuals, personalities and needs helped create a strong perspective on what is important. Marilyn describes what she has come to realize through working as a leader with such a variety of individuals stating “the most important thing is being able to lead for a purpose and being able to pull things out of different perspectives so that it can be an even closer perspective for other people”. While Misty indicated that “growing up” in leadership for her meant learning “to make decisions you know people aren't going to like but you know will benefit the chapter in the long run, stuff like that”. Most of the women who expressed the perspective that their leadership growth and potential was a direct reflection of their sorority participation and membership are women who have held leadership positions inside and outside of their sorority.

Being a Sister. Being a member of a particular sorority means having strong connections and ties to a particular group of individuals. Sorority women form bonds through common goals and rituals for their organization. In the process of recruitment women and sororities mutually select one another for membership. These relationships formed through sorority bonds were described by the women of this study in terms of the stereotypes associated with being a sorority woman, their perspectives on academics and their perspectives on the individual and group relationships with other women.

Stereotypes. One particular challenge a few of the women described was the way in which they must fight against the stereotypes often lodged at them as sorority women or has Tricia described it, the “stigma associated with sororities”, in particular, the stigma of negativity that often comes with media portrayals of the sorority experience. Kristy expressed her own

dismay at this by stating that her sorority experience, “it’s not what you see on TV”. For some of the women, they admitted that had their own perceptions of sorority women. Maria provided an example from her own experience and admitted to her own prejudgment of what sorority women were and how she realized that these stereotypes were not appropriate for SPSU sorority women:

I had the negative stereotype whenever I first came on campus, I was like, they're all going to be blond, they're all going to be blue eyed, they're all going to be giggly and all that kind of stuff and they're going to be obsessed with painting their nails, doing their nails whatever, not really anything concrete and real. But then when I met some friends that wanted to go through recruitment, I was like these girls don't fit that criteria, why would they want to...I was kind of interested in going out and going through recruitment with them and see, and then once I got there and saw that both of the sororities really weren't like that on this campus, maybe they are on other campuses but I don't think they are after going through recruitment and meeting other chapters and stuff like that. That's the negative stereotype and that stereotype isn't really there anymore.

While Maria fought her own perceptions of the sorority women on campus, Stacey described the continued battles she fights against stereotypes of the type of women join sororities.

One of my good friend thinks I've turned into the kind of person that sleeps around with everybody just because I joined a sorority...and she's one of the people I was friends with my freshman year when I wasn't in a sorority, but she knows how my college journey has been going and that's definitely a negative side of it that people, some narrow minded people always think these things, it's unfortunate.

The stereotypes the women described permeating campus characterize the women of the Greek community negatively, these stereotypes doubt the intelligence of these women.

A few of the women who indicated dismay regarding the negative perspective and judgments of sorority women expressed how they personally have felt their intelligence questioned solely because they might wear Greek letters, “Being a sorority girl, I was definitely looked at as being dumber than other people” (Woman8). Tricia expressed her own worry about how she is perceived because of her sorority status, understanding that everyone does something stupid now and then, her concern that her actions might perpetuate negative thought regarding sorority women was evident.

It’s probably just me being paranoid but sometimes I feel like if I do something stupid then they are like ‘oh, it’s because she’s in a sorority’ and I’m like ‘wow, I wish I didn’t wear my letters today.

However, Tricia and others, such as Sasha, indicate their pride in “proving that we are just as good” and enjoy breaking the stereotype mold and expectations.

I feel like I am doing a good job of representing my sorority because I’m taking engineering classes and I feel like that way they’ll see that ‘oh, these girls are smart’ in any hard classes...I feel like whenever I wear my letters to statics or something I’m giving a good impression of us.

This desire to “show that we are not dumb” (Woman11) more closely aligns with the data provided by the Office of Greek Life through the Greek Book (2012) which indicates that Greek women do very well academically and frequently exceed the GPAs of non-Greek women.

Stereotypes, as described by the women, apply not only to the individual women of the Greek community, but to the organizations as well. This included describing the NPC sororities, “one is ugly and the other is loose” (Woman3) or as Sharon stated, “my sorority has the reputation of being the boy sorority and the other sorority has the reputation as being the slut

sorority”. The women’s descriptions of chapter stereotypes were not limited to the NPC sororities as an NPHC member Amy shared, “People think that NPHC is only for black people. No, it’s not. We have chapters in Japan, it does not matter, I have sisters everywhere and that’s amazing to me”. Sonya shared why she believes that the chapter stereotypes perpetuate, she described how she believes the women cause part of their problems, “You’ll have one girl from my sorority hate on the other sorority, and then you have one of them hate on ours, and you know people hear it. So they think we’re just a bunch of catty women”.

Academics. Conversations with any college student usually begin with questions regarding programs of study. With sorority women this conversation began no differently, however, when specifically focusing on the sorority experience the conversations quickly moved towards the way in which the sorority membership and participation affects grades and the academic processes. In the course of discussing academics during interviews and focus groups as well as examining promotional materials for the Greek life program, conversations and observations were categorized in two ways, “pushing me to be better” or causing “grades to crash”.

Push me to be better. In the 2012 Greek Book given out to the Freshman of Fall 2012, academics are a large focus of the promotion of the Greek life experience. In it are described academic resources, study sessions, scholarship awards and an entire page of the manual dedicated to the GPAs and academic achievements of each Greek chapter. This focus on academic achievement spilled over into women’s descriptions of their own experiences within the Greek system. Some described the ways in which their sorority or sorority sisters have provided help or support to meet academic goals such as transfer student Cathy who described her own academic experiences with her sorority:

[My sorority] definitely helped because I came in on academic probation. They kind of gave me a grace period because I had a very bad semester at [my previous institution], and they were like everyone has one bad semester. But this semester I have all A's and B's cause I'm striving to get off academic probation and just to make sure that my sisters don't see me as someone who is pulling down our GPA as a whole.

Other women described the way the sisters helped one another with class selection or finding the right academic opportunities on campus. Woman12 from Focus Group C described how her sisters have assisted her in selecting classes when she shares that "I like having sisters that can say 'don't take him, he doesn't like girls' or 'don't take her because she's going to look down on you because you're in a sorority'". Joy describes how her sisters helped her to achieve by working together:

They definitely push me to have better grades. We work with each other, we have study hours, study buddies and we ask people like 'hey, how are you doing in your classes, do you need help, we can find a sister than can help you, or somebody else in the Greek community that can help you'.

The aspect of academic help that appealed to Sonya was the opportunity her sisters provided to "help you get into any of those organizations that like honors or society of women's engineers" that may provide a level of academic prestige or support. While Woman9 in Focus Group C described how "whenever you need a study partner...everyone is always there for you".

Providing assistance in learning or studying was not the only way in which the women described their sorority and sisters promoting academic achievement. Others described a level of positive pressure to be successful so the sorority would preserve a positive academic reputation

in the community. Carol described her own desire to do well academically in terms of the faculty expectations because of the sisters that have come before her.

I definitely feel a little bit more pressure 'cause my teachers expect me to be better because they've had sisters in their classes before and they know they're awesome...but I feel they expect more from me but that also makes me sort of up my game.

Another woman described how she perceived academics as a part of what the sorority strives for, "You have to stay on your academics; a part of the sorority is scholarship, so that always comes first not matter what." (Sasha). Erika shared how her sorority participation "pushes me harder" she felt that academics are a way in which the women represent their sorority, and at an institution that is academically challenging in order to "represent your sorority or fraternity to the best you got to have those grades". Personal responsibility was the motto of Alexis as she stated,

I make sure that one of the things for us is that we have the highest GPA on campus. I continue to strive for that. I felt like it has made me, I did this before, but you have to work first then play. It's actually helped me with my time management skills so it's like, if we have a weekend event where I need to do this, then I need to make sure that I have this, this, and this done. So I plan it out each day.

However, personal responsibility does not solely help sisters manage their academic expectations as Sharon described

The sorority knows your GPA; the sorority knows the classes that you're taking. Your grades, we have to have your mid-term. They want to know how you're doing and they try to help you out.

Her sorority, as she believes, provides a level of accountability as it monitors its members and works with the members to insure their and the chapter's academic success and as Woman5 described there is someone to "hold you accountable" for your academics.

One final way in which just a few women described their academic achievement in relation to their sorority was those women who expressed their own personal choices to pursue excellent quality academics. Amy expressed her personal worries regarding her first semester in the sorority and her overcoming the academic challenge

It made [my grades] better...once I started I was a little afraid that my grades would drop but they went higher. I got a higher GPA; it was amazing because that was one of my goals. One of my main things was to either maintain or to raise my GPA and I did that and it made me feel like the bomb.com.

Another woman, Misty expressed her own personal drive for academic excellence by ensuring that her priorities did not shift with her participation in the sorority

I mean I've always gotten straight A's every single semester since I've been here... For me, my classes have always; my grades have always been the same regardless of what was going on. I'm really focused in school. I definitely put school first over anything.

Misty was not alone in expressing her value of grades, but Stacey also explained this value as well as tying her personal expectations to her sorority expectations

I'm a very hard on my academics and I expect a lot of myself and I learned certain things about it when I was a new member, when I wasn't a sister that I really loved, like realizing our potential is our motto...and that's something that really inspired to me to in there.

These women expressed how their participation in their sorority either encouraged or did not interfere with their academic pursuits and how they have successfully maintained or increased their college GPAs. However, not all women felt that the sorority experience proved as beneficial to their academic pursuits.

Grades Crash. One of the strongest points that many of the women made regarding their grades suffering from their sorority participation was in regards to the prioritization of the sorority and sorority activities over their academic pursuits due to the peer pressure from sisters. As Anna described “There are those who think the sorority should be your top priority. When it comes down do it, I have to look out for my grades” and as Woman10 in Focus Group C describes,

[The sorority] takes a lot of time... a lot of time my school work gets pushed aside for [sorority] deadlines. I haven't done as much homework as I probably could have if I hadn't been doing all of the sorority stuff.

Cathy also described her own challenges with putting her academics behind her sorority

I put the sorority above my academics a lot, just because I do have that exec position. I want to make the chapter better, do all of this stuff better for it. I'm worried about it, I just want to do everything for it, but it kinda goes above school work sometimes which isn't good.

Mimicking Anna's perception of the pressure that often requires women to place the sorority over their academics, Sonya expressed her own frustrations with balancing the needs of the sorority with her academic needs and how the pressure from her sisters can often make her choose the sorority rather than her academics:

Sometimes the girls can get demanding on what they need done, and sometimes they can be, I'm trying to think of a nice word, I can't think of one, sometimes they can be bitches about it and then even if you say "I'm falling behind in my classes because I'm busy with you" they still get mad because your choosing school, to me that's the worst part of the sorority is just the girls just don't seem to understand that grades should come first.

Two women provided little insight into their reasons for their suffering grades other than to share that their membership did adversely affect their grades. Stacey expressed her own personal experience and her perceptions of what she believes is common "I was on the dean's list as a freshman, and then I joined the sorority, and I've heard other girls say this too, grades crash." While Kristy expressed her own academic challenge, she also shared that she believes the benefits of her sorority participation outweigh the negative impact on her grades sharing that [my] grades have declined a little bit, I failed my first class ever...But I used to be all A's and B's and now I'm like I'm ok with C's, but I think it's worth it honestly". Despite the challenges, all of the women expressed growth and development and opportunities they feel will assist them in the future.

Sisterhood. A common theme expressed by all the of the women, regardless of their sorority, in focus groups, interviews and the literature, is the expression of the power of sisterhood and how the sorority experience provides women a "home away from home", support and guidance (Greek Book 2012). The recurrent use of terminology such as family and sister to describe the sorority environment and experience wove its way into the discussions with most of the women. Amy described the relationship with her sisters in strong familiar language:

They are my sisters. They are my sisters. They are my sisters in the sense that they get on my nerves. They make me smile. They can say the smallest things to pick me up. They're there for me when I truly need them. We fight, but love harder.

Sasha, a sister of Amy's described the relationship in a similar manner including the concept that sorority life and sisterhood is not always positive which enhances the perception that the sorority and the Greek community as a family rather than a gathering of like-minded women.

They really are my sisters. Like normal sisters you may argue and then the next five minutes 'oh you want to go the store', it's the real thing, like that's how it is and just knowing that you always have somebody there, you know, even if we do have a lot of different schedules.

This family-like bond was expressed most strongly in the language of the sisters from Sorority B as another sister described this relationship:

The bond you have with people you know will always have your back with anything, you can call, they can help you. It's sort of like, the whole sorority is like an immediate family.

The continued use of words such as "family" by most of the women emphasized the perspective that sorority participation for these women is more than a club or activity, their relationships with one another feel much "deeper" and more significant than traditional friendships. Anna indicates this closeness and bond stating that she "would do anything for my sisters, I love them to death, no matter how much they might drive me insane, they might drive me up the wall, but I will always love them".

In addition to the ideas of family, the women regularly expressed their relationships with their sorority sisters as different from that of the relationships they may have with other women.

Cathy expressed that her relationship with her sorority sisters is “just a closer connection than just friends” and Amy expressed how she perceived this relationship as more than just friends long before she even became a sister:

I had the extraordinary opportunity before I even became a ___ to witness the sisterhood...hundreds of [them] – young, old, big, small, white, black it does not matter, it was so overwhelming to be in a room of women who loved each other so much.

This type of experience led Anna and others to crave the “more than just friends” relationship that they perceived among other sorority women and a “sense of community” (Carol) they felt being among these women.

I've always wanted to rush. I just wanted that extra support system. I wanted someone that I could go to if something was bothering me, if I just needed someone to talk to and to help me become a better person than I was. They have done just that...After we had our Pref night and the girl that was pref-ing me, I knew her through my brother and she wrote this very touching note that when I read it I was crying and I knew that not only did I have a connection with her, but I felt like I had a connection with everybody and that right there was my hook, line and sinker was when I read that note and I knew for a fact that I felt that they wanted me for who I was, that they thought I was good enough to be part of their sorority to make it better.

This connection that Anna felt is also expressed by other women as they describe their own experiences and connections with their sisters, specifically as they express typical emotions. In particular, the sorrow and joys experienced during the course of the college experience.

The common expression of the ability to understand, empathize and support one another during times of joy and sorrow was indicative of many of the women's comments through

interviews and focus groups. Within the focus groups, the common expression of community support during joy and sorrow was evident in discussions regarding the recent passing of a sister from one of the campus sororities. Women in all sororities expressed the “coming together” of the community and the desire to support one another “because whatever our letters we have sisters too” (Woman 3). During the trying time of mourning a sister, many of the women in her sorority expressed delight in the support of the community and “how we all come together to pay respects to her” (Woman 9) while women in the other sororities expressed the need to “come together as a community” (Woman 11) in such a time, because “that’s what we would want them to do for us” (Woman 5).

The loss of a friend or sisters does not provide the only opportunity to provide support to sisters, within a woman’s own sorority or within the community. Everyday life provides enough stress. Amy described how within her sorority they share this stress, “My pain is your pain. Whenever you’re stressed, I can handle that load because I’m with you. So, [stress] is never a secret”, the “stress” of life is shared amongst her sisters so that no one “is alone” in their stress. Erika shared this sentiment of sharing, “If my sister's sad, I’m sad - there's a reason why she's sad, so if she feels down, I’m gonna feel down, so she don't feel alone”. The shared perception of having a “shoulder to lean on” is also shared by Carol:

Anytime I need to cry I can run to my sorority house and even if my big is not there I always have somebody whose shoulder I can lean on and they’ll get me some chocolate and send me on my way when I finish crying.

Hannah expressed this type of relationship in terms of her sorority’s traditions by describing the feeling it gives her to have support from her sisters in times of need:

Warm tingly feeling, in our symphony 'we will share both joy and sorrows and bring into living reality the sisterhood of women.' it's something like that, it's joy, sorrow, all of that kind of good stuff.

Hannah's statement indicates how the expectation of shared joy and sorrow integrates itself into their community expectations. Misty expressed the ability to share with her sisters both the good and bad times of life; "I can go to them to laugh; I can go to them about serious stuff too. They're there for me no matter what; if I do something stupid they're still there for me". This idea of having "Sisters that care for me" (Carol) and describing their positive interactions with their sisters and the Greek community explain why the women also expressed how their participation in the sorority experience creates a sense of being a part of something.

Part of Something. Freshman, Woman7 expressed her reasoning for participating in sorority recruitment; "I wanted to be a part of something". This desire to be a part of something larger than themselves was expressed by numerous women as a significant part of their decision to become a part of the Greek community. Sasha expressed her happiness as feeling that she was included or accepted "I felt included, I wasn't alone". How this sense of being a part of something was described by Stacey as: "The feeling of belonging somewhere that you get, because you participate in these ceremonies and it's like you can fit in that niche and stuff like that."

The women described being a part of something as having multiple facets. Some women described their desire to feel included and having a social group to be with as their reasoning. Joy described how joining a sorority made her appreciate the people; "I really liked being a part of a team and knowing I always have somewhere to go and hangout with people, I like being social". While Maria described the importance of knowing people:

I guess just being in a group of people or girls, just being part of something I guess, I just wanted to come into college not knowing anybody and all the sudden you know like 60 new girls. I just wanted to be a part of something.

Misty shared with Maria the delight in knowing people and establishing life-long relationships:

I've met so many people, made so many friends, people I'll know forever...It's made time go so much faster...It makes time go by so much faster so you don't get so wrapped up in school.

Sasha shared Misty's desire for the establishment and creation of lifelong relationships as she stated: "I was just mainly looking for like lifelong friendships, to be a part of something that you know I could always have on me" as her reason for choosing to participate in a sorority. Kristy shared the desire for friends as she stated "I wanted the friends, I wanted, I loved that house, I wanted to be a part of it".

Other women expressed their concept of being a part of something as a desire to be like the women they had observed in the sororities. Cathy expressed her desire to be like the women she saw during the recruitment process:

I liked the idea of being a part of something, like an organization like that. Like after I went through recruitment and saw how all of them acted, the way they looked, and the way they presented themselves, I wanted to be like that.

Maria looked at the advantage the contacts formed in sororities gave her, the special relationships created and how advantageous it was for her versus those women who didn't participate in the sorority processes:

Just the special bond and connections we make with one another... the bonds and friendships that you make you feel like you have all these special people in your life versus the one who didn't join.

However, the desire to be a part of something and the desire for friendships alone do not fully describe the experience of being Greek.

Finding Women among Men. Some of the women expressed the importance of the relationships formed through their sorority involvement as providing them a way to find other women in a sea of men. As mentioned by many of the women earlier, being a woman on SPSU provides a unique experience for the women on campus, some positive and some negative. Focus Groups and interviews provided women's descriptions of the challenges associated with finding female friends on campus and their desire to have friendships with other women. In both Focus Group B and Focus Group C, the difficulties of finding and making friends with other women were discussed as they described the initial shock of first coming to campus and seeing how many men were around and how few women, "It's kinda weird to be the only girl in the classroom, you don't notice it until you look around and realize your it" (Woman11). Transfer student Tricia had previously attended an institution where she found little true friendship:

I was wanting to make better friends here, and since it's predominantly a male school and I'm taking engineering classes where there is one other girl...sometimes I am the only girl out of 60 guys. So I decided that if was going to meet girls at all [sororities] was really the only place I knew I could find them.

She expressed this desire to change that experience when she arrived at SPSU. For her, the sorority experience at her previous institution was not an experience she wanted, but at SPSU, the experience meant more than a "popularity contest" and was more about finding other women.

Tricia was not alone in her belief that a challenge to making female friends exists at SPSU, but she expressed that finding male friends was not hard

You have to go a little bit outside your comfort zone to find a couple of friends, actually as a girl guys just kinda come up to and they're like 'you're a female we should be friends or be other than friends', I think that it's a little harder to find those girlfriends.

However as Hannah continued to describe the challenges, she did include that "It's a lot harder to find a good core group of girlfriends". How important a good female friend is was not lost on Woman9 as she expressed, "I don't think you could get through college without at least one girl friend".

For Joy, this challenge pushed her to do something that she never expected from herself, she went through sorority recruitment, something that surprised even her,

There weren't a lot of girls on campus and I definitely wanted to be able to hang out with more females and originally I was telling myself that I wouldn't go through, but when the recruitment started to come up I changed my mind.

For some of the women, the reality of this difficulty to find female friends did not truly come to light until later, when they had experiences with women who did struggle with the friendship process. Sonya described her own experience and how she saw first-hand the challenge many women had.

I mean it's just nice to know, even though I'd much rather hang out with guys, I still need girls in my life to just be like- someone whose going to understand my girl problems basically, cause guys don't always understand, they'll listen....it's hard to find females you can actually talk to and actually be friends with....there's one girl whose a commuter and she's also a game design major. She introduced me to her sister the other day as her first

friend on SP campus. And I was like, we didn't meet until like 3 weeks after school started and I'd already gone through recruitment at that point or was going through, one or the other.

Sonya's observation of her classmate's experiences, were echoed by others such as Hannah who shared that "my old roommate didn't go Greek and...she found her own niche in the campus, it just took her a little bit longer." Woman1 shared her own shock at the lack of women on campus as a freshman and the difficulty finding female friends, "it's a little harder here to find other women, especially if you are in a major with mostly men like mine, it's nice to find women who are interested in the same things". Interest in similar things does not however mean that all women within sorority life are the same, they have different experiences and different backgrounds that provide a degree of diversity in the sorority experience at SPSU.

Diversity. For the sorority women at SPSU, Greek life is about working with a diverse population of women. The demographic of the women interviewed provides a microcosm of the larger sorority population at SPSU. Women interviewed included multiple racial and ethnic backgrounds, women with heritage from all over the world, women with (admitted) mental illness, women who come from privilege and women who come from poverty, women with large families and women who are the only child, homosexual women, and gender non-conforming women. This spectrum of diversity exists not only in the women interviewed, but also within the larger Greek community at SPSU. One woman expressed her own surprise at the opportunity provided to work with a diverse population and how well she perceives the diversity within the system, "I know there's just so many different types of people and they're all so accepting" (Alicia). Another woman expressed the same admiration, but shock, that such a diverse group of

women could work well together to make a complex organization such as a sorority run effectively.

There's different personalities overall and before I'm kinda like I hang out with people like me but I was able to meet so many people and find different things in common that I didn't think we would ever get along. (Woman1)

Others expressed their own relief at the acceptance of others, and how their belief that sisterhood is about acceptance of all,

We all have different backgrounds, we all do, so I guess the most important would be you have to learn how to live or be with someone that's different than you are...in a sisterhood you don't want to be judged, you won't judge other people. You have to learn how to live with them, so accept how they are, that's one of the most important things I've learned I guess. We're all different, sometimes you're not going to like how other people are even if they're your sisters, but that's how they are, you just have to embrace it, find the positive things about them. (Sharon)

Another woman described her own experiences with diversity in her sorority when a woman joined their membership with a different racial identity from that of all of the sisters. Amy expressed admiration as she described the woman's sentiment towards sisterhood as she stated "I know I may not look like my sisters, but sisterhood doesn't have a color". Misty shared how this need to work together with a variety of individuals and making tough choices has helped her grow as a person,

I've learned how to work with a group of people, work with different personalities....deal with what are difficult decisions to make for the chapter and just ...like a growing up experience.

Joy effectively summarized many of the women's perspectives toward ultimate relationship between sorority and diversity, "[The sorority gives] life experiences with dealing with people with different backgrounds and how sort of how a business runs, just how to manage things in general". The sorority take a great deal of effort and time to run effectively and the diversity observed in the SPSU Greek system offers women the opportunity to learn how to operate outside of the comfort zone of their own perspective and experiences.

Empowerment. While women in sororities may express their delight in forming relationships with other women, the networking opportunities and diversity opportunities these relationships provide them; ultimately, many of the women describe a sense of empowerment development through their participation with the women in the sorority and with the sorority itself. Tricia describes in the most basic sense, how her membership makes her stronger, "I feel like that if we do something in groups [my sorority] gives me self-confidence 'cause I have positions and people backing me".

This level of confidence in their abilities was felt by other women. Woman1 indicated "being Greek it's given me more confidence to approach people and ask them those questions and trying to figure out what I need to do in general with my life" as she expressed her previous shy nature and her present willingness to talk to staff, faculty, and other students about her future. Kristy understood the difficulty in placing yourself in a potentially vulnerable position but that her membership in the sorority helped her feel able to step up and take on challenges, "It's hard to put yourself out there, but when you join a sisterhood where everyone's like 'I love you' then you're like 'I got this' you know. You get the confidence in yourself". This confidence is also boosted by the perception many of the women shared that their sorority chose them, they were selected and by that selection they feel special.

Sonya described how her membership in a sorority made her feel special because there is a level of selectivity involved in the joining process. Though not as selective as many other colleges or Universities, SPSU's process still provides women a feeling of being chosen for membership,

It makes me feel awesome and special. It's kind of nice to be part of an organization that not everybody knows everything about, 'cause it's not like something like that game club, there are not secrets involved, there's nothing special about it, just anyone can join. With us you actually have to go through recruitment, you get chosen; it's nice to be like I was chosen to be part of this. (Sonya)

Amy, member of a different sorority than Sonya, shares this same perspective that the selectivity of her sorority helps her feel that she has a benefit that other women do not,

To be a part of that [organization] I feel like that it is an elite group. But not in a sense that you know we're better than anyone else, but to have come so far knowing that it is something that is going to better your life and that you have the opportunity to better other people is extraordinary.

Sasha, sorority sister to Amy summed up her valuation of herself, because of her membership, someone else saw value and potential in her, "So the fact that I was chosen....that let me know that I had something special that they saw, a characteristic that they saw in me" and there is something exceptional about that feeling.

This perspective of increased self-worth and support from women provides the members of sororities the opportunity to succeed and fail at what they choose to do. As Alicia shared, "It's like a big group of people who see all these things in you that you don't necessarily find out for yourself. It's a good support, encouraging". In addition, as Kristy stated the sorority is able to

also support you when things do not work out the way you had hoped, “It just opens up a door for you to try, it’s ok to fail ‘cause you got your sisters there, they’re going to help you. I like that a lot”. This ability to serve as motivator and safety net provided other women the courage to try new things and to take on new challenges and tasks. Woman1 shared how she has done things she never expected or probably wouldn’t have attempted without the support of her sisters.

I feel like I’ve gotten a lot from it, but I guess I know just being around people who are really encouraging and supportive. There's a lot of stuff that I probably wouldn't have done without them, not that I couldn't, it's just that I wouldn't have even thought about it.

Alicia also indicated her own emboldened perspective in how her sisters pushed her to try new things, “I think it's been, I don't want to say easier, but it's been, since I got here I've had a support group to like help me keep on track and stuff”.

Summary

The participants in this study embody various demographic backgrounds and perspectives. Two particular themes frequented the conversations with the women of this study, the women’s perspectives of the climate of Southern Polytechnic State University and their experiences and reflections as members of the Greek community and members of a sorority. These conversations offer insight into the perceptions of these women through their own words and descriptions.

The typical SPSU college climate was consistently described as quiet, non-traditional, and potentially lonely experience. In addition, the women often shared how the rarity of being a woman on campus altered their expectations for college, and shifted their perspectives on the importance of friendships and the need for female to female interaction. In addition, they expressed how the lack of women altered their relationships with males on campus. One such

way that many women described this climate was through the acts of discrimination or judgment specifically due to their gender. Though many shared this experience, others found opportunity to seek advantages or indicated a potential for advantage due to their gender.

Being Greek at SPSU allows individuals to differentiate themselves from the general population since only a small percentage of the university population participates in the social Greek system. The idea they expressed frequently of fighting a sorority stereotype indicated a common experience. In addition, the women in sororities at SPSU often felt that their experiences were not the same as those depicted in popular media or those expected by their non-Greek classmates. The academic success of Greek women or lack of success proved a perspective that showed polarization in the conversations with the women. Women indicated that either their sorority participation pushed them to be more successful inside the classroom or that their participation in the sorority pulled them away from their studies and reflected negatively in their grades.

Sorority women at SPSU also indicated perceptions of the benefits of participation in the Greek community by sharing their personal experiences. Many described the development of leadership skills and opportunities provided to them to grow as leaders while others expounded on the networking and new opportunities associated with Greek participation. In addition, the concept of sisterhood arose frequently in the conversations with the participants as they regularly and consistently stressed the importance and value of the relationships the women form with one another. They continued by expressing how these relationships with the women allowed them to feel a part of something bigger than themselves, to obtain membership and the positive feelings associated with being accepted. In addition, this sense of belonging seemed to counteract the feelings of loneliness and the sense of being different (from their male classmates). Not only did

the women consistently describe their own personal feeling in regards to belonging to a group and the personal feelings it provided them, but in addition the women explained the opportunities to learn more about others different from themselves and the sense of empowerment that their membership provided them by allowing them opportunities in a safe environment. Ultimately, the women's descriptions enhance our understanding of the culture of SPSU and help us understand how women describe their relationship with the Greek community and characterize their relationships with other women in the community.

Chapter 5

Conclusions

Time outside of the classroom, how students choose to spend it, and who they choose to spend it with may determine more about who college students become and how they achieve success in college more so than the notes they take in class or the manner in which they study for their next test. Learning and personal development occurs inside and outside the classroom through the activities and various forms of engagement by students (Astin, 1993; Pascarella and Terenzini, 1991). The Greek letter system provides one opportunity for students to interact with other students of like mind and acquire a sense of belonging through the creation of “lasting, positive and significant interpersonal relationships” (Baumeister and Leary, P. 497, 1995).

What we know about sorority women is limited in scope and often must be derived from research done holistically on the Greek community and not exclusively women in the community. In addition, our limited perspective of women in STEM education derives from limited research on the climate within the STEM fields. In addition, little research tells us about the experiences of women at a male dominated institution. When these circumstances come together as they do for sorority women at a male dominated institute of technology, our ability to understand their situation and experiences fall to anecdotal evidence and personal experiences rather than traditional research.

For the sorority women at Southern Polytechnic State University the time they spend outside of the classroom and the time they spend participating in sorority functions, interacting with sorority members and engaging with other members of the Greek community creates bonds and relationships between the women and with the community. How they characterize these

relationships and the climate in which they are formed allow us to better understand these women.

Answering the research questions

The purpose of this research was to understand women's perceptions of their experiences as sorority women at an institute of technology. This dissertation was guided by four primary research questions that sought to understand how women perceive and describe their experiences with the climate of the institution, the climate for women on campus and their participation in the Greek system. These research questions were designed to better understand the experiences of these women in their own words. How do these women describe the general climate of SPSU? How do they describe the climate for women at SPSU? How do these women describe being a member of the Greek community? How do these women characterize their relationships with the women in their sorority? Below I provide brief summations to answer the questions with the data from participants through interviews and focus groups as well as the data collected through the Greek book and Greek website and as informed by the previous research found in Chapter 2.

Previous literature does not explore the college experience as described from the sorority women's perspective. Specifically, the descriptions of women at STEM institutions and sorority women at STEM institutions, whose experience is more defined by their program of study and gender finds no voice in contemporary literature and research. Using the theoretical framework of belongingness as described by Abraham Maslow (1943) and Baumeister and Leary (1995) this study sought to better understand the need for women to find a sense of belonging on a campus where they are the minority gender studying fields which have often been described as "chilly" (Hall & Sandler, 1982) for women. The perspectives of Baumeister and Leary (1995) describe the need for all humans to seek positive relationships. In addition Maslow (1943) describes

belongingness as a complex need that all individuals seek. This theoretical perspective supplied the analysis of the data collected with a concept by which to better understand the perceptions of the women. The concepts and theory surrounding belongingness appeared to permeate the language and the perceptions of the women in this study as they frequently identified their experiences in terms of their sense of “fitting in” and finding a “fit” in the college environment.

Chart 1 provides a visual summary of the findings from this study.

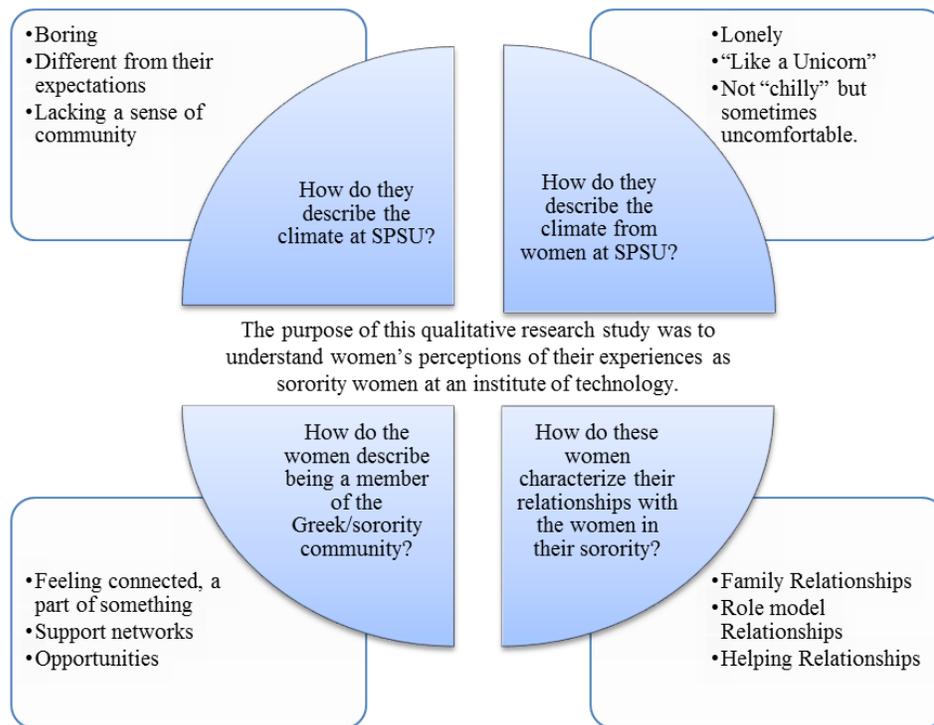


Chart 1

With enrollment of less than 25% female, Southern Polytechnic State University provides an education environment that has historically been dominated by male students. This historical precedent and the current standing of the ratio between men and women typify most institutions with similar focuses in the Science, Technology, Engineering and Mathematics fields. The first question I sought to answer examined the general climate of SPSU for students.

Question 1 – How do these women describe the general climate of SPSU? The women of this study come from a variety of experiences and backgrounds with different expectations for college. The women in this study describe the general climate of SPSU in terms of their experiences and expectations for college. They often use terms such as “boring” to describe the atmosphere of the college, they discuss how different the campus is from their expectations and how the environment lacks excitement for them. The women described expectations of a socially active atmosphere with greater interaction between students outside of the classroom. Once at Southern Polytechnic State University, many of the women described how different the actual experience was from their expectations. For transfer students the climate of SPSU provided less of a shock than the traditional first time freshman students as they had previous experience (most with community or two year colleges) with the day to day student interactions of a college campus. However, most of the women described disappointment with the failure of the college culture to meet their expectations. Their concept of the SPSU common experience for all students, and specifically for those outside of the Greek system was an experience lacking excitement or interaction with others. It was not uncommon to hear the women compare their perceptions of the SPSU college climate with their expectation of what college should be based on their assumptions and the media. Their reality differed greatly from what they had seen in the movies or heard about through word of mouth. The women told of students walking from class to class with little or no communication with other students on campus. Without opportunities to socially engage with other students, the women felt they lacked a sense of community with the other students on the SPSU campus. The women additionally shared a perception of the campus lacking community and not providing them what

they felt were needed opportunities to connect with others and create a sense of belongingness with the campus community.

Question 2 – How do they describe the climate for women at SPSU? As women, separating the climate of SPSU from the climate specifically for women proves complicated since the participants in this study were all women, they must face the general college climate alongside of the climate as it orientates and shifts specifically for women. In addition to their general description of the climate of SPSU as being ‘boring’, many of the women described the feelings of loneliness and their perceptions of being singled out as a rarity on campus as a woman. Emphasizing the feelings of being “like a unicorn” or like “a piece of meat in a meat market,” the women regularly described the loneliness and socially challenging life before going Greek as difficult due to a lack of support networks of like-minded and like experienced individuals on campus. As there are so few women on campus, finding female friends proves challenging enough, striving to find female friends who share similar interests provides a greater challenge. Many of the women expressed surprise at being the only woman in a class or the reality of being a minority for the first time in their life. Standing out in such a way can feel uncomfortable especially in an academic environment. Though they did not express a “chilly” climate as previously found by researchers, the women indicated they often found it a unique and sometimes uncomfortable situation to find themselves in as the only woman or one of very few women in a class.

Question 3 – How do the women describe being a member of the Greek community? Choosing to participate in the Greek experience provided many of the women the opportunity to connect with other women they had been missing from campus. The largest majority of the women described their participation in the Greek system as enhancing their social growth and

development by providing them connections and encouraging them to work with others and learn how to understand and live with people different from themselves. By joining a sorority, these women described how they became a part of a smaller community on campus and integrate themselves into what they felt was a social element of the college experience they had previously missed or felt was absent from their experiences.

The women also described how their participation in the Greek community provided a support network of men and women to the male dominated environment of campus. Most of the women described this support system provided by the Greek community as a general support network that assists them in surviving and breaking into highly competitive fields. They frequently indicated that as a woman in a sorority they feel they receive a better network and assistance for entering predominantly male fields because they are provided opportunities in the Greek system to participate in leadership roles and honor organizations that provide a level of prestige to their academic credentials. The women described the opportunities they felt were provided because of their Greek membership to develop as leaders in a supportive environment as well as meet individuals around campus that they otherwise may never have the opportunity to meet.

Question 4 – How do the women characterize their relationships with the women in their sorority? The relationships between the women in a sorority and the relationships formed through membership in the Greek community permeated the conversations with the women in this study and the material gathered through the view book and website. Common themes of how the women in the study and the materials characterize the relationships with one another include the family relationship, the role model relationship, and the helping relationship.

Perhaps the most prevalent ideas and characterization the women used to describe their relationships with one another utilized the concept of family bonds to highlight their perceived strength of the relationships with one another. Women within each sorority, of all ages, and all backgrounds indicated their strong feelings for their sorority sisters as true sisters and how their sorority and the Greek community provide them a family away from their family. This family bond provides them support in times of sorrow such as described by many of the women when describing the recent loss of a sorority sister (Alumnae) from one of the chapters on campus. The usage of roles within the sorority such as ‘big sister’ establish ties between older and younger women and set up an additional way in which the women describe their relationships with one another the role model relationship.

The characterization of a role model relationship between the women was not articulated by the women using the term “role model”. However, the women frequently described their relationships as such when discussing academic and social achievement. Academically, many of the women described how they strove to meet the high standards set by previous sisters with high grades and the positive relationships and respect obtained with the faculty. Negatively, older sisters who felt ambiguous or lackadaisical regarding their own academic achievement set themselves up as a negative role model for young women. Some of which described in their interviews their dropping grades and lack of concern regarding these drops. However, by setting positive academic standards of high achievement, older women set examples for the younger members to follow and by which the sorority expected younger members to attain. Socially, as older members provide leadership to the sorority and the university community, young women indicated their desire to achieve the same leadership roles and either meet or exceed the standards set by their sisters. The example set, did not always indicate a positive role model, but

a model which taught the younger sisters who they as leaders and women wished to be perceived.

The helping relationship as characterized by many of the women ties together the connectivity of the women and their academic pursuits and career aspirations in addition to the day to day assistance with surviving college and navigating the waters of the complex social networks of a university. The idea that someone else understands your experiences and your needs allowed many of the women to feel a strong connectedness with their sisters as their older sisters assisted them and they continue to pay it forward assisting their younger and newer sorority sisters. As one woman described how a sorority sister had assisted her in obtaining a job, she indicated that she wished to continue providing a similar helping hand to a younger sister as she was leaving a job that needed a replacement and would recommend a sorority sister for the position. Other women described the help they received in adapting to SPSU from either another college or high school by introducing the newer sisters to other Greek students and faculty and staff on campus.

Implications

The information gathered in this study provides insight into the expectations contemporary women at Southern Polytechnic State University have towards their college experience. In addition, the women in this study provide insight into the campus environment for all women bringing to light any problems or concerns of all women on campus and how their relationship with the Greek community and the women in their sorority enhance or detract from their perceptions of the college. The findings of this study provide a level of insight into a small, very specific population of college students, but it provides an excellent opportunity for the Greek system of SPSU, for SPSU as a whole, administrators' who wish to understand the

contemporary sorority, and to the community seeking to promote women in STEM education and careers.

SPSU Greek System. For the women within the sororities and the staff who support the Greek letter system at SPSU, the information gathered in this study provides data identifying opportunities and challenges for the future of the sorority system. The women identify their own challenges with academics and the university perception of sorority women on campus as a potential barrier for women on campus such as the feeling that faculty see sorority women as less intelligent or less serious than their non-Greek counterparts. For the women who described a negative perception from faculty and other students regarding sorority members, the challenge stands to produce women of intelligence and obtaining the support and respect of the university community. Understanding how the women describe the system working together, in particular the relationships between sisters and the often strained relationships between the various sororities from their mouths and in the words of the women living the experience, indicated challenges of continuity and collaboration between the three sororities on campus, their needs and desires. The participants openly admitted to the weaknesses of their own system such as the high level competition set up between the two NPC sororities on campus and the separation that often appears between the National Panhellenic Council and National Pan-Hellenic Conference organizations.

The words of the women in this study indicate numerous opportunities for continued growth and development of the system and overwhelmingly indicated an overall positive experience with their sorority. These positive experiences held by the women of this study indicate their perceptions that the relationships formed through sorority membership are beneficial to the women at Southern Polytechnic State University. For purposes of recruitment

and engagement of other women, understanding this positive perception and attributes of the program promotes the Greek system and underscores the important role of belongingness to the women of the system and the way in which their sorority membership has helped them feel comfortable among their peers. The women in this study largely believed that their college experience was better because of their sorority membership. In addition, they expressed a sense of happiness to have found a place that they fit with other women who cared for and respected them. With appropriate promotion and articulation of the positive attributes of Greek membership, women of SPSU may feel more open to the potential of joining the community. The women of the Greek community must work together to portray an overall positive message about the Greek system to the university community. They will need to work together to enhance the system recruitment processes and to support one another in obtaining the brightest and most passionate women.

Southern Polytechnic State University. What we ascertain for the University this data indicates the current student perceptions and expectations for their college experience as they arrive on the SPSU campus. In particular are the perceptions of the lack of “life” or the perception of a “boring” environment that detracts from the overall college experience. The university must be aware of the student perceptions of their campus climate and strive to enhance the environment to feel positive and a place that students feel they can grow socially as well academically. By better understanding how the women in this study have perceived the SPSU experience before and after or outside and inside of their Greek membership and experiences, administrators on campus obtain a peek at the thoughts of their students and how campus life is perceived by a small population of individuals and this increased understanding may provide clues as to what students are seeking from their campus life environment. Are there things that

the various departments and services on campus can do to engage students with the university and with one another outside of the classroom?

In addition to the women's perceptions of the campus environment, this study also provides the college administration a pivotal understanding of how the relationships women form through sorority membership may benefit the institutions. The women of this study indicated that their membership in the Greek system was often driven by loneliness or a desire to find other women they could bond with. Their memberships in their sororities provided them with something, a sense of belonging, they could not find in the general population of the college. These women formed deep, meaningful, and lasting relationships with other women on campus who shared similar academic and personal interests. What particular aspects of these relationships are applicable to other student organizations on campus, other programming tools such as the first year programs, as well as the academic environments on campus? The women in this study repeatedly indicated the importance of their relationships with their sorority sisters as integral to their academic success. Their willingness to encourage one another and support one another through their academic and career aspirations provided the women incentive to persist towards graduation in spite of potentially "chilly" classrooms. The benefits the women described as associated with their sorority participation allows administrators on campus to deduce gaps in the system preventing women outside of the Greek system from accessing similar benefits. In addition, understanding the perceived benefits of sorority participation allows administrators to determine potential opportunities and needs for women who do not participate in the Greek system and how they might provide a way for non-Greek women to form similar bonds with others outside of the system.

Women in STEM. As the nation continues to find itself in need of more and more graduates and educated individuals in the STEM fields and as women now outnumber men in college attendance, there is a growing need to better understand why women who enter STEM fields and attend schools focusing in the STEM majors such as SPSU, stay and why they choose the leave. As expressed by most of the women in this study, men still far outnumber women in the STEM fields of education as well as in the working world of STEM. The women who choose to pursue these careers often do so with their eyes somewhat open to the fact they will be the minority in a world of men. However, many of the women, though aware of the low number of women present at SPSU, still expressed shock in the actual living with this status on a day to day basis. There remains a uniqueness to women in a predominantly male field or institution. Two particular implications of this study for women in STEM include the change of perception of the “chilly climate” atmosphere of STEM education and the important role in which strong relationships between women promote continuation in the field.

Though they expressed little of the same sentiments other researchers have found in regards to a “chilly climate,” women at SPSU did indicate the awkwardness felt by being the only woman in a class or the strange feeling of walking around campus and the perception that all men on campus see you as a rarity. The idea of feeling “like a unicorn” permeated the women’s conversations as they described the stares and the observations of their male classmates. Some of the women shared experiences of negative interactions with faculty or other students due to their gender, however, they also indicated a lack of concern regarding most of the actions of faculty and other students toward them. Many of the women who shared that a prejudice existed against women in the classroom also indicated a lack of concern or surprise by the actions of their faculty or classmates. Although the “chilly climate” may still exist, for the

women in this study, the atmosphere provoked an eye roll and a sigh but not a deterrent for their goals. The ability to let a “chilly climate” not prevent their success may be due to their perspective that the sorority provided a network of support outside of the classroom and they did not rely on support from their classmates or faculty to feel capable or successful.

During the conversations with the women in the SPSU Greek system, women of different backgrounds, experiences, interests, and personalities, all expressed a level of comfort in feeling that they had a place to belong on campus through their sorority participation. Though sometimes adding additional stress to their college experience, holistically, the women expressed that their participation in the sorority helped them to gain knowledge, develop leadership skills, helped them meet other women in their career fields, and provided them with the confidence to compete against “the boys” inside and outside of the classroom.

Recommendations for practice

For the future of Southern Polytechnic State University, and the sorority system, great opportunities for growth exist in addressing the concerns conceived by the women within the system and their perceptions of the system and the women within the system. As the women within the system largely found comfort and positive support within the Greek system, this argument provides great support for the continued and increased promotion of the sorority system on campus. Increased visibility on campus through signage on the main parts of campus, and an increased web presence and a presence during the orientation faze of a new student’s college experience would help new women to campus become aware of the opportunity. In addition, remodeling the Greek book concept to promote specifically organizations available to women and a second Greek book geared towards the men on campus may provide a more directed marketing opportunity allowing the women of the sororities (and men of the fraternities)

to provide more information on their opportunities, rather than just listing colors, mascots, and philanthropies, etc.

In addition to increasing awareness of the sororities, a rebranding of the concept of sorority and what a sorority at SPSU can mean for women on campus will assist in enhancing the image with faculty and staff as well as obtaining parental support and encouragement for their daughter's participation in the Greek system on campus. Highlighting the excellent qualities of the system such as the diversity of the population, the academic standards, the opportunities membership provides through networking while enrolled and after graduation all promote the positive aspects of the Greek experience at SPSU. As a significant portion of rebranding the role in which the relationship with women positively impacts the college experience at SPSU should fall in the forefront of the campaign to go Greek on campus. Awareness of the sense of belonging that membership in a sorority provides can encourage other women on campus to seek out this same network for support as they pursue their formal higher education.

Additional recommendations for SPSU outside of the Greek community include providing all women the opportunity to create meaningful relationships through the creation of a networking and mentoring program. As many of the women indicated, meeting fellow women on campus proved much more difficult than they had expected when they arrived on campus. Though the Society for Women Engineers or SWE as well as the Greek system provides excellent opportunities for like-minded women to connect with one another, they are specific outlets, one with a focus on Engineering and the other a primarily social outlet and tool. Some resources need to be created which provides all women, regardless of their program of study an opportunity to connect with women on campus who share similar academic pursuits, career goals, and challenges. In addition, such an activity could provide the opportunity for young

college women to meet successful women in various careers in STEM that may serve as role models and mentors. This creation of bonds between women also creates a sense of community among the women on campus and a greater sense of belongingness that exists from knowing one's peers in the University and in the field.

Recommendations for Future Research

Though the data gathered over the course of this study proves fascinating and provides a brief glimpse inside of the world of Greek women at this particular institution, this research creates a new set of questions. In particular, the strength of its findings and the way in which the findings may be used to further the greater understanding of women entering the STEM fields who have selected to participate in a Greek organization and the relationships they form with the women inside these organizations.

Conducting this study at a single site provides an adequate picture of the women of SPSU and their perceptions of the University, their sorority and the women within their sorority. However, by limiting this investigation to a single site, the data collected is unable to serve as a summation of the experiences and perceptions of similar women at similar institutions. In addition, the data gathered only provide a snapshot in time of the SPSU Greek system. Expanding and applying similar research methods to other institutes of technology would provide a greater picture of women who choose to pursue STEM in addition to better understanding the women who attend institutes of technology and choose to join a Greek letter organization.

One of the greatest challenges for this study proved the acquisition of participants. The small pool of women for this study required a high return on volunteers from each solicitation. Communication with the office of Greek life as well as with the student leaders for each of the

sororities provided the only method to reach the needed number of women and procure their assistance. A willingness to work with the women's class and work schedules helped in gaining their time to sit down with me and speak openly about their experiences. Continuing this research with an increased number of participants, as many as 90%-100% of all women in the system, would provide the ideal picture of the current system and allow for the greatest perspective and diversity.

The short time period and the limitation of numbers of volunteers provides opportunity to enhance this study through a phenomenological study which selects a set of women (some Greek, some non-Greek) over the course of 4-5 years through freshman year to graduation at SPSU to better understand and compare the experiences of Greek and Non-Greek women on campus. This type of study would provide a greater understanding of the SPSU college experience and assist in identifying attributes of this experience that are unique to Greek women. Expanding outside of the walls of SPSU through further research would allow a deeper understanding of the relationships between women in sororities, particularly at an institution similar to SPSU. Expansion of this research may choose to conduct comparable studies at similar institutions to determine if the findings at SPSU are unique or indicative of a common experience from women at similar institutions.

Summary

As students at an institution with 75% of its population male (SPSU, 2012a), the women in this study chose to actively seek out a support network of other women to live, socialize, and connect. Mostly, the women did not take their decision to enter a predominantly male institution lightly. They entered with an understanding of what they might face both academically and socially. Even so, they still experienced surprise and shock and the ratio. However, these

women did not allow their status as a minority on campus deter them from their goals, they actively sought opportunities to enhance their experience. Their choice to participate in social Greek letter organizations reflects their choice to seek belongingness. By choosing this type of extracurricular involvement; these women made an active choice in establishing relationships with other women differently than women who do not participate in social Greek letter organizations.

Previous research stops just short of examining this particular group of women and their unique experience as college students. Research examines the Greek community as a whole, the trials, the benefits and the problems but not specifically seeking to understand individual experiences as Greek women. In addition, Prior research indicates the expectations for women's college experiences in the STEM fields including the "chilly climate," (Whitt, Edison, Pascarella, Nora, Terenzini, 1999; Hall & Sandler, 1982; Ginorio, 1995) where women rely on support networks through their educational process (Perna, et al., 2009). Other research does not explore the individual student's, and specifically, the sorority woman's perceptions of her involvement outside of the classroom and how she perceive her involvement impacting her growth and development but does elaborate on the importance of growth and development. Frequently ignored is the importance of the establishment of belongingness through the relationships built on campus and the role that sorority participation may play in women's willingness and ability to pursue their education in the STEM fields. However, this previous research does not provide the perceptions of women with established support networks such as sorority women in this environment.

With this study I hoped to better understand a group of women and their perceptions of their experiences as sorority women at an institute of technology. The women in this study

described a mostly positive experience that they believed helped and continues to help them grow and develop as individuals. In addition, they describe the importance of their sorority membership in how they feel it provides them a support to obtain success as a professional. Through the words of this small population of women, this data provides a greater understanding of the sorority woman experience at an institution such as SPSU, the importance this experience holds for the women involved, the benefits and detriments of involvement and paints a picture of the sorority experience that had yet to be described.

References

- Allan, E.J., & Madden, M. (2006). Chilly classrooms for female undergraduate students: A question of method. *Journal of Higher Education*, 77(4), 684-711.
- Alpha Xi Delta (2012). "Chapter History." Retrieved on February 9, 2012 from http://gatech.alphaxidelta.org/index.php?page_name=chapter_history.
- Aluede, O.O., C.I. Imahe, & J. Imahe. 2002. University female students' motives in enrolling for non-traditional degrees. *Australian Journal of Career Development* 11 (2): 45-48.
- Asel, A.M., Seifert, T.A., & Pascarella, E.T. (2009). The effects of fraternity/sorority membership on college experience and outcomes: A portrait of complexity. *Oracle: The Research Journal of the Association of Fraternity/Sorority Advisors* 4(2).
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. 25, 297-308.
- Atkinson, R.D. & Mayo, M.J. (2010) *Refueling the U.S. Innovation Economy: Fresh Approaches to Science, Technology, Engineering and Mathematics (STEM) Education*. The Information Technology & Innovation Foundation, Washington, DC.
- Baker, C. N. (2008). Under-represented college students and extracurricular involvement: The effects of various student organizations on academic performance. *Social Psychology of Education: An International Journal*, 11(3), 273-298. doi:10.1007/s11218-007-9050-y
- Baumeister, R.F. & Leary, M.R. (1995). "The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Bem, S. L. (2001). In a male-centered world, female differences are transformed into female disadvantages. In P. S. Rothenberg (Ed.), *Race, class, and gender in the United States* (5th ed., pp. 60-63). New York: Worth.
- Bennett, R. A. (1997). *Southern polytechnic state university: a history*. Southern Polytechnic State University. Marietta, GA.
- Bix, A.S. (2000). "Engineeresses' Invade Campus: Four Decades of Debate of Technical Coeducation." *IEEE Technology and Society Magazine* 19(1): 20-26.

- Bix, A.S. (2004). From “engineeresses” to “girl engineers” to “good engineers”: A history of women’s US engineering education. *NWSA Journal*, 16(1), 27-49.
- Bogle, K. (2008). *Hooking up: Sex, dating and relationships on campus*. New York University Press, New York.
- Brady, K. L., & Eisler, R. M. (1999). Sex and gender equity in the college classroom: A quantitative analysis of faculty-student interactions and perceptions. *Journal of Educational Psychology*, 9(1), 127-145.
- Brown, T.L., Parks, G.S., & Phillips, C.M. (2012). *African American Fraternities and Sororities: The legacy and the vision*. University of Kentucky Press, Lexington, KY.
- Busseri, M., & Rose-Krasnor, L. (2008). Subjective experiences in activity involvement and perceptions of growth in a sample of first-year female university students. *Journal of College Student Development*, 49(5), 425-442. doi:10.1353/csd.0.0026
- Byer, J. L. (1997). *Comparisons of socioeconomic background characteristics of Greeks and independents*. (ERIC Document Reproduction Service No. ED406922).
- California Polytechnic State University Pomona. (2012) History. Retrieved from <http://www.csupomona.edu/about.php>.
- Callais, M. A. (2002). *Sorority Rituals: Rites of Passage and their Impact on Contemporary Sorority Women*. (Dissertation). Retrieved from http://etd.lsu.edu/docs/available/etd-0418102-225829/unrestricted/Callais_dis.pdf.
- Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education*, 47(1), 1-32. doi:10.1007/s11162-005-8150-9
- Case, D. N., Hesp, G. A., & Eberly, C. G. (2005). An exploratory study of the experiences of gay, lesbian and bisexual fraternity and sorority members revisited. *Oracle: The Research Journal of the Association of Fraternity Advisors*, 1(1), 15-31.
- Cavanagh, S. (1997). Content analysis: concepts, methods, and applications. *Nurse Researcher* 4, 5-16.
- Chen, E. W. (1998). *The continuing significance of race: a case study of Asian American women in white, Asian American and African American sororities*. Ph.D. Dissertation, Department of Sociology, University of California, Los Angeles, Los Angeles, CA.
- Cooper, J.E. & Stevens, D.D. (2002). The journey toward tenure. In J.E. Cooper and D.D. Stevens (Eds.), *Tenure in the sacred grove: Issues and strategies for women and minority faculty* (p. 3-15). Albany: State University of New York Press.

- Cress, C. (2002). Campus climate. In A.M. Martinez-Aleman and K.A. Renn (Eds), *Women in higher education: An encyclopedia* (p. 390-397). Santa Barbara, CA: ABC-CLIO.
- Cress, C. M., Astin, H. S., Zimmerman-Oster, K., & Burkhardt, J. C. (2001). Developmental outcomes of college students' involvement in leadership activities. *Journal of College Student Development*, 42(1), 15-27.
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed). Thousand Oaks, CA: Sage.
- Crombie, Pyke, Silverthorn, Jones & Piccinin. (2003). Students' perceptions of their classroom participation and instructor as a function of gender and context. *The Journal of Higher Education* (74) 1, 51-76.
- Cornell Daily Sun*. (1937, November 12). Three Coeds Invade Engineering Courses and Compete With Men at Cornell University. *Cornell Daily Sun*.
- DeBard, R., Lake, T., & Binder, R. S. (2006). Greeks and grades: The first year experience. *NASPA Journal*, 43(1), 56-68.
- Drew, T. L., & Work, G. G. (1998). Gender-based differences in perception of experiences in higher education: Gaining a broader perspective. *The Journal of Higher Education*, 69, 542-555.
- Downing, R.A., F.J. Crosby, & S. Blake-Beard. (2005). The perceived importance of developmental relationships on women undergraduates' pursuit of science. *Psychology of Women Quarterly* 29 (4): 419–26.
- Duncan, J. R. & Zeng, Y. (2005). *Women: Support factors and persistence in engineering*. Research in Engineering and Technology Education Report. National Center for Engineering and Technology Education.
- Eberhardt, D., Rice, N. D., & Smith, L.D. (2003). Effects of Greek membership on academic integrity, alcohol abuse, and risky sexual behavior at a small college. *NASPA Journal*, 41(1), 137-148.
- Eisen, B. (2009, July 22). Seeking advice on women in science. *Inside Higher Ed*. Retrieved from <http://www.insidehighered.com/news/2009/07/22/stem>.
- Elkins, B., Helms, L. B., & Pierson, C. T. (2003). Greek- letter organizations, alcohol, and the courts: A risky mix? *Journal of College Student Development*, 44, 67-80.
- Fabert, N., Cabay, M., Rivers, M., Smith, M.L., & Bernstein, B. L. (June, 2011). *Exaggerating the typical and stereotyping the differences: isolation experienced by women in STEM doctoral programs*. American Society for Engineering Education, Vancouver, BC.

- Fischer, M. J. (2007). Settling into campus life: Differences by Race/Ethnicity in college involvement and outcomes. *The Journal of Higher Education*, 78(2), pp. 125-161. doi:10.1353/jhe.2007.0009
- Flowers, L. A. (2004). Examining the effects of student involvement on African American college student development. *Journal of College Student Development*, 45(6), 633-654. doi:10.1353/csd.2004.0067
- Foubert, J. D., & Grainger, L. U. (2006). Effects of involvement in clubs and organizations on the psychosocial development of first-year and senior college students. *NASPA Journal*, 43(1), 166-182.
- Garvin-Doxas, K., & Barker, L.J. (2004). Communication in computer science classrooms: Understanding defensive climates as a means of creating supportive behaviors. *ACM Journal of Educational Resources in Computing*, 4(1), 1-18.
- Georgia Tech Living History (2012). "Tech Timeline". Retrieved June 20, 2012 from <http://livinghistory.gatech.edu/new/timeline/1940.html>
- GI Bill (2012). *GI Bill History*. Retrieved June 8, 2012 from http://www.gibill.va.gov/benefits/history_timeline/index.html
- Gilmartin, S.K., & Sax, L.J. (2002). Romantic relationships. In A.M. Martinez Aleman and K.A. Renn (Eds.), *Women in higher education: an encyclopedia* (p. 343-347). Santa Barbara, CA: ABC-CLIO.
- Ginorio, A.B. (1995). Warming the climate for women in academic science. Association of American Colleges and Universities, program on the status and education of women. Washington, DC.
- Glassman, J. (2010). *Innovation: Is America Suffering an Innovation Gap?*. Retrieved July 8, 2010 from <http://www.ideasinactiontv.com/episodes/2010/07/innovation-is-america-suffering-an-innovation-gap.html>.
- Glazer-Raymo, J. (2008). The feminist agenda: A work in progress. In J. Glazer-Raymo (Ed.), *Unfinished agendas: new and continuing gender challenges in higher education* (p. 1-34). Baltimore: Johns Hopkins University Press.
- Goff, A. (1946). *Women can be engineers*. Youngstown, Ohio.
- Gohn, L.A. & Albin, G.R. (2006). *Understanding college student subpopulations*. NASPA.
- Grose, T.K. (2006). Trouble on the horizon. *ASEE Prism*, 16 (October, 26-31).
- Goulden, M. Frasc, K., & Mason, M.A. (2009). *Staying competitive: patching America's leaky pipeline in the sciences*. Washington DC: Center for American Progress.

- Hall, R., & Sandler, B. (1982). *The classroom climate: A chilly one for women?* Washington, DC: Project on the Status and Education of Women, Association of American Colleges.
- Handelsman, J., Cantor, N., Carnes, M., Denton, D., Fine, E., Grosz, B., Hinshaw, V., Marrett, C., Rosser, S., Shalala, D., & Sheridan, J. 2005. <http://scientificteaching.yale.edu/sites/default/files/science2005.pdf>. *Science* 309: 1190-1191.
- Harris, B.J., T. Reed-Rhoads, S.E. Walden, T.J. Murphy, R.E. Meissler, & A. Reynolds (2004). "Female Perceptions of the Industrial Engineering Major Compared: A Pilot Study." *National Women's Studies Association Journal*, 16(1): 186-193.
- Hartman, H., & Hartman, M. (2003). Empowering female students: SWE vs disciplinary organization participation. Paper presented at the, 2 AI1-AI06. <http://doi.ieeecomputersociety.org/10.1109/FIE.2003.1264777>
- Harvey, L., & Mason, S. (1996). A quality graduate. In J. Tait & P. Knight (Eds.), *The management of independent learning* (pp. 13-28). London: Kogan Page.
- Hayek, J. C., Carini, R. M., O'Day, P. T., & Kuh, G. D. (2002). Triumph or tragedy: Comparing student engagement levels of members of greek-letter organizations and other students. *Journal of College Student Development*, 43(5), 643-663.
- Holland, D. & Eisenhart, M. (1992). *Educated in romance: Women, achievement and college culture*. Chicago: University of Chicago Press.
- Holloway, B.M., Reed-Rhoads, T., & Groll, L. (June, 2011). *Women as the miner's canary in undergraduate engineering education*. American Society for Engineering Education, Vancouver, BC.
- Horowitz, H.L. (1987). *Campus life: Undergraduate cultures from the end of the eighteenth century to the present*. New York: Alfred A Knopf.
- Huang, G., Taddese, N., & Walter, E. (2000). *Entry and persistence of women and minorities in college science and engineering education*. Report No. NCES 2000-601. Washington, DC: National Center for Education Statistics.
- Hughes, W. J. (2002). Gender attributions of science and academic attributes: An examination of undergraduate science, mathematics, and technology majors. *Journal of Women and Minorities in Science and Engineering*, 8, 53-65.
- Hughey, M. W. (2007a). Rushing the wall, crossing the sands: Cross-racial membership in American college fraternities and sororities. In C. Torbenson & G. S. Parks (Eds.), *Diversity within college fraternities and sororities*. Lexington, KY: University of Kentucky Press.

- Hughey, M.W. (2007b). Crossing the Sands, Crossing the Color Line: Non-black members of black greek letter organizations. *Journal of African American Studies*, 11 (1), p. 55-75.
- Janz, T.A. & Pyke, S.W. (2000). A scale to assess student perceptions of academic climates. *The Canadian Journal of Higher Education*. 30(1), 89-122.
- Kezar, A., & Moriarty, D. (2000). Expanding our understanding of student leadership development: A study exploring gender and ethnic identity. *Journal of College Student Development*, 41(1), 55-69.
- Kimbrough, W. M., & Hutcheson, P. A. (1998). The impact of membership in black greek-letter organizations on black students' involvement in collegiate activities and their development of leadership skills. *The Journal of Negro Education*, 67(2), 96-105. doi:10.2307/2668220
- King, J.E. (2010). *Gender equity in higher education: 2010*. Washington, DC: American Council on Education, Center for Policy Analysis.
- Kinzie, J., Gonyea, R., Kuh, G.D., Umbach, P., Blaich, C., & Korkmaz, A. (n.d). *The relationship between gender and student engagement in college*. Unpublished manuscript.
- Knapp, L., Kelly-Reid, J.E., Whitmore, R.W., & Miller, E. (2007). Employees in postsecondary institutions, Fall 2005. <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007150>.
- Kuh, G. D. (1995). The other curriculum: Out-of-class experiences associated with student learning and personal development. *The Journal of Higher Education*, 66(2), 123-155. doi:10.2307/2943909
- Kuh, G. D., Hu, S., & Vesper, N. (2000). "They shall be known by what they do": An activities-based typology of college students. *Journal of College Student Development*, 41(2), 228-44.
- Kuh, G. D. (2001). Assessing What Really Matters to Student Learning: Inside the National Survey of Student Engagement. *Change*, 33(3): 10-17, 66.
- Kuh, G. D. (2005). Student Engagement in the First Year of College. In *Challenging and Supporting the First-Year Student: A Handbook for Improving the First Year of College*, edited by M. L. Upcraft, J. N. Gardner, and B. O. Barefoot, 86-107. San Francisco: Jossey-Bass.
- LaBrie, J.W., Huchting, K.K, Lac, A., Tawalbeh, S., Thompson, A.D., & Larimer, M.E.(2009). Preventing risky drinking in first-year college women: Further validation of a female-specific motivational-enhancement group intervention. *Journal of Studies on Alcohol and Drugs, Supplement No. 16*, 77-85.

- Lake, W.A. (2005). Membership and the First Year of College: A Comparison of the Academic Achievements of Social Sorority and Fraternity Members Who joined during their First year of college and students who never joined. The Ohio State University. Dissertation retrieved from <http://etd.ohiolink.edu/send-pdf.cgi/Lake%20William%20A.%20Tony.pdf?bgsu1131488126>.
- Lynch, J. F., Mowrey, R. J., Nesbitt, G. M., & O'Neill, D. F., (2004). Risky business: Misperceived norms of sexual behavior among college students. *NASPA Journal*, 42(1), 21-35.
- Macnaghten, P. & Myers, G. (2004). Focus groups. In C. Seale, G. Gobo, J.F. Gubrium, & D. Silverman (Eds.), *Qualitative research practice* (pp. 65-79), Thousand Oaks, CA: SAGE.
- Maher, F. A., & Tetreault, M. K. T. (2001). *The feminist classroom: Dynamics of gender, race, and privilege* (Expanded ed.). Lanham, MD.: Rowman & Littlefield.
- Martinez Alemain, A.M., & Renn, K.A. (Eds.). (2002). *Women in higher education: An encyclopedia*. Santa Barbara, CA: ABC-CLIO.
- Maslow, A. (1943). A theory of human motivation. *Psychological Review*, 50, p. 370-396.
- Massachusetts Institute of Technology (2011). *MIT Facts*. Retrieved November 21, 2011, <http://web.mit.edu/facts/mission.html>.
- Mason, M.A., Goulden, M. , & Frasch, K. (2009). Why graduate students reject the fast track. *Academe*, 95(1), 11-15.
- McCabe, D.L. & Bowers, W.J. (2009). The relationship between student cheating and college fraternity or sorority membership. *NASPA Journal*. 46(4): 573-586.
- McLoughlin, L.A. (2005). Spotlighting: emergent gender bias in undergraduate engineering education. *Journal of Engineering Education*, 94(4), 373-381.
- Mead, M. & Metraux, R. (1957). Image of the scientist among high-school students. *Science* 126, 384-390. doi: 10.1126/science.126.3270.384.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: John Wiley and Sons.
- Mills, J., Ayre, M.E., & Gill, J. (2008). *Perceptions and understanding of gender inclusive curriculum in engineering education*. Paper presented at the European Society for Engineering Education (SEFI) Annual Conference, Aalborg, Denmark.
- National Panhellenic Conference. (2011). "Statistics." Retrieved July 20, 2011 (<http://www.npcwomen.org/about/statistics.aspx>).

- National Pan-Hellenic Council. (2011). "Mission." Retrieved July 20, 2011. (<http://www.nphchq.org/mission.htm>).
- National Science Board. (2010). *Science and Engineering Indicators*. Washington D.C.
- National Science Foundation Advisor Committee. (2003). Retrieved from www.nsf.gov/sbe/ac_notes.doc
- National Science Foundation, Division of Science Resource Statistics. (2007). *Women, minorities, and persons with disabilities in science and engineering: 2007* (NSF 07-315). Arlington, VA: National Science Foundation.
- Nidiffer, J. (2002). Overview. In A.M. Martinez Aleman & K.A. Renn (Eds.), *Women in higher education: an encyclopedia* (p. 3-15). Santa Barbara, CA: ABC-CLIO.
- North American Interfraternity Conference (2011). "About NIC." Retrieved July 20, 2011. (<http://www.nicindy.org/about/>).
- Nuwer, H. (2001). *Wrongs of passage: fraternities, sororities, hazing and binge drinking*. Bloomington: Indiana University Press.
- Nuwer, H. (2004). *The hazing reader*. Bloomington: Indiana University Press.
- Obama, Barack (2012). *Fact sheet on presidential memorandum on scientific integrity*. Retrieved November 21, 2012. <http://www.whitehouse.gov/the-press-office/fact-sheet-presidential-memorandum-scientific-integrity>.
- Pace, D., & McGrath, P. B. (2002). A comparison of drinking behaviors of students in Greek organizations and students active in a campus volunteer organization. *NASPA Journal*, 39(3), 217-232.
- Pascarella, E. T., Flowers, L., & Whitt, E. J. (2001). Cognitive effects of greek affiliation in college: Additional evidence. *NASPA Journal*, 38(3), 280-301.
- Pascarella, E.T. & Terenzini, P.T. (2005). *How college affects students, volume 2, a third decade of research*. San Francisco, CA: Jossey-Bass.
- Perna, L., Lundy-Wagner, V., Drezner, N. D., Gasman, M., Yoon, S., Bose, E., & Gary, S. (2009). The contribution of HBCUS to the preparation of African American women for STEM careers: A case study. *Research in Higher Education*, 50(1), 1-23. doi:10.1007/s11162-008-9110-y
- Pike, G. R. (2000). The influence of fraternity or sorority membership on students' college experiences and cognitive development. *Research in Higher Education*, 41(1), 117-139. doi:10.1023/A:1007046513949

- Pike, G. R. (2002). The differential effects of on- and off-campus living arrangements on students' openness to diversity. *NASPA Journal*, 39(4), 283-299.
- Pike, G. R., Kuh, G. D., & Gonyea, R. M. (2003). The relationship between institutional mission and students' involvement and educational outcomes. *Research in Higher Education*, 44(2), 241-261. doi:10.1023/A:1022055829783
- Pittsburgh Post-Gazette*. (2009, February 10). STEM education is branching out. Retrieved from <http://www.post-gazette.com/stories/news/education/stem-education-is-branching-out-329382/>.
- Rosenthal, L., London, B., Levy, S.R., & Lobel, M. (2011). The roles of perceived identity compatibility and social support for women in a single-sex STEM program at a co-educational university. *Sex Roles*. 65(9-10), 725-736.
- Reitman, I. (Producer), & Landis, J. (Director). (1978). *Animal House* [Motion picture]. United States of America: Universal Pictures.
- Rubin, H.J., & Rubin, I.S. (2005). *Qualitative Interviewing: the art of hearing data*. London: Sage Publications.
- Saldana, J. (2009). *The coding manual for qualitative researchers*. London: Sage Publications.
- Salter, D. W. (2003). Exploring the "chilly classroom" phenomenon as interactions between psychological and environmental types. *Journal of College Student Development*, 44(1), 110-121.
- Savin-Baden, M. & Major, C. (2012). *Qualitative research: The essential guide to research and practice*. London: Routledge.
- Seymour, E. & Hewitt, N. (1997). *Talking about leaving*. Boulder, CO: Westview Press.
- Smith, M.L. (1987) Publishing qualitative research. *American Educational Research Journal*, 24(2).
- Schneider, M.E. & Ward, D.J. (2003). The role of ethnic identification and perceived social support in Latinos' adjustment to college. *Hispanic Journal of Behavioral Sciences*, 25, 539-554.
- Snyder, T.D., Dillow, S.A., & Hoffman, C.M. (2008). *Digest of Education statistics, 2007*. Washington, DC: National Center for Education Statistics.
- Southern Polytechnic State University (SPSU). (2012a). "2010 Fact Book." Retrieved on February 10, 2012. <http://www.spsu.edu/institutionalresearch/factbook/documents/FactBook2010-11.pdf>

- Southern Polytechnic State University (SPSU). (2012b). "Enrollment Reports" Retrieved on June 1, 2012. <http://www.spsu.edu/institutionalresearch/enrollmentreports/index.htm>.
- Spanard, J. (1990). Beyond intent: reentering college to complete the degree. *Review of Educational Research*, 60(3), 309-344.
- Stake, R.E. (1995). *The art of case study research*. Thousand Oaks, CA: SAGE.
- Steele, J., James, J. B., & Barnett, R. C. (2002). Learning in a man's world: examining the perceptions of undergraduate women in male-dominated academic areas. *Psychology of Women Quarterly*, 26(1), 46-50.
- Thomas, S. L. (2000). Ties that bind: A social network approach to understanding student integration and persistence. *The Journal of Higher Education*, 71(5), 591-615. doi:10.2307/2649261
- Thompson, C.D. (2000). Factors that influence minority student participation in predominantly white fraternities and sororities. Ph.D. Dissertation, Department of Political Science, Northern Arizona University, Flagstaff, AZ.
- Thorn, M. (2001). *Balancing the equation: Where are women and girls in science, engineering, and technology?* New York: National Council for Research on Women.
- Time*. (2012, April 25). Will new funding rules improve dismal university graduation rates? Retrieved from <http://www.time.com/time/nation/article/0,8599,2113097,00.html>.
- Tinto, V. (1993). *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Second Edition. University of Chicago Press.
- Tonso, K. L. (1998). Engineering gender--gendering engineering: What about women in nerd-dom? Paper presented at the Retrieved from <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED420258>.
- US News and World Report (US News). (2012). "Massachusetts Institute of Technology." Retrieved on May 21, 2012 from <http://colleges.usnews.rankingsandreviews.com/best-colleges/massachusetts-institute-of-technology-2178>.
- Umbach, P. & Kuh, G. (2003). Student experiences with diversity at liberal arts colleges: another claim for distinctiveness. *Journal of Higher Education* 77(1), 169-192.
- Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press.
- Valian, V. (2005). *Sex disparities in advancement and income*. Retrieved November 20, 2012 from <http://www.hunter.cuny.edu/genderequity/equityMaterials/numbers.pdf>.

- Whipple, E. G., & Murphy, R. K. (2004). Student Activities. In F. J. D. MacKinnon, & Associates (Eds.), *Rentz's Student Affairs Practice in Higher Education (Third Edition)*. (pp.298-335). Springfield, IL: Charles C. Thomas.
- Whitt, E. J., Edison, M. I., Pascarella, E. T., Nora, A., & Terenzini, P. T. (1999). Women's perceptions of a "chilly climate" and cognitive outcomes in college: Additional evidence. *Journal of College Student Development, 40*(2), 163-77.
- Whitten, B., Foster, S., Duncombe, M., Allen, P., Heron, P., McCidlough, L., Shaw, K., Taylor, B., & Zorn, H. (2004) Like a family: What works to create friendly and respectful Student-faculty interactions. *Journal of Women and Minorities in Science and Engineering, 10*, 229242.
- Wilder, D. H., McKeegan, H. F., Midkiff, R. M. Jr., Skelton, R. C., & Dunkerly, R. E. (1997). The impact of greek affiliation on students' educational objectives: longitudinal change in clark-trow educational philosophies. *Research in Higher Education, 38*(2), pp. 151-171. doi:10.1023/A:1024977402385
- Winona Daily News*. (2011, November 13). Ramaley coined STEM term now used nationwide. Retrieved from http://www.winonadailynews.com/news/local/article_457afe3e-0db3-11e1-abe0-001cc4c03286.html.
- Yin, D., & Lei, S. A. (2007). Impacts of campus involvement on hospitality student achievement and satisfaction. *Education, 128*(2), 282-293. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ816872&site=ehost-live>; http://www.projectinnovation.biz/education_2006.html.
- Yin, R.K. (2009). *Case study research: design and methods*. Thousand Oaks, CA: SAGE Publications Inc.
- Zhao, C., Carini, R. M., & Kuh, G. D. (2005). Searching for the peach blossom shangri-la: Student engagement of men and women SMET majors. *The Review of Higher Education, 28*(4), 503--525. doi:10.1353/rhe.2005.0054

Appendix A

Key Terms

Key terms appear frequently through the duration of this research. It is imperative to understand this terminology in order to more fully define and comprehend the importance of these young women's experiences.

STEM

Science, technology, engineering, and mathematics (STEM) institutions refers specifically to those schools whose mission implores them to prepare students for careers in these areas. Most of these institutions offer limited programs (if any) to students in the liberal arts, social sciences, or general programs of studies. These specific types of institutions are rare and often came in to existence in the Reconstruction era, the Industrial Revolution, and post-World War II periods of American history. Coined by Dr. Janice Ramaley of the National Science Foundation in the early 2000's to help describe these specific academically focused institutions, STEM developed into the buzz word of science education in the modern era.

Greek Organizations

For the purposes of this research, Greek organizations refer specifically to those women's Greek organizations with national or international affiliations. These groups are held accountable to not only their national/international offices but also report to governing organizations such as the National Panhellenic Conference, the National Pan-Hellenic Council and to the Greek advisor for the college. Two specific types of women's Greek organizations exist, those that are historically black groups and those that have been historically white. A total of four groups are present at the institution of focus in this study including two historically black organizations and two historically white.

Appendix B
Institutional Review Board Approval

Office for Research
Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
R E S E A R C H

March 7, 2013

Cynthia Lunk
Dept of Higher Education Admin.
College of Education
Box 870302

Re: IRB#: 13-OR-081 "The Sorority Life: Women in Greek Letter Organizations at a Polytechnic Institute"

Dear Ms. Lunk:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on March 6, 2014. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent forms to obtain consent from your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research

Sincerely,

Carpantier T. Myles, MSM, CCM
Director & Research Compliance Officer
Office of Research Compliance
The University of Alabama



358 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-0127
(205) 348-8461
FAX (205) 348-7189
TOLL FREE (877) 820-3066

**SOUTHERN
POLYTECHNIC**
STATE UNIVERSITY

Dean of Students

1100 South Marietta Parkway
Marietta, Georgia 30060-2896

678-915-4102 DIRECT
678-915-7409 FAX

bb@spsu.edu

February 26, 2013

Institutional Review Board
University of Alabama
358 Rose Administration
Box 870127
Tuscaloosa, AL 35487

To Whom It May Concern:

I write to give official institutional approval for Lauren Lunk to conduct her doctoral research at Southern Polytechnic State University. Ms. Lunk is a doctoral student in your university's Higher Education Administration program. The subjects for Ms. Lunk's research will be SPSU sorority women. A variety of qualitative research methods will be employed including focus groups and individual interviews to gain the women's perspective of being a member of a Greek-letter social sorority at a polytechnic institutional. The university unconditionally supports and approves Ms. Lunk's research.

Please contact me at 678-915-4102 if there are any questions or concerns.

Sincerely yours,

Barry Birckhead
Dean of Students



Appendix C
Protocols

Individual Interview

Protocol A

Spring Semester 2013

Interviewer: (Introductions)

Tell me a little about yourself

What year did you begin college?

Is SPSU your first college?

What is your program of study?

Why did you choose this program of study?

When did you go through sorority recruitment?

If you did not join as a freshman, tell me about why you decided to join later?

If you did not join as a freshman, how does your college experience before joining a sorority differ from your current experience?

Why did you decide to join a sorority?

What appealed to you about being in a sorority?

What did you feel that being a part of a sorority would give you?

What is the most important thing you have gotten out of your membership so far?

What kind of relationship do you have with your sorority sisters?

What kind of relationship do you have with other women in the Greek system (not in your sorority)?

How does being a member of a sorority at SPSU make you feel?

Does your sorority membership affect your academics? How?

When upsetting things happen at school (Classroom, academically related) what role does your sorority play?

How does your sorority make you feel as a student at SPSU?

Tell me how you think your college experience is different from a woman that is not a member of a sorority at SPSU?

Do you believe that women not in sororities have a better, worse or just different experience?

How would you describe your college experience so far?

What is the most important thing you believe you have learned or gained from being in a sorority?

Focus Group Interview

Protocol B

Spring Semester 2013

Interviewer: (Introductions)

What is it like to be a woman at SPSU?

What made you want to join a sorority?

What kind of relationship do you have with your sorority sisters? Other Greek women?

Tell me about how your sorority affects your academics?

Do you spend a lot of time with women that aren't in a sorority?

Does the small percentage of women on campus and in the classroom affect you? How?

Tell me how you think your college experience is different from a woman that is not a member of a sorority?

Do you believe that women not in sororities have a better, worse or just different experience at SPSU?

What do you believe is the difference in experience for women in in a sorority at SPSU?

What is the most important thing you believe you have learned or gained from being in a sorority?

Appendix D
Informed Consent

AAHRPP DOCUMENT #192
UNIVERSITY OF ALABAMA
HUMAN RESEARCH PROTECTION PROGRAM

Informed Consent for a Non-Medical Study

Study title: The Sorority Life: Women in Greek Letter Organizations at a Polytechnic Institute

Lauren Lunk, University of Alabama EdD Student

You are being asked to take part in a research study.

This study is called (The Sorority Life: Women in Greek Letter Organizations at a Polytechnic Institute). The study is being done by Lauren Lunk, who is a graduate student at the University of Alabama. Ms. Lunk is being supervised by Professor Claire Major who is a professor of Higher Education Administration at the University of Alabama.

Ms. Lunk is the spouse of Ron Lunk, Director of Student Life

This study is being done to find out how your participation in a national social sorority and the relationship with your sorority sisters contributes to your college experience.

This knowledge is important/useful because it will help us better understand the perspective of women who choose to participate in a social sorority at an institute of technology. The results of this study will help student life administrators and Greek life professionals understand better ways to help sororities on campus recruit and retain women as well as help the university recruit and retain women in the science, technology, and engineering and mathematics fields.

Why have I been asked to be in this study?

You have been asked to be in this study because you are an active member of a national social sorority at Southern Polytechnic State University.

How many people will be in this study?

About (35) other people will be in this study.

What will I be asked to do in this study?

If you meet the criteria and agree to be in this study, you will be asked to do these things: Participate in a one hour interview on campus and/or a one hour focus group with other women on campus.

How much time will I spend being this study?

UNIVERSITY OF ALABAMA JRB
 CONSENT FORM APPROVED: 3/7/13
 EXPIRATION DATE: 3/6/2014

As a participant you will spend no more than two hours of time participating in this study. Most participants will only spend one hour of time.

Will being in this study cost me anything?

The only cost to you from this study is your time.

Will I be compensated for being in this study?

You will not be compensated for being in this study.

Can the investigator take me out of this study?

The investigator may take you out of the study if s/he feels that the subject matter is upsetting to you or if you request to be removed from the study.

What are the risks (dangers or harms) to me if I am in this study?

No risks are foreseen by your participation in this study. However, there is a potential for psychological risks if the content of questions or conversation may be upsetting for you. Small risks for social well-being may also exist as participation in focus groups may require explaining or sharing activities or feelings of conflict with other women in the focus group. In addition the researcher cannot guarantee complete anonymity on campus, only provide confidentiality in the written research project. No names will be linked to any results or comments.

What are the benefits (good things) that may happen if I am in this study?

There are no direct benefits to you.

What are the benefits to science or society?

This study will allow researchers, administrators and your Greek organizations to better understand your experiences at SPSU as a woman and as a member in a social Greek organization.

How will my privacy be protected?

Participants will be interviewed in a private room or a site on campus. If the selected site is not comfortable for the participant an alternate location will be found. You will be asked about your experiences as a college student and as a woman on a male dominated campus. You may choose not to answer questions if you wish.

How will my confidentiality be protected?

All participants will be provided with pseudonyms for use in the research. Student's names and organizations will not be revealed to anyone. Only the researcher will have access to names, student organizations and data collected during the interviews or focus groups. At the completion of this study, all audio and video records will be permanently deleted/destroyed.

What are the alternatives to being in this study? Do I have other choices?

The alternative to being in this study is not to participate.

What are my rights as a participant in this study?

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 3/7/13
EXPIRATION DATE: 3/6/2014

Taking part in this study is voluntary. It is your free choice. You can refuse to be in it at all. If you start the study, you can stop at any time. There will be no effect on your relations with the University of Alabama or Southern Polytechnic State University.

The University of Alabama Institutional Review Board ("the IRB") is the committee that protects the rights of people in research studies. The IRB may review study records from time to time to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

You have the option to not be video or audio taped. If you choose to not be recorded, please indicate this to the researcher.

Who do I call if I have questions or problems?

If you have questions, concerns, or complaints about the study right now, please ask them. If you have questions, concerns, or complaints about the study later on, please call the investigator Lauren Lunk at 678-296-0743.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or email the Research Compliance office at participantoutreach@bama.ua.edu.

After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

I have read this consent form. I have had a chance to ask questions. I agree to take part in it. I will receive a copy of this consent form to keep.

Signature of Research Participant Date

Signature of Investigator Date

You have the option to not be video or audio taped. If you agree to allow the researcher to video or audio tape your participation, please sign and date below. Participants are not required to provide consent for video or audio recording.

Signature of Research Participant Date

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 8/7/13
EXPIRATION DATE: 3/6/2014