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**WOMEN EXPERIENCING AGGRESSION FROM WOMEN:
A MIXED METHODS STUDY OF HOW WOMEN EXPERIENCE
AGGRESSION, HOW IT IMPACTS LEADER EFFICACY, AND HOW THEY
NAVIGATE THROUGH IT**

by

KAREN KITCHEN BRIGGS

A dissertation submitted in partial fulfillment of
the requirements for the degree of

Doctor of Philosophy

May 2015

Dissertation Committee

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University of San Diego

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ABSTRACT

Despite advancements in education and hiring practices, women are still underrepresented in leadership roles. Contributing to this challenge is the conflict between communal expectations for women and agentic expectations for leaders which can cause some women to doubt their leadership capabilities. While encouragement from women can build leadership confidence, aggression can weaken it.

This convergent parallel mixed methods study explored the prevalence of female aggression among women leaders, the effect on leader efficacy, and response strategies. Women deans at doctoral granting universities were invited to complete an online survey that included the Negative Acts Questionnaire to assess aggression prevalence, the Generalized Leader Efficacy Questionnaire to measure leader efficacy, and a survey from the *bullying* literature to assess participant responses. Flanagan's (1954) Critical Incident Technique allowed participants to elaborate on responses with open-ended questions. Of the 635 women deans invited, 306 (48.2%) participated.

Results showed that 68% of respondents experienced aggression from women. Closer analysis revealed law deans were more likely to report aggression experiences while applied science/business deans were less likely. Furthermore, nursing deans and women who identified as LGBTQ reported more frequent aggression than others. Greater levels of aggression were also reported when the aggressor was in a higher position or had the same experience level as the respondent. Findings include the most common forms of aggression and three theoretical constructs for what respondents believed contributed to the behavior.

While leader efficacy was negatively affected at the time of the experience, no statistical difference was found in current leader efficacy between women who experienced aggression and women who did not. Many women who experienced aggression, however, felt it ultimately increased their confidence. Additional analysis revealed age had a mitigating effect on leader efficacy and that African American women reported higher leader efficacy scores than women of other races. The most frequent response strategies included internal responses, engaging others, confronting the aggressor, or leaving the position.

Results from this study provide insight for how aggression may affect women leaders. Understanding how women experience and navigate through this could help individuals and organizational leaders better respond when impacted by this behavior.

DEDICATION

This dissertation is dedicated to women pursuing leadership roles. May the stories shared by the women who participated in this study help you throughout your journey. Challenge yourself to be patient with women who struggle with your leadership, remain committed to your ethics, and take care of yourself along the way.

ACKNOWLEDGEMENTS

The process of earning a doctoral degree is a journey of both exciting discoveries and exhausting effort. This journey would have been a lot more difficult—and a lot less fun—if it were not for an extraordinary support system. I am incredibly thankful for the people who have encouraged and supported me over the years.

First, I would like to thank my committee who have both challenged and encouraged me throughout the dissertation process. Dr. Fred Galloway has been an advocate from the first day I met him, throughout my coursework, and in conducting this research. I have never had a professor who was so committed to his students' success and I am thankful to have gotten to work with him over the past five years. Dr. Lea Hubbard helped shape me into a qualitative researcher and her persistent encouragement to “synthesize, synthesize, synthesize” truly strengthened this dissertation. Dr. Robin McCoy's support and optimism has kept me going through this process and has meant more than she can possibly know.

When thinking about this program in its entirety, I also want to thank the other members of our cohort and all of the SOLES faculty and administration whose support and encouragement have made this process exciting and fun. I especially want to thank Dr. Nicki Schuessler whose friendship has been one of the greatest gifts of this program.

This research would not be possible without the participation of 306 women deans throughout the United States. I know their roles require a tremendous amount of time and energy and I appreciate them taking the time to contribute to this important work.

I also want to thank the women I have worked with who have supported me throughout my career and who have been wonderful role models for how women can

advocate for each other, with special acknowledgement to Cyndy Miles, Denise Pandza, Nenit Wills, Maya Omar, and members of the USD Crew. To the many mentors throughout my career, especially Dr. Sandra Tracey, Ms. Calista Davis, Dr. Gregory Pogue, and Dr. David Blake, I am so thankful that you believed in me even in moments when I questioned myself.

On a personal note, I also want to thank my family—my father, David, for being my confidante and compass when facing the challenges of leadership roles; my mother, Wendy, for modeling kindness, sincerity, and strength through her own leadership; and my sisters, Amy and Christine, for showing me how supportive women can truly be toward each other. I want to thank my in-laws, Peter and Marilyn, for encouraging me throughout this academic program as if they were my own parents—I feel so fortunate to be a part of the Briggs family. I also want to thank my son, Cameron, for helping me to keep things in perspective and for making me see what really matters in life.

Finally, and most importantly, I want to express my immense gratitude for my husband, Jeremy, for his love, patience, and commitment throughout this journey. We have experienced a lot together over the past five years. To have a husband who has been a true partner and who has supported this process through encouragement, sacrifice of time together, and love has made me adore him even more than I did before my first class. Thank you for believing in me.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

Over the past sixty years, the demographic of the American workforce has changed significantly as women became more actively involved. While women made up 34 percent of the United States (U.S.) workforce in 1950 (Bureau of Labor Statistics [BLS], 2007), the percentage grew to 47 percent in 2012 (BLS, 2014). When looking at management, women in manager/administrator roles increased from 16 percent in 1960 to 26 percent in 1980, and then again increased from 33 percent in 1985 to 52 percent in 2012¹ (BLS, 2014; “Women in management,” 2013). These statistics illustrate a steep incline in a relatively short amount of time.

A number of factors contributed to the increase in workforce participation including rapid economic growth and increased labor demand following World War II, the civil rights and women’s rights movements, and equal employment opportunity legislation—all of which created a more supportive and enticing atmosphere for women to work outside the home (Toossi, 2002). Another contributing factor to the increase of women in the workforce was a substantial rise in the number of degrees earned by women. Whereas women earned 24 percent of undergraduate degrees in 1950, they earned 57 percent in 2011 (U.S. Department of Education, National Center for Education Statistics [NCES], n.d.; NCES, 2013). Furthermore, the number of female graduate degrees also significantly increased from 47 percent of master’s degrees and 24 percent of doctoral degrees in 1977 to 60 percent and 51 percent (respectively) in 2012 (NCES,

¹ Due to re-categorization of occupations by the Bureau of Labor Statistics, labor force data for Managerial and Administrative positions can only be accurately compared within consistent categories. Data from 1960-80 can be compared as one group and data from 1985-2012 can be compared as another group.

2013; Riley, Robinson, & Griffith, 1995).

Even with this growth in education and workforce participation, however, there are still relatively few women in executive roles. In 2013, for example, women made up less than five percent of Chief Executive Officers and only 14 percent of executive positions in Fortune 500 companies (“Women CEOs in the Fortune 1000,” 2013). In other fields, women have been more successful advancing into executive roles. In educational institutions, 26 percent of college and university presidents are women (“Leading demographic portrait of college presidents,” 2012). In government, 27 percent of the federal government’s Senior Executive Service, 20 percent of the Senate, and 18 percent of the House of Representatives are women (Sabharwal, 2013; “Women in the U.S. Congress 2013,” 2013). While these figures show significant improvements, they also demonstrate that women are still drastically underrepresented in leadership roles despite parity reached at educational levels and general population parity where women represent 50.8 percent of Americans (U.S. Bureau of the Census, 2013).

A number of factors contribute to the underrepresentation of women in leadership. One of these challenges may be an internal struggle in which women doubt their own capabilities to successfully execute traditionally male associated tasks, including leadership (Betz & Hackett, 1981; Marra, Rodgers, Shen, & Bogue, 2009; McCormick, Tanguma, & Lopez-Forment, 2002, 2003). Because leadership roles have traditionally been filled by men, society often links traits associated with masculinity to leadership roles. These traits are based on the employment role that men historically had in society and are referred to as *agentic* associations. They include characteristics like aggressiveness, ambition, self-confidence, dominance, self-reliance, and forcefulness

(Carli & Eagly, 2007; Eagly & Carli, 2007; Kellerman & Rohde, 2007). As men attempt leadership tasks, because these associations are aligned, their agentic behavior is seen as expected and appropriate. When they succeed at a leadership task, this experience helps to foster a stronger sense of *self-efficacy*, or the belief that they can be successful at these tasks (Bandura, 1997; Hannah, Avolio, Luthans, & Harms, 2008; McCormick, 2001; McCormick et al., 2002, 2003). Thus, they are more likely to attempt future leadership opportunities (McCormick et al., 2002, 2003).

Conversely, because of the historical domestic role that women had in society, they are expected to demonstrate *communal* characteristics that convey concern for treating others with compassion. These characteristics include nurturance, helpfulness, kindness, sympathy, and soft-spokenness—all of which conflict with agentic characteristics (Eagly, 1987). The incongruity between communal role expectations for women and agentic expectations for leaders (referred to as the *double-bind* in feminist literature) often leads to unfavorable consequences for women seeking leadership roles (Carli & Eagly, 2007; Eagly, 1987; Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002; Rohde & Kellerman, 2007). For example, if a woman behaves consistent with communal expectations, she may be perceived as likable but not competent in leadership situations where people expect agentic behavior. Conversely, if she behaves agentially, she may be demonstrating expected behaviors for leadership but because she is violating expectations for how some people believe women should act she is likely to be viewed as less likable (and thus less desirable as a leader) (Casciaro & Sousa Lobo, 2005; Sandberg, 2013). The resistance women face can contribute to lower levels of self-efficacy toward leadership, which then results in fewer leadership attempts

(Bandura, 1997; Lei, Hinrichs, Prieto, & Black, 2010; McCormick et al., 2002, 2003; Mellor, Barclay, Bulger, & Kath, 2006).

For women who manage to navigate these obstacles, another challenge is that the limited number of women in leadership roles contributes to a perception of scarcity in leadership opportunities. This perception can often promote intragroup conflict as women feel they must compete with each other for positions, opportunity or acceptance (Ashforth & Mael, 1989; South, Bonjean, Markham, & Corder, 1982). Even when a woman is not directly competing for a position, she is more likely to engage in hostile or competitive behavior if she feels other women will form alliances that could put her at a disadvantage (Benenson, Markovits, Thompson, & Wrangham, 2011).

When women do demonstrate competitive behavior, it often manifests as *indirect aggression*, which is also referred in the literature as *covert aggression*, *micro-aggressions*, *incivility*, or *bullying* (if constant, continuous and considered a pattern of abuse) (Archer & Coyne, 2005; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Bjorkqvist, Osterman, and Lagerspetz, 1994; Crocker & Luhtanen, 1990; Hines & Fry, 1994; Lagerspetz, Bjorkqvist, & Peltonen, 1988; Lester, 2013; Owens, Shute & Slee, 2000; Tracy, 1991; Underwood, Scott, Galperin, Bjornstad, & Serton, 2004). Women are taught from childhood that direct aggression (e.g. yelling or hitting) is inappropriate for girls because it violates gender expectations of communality. Indirect aggression, on the other hand (such as gossip or social exclusion), is intended to manipulate a person's reputation or exclude them from a group while minimizing the risk of retaliation or social backlash because these approaches make it seem like there was no intention to hurt the other person and are often unknown to the victim (Archer & Coyne, 2005; Bjorkqvist et

al., 1992). While both men and women demonstrate this behavior in professional settings (because direct aggression is less acceptable for adults than children), women are far more accustomed to it because of exposure since childhood. Additionally, these strategies are effective because they threaten an individual's self-esteem and can cause psychological harm (Archer & Coyne, 2005; Lester, 2013).

Existing research shows that indirect aggressive behavior can affect people physically, psychologically, and/or psychosocially (Kaukiainen, Salmivalli, Bjorkqvist, Osterman, Lahtinen, Kostamo, & Lagerspetz, 2001). For women, this behavior had the highest correlation with psychosocial symptoms which includes family problems, low self-esteem, isolation in private life, alcohol problems, losing control of one's own work, lack of willingness to work, feelings that things are out of control, and problems in their sexual life (Kaukiainen, et. al, 2001). The risk of damaging positive relationships with female colleagues and thus risking these psychosocial effects is likely enough motivation to dissuade many women from pursuing leadership opportunities. Some women, however, do take up leadership and existing literature does not address what their experiences are like or what helps them through these challenges.

Indirect aggression, or *incivility* as it is often referred to in higher education literature, has historically been a concern for academic institutions (Keashly & Neuman, 2013; Twale & De Luca, 2008). As the "educated white elite realized that education was being expanded" to include students and faculty who were either of "more humble circumstances," ethnic minorities, immigrants, and/or women, they used indirect ways to discourage enrollment or professional success in order to maintain the status quo (Twale & De Luca, 2008, p. 34-35). The structure of higher education itself creates an

atmosphere that still discriminates against women and minorities in pay, workload, and tenure and promotion (Sallee & Diaz, 2013). Women at all levels of the academy, including those in more senior level positions, are more likely than men to experience bullying behavior, with women reporting this behavior from all organizational levels—superiors, coworkers and subordinates (Sallee & Diaz, 2013). Even more startling, evidence shows that women bullies target other women 80 percent of the time, demonstrating that women are often to blame for creating hostile environments for each other (Sallee & Diaz, 2013).

Statement of the Problem

Existing literature helps provide some understanding of the challenges women face in pursuing leadership roles. The double-bind women face when trying to meet societal expectations for leaders without violating sex role expectations can instigate negative reactions from both men and women (Carli & Eagly, 2007; Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001; Heilman, 2001; Heilman & Okimoto, 2007; Heilman, Wallen, Fuchs, & Tamkins, 2004). This negative behavior can come in the form of competitive, indirect, aggressive behavior that can negatively affect a woman's self-esteem (Bjorkqvist, Osterman, & Hjelt-Back, 1994; Kaukianinen et al., 2001). For women in higher education, because of the unique culture and traditionally male-dominated environment, the problem can be even more exacerbated. While all of this information is helpful in understanding the context in which women are operating, there are significant gaps in the literature that could be helpful to women as they prepare to face these challenges.

Looking at competitive, aggressive behavior, few studies actually look at the extent to which women experience this behavior in the workplace. Research in higher education reveals a limited number of studies that surveyed entire populations within given institutions and generally show that approximately 26 percent of women experience aggressive behavior in their workplace (compared to 18 percent of men) (Keashly & Neuman, 2013). These studies, however, do not differentiate between aggression being directed from men or women. Furthermore, these studies do not look at individuals in leadership roles and whether or not their experience rates are consistent with or different from the rest of the institutional population. No current studies could be located that look at the extent at which women leaders experience aggressive behavior in the workplace, more specifically from women.

When looking at research for how aggressive behavior can affect individuals, research does suggest that this behavior can have negative effects on an individual's self-esteem (Kaukiainen et al., 2001). Very few studies, however, appear to address how aggressive behavior can impact self-efficacy. While self-esteem and self-efficacy are sometimes assumed to be interchangeable, they are two distinctly different concepts. Self-efficacy relates to judgments of personal capability and self-esteem relates to judgments of self-worth (Bandura, 1997). While there are some studies that indicate the positive influence that encouragement from others can have on building self-efficacy (Cox, 2008; Juntunen, 1996; Mellor et al., 2006; Rayle, Arredondo, & Robinson Kurpius, 2005; Scheye & Gilroy, 1994), only one could be found that examined the effects of negative interactions (Lei et al., 2010).

If it was known how prevalent aggression was between women and how these experiences influence women's self-efficacy toward leadership, the information would only be partially useful. In order for women to be better equipped to manage these challenges, it is important to know how successful women navigate through similar experiences. It would be valuable to know how women managed through these obstacles—what strategies they used—so that other women can put support mechanisms in place when they are going through similar experiences. Some studies have looked at what women describe as support mechanisms that helped them in their leadership journey (Cox, 2008; Zeldin & Pajares, 2000). These studies, however, do not address how these support mechanisms specifically helped when facing aggression from other women.

One field in which the literature on this topic of aggression amongst women lacks is in the area of higher education administration. Of the career fields mentioned at the beginning of this chapter, higher education has one of the highest proportions of women in leadership roles when compared to other industries. While research indicates that aggression occurs in higher education (often referred to as *incivility* or *bullying*) (Lester, 2013; Twale & De Luca, 2008), it does not specify how prevalent aggression is among women. Despite the structural challenges mentioned specifically for higher education, women have made more progress in leadership roles here than in other fields. This apparent paradox may make higher education a valuable field to study for this subject.

Purpose of the Study

The purpose of this study was to determine to what extent women leaders in higher education experienced aggression from other women, how this affected their self-efficacy toward leadership tasks, and how these leaders successfully navigated through it.

A convergent parallel mixed methods design was used which involved collecting both quantitative and qualitative data during the same stage of the research process, analyzing it independently, and then merging results to provide an overall interpretation (Creswell & Plano Clark, 2011). Data was collected from women academic deans at doctoral granting colleges and universities in the United States.

The quantitative portion of the survey was used to assess the prevalence and form of aggression experienced from women, whether or not demographic factors related to experiencing this behavior, how these experiences impacted self-efficacy toward leadership, and what types of behavioral responses were utilized in response to this aggression. The qualitative portion of the survey used open-ended questions to collect more detailed information about the experiences of women who faced female aggression. These questions helped assess how women interpreted and made meaning of their experiences, how their experiences as recipients of aggression impacted their self-efficacy toward leadership, and what strategies helped them successfully navigate through this challenge.

Working Definition of Leadership

It is important to specify what is meant by leadership in this study. Scholars often debate the differences between *management*, *authority* and *leadership*, distinguishing between role, hierarchy and action (Antonakis, Cianciolo, & Sternberg, 2004; Heifetz, 1994). Schein (2004) takes an approach that associates leadership with the creation and management of culture, proposing that cultures begin with leaders who shape an organization with their own values which then become ingrained organizational assumptions that define success and leadership within that organization. As the

organization faces adaptive difficulties, however, leadership then becomes the ability to step outside the established culture to “start evolutionary change processes that are more adaptive” (Schein, 2004, p.2). The ability to “perceive the limitations of one’s own culture and to evolve the culture adaptively” is Schein’s theory regarding the distinction of leadership (2004, p. 2). For this study, an assumption is made that individuals taking up higher level roles of authority are expected to assess the organizational culture and to make positive change. This ability to perceive the limitations of the established culture and step out of it (specifically by taking up a higher level of authority, such as dean) to help it evolve is how this study will define leadership.

Research Questions

The following research questions guided this study:

1. To what extent have women in higher education leadership roles experienced aggression from women?
 - a. What personal and/or professional demographic variables are correlated with experiences of aggression from women?
 - b. What type of aggression are women experiencing from other women?
 - c. What situational factors are correlated to experiences of aggression from women?
2. In what ways does aggression among women impact leader efficacy?
3. What themes around strategies and responses emerge amongst women leaders who have experienced aggression from women?

CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter outlines the bodies of existing literature that are used in the framing of this study. Social cognitive theory asserts that when a person takes action toward a desired result (known as *human agency*) it involves an interactive relationship between the personal factors of an individual, behavior, and environment (Bandura, 1997). Being that leadership requires agency, this review is organized to mirror this interactive relationship utilizing three broad sections to demonstrate how self-efficacy influences women in relation to leadership roles (personal factor), how women both demonstrate and interpret aggressive behavior amongst each other (behavioral factor), and how this applies to women in a particular environment or professional context (environmental factor).

First, the intersections of literature around self-efficacy, leadership and women are surveyed; demonstrating how the development of one's belief in their abilities combined with conflicting role expectations is an inherent challenge for women pursuing authority roles. Looking at how some women respond to this challenge, the second section describes existing literature around competitive and aggressive behavior among women in the workplace: why they compete, the strategies they use, and the effects these have on women. This section explains that while most adults in the workplace utilize indirect strategies, women are highly skilled in this behavior because they have been socialized since childhood that this is the only form of acceptable aggression for girls. The final section of this review focuses on the role of aggression in one professional context: higher education.

Self-Efficacy, Women and Leadership

Leaders are individuals who have taken up a role that requires an ability to guide others toward a specific purpose. To do this effectively, they need a certain level of confidence or belief in their ability to reach their goals. The belief in one's ability to execute courses of action to successfully reach a goal is a concept known as *self-efficacy* (Bandura, 1982, 1997). This first part of the literature review looks at the intersection of research between self-efficacy, women, and leadership, exploring existing studies that connect each of these terms in pairs and then, finally, all three terms combined.

In order to provide necessary background and understanding for how self-efficacy will be viewed for this study, the first section introduces Bandura's theoretical concept of self-efficacy, including what contributes to efficacy development. The second section presents literature specifically looking at self-efficacy and women. Then, focus is given to literature describing self-efficacy in relation to taking up leadership roles. The fourth section surveys literature centering on leadership and women, specifically examining the conflict between leadership expectations and sex role expectations. The final section reviews literature specifically looking at the intersection of all three terms: self-efficacy, leadership and women.

Self-Efficacy

Psychologist Albert Bandura is most recognized for his work around *human agency* (intentional actions taken to get an intended result) and how people's beliefs in their capabilities influence their exercising of this agency (Bandura, 1982, 1997).

Bandura's *social cognitive theory* asserts that people learn through the interaction between personal factors, behaviors, and environment, with the combination of these

factors influencing how an individual takes action (see Figure 1) (Bandura, 1997). Many things contribute to the category of personal factors including knowledge, skills, abilities, and goals. Bandura asserts, however, that one particular personal factor—*self-efficacy*—is the primary driving force that influences the behaviors people use (Bandura, 1997).

Figure 1. Bandura's model of Social Cognitive Theory

Bandura coined the term self-efficacy defining it as the, “judgments of how well one can execute courses of action required to deal with prospective situations” (Bandura, 1982). Self-efficacy differs from *efficacy* in that the latter is defined as, “the power to produce a desired result or effect” (Efficacy, 2014) and self-efficacy is the *belief* of how well oneself can produce a desired result or effect (Bandura, 1997). His work on this subject, as an example, demonstrated that individuals suffering from phobic disorders could better mediate behavioral changes when they believed in their own capabilities to alleviate their phobia (Bandura, 1997). From that point, Bandura's research heavily focused on the effects of self-efficacy on psychological functioning and how that linked to his existing research on social learning. Bandura placed a lot of importance on self-

efficacy and how it drives behavior. Self-efficacy influences the course of action a person takes, the effort they put forth, how long they will persevere in the face of obstacles, their level of resiliency when stressed, whether or not their thought patterns are supportive or hindering, and ultimately, the accomplishments they achieve (Bandura, 1997).

The definition of self-efficacy and *self-esteem* are close and often considered interchangeable. In fact, there is an important distinction between these two concepts and the role they play in human behavior. Self-efficacy relates to judgments of personal capability and self-esteem relates to judgments of self-worth (Bandura, 1997). It is possible, for example, for someone to have low self-efficacy in their ability to juggle but have high self-esteem related to their general self-worth. People need more than self-esteem to do well in specific pursuits—they need confidence in their ability to produce a certain result to begin and sustain the effort required to be successful (Bandura, 1997).

Bandura (1997) posits that there are four sources that contribute to self-efficacy: *mastery experiences*, *vicarious experiences*, *verbal persuasions*, and *physical and emotional states*. Mastery experiences are those in which an individual successfully completes a task that then serves as an indicator of capability. He asserts that these experiences are, “the most influential source of efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed” (Bandura, 1997, p. 80). Successful experiences toward accomplishing a goal build up a person’s self-efficacy whereas failures can undermine it (Bandura, 1997).

Self-efficacy can also be influenced by watching others, referred to as vicarious experiences. For most activities, there are no absolute measures of adequacy so people

assess their capabilities by comparing with what others have accomplished (Bandura, 1997). For example, when timing how long it takes to run a mile, individuals assess whether their time is fast or slow depending on how it compares with others. Without this comparison, the timing would be irrelevant. Comparing oneself to others can be both constructive and destructive. Observing what others have accomplished can build someone's belief that they may be capable of accomplishing similar goals and thus view the successful individual as a role model. In contrast, when people compare themselves to peers engaged in similar endeavors, comparisons can lead to competitive behavior. In these cases, surpassing competitors raises efficacy beliefs and being outperformed by competitors lowers these beliefs (Bandura, 1997).

Verbal persuasion, also known as *social persuasion*, is another source for strengthening a person's beliefs that they are capable of achieving a desired outcome (Bandura, 1997; Lei et al., 2010). While Bandura argues that the power of verbal persuasion to increase self-efficacy is limited, he explains that it can positively influence self-change if the positive feedback is realistic given the person's capabilities. An individual who is encouraged by people they trust is likely to assert and sustain more effort than if they focus on their own self-doubts and deficiencies when difficulties arise (Bandura, 1997). If successful, this becomes a mastery experience building the individual's self-efficacy. If, however, verbal persuasion raises unrealistic beliefs for someone's capabilities, it is more likely the individual will fail, thus discrediting the persuaders and lowering the individual's self-efficacy (Bandura, 1997).

The fourth source of self-efficacy relates to an individual's physiological and affective states (Bandura, 1997). When assessing their capabilities toward a task, people

pay attention to physiological changes or moods and interpret these reactions as positive or negative. For example, if a person experiences elevated heart rate, an upset stomach, excessive sweating, and/or other feelings of anxiety when faced with an obstacle, these physical reactions may influence their perception of whether or not they can be successful toward a specific task. If they perceive these responses positively, they may respond by increasing effort; if perceived negatively, they may abandon the effort. Similar to verbal persuasion, therefore, if the person successfully accomplishes a task, they have then enacted a mastery experience. Thus, a person's mood and the interpretation of physical effects can influence their level of self-efficacy.

A search in the Academic Search Premier and Educational Resource Information Center (ERIC) databases provides thousands of studies that have examined self-efficacy and how it applies to individuals in different contexts. Many of these studies focus on children, adolescents, families, teachers, and health care professionals and demonstrate positive correlations between self-efficacy and success in accomplishing goals, whether in academic success, improved health conditions, or improved relationships. The following sections review literature that focuses on self-efficacy in relation specifically to women and to leadership.

Self-Efficacy and Women

Existing literature around self-efficacy and gender focuses generally on two topics: how self-efficacy influences career consideration and what experiences contribute to higher self-efficacy in women. The underlying purpose in many of these studies is to identify factors that may contribute to the underrepresentation of women in professional fields so that information gained might be useful in addressing this underrepresentation.

In a foundational study examining Bandura's theory of self-efficacy in relation to gender, Betz and Hackett (1981) compared men and women's self-efficacy toward various career choices. They surveyed 235 undergraduate students (134 women and 101 men) and assessed two measures of career-related efficacy: one to assess whether the individual felt they could successfully complete the educational requirements for the profession and another to assess whether they felt they could successfully perform the duties of the job. These assessments were conducted for 10 traditionally female occupations (those in which 70 percent or more of the members were women) and 10 traditionally male occupations (those in which 30 percent or less were women) (Betz & Hackett, 1981). Additionally, researchers reviewed participants' ACT scores to assess varying levels of capability.

Analysis of the ACT scores found no significant differences between men and women, confirming there was no difference in competence between the two groups. Furthermore, men reported equivalent self-efficacy levels for both traditionally male and traditionally female occupations. Women's self-efficacy scores for both educational requirements and job duties, however, were significantly lower than men's scores for five traditionally male occupations. Conversely, women's self-efficacy scores were significantly higher than men's scores for four of the traditionally female occupations (Betz & Hackett, 1981). The results of this study demonstrated that women's self-perceptions of their ability to pursue occupations corresponded with existing sex typing despite the fact that their competence levels were the same as men.

Using this study as a model, researchers continued to explore the influence of self-efficacy on women pursuing professional tracks and found similar results. Research

focusing on women in the STEM fields (science, technology, engineering and math), for example, revealed lower levels of self-efficacy than men (Heilbrunner, 2013; Marra et al., 2009). Furthermore, women in STEM majors presented lower levels of self-efficacy than women in non-STEM majors upon graduation (Dugan, Fath, Howes, Lavelle, & Polanin, 2013; Heilbrunner, 2013; Marra et al., 2009). These results demonstrate that not only do women in male-dominated fields possess lower self-efficacy than male peers but also possess lower self-efficacy than female peers in gender-neutral or female dominated fields.

Research considering race or ethnicity as a variable is scant but the few existing studies that do include it illustrate similar findings (Ancis & Phillips, 1996; Buchanan & Selmon, 2008; Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007). In fact, research has shown that women of color may actually perceive greater amounts of gender bias than white women (Ancis & Phillips, 1996). Furthermore, because ethnic minorities have historically been overrepresented among the economically disadvantaged, the additional hurdles they face in attaining higher education (especially these specialized fields that require strong academic support) exacerbate the self-efficacy challenge (Bandura, 1997; Buchanan & Selmon, 2008).

The results of these studies warrant attention in order to stop the circular patterns of women opting out of specialized fields. Lower self-efficacy is correlated with higher likelihood that women will self-select out of pursuing particular occupations or opportunities (Betz & Hackett, 1981). With women opting out, the underrepresentation of successful women in these fields continues and opportunities to build self-efficacy through vicarious experiences are fewer (Wheeler, 1983). Therefore, it is important to

examine what factors contribute to healthy self-efficacy for successful women in traditionally male roles.

Bandura (1997) asserted that mastery experiences are the most influential source of self-efficacy. He recognized the important role, however, of verbal persuasion in influencing a person to attempt and persist in a task that could then turn into a mastery experience. Research looking at self-efficacy and gender confirm this notion, specifically pointing to encouragement from families and teachers as important sources for self-efficacy development (Buchanan & Selmon, 2008; Montas-Hunter, 2012; Rayle et al., 2005; Scheye & Gilroy, 1994; Zeldin & Pajares, 2000).

Furthermore, in a qualitative study exploring the personal stories of women who excelled in STEM careers, Zeldin and Pajares (2000) found that because women's self-efficacy (developed through the caring of others) helped to build their confidence at the same time they were also building their competency in these fields, these women developed strong beliefs that helped them remain resilient when faced with both academic and social obstacles. Scheye and Gilroy (1994) obtained similar results demonstrating a positive relationship between influential male teachers in all-female educational institutions and higher self-efficacy for female students in respect to nontraditional (historically male) careers. The authors suggest that having men in traditionally male fields recognizing and encouraging the ability and potential of female students may have helped these students believe in their own abilities to be successful. The results from both of these studies offer an important distinction in that they highlight the importance not only of women believing in themselves but that it is just as important for others to believe in them. In other words, women's self-conceptions are, in part,

formed as a result of their perceptions of how others perceived them (Scheye & Gilroy, 1994; Zeldin & Pajares, 2000).

In addition to these studies focusing on direct forms of verbal persuasion, indirect forms of persuasion have also been shown to have positive effects. Women with families who place strong value on education and self-esteem demonstrate higher levels of educational self-efficacy (Rayle et al., 2005). Furthermore, women (including women of color) who come from families with liberal gender role attitudes also demonstrate higher levels of self-efficacy (Buchanan & Selmon, 2008).

These studies suggest that verbal and social persuasion have a significant influence on women's development of academic and career self-efficacy. The scope of these studies, however, is limited in that participants are exclusively students in high school or undergraduate programs. While this is useful in understanding the development of young women during a transitional part of their lives, these studies cannot address what might influence self-efficacy once an adult is interacting with colleagues outside of a peer group who share the same age and level of experience.

Another limitation of existing studies is that they only examine the influence of positive verbal persuasions on self-efficacy. If positive verbal persuasion can increase self-efficacy, it could be valuable to know if negative verbal persuasion might decrease self-efficacy. An assumption based on current research, however, would be inadequate as it would indicate that the lack of verbal persuasion would not influence self-efficacy levels—it does not address the potential effects of negative persuasion. While some existing research suggests that feelings of inclusion (or lack of inclusion) may play a role in self-efficacy or satisfaction in their field (Marra et al., 2009; Rivera et al., 2007), these

studies (where inclusiveness and acculturation were secondary priorities) did not demonstrate enough of a relationship to make broader conclusions.

While the studies in this section focus on self-efficacy in relation to career selection and anticipated job performance, they do not address how self-efficacy may be related to moving into leadership roles. The next section will describe existing literature that specifically focuses on how self-efficacy relates to leadership tasks.

Self-Efficacy and Leadership

Empirical research looking at self-efficacy in relation to leadership has only received attention within the past two decades (Hannah et al., 2008). Being that leadership is one of the most researched organizational behaviors and that the behaviors associated with high self-efficacy (such as setting ambitious goals and persistence when facing obstacles) match characteristics associated with successful leadership (Bandura, 1997; Bass, 2008), study into how self-efficacy and leadership interact was clearly needed (McCormick, 2001). This section describes some of the main theoretical studies around self-efficacy and leadership as well as empirical studies related to them.

As described earlier, Bandura (1997) asserted that human functioning is dependent upon how an individual's internal personal factors interact with their behavioral and environmental events (Figure 1). Using this model, and looking at the task of leadership, McCormick (2001) proposed that a leader's personal factors, leader behaviors, and the leadership environment interact and thus influence leader functioning (Figure 2) (McCormick, 2001). Furthermore, similar to how Bandura asserted that self-efficacy is the most important personal factor in determining success toward a task,

McCormick (2001) theorized that *leadership efficacy* is the most important personal factor in determining success in a leadership task.

Figure 2. McCormick's application of Social Cognitive Theory to leadership

These models, however, do not specifically address how individuals make decisions, which is a primary responsibility in leadership roles. While some theories of self-regulation suggest that individuals regulate decision making by assessing predicted outcomes and then choosing options that will cause the least amount of disequilibrium, Bandura's social cognitive perspective argues that if this was true, people would often do nothing when faced with challenging obstacles (Bandura, 1997). He asserts that if a person believes that the anticipated outcome of successfully overcoming the obstacle outweighs the negative costs of the disequilibrium, and the individual is confident that they can achieve this outcome (high self-efficacy), they are likely to move forward with the action. When things are going well and reaping positive results, the individual's self-efficacy becomes stronger which influences them to take these risks again toward more aspirational goals and persist toward accomplishing these goals (Bandura, 1997). When things do not go well, if the individual has a strong sense of self-efficacy, they will likely

adapt their strategy and persist toward their goals. If, however, they have low self-efficacy, they may decide not to pursue those same goals (Bandura, 1997).

To test this theory in relation to leadership, McCormick et al. (2002) surveyed 223 undergraduate students to assess what relationships existed between leadership efficacy and leadership experiences. Results showed that leadership efficacy was positively correlated with the frequency of attempting to assume a leadership role ($p < .01$). Furthermore, individuals with high leadership efficacy attempted to assume leadership roles more frequently than individuals with low leadership efficacy ($p < .01$) (McCormick et al., 2002). Looking at how leadership experiences, in turn, influence leadership efficacy, McCormick et al. (2002) looked to see if there was a relationship between the actual number of leadership experiences and leadership efficacy. Results demonstrated a significant association between these two variables ($p < .01$).

While this study was a starting point in looking at the relationship between leadership efficacy and leadership behaviors (in this case, attempts at leadership), the exclusive sample of undergraduate students and narrow scope of looking only at the frequency of pursuing and/or taking up leadership are limitations. Other existing literature relating to leadership efficacy, however, show similar results in a variety of educational and professional settings including positive correlations between leadership efficacy and leadership attempts (Paglis & Green, 2002), the motivation to lead (Chan & Drasgow, 2001), organizational achievements (Bandura & Wood, 1989), and work performance ratings (Robertson & Sadri, 1993).

Looking further at this concept, Hannah et al. (2008) reviewed existing literature on self-efficacy toward leadership and then asserted that there is a distinction between

leader efficacy and *leadership efficacy*. They view *leading* as the behaviors of individual leaders versus *leadership* as “the emergent positive influences occurring in a group of which the leader is a part” (Hannah et al., 2008, p. 670). Thus, in their explanation, leader efficacy is the set of beliefs an individual has toward their own capabilities to accomplish leadership tasks and leadership efficacy involves the interaction between the efficacy of the leader, the efficacy of each follower, and the collective efficacy that they are forming together. Figure 3 provides a graphic portrayal of their theoretical framework demonstrating this relationship. Like Bandura’s and McCormick’s models, Hannah et al. (2008) placed significant importance on the interaction between the leader, the followers, and their environment.

Figure 3. Hannah et al.'s (2008) theoretical framework for leadership efficacy

As mentioned earlier in this chapter, Bandura (1997) outlined four sources of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and

physiological and affective states. While various scholars suggest there is a relationship between leaders, followers, and the environment, research examining how interactions with others affect leader efficacy is limited. Three studies that specifically look at this interaction focus on the effect of social persuasion (based on Bandura's concept of verbal persuasion).

Banks (2012) modified Hannah et al.'s framework (see Figure 4), specifically adding Bandura's four sources of self-efficacy (with slightly different labels) representing the bidirectional behaviors of these sources. Using this model, Banks's study specifically looked at the influence of social persuasion on leader efficacy. Bandura's term of verbal persuasion was replaced in this study with *social persuasion* due to the fact that influence from others can come in various forms including the use of technology (blogging). Banks's reference to social persuasion, however, has the same purpose and elements as Bandura's verbal persuasion in that the supposed influential source of self-efficacy is based on feedback from others.

Figure 4. Banks's framework for leader efficacy and leadership efficacy

In this study, participants were asked to blog about their interactions with leaders asking specific questions about their leadership experiences. Participants' leader efficacy was measured by using questions from the Generalized Leadership Efficacy (GLE) Questionnaire developed by Hannah, Avolio, Walumbwa, and Chan (as cited in Banks, 2012). The GLE questionnaire specifically measures three components of leader efficacy: *self-motivation/thought*, *action*, and *means*. Hannah et al. (2008) asserted that all three components interact with one another to form general leader efficacy. Participant scores in Banks's study were compared with a control group who had not participated in discussions and/or blogging. Results demonstrated that participants who had discussions with leaders and blogged about them had higher general leadership efficacy scores than individuals who did not participate in these activities. These results demonstrated that participants who received positive social persuasion from others had higher leader efficacy than individuals who did not.

In another study looking at the relationship between follower behavior and leader efficacy, Lei et al. (2010) surveyed MBA students. Participants were provided with a description of various situations where a follower demonstrated specific behavior to them as the leader and then asked participants to rate how they were likely to feel (relating these answers to their level of efficacy). Results demonstrated that positive follower behaviors were positively correlated with higher levels of leader efficacy in the participants. Similarly, the more negative behavior demonstrated by followers were related to decreasing levels of leader efficacy. While one might assume this opposite result, this is the only study to date that specifically addresses the effects that negative

follower behavior can have on leader efficacy. The uniqueness of this study is significant as it provides empirical results related to the impact of negative social persuasion.

A third study by Mellor et al. (2006), also demonstrated a connection between verbal persuasion and leader efficacy. Researchers specifically looked at union leaders and their stewards to determine if gender similarity between the union members and the steward augmented the effects of verbal persuasion. This study will be discussed further in a future section discussing self-efficacy, leadership, and women. Before incorporating this additional variable, however, it is important to explore the unique challenges of women in leadership roles.

Leadership and Women

When considering the influence self-efficacy has for women in leadership roles, it is important to look beyond the individual to societal influences that shape how women, leadership, and women in leadership are viewed. This section first reviews literature around sex role expectations, looking at expectations people have regarding attributes for men and women. Then, leadership role expectations are described, specifically considering how expectations are shaped by the fact that men have historically been in these roles. Finally, the inherent conflict that women face between sex role expectations and leadership expectations is described including the unique challenge in navigating an environment where they can be considered competent or likable, but rarely both.

Sex role expectations. Throughout history, cultures have developed expectations for how men and women should act in relation to the roles they take up in these cultures. Scholars contend that psychological sex differences and behavioral tendencies develop from the roles typically filled by men and women in societies (Eagly, 1987). In other

words, as men and women perform specific tasks repeatedly in a particular culture their abilities to perform these tasks become societal expectations. For example, women have historically assumed (and been expected to assume) the majority of child-rearing and household responsibilities while men have typically worked to provide and/or protect their family both physically in more indigenous societies and financially in modern society.

As societies change, however, the roles of men and women can change. In more industrialized societies, fewer occupations require men's greater size and strength (Eagly, 1987; Eagly & Carli, 2007). Additionally, as women started having fewer children (Mather, 2012), they became more available to work outside the home. Furthermore, the desire to maintain a standard of living has required more families to have two wage earners to ensure adequate financial means (Bass, 2008). Despite these advancements, however, these historical roles developed over centuries and have contributed to mental associations and expectations for what roles men and women have in society. Expected roles have been continually reinforced through both direct experiences (teaching and task assignment) and indirect experiences (cultural traditions and media influence) which help to turn expectations into stereotypes, creating unconscious definitions for both normative and prescriptive behaviors for men and women (Eagly & Carli, 2007).

In the mid-1970s, literature began to emerge around psychological sex differences specifically arguing that attributes that were popularly believed to be more characteristic of one sex than the other were usually unproven in empirical research (Eagly, 1987). Around this same time, additional research developed about popular beliefs about men and women, focusing on gender stereotypes, demonstrating that even non-psychologists

believed men and women were different (Eagly, 1987). Maccoby and Jacklin's 1974 work, *The Psychology of Sex Differences*, served as a seminal work in the field of psychology as they attempted to review all existing literature around both cognitive ability differences and social behavior differences in one book (Eagly, 1987). Viewing the study of social behavior as inherently more complex than cognitive abilities (because social behavior is severely dependent on the definition of the situation at hand and cognitive ability is relatively stable), Eagly (1987) then conducted a meta-analysis of research, focusing more explicitly on social behavior analysis. Her work examined, "differences in the social position of the sexes and contend[ed] that these differences expose women and men to systematically different role expectations" (Eagly, 1987, p. 4).

Based on research around gender stereotypes, Eagly (1987) described the differences between women and men in terms of two dimensions: *communal* associations and *agentic* associations. Communal associations, believed to manifest in women more strongly than men, are concerned with the welfare of others. This dimension includes attributes such as caring, nurturing, eagerness to soothe hurt feelings, helpfulness, sympathy, kindness, and emotional expressiveness (Eagly, 1987; Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001). Agentic associations, believed to manifest in men more strongly than women, are concerned with assertive and controlling tendencies. These include attributes such as self-assertion (e.g., aggressiveness, ambition, forcefulness), self-expansion (e.g., self-reliance, self-confidence), and the urge to master things (competency and task orientation) (Eagly, 1987; Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001). From a social role perspective, Eagly (1987) asserted that these sex-role expectations influence how individuals choose to demonstrate

helping behaviors, aggression, as well as how individuals interact with and influence others.

An extensive amount of literature based on this concept of communal and agentic associations has developed over the past 25 years, mostly regarding what happens when individuals violate the expected norms for how men and women will act. The next section will focus on the literature that relates these expectations to leadership expectations.

Role expectations for leaders. Just as social role theory asserts that people have mental associations for different genders based on the roles these genders typically take up in society, people also have mental associations about leaders and leadership roles. Based on the fact that the majority of leaders have historically been male, early research on leadership studied men. *Trait* theories of leadership attempted to identify what traits successful leaders held in an effort to help prescribe what to look for in potential leaders (Antonakis, Cianciolo, & Sternberg, 2004; Bass, 2008). Because these studies focused almost exclusively on men, the traits identified as necessary were those agentic characteristics traditionally associated with men and thus these theories were named *Great-Man theories of leadership* (Bass, 2008). Personality traits associated with effective leadership included aggressiveness/assertiveness, ascendancy/dominance, emotional balance and control, independence/non-conformity, and self-confidence (Bass, 2008). Additionally, task-related characteristics associated with leadership included the drive to achieve or excel and task orientation (Bass, 2008).

For men, the alignment of agentic expectations for men and leadership is an asset. For women, the contrast between communal expectations for women and agentic

expectations for leaders puts them at risk for violating expectations for gender and leadership roles. As an extension to social role theory, Eagly and Karau (2002) developed a theory on role congruity that considered the congruity between gender roles and other roles (especially leadership) and how incongruity is likely to be perceived less favorably, thus instigating prejudicial views and behaviors. This theory described how the juxtaposition between agentic leadership associations and communal female associations would naturally cause others to judge women leaders based on their violations of *both* agentic and communal expectations. If a woman demonstrates the communal associations expected for her gender, she is likely to be perceived as less effective in her leadership role (Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002; Kellerman & Rohde, 2007). Yet, if she demonstrates the agentic associations expected for leaders, she is likely to be seen as more hostile and less rationale than male leaders (Eagly & Carli, 2007; Eagly & Karau, 2002; Heilman, 2001; Heilman et al., 2004; Kellerman & Rohde, 2007). This conflict between female expectations and leadership expectations is often referred to in literature as the *double bind* (Carli & Eagly, 2007; Eagly & Carli, 2007; Kellerman & Rohde, 2007).

These prejudices do not come solely from men. Research shows that women acknowledge having a preference for stereotypical male behavior in management roles and look unfavorably toward women in these roles (Brenner & Bromer, 1981; Carli & Eagly, 2007; Cooper, 1997; Ely, 1994; Schneider, Tinsley, Cheldelin, & Amanatullah, 2010). Aware of these prejudices and judgments, women often internalize these stereotypes and become less willing to engage in agentic behavior thus creating a “psychological glass ceiling” for themselves (Kellerman & Rohde, 2007, p. 8). The next

section focuses on the literature that demonstrates competing expectations for women in leadership roles and how likeability and competence have historically been negatively correlated.

Likability versus competence. In addition to the characteristics associated with effective or competent leaders described earlier, research also shows that interpersonal skills are positively correlated with perceived effective leadership (Bass, 2008). People generally want to be led by individuals they feel can relate to them and who genuinely care about them. This would indicate that the most effective leaders are those who are both competent and likable.

In their work describing how informal networks take shape in organizations and how people choose who they work with, Casciaro and Sousa Lobo (2005) describe four workplace archetypes based on the four possible combinations of competence/incompetence and likability/unlikability (see Figure 5). They describe how the ideal colleague is both competent and likable (the *likable star*) and that the least desirable colleague is both incompetent and unlikable (the *incompetent jerk*). While the rationale regarding work preferences with these two archetypes may seem obvious, Casciaro and Sousa Lobo (2005) further explored the other two archetypes where work preferences are not as easily predictable. Looking at people's preferences when faced with a choice of working with someone who is considered highly competent but not very likable (the *competent jerk*) and someone considered incompetent but likable (the *lovable fool*), results showed that most people choose likability over competence (Casciaro & Sousa Lobo, 2005).

Figure 5. Casciaro and Sousa Lobo's likeability vs. competence matrix

For men, competence and likability are positively correlated as people expect them to demonstrate agentic characteristics aligned with both their sex and leader role expectations (Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002; Heilman, 2001; Heilman & Okimoto, 2007; Heilman et al., 2004; Sandberg, 2013). It is possible for men to be able to demonstrate assertiveness and self-confidence and, at the same time, demonstrate strong interpersonal skills. For women, however, competence and likability are negatively correlated—if they demonstrate agentic characteristics associated with successful leadership, they may be given credit for being competent in specific scenarios, but they are also more likely to be viewed as *cold*, *bitter*, or *bitchy* (Eagly & Carli, 2007; Eagly & Johannesen-Schmidt, 2001; Eagly & Karau, 2002; Heilman, 2001; Heilman & Okimoto, 2007; Heilman et al., 2004; Kellerman & Rohde, 2007; Sandberg, 2013). If they demonstrate communal behaviors, they are more

likely to be viewed as likable but also more likely to be seen as less competent in leadership roles—soft and unable to make hard decisions (Heilman, 2001; Kellerman & Rohde, 2007). Women face a dilemma where they have to choose between being likable as a woman but incompetent as a leader or competent as a leader but unlikable as a woman.

In a research study investigating reactions to a woman's success in male dominated positions, Heilman et al. (2004) conducted a set of three studies, surveying 242 individuals about their reactions to similar profiles of men and women holding the same position (a traditionally male management role) in a large organization. In the first study, participants were asked to complete an evaluation rating the individuals on competence, achievement-related attributes, likeability, and interpersonal hostility. Ratings related to competence revealed that when the individual's prior success was made explicit in the profile, there was no significant difference in competence ratings between men and women profiles. When information about performance outcomes was left ambiguous, however, the female profile was rated as significantly less competent than the male profile. Results around achievement-related attributes mirrored those of the competence ratings.

When looking at likeability, ratings were opposite—when there was ambiguity about the target's performance, there was no significant difference in likeability ratings for male or female targets. When there was clear evidence of success, however, the female was rated as less likeable than the male targets. Similarly, in relation to evaluation of interpersonal hostility, when the performance outcomes were unclear, female targets were rated significantly less hostile than male targets—but when the

performance outcome was clearly successful, female targets were rated significantly more hostile than male targets (Heilman et al., 2004). For the second part of the study, the researchers performed the same test for a position that is gender-neutral but did not have the same results. They were able to confirm that the effects in the first study applied only when targets were in positions that contrasted with expected gender stereotypes (Heilman et al., 2004).

In the third and final part of the study, participants were asked questions to assess their perception of the target's competence and likeability and then to rate profiles for an overall evaluation, feelings about having the individual as a manager, whether or not they would recommend them for special career opportunities, and salary recommendations. Results indicated that (1) targets who were reported to be likeable were rated more favorable than those reported as unlikeable, (2) that likeability affected feelings about having the person as their manager in high-competence conditions but not in low-competence conditions, (3) that competent and likeable targets were recommended for special career opportunities significantly more than competent but unlikeable targets, and (4) that likeable employees were recommended for higher salary than less likeable employees, regardless of competence (Heilman et al., 2004). The results from all three parts of this study demonstrate the dilemma that women face in male-dominated roles—in order to be considered competent, successful performance outcomes need to be clear; but when they are clear, women are likely to be viewed as less likeable. Furthermore, likeability plays an important role in the evaluation of individuals toward overall evaluation and promotional opportunities.

In a more recent study by Heilman and Okimoto (2007), a similar format of three

parts looked at this issue of likeability in relation to communal expectations for women. Based on prior research highlighting how competent women have been described as being deficient in interpersonal skills (Heilman et al., 2004), the goals of this study aimed to determine if making communal associations evident made a difference in how participants perceived female targets. Results showed that women in masculine jobs were seen as less likeable, deficient in interpersonal attributes, and less desirable as a boss than men *except* when communal information was provided explicitly. When this depiction was clearly described as part of the profile, female managers were actually significantly more likeable than the male managers. In one part of the study, because raising children is typically associated with communal attributes, participants were told that the individual had children. Similar to the part of the study where communal behavior was described, when the parental status was shared in the profile, there were no significant differences between male and female targets in relation to likeability.

These studies are examples of literature demonstrating the challenge of the double bind for women in leadership roles. When considering the double-bind in relation to self-efficacy toward leadership, the challenge for women multiplies. Considering the first three of Bandura's four sources of self-efficacy, women are then facing fewer opportunities for mastery experiences, fewer role models for vicarious experiences due to the underrepresentation of women in leadership roles, and lower probability for verbal persuasion if support systems are concerned with role violation. All of these challenges are likely to influence an individual's physiological and affective state and the stress of attempting leadership without support may simply be too stressful for some women. Despite these challenges, however, women are making progress toward greater

representation in leadership roles. The next section will look at literature that sits at the intersection of these three bodies of literature—self-efficacy, leadership and women, specifically looking at how successful women in leadership roles navigate through these challenges.

Self-Efficacy, Women, and Leadership

The preceding subsections presented existing literature around the combinations of self-efficacy and women, self-efficacy and leadership, and leadership and women. While literature focusing on all three constructs together (self-efficacy, leadership and women) is limited in quantity, the empirical studies that do exist share some common themes. This section focuses specifically on this literature.

First, studies reveal that while women have the same capacity for leadership as men, they generally have significantly lower perceptions of their own self-efficacy toward leadership (a.k.a. leader efficacy) than men do (Hong, Schaafsma, van der Wijst, & Plaat, n.d.; McCormick et al., 2002, 2003). Earlier in this chapter, a study by McCormick et al. (2002) described how the number of leadership roles is positively correlated to leader efficacy. In that study's consideration of gender as a variable, however, researchers found that women reported lower self-efficacy than men, despite the fact that they reported the same number of leadership experiences. Wanting to look more closely at this finding, McCormick et al. (2003) explored how internal psychological barriers may contribute to underrepresentation of women in leadership roles. They found that women who had incorporated more masculine-type behaviors into their self-concept engaged in more leadership-related developmental activities and that engagement in these activities correlated with higher leader efficacy. Thus, women who

do not incorporate masculine-type behaviors are less likely to pursue leadership development opportunities.

Another theme from the literature demonstrates that, in alignment with Bandura's theory that the individual, their behaviors, and the environment are in a reciprocal relationship, studies by Hong et al. (n.d.) and Dugan et al. (2013) both verified an environmental effect. Hong et al. (n.d.) conducted an experiment with undergraduate students, where they were told they would need to work with others. In some cases, they were told that they were being evaluated based on how they compared with other teams (competitive control) and in other cases, they were told they were being evaluated on how well they collaborated within the group (cooperative control). Participants were asked in both scenarios whether they wanted to take the lead on the task and provided a number of statements to respond to related to behavioral intentions toward leadership and followership tasks. Results indicated that in the cooperative environment, there was no significant difference between men and women related to taking up leadership. In the competitive environment, however, women had a significantly weaker preference to lead (Hong et al., n.d.).

Looking at how this effect may play out in a non-experimental setting, Dugan et al. (2013) assessed leadership capacity and efficacy in female undergraduate students, specifically looking for differences between STEM students and non-STEM students. The authors asserted that because STEM fields tended to be male-dominated, they have historically been viewed to have a more competitive nature than gender neutral or female-dominated fields. This study, therefore, was seen as a good one to test theories based on the research done by Hong et al. (n.d.). While a comparison of STEM and non-

STEM female students showed no significant difference in leadership capacity, STEM females had significantly lower leader efficacy than non-STEM females. It is important to point out that both STEM and non-STEM female students showed increased levels of leader efficacy through their college experience but that non-STEM female students increased at a lower rate. Results from Hong et al. (n.d.) demonstrated that women had less of a preference to lead in experimental competitive environments and results from Dugan et al. (2013) confirmed this same sentiment by showing that women in competitive fields had less strong beliefs in their ability to accomplish a leadership task than women in more gender-neutral fields.

Studies that demonstrate that women have lower leader efficacy, especially when in competitive environments or fields, are concerning because it means they are less likely to attempt leadership opportunities. McCormick et al. (2003) demonstrated that the level of leader efficacy affects functional leadership behavior, specifically in the fact that leader efficacy is a contributing factor in whether or not someone will attempt leadership and that the more leadership experiences someone has had, the more their leader efficacy develops. All of these studies, however, utilized undergraduate students as their participants. To more fully understand the connection between self-efficacy, women and leadership, studies looking at the experiences of women in professional leadership positions could add significant value.

Two qualitative studies were identified that specifically looked at women leaders in higher education to assess their self-efficacy and what factors may have contributed to this construct. Cox (2008) interviewed women leaders at land-grant institutions looking for levels of confidence and what they felt contributed to this confidence. She found that

these women had high levels of confidence and an “I can” attitude (pp. 103-104).

Themes that related to what influenced their confidence included successful experiences in leadership (Bandura’s concept of mastery experiences) as well as feedback and support from others (Bandura’s concept of verbal persuasion).

Similarly, Montas-Hunter (2012) interviewed women leaders in higher education (focusing specifically on Latina women). Themes from these qualitative interviews also verified the positive impact from professional experiences (mastery experiences) and support and feedback from mentors and families (verbal persuasion). Both of these studies highlight the positive impact of mastery experiences and the influence of verbal persuasions from others.

Expanding further on the influence of verbal persuasion in the development of women’s leader efficacy, two studies looked more specifically at this construct and the effect it had on women leaders. Mellor et al. (2006), who looked at verbal persuasion in a union environment, found that the effects of verbal persuasion on self-efficacy were augmented when it was provided by someone with the same gender as the recipient. More specifically, they showed that when women gave verbal support to other women in the union environment, they were more likely to decide to serve in a leadership role as a union steward (Mellor et al., 2006).

The other study of significance relating to the effects of verbal persuasion on leader efficacy, particularly relating to women, is the study mentioned earlier in this chapter where Lei et al. (2010) demonstrated that leader efficacy increased with positive feedback from followers and decreased in response to negative feedback. This study showed no significant difference between men and women in relation to positive follower

feedback but that negative follower feedback had a greater effect in lowering leader efficacy for women than for men (Lei et al., 2010). This finding is particularly relevant as it indicates the detrimental impact that negative feedback can have on women who are more likely to have lower levels of leader efficacy to begin with. Further examination into this particular relationship could be useful to women in or pursuing leadership roles.

Summary

This first section of the literature review began with an explanation of Bandura's concept of self-efficacy as a foundation for exploring how individuals develop the belief in their own ability to take action toward a goal, including four constructs that he asserts contribute to self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states. Then, existing literature looking at self-efficacy and gender was reviewed, demonstrating that women tend to have lower levels of self-efficacy than men when considering traditionally male career options. This section also showed that encouragement from family and teachers (fitting Bandura's construct of verbal persuasion) helped to build women's self-efficacy.

The third subsection reviewed literature around self-efficacy and leadership, including adaptations of Bandura's self-efficacy framework toward more specific leadership and leader efficacy. Literature looking at these constructs revealed positive correlations between leadership experiences and leader efficacy as well as validated the impact of Bandura's four sources of self-efficacy. The next subsection focused on leadership and women, describing how sex role expectations and leadership expectations conflict to form a double-bind for women in leadership, and how women are more likely to be deemed either competent or likable but less likely to be both.

The final subsection introduced the literature that examines self-efficacy, women and leadership. While the number of studies looking at all three of these constructs is limited, existing literature does suggest that women have lower leader efficacy than men and that this may have to do, in part, with an adverse response to competition and/or negative feedback. The next major section of this literature review looks more extensively at the concept of competition among women in the workplace, specifically looking at how this is similar to or different from men and how this behavior impacts women.

Competition among Women

There are a variety of challenges for women in leadership roles. As already mentioned, the conflict between expected sex roles and leadership roles for women make it difficult for women to be perceived as both competent and likable. Furthermore, women are underrepresented in leadership roles, offering fewer role models who could help women navigate these challenges. The underrepresentation of women in leadership also contributes to a perception of scarcity for these roles for women. All of these challenges contribute to an environment where people can feel a need to protect their self-esteem and social standing. When this happens, they may behave in competitive ways toward others. While competitive behavior may be intended to help protect and preserve an individual's psychological safety, there are detrimental effects. This type of behavior not only impacts victims but can undermine the collective goals women have for higher representation in leadership roles.

This section will introduce literature around competition among women in professional settings. First, literature will be reviewed pertaining to *why* women compete

with one another. Then, research around *how* women compete will be shared, specifically looking at the types of strategies women use and what purposes these strategies serve. Finally, the individual effects of competition among women will be discussed.

Why Women Compete

As introduced earlier, women pursuing leadership face a double bind as social expectations of communality for women contrast with agentic social expectations for leaders. Women who rise to senior level positions of authority, especially in male-dominated organizations, learn to adapt to fit the organization's leadership culture. One way to do this is to find ways to relate to men by behaving in stereotypical male behavior. At the same time, these women may de-emphasize the similarities they share with women in order to counteract stereotypes that they may seem weak (Kellerman & Rohde, 2007). By distancing themselves from other women, however, they may be contributing to a different problem—hostility among women.

This section will use *social identity theory* to help further explain why women aim to identify with men in leadership roles and distance themselves from women. Then, *competition theory* and *Queen Bee syndrome* are described as explanations for why women leaders demonstrate hostility toward other women. Finally, literature is presented to demonstrate the reciprocal nature of hostility, specifically focusing on hostile behavior from women in lower ranks to women in leadership.

Social identity theory. Social identity theory (SIT) suggests that there are two components to an individual's identity—a personal component and a social component (Ashforth & Mael, 1989; Crocker & Luhtanen, 1990; Ellemers, Van Den Heusel, De

Gilder, Maass, & Bonivi, 2004; Ely, 1994; Ethier & Deaux, 1994; Mehra, Kilduff, & Brass, 1998; Wharton & Baron, 1991). The personal component includes an individual's personality, intellect, and physical appearance while the social component consists of the person's group memberships such as age, gender, race, socioeconomic status, religion and any other categories where individuals share some common characteristics (Ely, 1994; Ethier & Deaux, 1994; Turner, Brown, & Tajfel, 1979). SIT posits that people classify themselves and others into social categories (Ashforth & Mael, 1989) in an attempt to achieve and maintain a favorable self-image (Ely, 1994; Turner et al., 1979). Furthermore, this theory suggests that as more individuals identify with a group, the more they will demonstrate bias in favor of this group at the expense of other groups (Negy, Shreve, Jensen, & Uddin, 2003; Turner et al., 1979). Because groups only exist in relation to others, this means that individuals within these groups define their social meaning in relation to others (Hogg, 2001).

Identification with a particular shared characteristic or social group, however, is not the only factor that influences people to connect in social settings. The prestige of a group is likely to increase an individual's desire to identify with that group (Ashforth & Mael, 1989). Conversely, the awareness of *out-groups*, or groups with less desirable characteristics within a particular setting, can also contribute to an individual's desire to identify (or not-identify) with a group (Ashforth & Mael, 1989). If an individual shares a characteristic with another person or group that is defined as less desirable, it is likely he/she will try to identify with a different social group based on some other characteristic that is more desirable in that context.

The reason behind this behavior is that individuals identify with social categories

to gain acceptance and enhance personal self-esteem. Each group develops an identity as a collective. This *collective identity*, and the status they have within the larger social group, creates a level of *collective self-esteem* which directly influences an individual's self-esteem and psychological safety (Crocker & Luhtanen, 1990). People choose groups where they feel they can gain the greatest amount of psychological safety and self-esteem. Turner et al. (1979) stated that, "individuals are motivated to achieve a positive self-image and self-esteem can be enhanced by a positive evaluation of one's own group" (p. 190).

Women who rise to higher level positions within male-dominant organizations often must find ways to socially identify with men in order to project the organization's image of leadership and be viewed favorably. In order to adapt to the organization's expectations, women minimize the similarities they have with other women, focusing instead on shared characteristics with men (Ellemers et al., 2004). They do this to build and protect their self-esteem, psychological safety and status within the organization. When new women enter the organization, this bias these other women have against female characteristics can manifest in behavior that demonstrates a lack of support for the new women.

Hostility from the top: Competition theory and Queen Bees. While social identity theory posits that people identify with the social groups in which individuals share similar characteristics, it also acknowledges that conflict can arise when a group is perceived to have lower status (Turner et al., 1979). The existence of this conflict has been validated by empirical evidence supporting *competition theory*. Based on Blalock's (1967) work that linked intergroup competition to unfavorable attitudes at the individual

level, Tolbert, Simons, Andrews & Rhee (1995) labeled the phenomenon *competition theory*, suggesting that as the proportionate size of a minority group increases, the level of intergroup hostility and conflict increases. This theory is predicated on the assumption that members of socially defined groups compete for scarce resources and that group size often determines the outcomes of this competition (Tolbert et al., 1995). In other words, when underrepresented groups are proportionally smaller, they are less likely to be seen as a threat to these limited resources. But as the size of that group increases, the perception of threat rises, which can lead to increased hostility by the majority toward the underrepresented group and discrimination aimed at maintaining the group's privileged status (Crocker & Luhtanen, 1990; Tolbert et al., 1995).

Research by Tolbert et al. (1995) also showed that as the presence of females increased proportionately in male-dominated work environments, turnover actually increased among women in these organizations. For their research, they reviewed an annual publication of the American Sociological Association that published demographic data for faculty members in 50 university sociology departments with graduate programs. They wanted to use this data to examine turnover rates for women in academic departments. Comparing the listings over time, researchers calculated turnover rates and determined that until the proportion of women reached between 35 to 40 percent, female turnover actually increased even as more women were hired (Tolbert et al., 1995).

While the limited data used and the arguably unreliability of their source leave a number of unanswered questions (most glaringly *why* did the individuals leave their positions), the results support the general claims made in competition theory. As the proportion of a minority group (in this case women) increased, turnover of this group also

increased. It is possible that something within these work environments, perhaps hostility from other women, influenced women to leave.

While research and popular press tend to focus on workplace competition between men and women, multiple layers of competition occur within a group. In her research looking at women's evaluation of other women as leaders, Cooper (1997) found that women with traditional views of female roles may contribute more significantly than men to the failure of women. This occurred because they felt the women leaders violated the traditional agentic view of leadership. Additionally, as hostility and discriminatory acts increase toward women, they often compete with each other to gain social standing. If opportunities or resources appear to be limited for women, intragroup conflict is likely to increase as they compete with each other for positions, opportunity or acceptance (Ashforth & Mael, 1989; South et al., 1982). This competition can negatively affect a woman's general job satisfaction, job-related depression and job-related self-esteem (Wharton & Baron, 1991). Wharton and Baron's research looking at the psychological impact of gender segregation for working women showed that predominantly male work environments often offer higher levels of work satisfaction for women than environments with higher proportions of women.

Ely's (1994) research of women in law firms supports this theory relating to hostility between women in the workplace. In her mixed methods study, Ely interviewed and surveyed women at *male dominated* (less than five percent women) and *sex-integrated* (greater than 15 percent women) law firms to learn more about the relationships between women partners and women junior associates in firms with different gender make-up. She found that junior women associates in male-dominated

firms often reported higher levels of perceived hostility from women partners than their counterparts in sex-integrated firms. This increased hostility supports competition theory showing that the influx of newer women increased hostility levels from existing women. While this study looks at perceptions and not observable behaviors, these perceptions are important to consider because they will influence interactions between partners and associates.

In early research on this subject of hostility from women leaders, Staines, Jayaratne, and Tavris (1973) described the phenomenon of a woman in a position of authority viewing or treating female subordinates more critically than men as *Queen Bee Syndrome* (as cited in Ellemers et al., 2004). Research confirms that women are often more critical of other women than they are toward men. In a study examining gender-related differences in hiring decisions, Snipes, Oswald and Caudill (1998) asked male and female participants to evaluate resumes, while varying only the name of the applicant as a male or female name. Women evaluators judged female applications more harshly than comparable male applications, showing overly high expectations on other women in comparison to men's expectations of women. In fact, women evaluators perceived women applicants as less likely to be successful in future job performance, even when the job was something the evaluators considered to be *female-oriented* (jobs that have traditionally had more women, such as nursing or teaching) (Snipes et al., 1998).

Similarly, in an examination of the underrepresentation of women in science faculty positions, Ellemers et al. (2004) conducted studies in the Netherlands (where the field is more male-dominated) and Italy (which the field is more gender balanced) to assess (1) if commitment levels varied between male and female students and (2) how

faculty members perceived these levels of commitment. Their findings revealed that while no difference in commitment levels existed between male and female students, female faculty (more than male faculty) ranked female students as having lower levels of commitment. The researchers suggested that this happens because female faculty learn to identify more with male colleagues and then engage in stereotypical behavior towards women even when men do not engage in these behaviors (Ellemers et al., 2004). Both of these studies confirm the tendency for women in authority roles to hold women entering the field to higher standards than men reviewers.

There may be multiple explanations for this behavior between women. If women in male-dominated environments have learned to identify more with men, their self-esteem is influenced by how men perceive them as leaders and/or colleagues. When new women enter the organization, existing women face a dilemma—men expect them to conform to accepted male norms and women expect them to demonstrate female norms. These expectations are in conflict. Another explanation is that when self-esteem or acceptance is threatened, people often engage in self-enhancing strategies as a protective measure (Crocker & Luhtanen, 1990). This may help explain why some successful women in male-dominated organizations demonstrate biased attitudes toward new women—they are attempting to preserve their social status within the organization.

Whatever the reason, some women in authority roles in male-dominated organizations do engage in indirect stereotypical or discriminatory actions toward women at lower organizational levels. These behaviors undoubtedly influence the perceptions that women at lower hierarchical levels have of women in authority roles which are likely to manifest in reciprocal negative behavior.

Hostility from below. While historical research suggested that women would prefer a female boss over a male boss (Terborg, Peters, Ilgen, & Smith, 1977), consistent results from Gallup surveys conducted every few years since 1953 showed that when women have a preference for the gender of their boss, they consistently preferred a man (Carroll, 2006). This counterintuitive result begs for further explanation.

As previously discussed, research suggests that women often feel less supported by women superiors and this contributes to negative perceptions of women in leadership, particularly in organizations that have a majority of men (Ely, 1994; Wharton & Baron, 1991). While this may be a consequence of Queen Bee syndrome, the resulting behaviors contribute to negative relationships between women in the workplace. Rather than admiring higher-level women who have successfully climbed to senior positions in an organization, junior women may perceive women in authority roles negatively.

In Ely's (1994) mixed methods study examining perceptions of women in law firms (mentioned in the beginning of this section on competition theory), 30 women junior associates from male-dominated firms and sex-integrated firms were interviewed about their perceptions of women partners. In comparison with sex-integrated firms, junior women associates in male-dominated firms perceived women partners as having fewer shared experiences, were less likely to view their authority as legitimate, and did not see them as good role models (Ely, 1994). While the gender ratio of sex-integrated firms (>15%) seems low, requiring a higher percentage of women partners would not have provided an adequate number of firms from the *NALP Law Directory* (where Ely identified her sample). In the early 1990's women working at the partner level in law firms was still relatively rare. Even with this seemingly low threshold of gender

integration, the perceptions of women senior associates in those sex-integrated firms were significantly more positive than in the male-dominated firms.

In contrast, men often have different experiences with female bosses than women. Data from extensive phone surveys of 839 men and 670 women for the 2002 *National Study of the Changing Workforce* showed that more men than women reported receiving job-related support from women bosses and were optimistic about future opportunities for advancement (Maume, 2011). In addition, men reported receiving more mentoring and support for advancement than women did. This may provide some explanation as to why women employees consistently prefer having a male boss to a female boss.

The need for women in authority roles to protect their status and self-esteem along with the negative perceptions that women in lower level positions have of women in authority are likely to manifest in negative behaviors toward each other. Unfortunately, this establishes an unconstructive self-perpetuating cycle that ultimately prevents women from making further progress towards equality. The next section of this paper will review some of the behaviors and strategies women use to compete amongst each other.

How Women Compete

When people fear the loss of status or favor, these fears can manifest in competitive behavior. The nature of competitive behavior is to be, “as good as or better than others of the same kind” (Competitive, 2014). Whereas competition among men is generally acceptable because sex role expectations include ambition and self-confidence, role expectations for women expect them to behave cooperatively rather than competitively (Eagly & Carli, 2007; Oeltjen, 1993). In order to compete without openly

violating these norms and thus being deemed unlikable, research shows that women often utilize indirect aggressive strategies so as not to threaten their image and social standing (Crocker & Luhtanen, 1990; Hines & Fry, 1994; Tracy, 1991; Underwood, Scott, Galperin, Bjornstad, & Seson, 2004). They find ways to protect themselves and vent their frustrations by making their aggression less obvious (Lagerspetz, Bjorkqvist, & Peltonen, 1988).

The use of indirect aggression allows women to respond aggressively but in a way that hides their aggression and the intent of hurting the other individual (Bjorkqvist, Lagerspetz, & Kaukianinen, 1992). These strategies allow an aggressor to harm their target without necessarily being identified, which makes it seem safer than direct aggression (Lagerspetz et al., 1988). When exploring the use of indirect aggressive strategies, Bjorkqvist, Osterman, and Lagerspetz (1994) presented the concept of the *effect/danger ratio*. This type of cost/benefit ratio occurs when the aggressor assesses the, “relation between a) the effect of the intended strategy, and b) the dangers involved (physical, psychological or social) for him/herself and for people important to him/her” (Bjorkqvist et al., 1994, p. 28). The aggressor wants to select an effective technique that will bring as little risk as possible (Bjorkqvist et al., 1994).

Until the late 1980s, research on aggression focused on direct or *overt* aggression (Archer & Coyne, 2005). When researchers began studying indirect or *covert* aggression, they defined it as, “a type of behavior in which the perpetrator attempts to inflict pain in such a manner that he or she makes it seem as though there has been no intention to hurt at all” (Bjorkqvist et al, 1992, p. 118). Indirect strategies of aggressive behavior aim to manipulate a person’s reputation or to exclude them from a group (Archer & Coyne,

2005). It can include behaviors such as gossiping, spreading rumors, criticizing someone behind their back, ignoring, social exclusion, becoming friends with someone else as revenge, dirty looks, putting pressure on someone, judging someone's work in an unjust manner, and/or interrupting when intended to discredit or embarrass someone (Archer & Coyne, 2005). These strategies are effective because they threaten an individual's self-esteem (Archer & Coyne, 2005).

In the first study to systematically examine indirect aggression, Lagerspetz, Bjorkqvist and Peltonen (1988), studied 11- to 12-year-old children, to determine whether boys and girls utilized the same aggression strategies. They interviewed 167 fifth grade students (89 girls, 78 boys), asking them to evaluate all other children of the same sex in their class with respect to what behavior the individual demonstrated when they were angry with someone in the class, how often the individual was angry with another boy/girl, and what patterns of friendship existed among classmates. Results showed that while the boys became angry more often than girls, the girls utilized more covert methods to demonstrate their anger more often than boys. These methods included telling a lie behind someone's back, choosing to be someone else's friend in revenge, convincing others not to be friends with a girl, arguing, sulking, or acting like she did not know the girl.

Factor analyses for all of the aggressive behavior variables resulted in a three-factor solution in which the first factor was labeled as *indirect means* (behavior that exploited relationships among peers in order to punish the person at whom they were angry), the second factor was labeled *direct means* (physical behavior or verbal abuse), and the third factor reflected *peaceful means* (solving conflicts, talking through a

problem, and/or telling a teacher or parent) (Lagerspetz et. al, 1988). Study results showed that girls more often utilized indirect means and peaceful means while boys more often utilized direct means (Lagerspetz et. al, 1988). Another important finding in this research showed that while boy friendship groups often included four or more boys, girl friendships were more mostly described in pairs, which Lagerspetz et. al (1998) considered a *tighter* social structure. These close friendships increased opportunities for indirect social aggression (Lagerspetz et. al, 1988). With fewer friendship bonds, indirect aggressive behavior had a more significant impact and girls could be easily isolated from others in the class and deemed unlikable.

Interestingly, when the students rated themselves for indirect and direct aggression (the classes as wholes and the boys as a group) the correlation between self-ratings and peer-ratings was higher for direct aggression rather than indirect aggression (Lagerspetz et. al, 1988). Furthermore, boys' self-ratings for direct aggression correlated more positively than girls' ratings. In other words, the students—especially girls—were either not aware of (or did not want to admit to) their indirect aggressive behavior toward others.

While this study is limited in generalizability because it only looked at one specific age group, it offers a number of hypotheses for future studies. First, they were able to demonstrate that girls utilized more indirect aggressive behavior than boys. Second, the smaller networks of friendships that girls form make indirect aggression particularly effective. Finally, girls often do not realize, or at least do not want to admit, that they are aggressive in anyway.

Bjorkqvist, Lagerspetz and Kaukiainen (1992) attempted to replicate the 1988

study with 8-year-old and 15-year-old students. A three-factor solution from the factor analysis of the 8-year-old group showed that items grouped together as either *direct aggression*, *indirect aggression*, or *withdrawal* (included telling a teacher, going away, or sulking). Similar to the first study, boys displayed significantly more *direct aggressive* behavior than girls, and girls scored higher for *indirect aggression* (although not significant) and *withdrawal*.

In the 15-year-old cohort, four variables grouped items together, rather than three. These included *indirect aggression*, *direct physical aggression*, *direct verbal aggression*, and *withdrawal* (Bjorkqvist et al., 1992). Similar to the other studies, the boys scored significantly higher on *direct physical aggression*, while the girls scored higher on *indirect aggression* and *withdrawal* (Bjorkqvist et al., 1992). Both boys and girls appeared to engage in *direct verbal aggression* and there was no significant difference between the groups (Bjorkqvist et al., 1992).

The comparison of the three cohorts in these two studies demonstrates that girls consistently used indirect aggression strategies more often than boys, although not at a significant level for the 8-year-old group. Results from the social network analysis showed that the friendship structure between boys and girls in the 8-year-old cohort did not differ significantly as they did with the 11-year-olds and 15-year-olds. They conclude that as the children mature and as social networks begin to form (creating an environment where indirect aggression strategies can inflict more pain), the use of indirect strategies increases (Bjorkqvist et al., 1992).

Green, Richardson and Lago (1996) conducted a similar study with 148 college-age students who completed a questionnaire where they self-identified utilization of

various aggressive behaviors and friendship patterns to measure aggression based on network density. High density networks are when members within a community have a high number of relationships among each other. In contrast, low density networks exist when there are fewer relationships or connections between community members. Based on Lagerspetz et al. (1988), the authors hypothesized that groups with higher network density would utilize indirect aggression more than direct aggression because it may be more effective in hurting the individual by damaging relationships. Results of Green et. al's study showed that while men still reported more direct aggression than women, both sexes demonstrated similar levels of indirect aggression. Additionally, men with higher density networks reported more indirect than direct aggression strategies. Interestingly, however, women reported indirect aggression strategies regardless of network density (Green et al., 1996). This demonstrates that men may utilize different aggression strategies based on their network density. As women's relationship networks vary in density, however, they use indirect aggression strategies regardless of network density.

While these studies provide important information about how girls and boys demonstrate aggressive behavior, it is difficult to generalize the results to adult populations because individuals develop intellectually and socially as they get older. Even the study utilizing college students is significantly limited in that (1) it relied on self-ratings (which Lagerspetz et al. (1988) established may not be a reliable source of data because girls did not know (or did not want to admit) they were being aggressive to other girls) and (2) because traditional aged college students have not yet entered the professional workforce.

A study by Benenson, Markovits, Thompson, and Wrangham (2011), however,

specifically looked at one indirect aggressive behavior strategy in adult populations. Their research examined whether adults were more likely to engage in *social exclusion* when faced with the threat of social exclusion from others. In this research, there were four different studies of relatively equal groups of men and women. Individuals were asked to participate in a computer simulation where they were given the option to play alone, form a two-way alliance, or form a three-way alliance. Some groups were told that if they chose to play alone, the other two players would form an exclusionary alliance while other groups were not told this. The researchers were looking to see if participants would choose an exclusionary alliance proactively or reactively.

The results showed that women, more often than men, chose to form an exclusionary alliance reactively when faced with the threat of being excluded from a different exclusionary alliance. Neither gender group showed significant results supporting proactive formation of an alliance. These results support the hypothesis that women tend to use social exclusion and alliances as a defense strategy when there is a perceived threat of being socially excluded from others. This provides valuable insight as to why women may engage in this competitive strategy.

The results from this study offer an explanation that aligns with research by Owens et al., (2000) that showed that teenage girls participated in exclusionary behaviors to help secure their own status with the larger group. The study by Benenson et al. helped confirm this sentiment in that when the women felt that their status may be degraded by others, they chose to act aggressively first.

Effects of Indirect Aggression

Another important component when reviewing this topic involves understanding

how this indirect aggressive behavior affects women. Similar to previously mentioned studies that examine the use of indirect aggression in children and teenagers, empirical research regarding the effects this behavior can have on adults is limited. Existing research, however, does provide some important insight and direction to understand the consequences of this behavior.

The effects of indirect aggression on children have attracted a great deal of attention because of the severe psychological consequences it can have, in extreme cases leading to a victim's suicide. When relational aggression (a form of indirect aggression) is included in studies about the effects of bullying behavior, researchers have been able to show that this behavior is significantly related to social-psychological adjustment difficulties such as depression and loneliness (Adams & Lawrence, 2011; Aluede, Adeleke, Omoike, & Afen-Akpaide, 2008; Archer & Coyne, 2005).

In a study similar to the one originally done by Lagerspetz et al. (1988) looking at how children demonstrate aggressive behavior, Kaukiainen, Salmivalli, Bjorkqvist, Osterman, Lahtinen, Kostamo & Lagerspetz (2001), conducted a study of aggressive behavior among men and women to try and assess the effects of that behavior. This study was conducted with 169 working professionals in a variety of occupational settings. In addition to studying what types of aggressive behavior people experienced (which aligns with results from studies mentioned in earlier sections), the researchers also asked participants to self-assess to what extent they experienced physical, psychological (affective or cognitive), and/or psychosocial symptoms that together would contribute to a measure of well-being. Physical symptoms included headaches, backaches, sleeplessness, heart trouble, stomach problems, elevated blood pressure, panic disorders,

sick leaves, eating problems and tiredness or weakness. Psychological problems included depression, melancholy, anxiety, lack of concentration, lack of initiative, nervousness, and tenseness. Psychosocial problems included family problems, low self-esteem, isolation in private life, alcohol problems, losing control of one's own work, lack of willingness to work, feelings that everything is falling on one's head, and problems in one's sexual life. For women participants, the highest correlations between experienced aggression and well-being were with psychosocial effects (Kaukianinen et al., 2001). While this result is valuable in developing a greater understanding of the impact of this behavior, more research is needed on how indirect aggression affects adults, women in particular.

Summary

This section described the existing literature relating to why women compete, how they compete, and the effects of competitive behavior. Social identity theory, competition theory and Queen Bee syndrome helped explain why women may act more hostile toward other women in their pursuit to gain acceptance by organizational leadership. Furthermore, research was shared demonstrating that women are more likely to utilize indirect aggressive approaches toward women (rather than direct aggressive approaches) as a self-protection measure because aggression in women violates social expectations. Finally, the effects of this aggression are described, specifically acknowledging psychosocial impact including lowering self-esteem. This further suggests there may be an effect of negative social persuasion on self-efficacy.

The Unique Environment of Higher Education

A historical view of leadership studies illustrates an evolution in thought from

primary focus on the individual to consideration of the context or environment. *Great-Man theories*, or *trait* school of leadership popular at the beginning of the 20th century, focused on what characteristics or personality traits differentiated leaders from non-leaders (Antonakis et al., 2004; Bass, 2008). While this school of thought was popular for the first half of the 20th century, pessimistic reviews of the literature helped transition the focus from personal traits of leaders to behavioral styles in the 1950s (Antonakis et al., 2004). When research produced contradictory findings given the same behavior, however, this perspective came under criticism as well. The conflict in behavioral studies of leadership helped scholars realize that the success of the leader in relation to their behavior was dependent upon the situation (Antonakis et al., 2004; Bass, 2008).

This progression also aligns with Bandura's social cognitive theory that asserts that human agency operates as a result of a reciprocal and interdependent relationship between personal factors, behavior and environment (Bandura, 1997). The first section of this literature review focused on self-efficacy as a personal factor and how this relates to women and leadership. The second section focused on competitive aggressive behavior among women. This third and final part of this chapter focuses on one specific environment—higher education—and how this environment may uniquely help shape self-efficacy and cultivate aggression.

In this section, the academic environment is described including a historical description of how higher educational systems developed and the unique aspects of colleges and universities that may foster aggression. Then, a review of the growing body of literature around bullying in higher education is reviewed, specifically looking at prevalence, targets, and typical responses. Finally, a review of the literature specifically

addressing women's experiences with bullying in higher education is presented.

The Academic Environment

In most organizations, employees are expected to operate cooperatively toward broader organizational objectives and their performance is evaluated by management who can determine whether or not their employment should continue. The role of faculty members in higher education, however, is more autonomous in nature as research is often done independently (or with a small group of peers) and tenure provides job security rarely seen in other professional fields. The unique aspects of the academic environment provide individuals with a greater level of freedom in regard to their behavior because protective measures are in place.

This section will first provide a brief historical overview of the development of higher education. Then, descriptions of three unique attributes of higher education are provided: *academic freedom*, *tenure*, and *civil discourse*. Finally, an explanation is given for how these unique structures and processes help to shape an environment that fosters and supports aggression and incivility.

Historical development of higher education culture. Originally, higher education in America was seen as a pathway to privilege and status for elite men of society. During colonial times, education was viewed as, “a means of social control because it was designated to preserve the social class level and elite status of colonial gentleman” (Twale & DeLuca, 2008, p. 34). As the country moved into the Industrial Revolution, however, there was a need for more human capital and more educated individuals to run a growing industrial nation. This opened up opportunities for men from less affluent backgrounds (and some women) who enrolled in local and regional

institutions to gain further education while protecting the elite status of the Ivy League schools (Twale & DeLuca, 2008).

In order to help manage the need for broader offerings of education while still maintaining control over the elite status of the educational institutions, new institutions were established for specific populations. Women's colleges, such as Wellesley College, provided an opportunity for women to gain higher education; religious based institutions such, as Brigham Young University and Yeshiva University, attracted individuals who wanted an education based on their moral beliefs; and Black colleges and universities were established to prepare black men and women for ministry and teaching ("About Spelman College," n.d.; "About YU," n.d.; "Brief history of Howard University," n.d.; "College history," n.d.; "History of BYU," 2011; "Morehouse legacy," n.d.). While these institutions offered support systems for students who would otherwise be minorities in traditional institutions, the development of separate systems of education can also be viewed as a form of social control to protect the elitism of other institutions for affluent white men. This avoidance of full integration and endorsement of specialized educational institutions, led by a perception of threat and scarcity for seats at the elitist educational institutions, was a form of discrimination between social identity groups.

Higher education institutions employed scholars who could educate and challenge students to expand their ideas about the world in which they lived and prepared to take up their professional roles. To accomplish this goal, faculty members were expected to promote inquiry and advance knowledge through their teaching and research. In advancing knowledge, however, a person needs the flexibility and freedom to challenge conventional perspectives and structures which can sometimes contribute to conflict

within organizations. The next section describes this conflict and what measures have been put in place to help manage it.

Academic freedom, tenure, and civil discourse. In 1900, in response to a disagreement in views between Mrs. Leland Stanford and economics professor Edward Ross on immigrant labor and railroad monopolies, Stanford University terminated Ross's employment ("History of the AAUP," n.d.). Concerned with the idea that institutions could potentially influence the advancement of knowledge by creating an environment where professors did not feel safe to explore and challenge existing constructs, a group of university professors met to discuss issues around *academic freedom* ("1915 Declaration of Principles," 1915). From this meeting, the group established the American Association of University Professors (AAUP)—an organization of professors committed to protecting the rights of academics to advance academic freedom.

To address the problem around academic freedom, a committee of the AAUP drafted the *1915 Declaration of Principles of Academic Freedom and Tenure*, which outlined what would be considered normative standards across university campuses, stemming from the principles that the purposes for which universities exist are to (1) promote inquiry and advance the sum of human knowledge, (2) provide academic instruction to students, and (3) develop experts for different branches of public service ("1915 Declaration of Principles," 1915). In order to effectively accomplish these goals, without fear of retribution from university administration, the AAUP established guidelines that universities would accept in order to attract and retain the best scholars. These guidelines included granting *tenure*, or reasonable security of employment, that protect faculty from being terminated for presenting dissenting opinions or academic

perspective. Tenure, thus, “gives faculty members the academic freedom to explore the truth and report new knowledge, with the financial security necessary for institutions to attract competent scholars” (Taylor, 2013, p. 25).

The AAUP standards outlined four measures for universities to adopt to manage tenure: (1) that reappointments or refusals of reappointments would not be made without advice from a committee made up of faculty members; (2) that a clear definition of tenure should be given for all positions and that all positions above the level of instructor would be permanent after ten years, (3) that guidelines for dismissal should be reasonable, clearly defined, and that the authority for interpreting them designated, and (4) that every university or college teacher should be entitled to have a judicial hearing prior to dismissal (“1915 Declaration of Principles,” 1915).

The fact that faculty colleagues can positively or negatively influence the reappointment and tenure of each other is something that is exceptionally unique to higher education. Whereas in most organizations, employment decisions are heavily or exclusively provided to supervisory administrators, the power differential shifts with this unique aspect of academia. While the intent is to protect faculty members from what was considered overstepping from administration, it can contribute to a different problem—biased evaluation and potential aggression from colleagues.

Civil discourse, a term used to describe a polite exchange of opposing ideas intended to help constructively challenge knowledge for the purposes of advancing this knowledge, provides another complicating factor in the relationship between tenure and academic freedom (Taylor, 2013). Faculty members are expected to challenge current understandings of knowledge while also remaining collegial. Collegiality, however, can

mean different things to different people and there is no standard method to evaluate collegiality. When comments aim to diminish another person's work, to discredit someone in an unjust manner, or to personally attack an individual, this behavior could be perceived as aggressive or bullying (if repetitive). However, because of expectations around academic freedom and the fact that faculty rely on each other for promotion and tenure review, victims and bystanders are "reluctant to challenge their colleagues on aggressive behavior for fear of being accused of curbing someone else's freedom of speech," thus maintaining a destructive environment where the behavior is condoned (Myers, 2012, p. 48). Additionally, faculty may fear retaliation or may not know how to handle the situation (Twale & De Luca, 2008).

This issue is sensitive, complicated, and has gone largely unaddressed in the academic field. Some discussion has taken place about the role of collegiality in faculty review but the AAUP argues against additional evaluation criteria related to collegiality and instead recommends that it be interwoven with the other three evaluation criteria of research, teaching and service ("On Collegiality as a Criterion for Faculty Evaluation," 1999; Taylor, 2013). Because of the ambiguity around how to address aggressive behavior in academia, however, the structure of the field can actually contribute to a perceived acceptance or endorsement of aggressive behavior.

Key structures and processes that support aggression. To better explain the role of different factors contributing to workplace aggression, Salin (2003) developed a conceptual framework based on existing literature on *workplace bullying* and described several key structures and processes that create an environment where incivility, bullying, or mobbing are more likely to occur (Figure 6). She asserted that it was more likely for

bullying to occur when organizations had a combination of *enabling structures and processes*, *motivating structures and processes*, and *precipitating processes* that were all interacting with each other. Looking at higher education specifically, Twale and De Luca (2008) adapted Salin's model to incorporate some of the unique structures within academia that contribute to an environment where aggressive, bullying behavior are prevalent (Figure 7).

Figure 6. Salin's framework for structures and processes that contribute to bullying

Salin (2003) described *enabling structures or processes* as the antecedents to bullying, or factors that provide “fertile soil” for bullying to occur in the first place (p. 1219). Examples of these conditions can include perceived power imbalances between individuals (that can thus predict victims and perpetrators), low organizational costs for perpetrators demonstrating bullying behavior, and dissatisfaction or frustration with the

work environment (Salin, 2003). In academic environments specifically, the strong culture that supports the isolation in which faculty work, the peer review process, ambiguity in expectations, and a competitive environment all contribute to environmental conditions for hostile behavior (Keashly & Neuman, 2010; Twale & De Luca, 2008).

The mere presence of these enabling structures, however, is not generally enough to explain why bullying occurs. In addition to these enabling structures and processes, there can be structures, processes, or circumstances that actually *motivate* and inadvertently reward perpetrators for harassing others (Salin, 2003; Twale & De Luca, 2008). In higher education, the shared governance model and campus politics can lend power (or at least perceived power) to outspoken individuals or subgroups. Reward structures also play a role in that increased merit or research dollars provide perceived reinforcement of behaviors, even if inappropriate.

Finally, while the enabling and motivating structures and processes can make a work environment ripe for bullying behavior, there are additional processes that act as a trigger for bullying. These *precipitating processes* usually involve changes to the status quo such as changes to the composition of the work group or organizational changes (Salin, 2003). In higher education, these can include the competition for scarce resources or the perceived threat that accompanies an influx of new academics of a different gender or race (Twale & De Luca, 2008). When individuals get frustrated based on these triggers, it can manifest in aggressive behavior, especially if the culture supports such a response (Twale & De Luca, 2008).

These unique factors contribute to an environment where aggressive behavior can easily exist, be hidden, and even be encouraged. Because of people's reluctance to speak

up when they witness aggressive behavior, it legitimizes the behavior because of the perceived indifference or approval from others. The perception that risk of punishment is low or non-existent makes it more likely for the behavior to be replicated and to become part of the culture—thus the aggressive behavior then becomes normative (Twale & De Luca, 2008). The next section will look at literature that specifically examines bullying behavior in higher education.

Figure 7. Twale and DeLuca's adaptation of Salin's model for higher education

Bullying Behavior in Higher Education

When reviewing existing literature around aggressive behavior in higher education, much of the existing research categorizes this type of behavior as *workplace bullying*. Workplace bullying is similar to the description of indirect aggression earlier in this chapter in that it is characterized as a type of interpersonal aggression which could

include behavior like gossip, social exclusion, discrediting someone's work, or overly criticizing someone (Lester, 2013). The differentiation, however, is that the aggressive behavior is "frequent, intense, and occurs over a specific period of time" (Lester, 2013, p. ix). Workplace bullying is a continuous pattern of destructive and deliberate behavior that intends to demean another person, causing psychological or emotional harm (Lester, 2013; Vega & Comer, 2005).

While studies indicate that approximately 10 to 14 percent of American workers claim to have experienced bullying at work, findings specific to higher education are limited (Keashly & Neuman, 2010, 2013; Lester, 2013). Furthermore, the few existing studies are difficult to compare because studies define bullying behavior differently, researchers use a variety of survey instruments, and different timeframes are referenced varying from six months to five years (Keashly & Neumann, 2013). Even with these difficulties, however, some observations can be made to inform future researchers. This section discusses the literature that indicates there is a higher prevalence of bullying in higher education in comparison to other industries. It also presents research that describes who the actors and the targets are in higher education, as well as the actions or reactions taken by the targets and what effects these had.

Prevalence in higher education. The results from numerous studies demonstrate that bullying is experienced at higher rates in higher education than in other organizations (Björkqvist, Österman, & Hjelt-Bäck, 1994; Hollis, 2012; Keashly & Neuman, 2010, 2013; Richman et al., 1999). Whereas average rates of bullying in the literature outside of higher education indicate rates of 2 to 20 percent globally, rates in higher education range from 11.7 to 67 percent (Keashly & Neuman, 2013). Furthermore, in studies that

asked participants about whether they had witnessed bullying, percentages were even higher ranging from 22 to 75 percent (Keashly & Neuman, 2013). These studies indicate that bullying may be more highly prevalent in academia than other industries.

Consistent with assertions made by Salin (2003) and Twale and De Luca (2008) in their frameworks about bullying environments, scholars attribute these higher rates to the unique culture of higher education, in particular the strong influence between peers through reappointment and promotion procedures, shared governance, and the intention for (but often lacking in) civil discourse (Keashly & Neuman, 2010).

Targets and actors. To better understand the context in which bullying takes place, researchers typically include demographic data to determine if particular subgroups experience bullying at varying rates. Results of these studies consistently show that women, racial minorities, and members of the LGBTQ community experience bullying behavior at higher rates than white men (Björkqvist et al., 1994; Hollis, 2012; Keashly & Neuman, 2010, 2013; Richman et al., 1999; Sallee & Diaz, 2013; Simpson & Cohen, 2004). While this is not surprising given the fact that these results mirror existing literature outside of higher education and given the historical male-dominated profession of higher education, it does confirm a challenge for women pursuing professional success and leadership roles given that they are more likely to experience bullying behavior.

Studies also indicate that bullying can happen regardless of position level and can be directed to both tenured and non-tenured professors. Taylor (2012, 2013) demonstrated, for example, that non-tenured faculty experience bullying behavior from tenured faculty. Reasons for this could include that the tenured faculty feel threatened by new faculty who represent a different and changing persona of the professoriate or

because their favorable status is at risk of being diminished by someone new who is performing at a high level. Conversely, however, other research demonstrates that tenured faculty may experience bullying behavior as a means to pressure individuals to leave the institution—because formal processes to remove a tenured faculty from office are complicated given the rules of dismissal, it may seem easier to use bullying tactics to make professors so miserable that they want to leave (Taylor, 2012, 2013).

While these studies identify who are often the targets of bullying behavior, they also have interesting findings regarding the actors, or perpetrators, of this behavior. While bullying behavior can be perceived to come from superiors, peers, or subordinates, most of the existing literature around bullying indicates that the prevalence is highest from superior to subordinate. In higher education, however, the results are mixed. In fact, some studies show rates of peer bullying at or above rates of superior bullying (Keashly & Neuman, 2013). Even in studies that demonstrated higher levels of superior bullying, the rates of peer bullying are higher when compared to the general literature (Keashly & Neuman, 2013). These levels of peer bullying are not completely surprising, however, given that professional standards and institutional structure require peer review and shared governance. These levels of bullying also explain the limited insertion of witnesses or bystanders.

Responses. Another important aspect of the research, specifically when looking at bullying in higher education, is what strategies targets used to respond to aggressive/bullying behavior and whether or not they perceived these responses to have improved the situation or to have made it worse. In a 2008 study by Keashly and Neuman, respondents were asked to indicate what responses they tried and whether it

helped, worsened, or had no effect on the situation (Keashly & Neuman, 2013). Their results indicated that the most often used strategies were passive, indirect and informal such as talking with coworkers, friends, or family, avoiding the bullying, or ignoring it. Respondents stated they were least likely to use the more active strategies such as making a formal complaint, telling a supervisor/chair/dean or going to someone in the human resources department. When asked if they felt their responses helped or hindered the situation, the results indicated that overall there seemed to be little effect on the situation regardless of their method. Interventions that were more indirect in nature, however, were more highly correlated with a perception that it made the situation better and interventions that more directly addressed the problem (e.g. making a formal complaint) seemed to make the situation worse (Keashly & Neuman, 2013).

In this same study, the researchers asked about witnessing behavior responses and interventions. Similar to the targets' responses, most of the approaches used were passive approaches and seemed to help improve the situation. Many of the direct responses seemed to worsen the situation. Some direct responses, however, like helping the victim talk to the bully, and going with the victim when they reported the incident, seemed to give the perception of helping to improve the situation. It is important to note, however, that those more direct and openly supportive methods were much less often utilized, indicating a generally more passive approach used even by bystanders (Keashly & Neuman, 2013).

These results reveal some significant findings when considering effective methods of addressing this issue. Most glaringly, they imply that resources intended to help improve the situation often do not and that the methods that appear to have any

positive effect require avoiding and enduring the situation. While this is discouraging for people who want to help improve the situation, it also reveals how difficult and complex these situations are for individuals involved.

Bullying and Women in Higher Education

While the literature around aggression and bullying have grown over time, there is a distinctive hole in the research addressing women's experiences of bullying in higher education (Sallee & Diaz, 2013). Furthermore, research examining women's experiences with aggression from other women in higher education is largely absent. Literature examining higher education women leaders, however, does hint at this phenomenon when they describe the barriers and/or support systems that contribute to these women's successes. Most of this literature focuses on the impact of women's relationships.

Existing literature focusing on women leaders in higher education puts clear significance on the individual's perception of the importance of relationships in their success. Airini, Collings, Conner, McPherson, Midson & Wilson (2011) conducted a qualitative study where they asked women to write about critical incidents that helped and hindered their advancement in university leadership. Of the five themes that emerged from their data (work relationships, university environment, invisible rules, proactivity, and personal circumstances), *work relationships* was the most prevalent. This theme was broken down into three subcategories: *collegial relationships with seniors*, *collegial relationships with peers*, and *unsupportive collegial relationships*. The incidents indicated that positive relationships resulted in increased confidence, resilience, job satisfaction, improved negotiation skills, higher levels of support for their peers (reciprocity), and improved writing skills for journal publications. Negative

relationships, however, resulted in decreased energy levels, lower confidence, and fear that confrontation could affect their career (Airini et al., 2011).

The approach taken by Airini et al. (2011) is unique because it asked individuals to describe incidents that they deemed to be critical—ones that made a significant contribution to their advancement in leadership roles. The prevalence of incidents focusing on relationships, the selection of these particular incidents, and the analysis that related these relationship experiences to increased or decreased confidence, demonstrates the strength of impact that positive and negative relationships can have.

Whereas the study by Airini et al (2011) did not separate out male-female and female-female work relationships, Jones and Palmer (2011) looked specifically at the relationships between women in academia. They surveyed 3,726 women in professional positions from 988 community colleges in the United States, asking both quantitative and qualitative questions to determine if women support the career advancement of other women colleagues and what behaviors are demonstrated by women in these relationships.

Their findings indicated that 84 percent of participants perceived that women were supportive of their female colleagues' career advancements. Despite this high perception of support, however, content analysis of participant comments revealed discussions of competition between female co-workers and identified jealousy and competition as reasons why they did not support one another (Jones & Palmer, 2011). Furthermore, results indicated a generational influence on the dynamics between women in their roles with comments reflecting conflict between older women expressing dissatisfaction toward younger women who apparently do not feel they need to adapt to the more masculine dress and approach to work as women in the first wave of feminism

did (Jones & Palmer, 2011).

The contrast of the high level of perceived support for women and the high number of comments related to competition among women offer important insight to this issue. It is possible that in many work settings women have higher numbers of supportive relationships with other women and thus perceive overall support amongst women as a whole. Being that, however, negative experiences of competition and jealousy are highly prevalent even though these experiences may be with fewer female colleagues. For example, a woman may have 20 positive relationships with other women but one or two negative or competitive relationships. The findings from both Jones and Palmer (2011) and Airini et. al (2011), however, indicate that these competitive and unsupportive relationships can have a significant impact on a woman's experience in her role.

In a qualitative study of women vice presidents at land-grant universities, Cox (2008) interviewed participants specifically looking at self-efficacy and how this related to career advancement. While there is no specific mention of competitive relationships between others (men or women), Cox's results demonstrate the importance of supportive relationships to build confidence, to advise for career progression, to coach, and to provide feedback. Confidence and healthy self-efficacy were found to be traits needed in these roles, and thus supportive relationships to build a healthy self-efficacy are critical. What this particular piece of research does not address is how unsupportive or challenging relationships affect a woman's self-efficacy and thus how she manages that within her career.

Summary

This section began with a brief review of higher education history and how the shaping of academia and its unique elements of academic freedom, tenure and civil discourse can contribute to an environment that can trigger, motivate and further foster aggressive bullying type behavior. Research specifically looking at higher education confirms this hypothesis as it demonstrates that higher proportions of university employees experience and/or witness bullying behavior. This research also demonstrates that women and other underrepresented groups often experience higher rates of aggression. Finally, the few studies that do focus on the bullying experiences of women academics show the importance of relationships and that while most women believe most of their relationships with female colleagues are positive, the relationships that prove to be negative or competitive can have a significant impact.

CHAPTER THREE

METHODOLOGY

This chapter presents the methodology used to answer the study's research questions. The chapter begins by reviewing both the purpose of the study and the research questions. Then, the research design is described, specifically outlining the purpose and advantages of using a mixed methods approach. The final sections focus on the specific rationale and steps taken for participant selection, data collection (including survey design) and data analysis.

Purpose of the Study

The purpose of this study was to determine to what extent women leaders in higher education experience aggression from other women, how this may affect their leader efficacy, and how these leaders successfully navigate through it.

The following research questions guided this study:

1. To what extent have women in higher education leadership roles experienced aggression from women?
 - a. What personal and/or professional demographic variables are correlated with experiences of aggression from women?
 - b. What type of aggression are women experiencing from other women?
 - c. What situational factors are correlated to experiences of aggression from women?
2. In what ways does aggression among women impact leader efficacy?
3. What themes around strategies and responses emerge amongst women leaders who have experienced aggression from women?

Research Design – A Mixed Methods Approach

To answer these questions pertaining to both how prevalent this phenomenon is and about the specific experiences of participants, this study utilized a *convergent parallel* mixed methods design that involved collecting quantitative and qualitative data at the same stage in the study, analyzing the data separately, and then merging the results together for the overall interpretation (Creswell & Plano Clark, 2011).

Because this study aimed to both determine the extent to which aggression is experienced and how specific individuals interpret and manage through these experiences, a mixed methods approach was appropriate because it can help provide a more complete understanding of a research problem (Creswell & Plano Clark, 2011). While quantitative research can reach an extensive set of participants and can help generalize findings to broader populations, it disallows for understanding the contextual factors that could be valuable in interpreting the results. Qualitative research designs, on the other hand, offer an opportunity to more closely understand the lived experiences of research subjects but are seldom generalizable because they use a smaller sample (Creswell & Plano Clark, 2011). Mixed methods approaches allow researchers to combine the advantages of both research perspectives while offsetting the weaknesses of each (Creswell & Plano Clark, 2011). This section will explain how data will be used to attempt to answer specific research questions. Specifically, it will outline how participants will be selected and how data will be collected and analyzed.

Participant Selection

For the purposes of this study, I invited women academic deans at doctoral granting institutions in the United States to participate. Women in these roles were

selected for a number of reasons. First, as described in chapter one, the definition of leadership used in this study is based on Schein's (2004) description where he illustrates how an organization's culture defines success and leadership but that as the organization faces adaptive difficulties a leader must be able to step out of the established culture to initiate change processes that are more adaptive. Women deans fit this definition of leadership. The inclusion of peer review within the faculty appointment, reappointment, tenure and promotion (ARRT) processes creates an environment where the faculty define what success and leadership look like within the organization. To be successful, one must subscribe to the defined measures of success, meet these established standards, and build collegial relationships with their peers. Once moving into a dean's role, however, the individual is expected to address a variety of situations and implement organizational changes that may be unpopular at times. The ability to step outside of the established culture and make decisions that question people's underlying assumptions for the good of the organization aligns with this definition of leadership. Additionally, because women have historically been underrepresented in higher education, I wondered if the environment provided an opportunity to explore the findings by Tolbert et al. (1995) about competition theory to see how women might interact with one another when roles of women leaders were limited.

Perhaps most importantly, however, were the similar stories of career progression that most deans would have in advancement. Whereas women in other fields may have very different paths to leadership roles, women who have navigated through the faculty tenure and promotion process likely have more similar advancement experiences. This allowed for comparison across different disciplines because the steps for advancement

were probably similar.

To identify participants, I accessed the online version of the Higher Education Directory—an online reference database that provides name and contact information for various positions at colleges and universities throughout the United States. This database allows for grouping of institutions based on Carnegie classification which includes six overarching categories: *Associate's Colleges* (N=957), *Baccalaureate Colleges* (N=810), *Master's Colleges and Universities* (N=724), *Doctorate-granting Universities* (N=297), *Special Focus Institutions* (N=851), and *Tribal Colleges* (N=32) (“Carnegie Classification Methodology,” n.d.). For this study, I focused on doctorate-granting institutions. These colleges and universities usually offer a range of academic programs and degree levels which make it possible to compare within and across different groups. For example, many of these organizations have deans that oversee liberal arts degree programs and deans that oversee more specialized degrees (such as business or science). Furthermore, many of these institutions have specialized graduate degree programs that might include education, medicine, business, or law. Comparing the experiences of women deans within and across disciplines offered some insight into the challenges that women face in different fields and allowed for comparison with existing literature around self- and leader-efficacy in traditionally male and female dominated fields.

Looking at the list of positions, I selected those that included the word “Dean” in the title and then selected subsequent filters based on Carnegie Classification to include Doctoral/Research Universities (DRU), Research Universities (high research activity) (RU/H), and Research Universities (very high research activity) (RU/VH). I created a spreadsheet to track the results that included the individual’s name, title, institution,

identified discipline category, and email address. For most traditional names, I made an educated guess on whether the individual was male or female based on first name. For example, if the first name was “Sarah,” I assumed the individual was female; if the name was “William” I assumed this person was male. When gender assignment for the name was unclear (i.e. a gender-neutral name like “Terry” or a name I was not familiar with like “Latha”), I included these names on the list and then looked up these individuals on their institution website to determine gender based on pronouns and/or pictures of the individual.

This study focused on academic deans, specifically excluding deans of libraries, continuing education, honors programs, and student affairs. The purpose behind these exclusions was because career paths for these other dean roles often differ significantly across institutions based on how those institutions define these roles. For example, deans in student affairs do not generally go through a peer review process as part of the appointment or promotion process. Additionally, while some deans in these fields go through a tenure process, others do not. Lastly, the expectations around teaching and scholarship can vary greatly among professionals in these fields. In order to compare more closely related experiences, this study focused specifically on academic deans.

Prior to sending out the survey instrument, I sent a pre-emptory email to the identified women deans inviting their participation and explaining that an email with the survey link would be sent the following week. (This email and the official email invitation are provided in Appendix A.) In response to this email, I received automatic replies for some recipients stating that I had an invalid email address. I cross referenced these email addresses with the spreadsheet and looked up the individuals to see if (1) they

were still a dean at that institution and (2) if I had an incorrect email address. If the answer was the latter, I made the necessary correction. If the answer was that they were no longer the dean at that institution, I identified their replacement. If the current dean was a woman, I added her information to the list. If they were a man, I did not. Additionally, I received some emails from people stating that they were no longer in the dean role. Similar to the invalid email addresses, I looked up the current dean at that institution and added them to the list if they were women. This resulted in 635 women who were invited to participate.

Data Collection and Analysis

The convergent parallel mixed methods design of this study warrants separate analysis of quantitative and qualitative data and then merging the data for an overall interpretation of data relevant to the research questions. To gather both quantitative and qualitative data, a survey with both closed and open ended questions was distributed to the target population. This section first describes the survey and how it was administered. Then, more specific descriptions for how data was collected and analyzed is provided pertaining to the three main research questions.

Survey instrument. Data was collected using an online survey tool—[surveymonkey.com](https://www.surveymonkey.com). An online survey (versus paper) allowed for easier data collection and faster compilation of data to be used in analysis. The survey included four quantitative sections consisting of demographic questions, an adapted version of the revised Negative Acts Questionnaire (NAQ-R), the Generalized Leader Efficacy Questionnaire (GLE), and a survey asking about what behavioral responses they utilized during their experiences. Additionally, open-ended questions were asked throughout the

survey designed to elicit qualitative responses about the participants' experiences.

Question logic (the ability to move to different questions based on the answers provided) was used so that participants were asked specific follow up questions based on their responses. For example, if a participant indicated they never experienced aggression from a woman, there was no need to have them complete the questions related to the NAQ-R or the qualitative questions specifically related to aggression experiences.

The first section of the survey asked the participant a number of demographic questions. Additionally, they were asked whether or not they had ever experienced aggressive behavior from other women in their academic career. For participants who answered affirmatively, they were then asked additional questions about when the experience happened (stage in career), comparative demographics questions about the aggressor, and whether they perceived the organization to be male-dominated, female-dominated, or gender-balanced. These demographics were based on the participant's perceptions and not verified independently. Additionally, they were asked how long ago the aggressive experience was to gauge the length of time that had since passed. All of these questions were used as independent variables in multiple regression analyses to answer the research questions. Table 1 describes these independent variables in more detail. Further description about the regression analyses is provided in following sections pertaining to each research question.

Table 1

Independent Variables

Description	Coding
Participant Demographics	
Age	Number of Years (Numeric – Scale)
Race	Three dichotomous variables with “White/Caucasian” as the reference category. Other variables include “Black/African American,” and “Alaskan Native/American Indian, Asian/Pacific Islander, and Hispanic/Latina.”
Sexual orientation (Identify as LGBTQ)	Dichotomous Variable 1=Yes, 0=No
Years Since Tenure	Number of Years (Numeric – Scale)
Years as Dean	Number of Years (Numeric – Scale)
Years at Institution	Number of Years (Numeric – Scale)
Discipline	Nine dichotomous variables based on grouped categories with “Arts and Sciences” as reference category. Other variables include “Applied Science/Business,” “Education,” “Law,” “Medical,” “Nursing,” “Other Health Professions,” “Public Service,” and “Other.”
Highest Earned Degree	Five dichotomous variable with “Ph.D.” as the reference category. Other variables include “Ed.D.,” “Medical Doctorate,” “J.D.,” and “Bachelors/Masters.”
Aggression Experienced from Women	Dichotomous variable with 1=Yes, 0=No
Years Since Aggressive Experience	Number of years (Numeric – Scale)
Aggregate NAQ-R score	
Person-related bullying	Number – Scale (based on results of NAQ-R)
Work-related bullying	Number – Scale (based on results of NAQ-R)
Physical intimidation	Number – Scale (based on results of NAQ-R)
	Number – Scale (based on results of NAQ-R)

Situational Variables	
Stage in Career	Five dichotomous variables with “Dean” as the reference category. Other variables include “Before Tenure,” “Associate Professor,” “Full Professor,” and “Administrative Role.”
Aggressor Demographics	
Age comparison	Dichotomous variable with “Older” as reference category. Other variables include “Younger,” and “Same Age”.
Experience comparison	Dichotomous variable with “More” as reference category. Other variables include “Less Experience,” and “Same.”
Position level comparison	Dichotomous variable with “Subordinate” as reference category. Other variables include “Higher,” and “Peer.”
Aggressor race	Three dichotomous variables with “White/Caucasian” as the reference category. Other variables include “Black/African American,” “Alaskan Native/American Indian, Asian/Pacific Islander, and Hispanic/Latina.”
Environment Demographics	
Gender-dominance	Dichotomous variable with “Male-dominated” as the reference variable. Other variables include “Female-dominated,” and “Gender-balanced.”

Respondents who answered “Yes” to the question asking whether they had ever experienced aggression from other women in their academic career were asked to think of “one of the most impactful experiences of female aggression that [she] experienced.” This was done to have respondents identify a point of reference for questions throughout the rest of the survey. This strategy has been utilized in past research as a form of narrative inquiry referred to as the *Critical Incident Technique*. Conceptualized by Flanagan (1954), this technique asks participants to “provide descriptive accounts of

events that facilitated or hindered a particular aim” (Airini et al., 2011, p. 48). This method allows researchers to observe and learn about critical incidents within participant experiences so that the information can be potentially useful in “solving practical problems and developing broad psychological principles” (Flanagan, 1954, p. 327). The full survey is provided in Appendix B. Further description about how this data will be analyzed is explained in subsequent sections.

To assess any potential difficulties with the survey, I piloted the survey with ten women in various administrative roles within higher education (provosts, associate deans, assistant deans and directors) not included in the study to determine whether questions were clearly worded and neutral in tone. Based on their feedback, slight modifications were made to allow for easier navigation on various electronic devices and to increase participation in the survey.

After receiving approval from the University of San Diego Institutional Review Board, the survey was distributed via email link to the targeted population in October 2014. Participation was voluntary and anonymous. Consent was obtained electronically at the beginning of the survey prior to any survey questions being asked. If a respondent declined to give consent, she was prevented from completing the survey and accessing any survey questions.

Understanding that participation was voluntary and that electronic surveys typically have low response rates, a number of strategies were used to try to maximize responses. Cook, Heath and Thompson (2000) suggest that personalized contacts, pre-contacts, and number of contacts are the factors most associated with higher response rates in web-based surveys. Prior to the link to the survey being sent to the deans, I sent

personalized emails (via an email mail merge) to the 635 women explaining the purpose of the study and that an email with a link to the survey would be sent the following week. The next week, a similarly personalized email was sent with the link to the survey, which resulted in 159 responses. The following week, another personalized email was sent reminding individuals of the survey, which resulted in 94 responses. After receiving these 253 responses, I compared the distribution of identified discipline areas as identified by the survey respondents with the distribution of identified discipline areas in the spreadsheet of women I invited (collected from the Higher Education Directory). For disciplines that appeared to be underrepresented based on this comparison, I sent an additional email to those individuals, specifically stating that deans in their respective field were underrepresented in the survey and invited them to participate which resulted in an additional 56 responses. The survey was left open for an additional month which resulted in seven more responses. Upon the survey closing, the data were imported into an Excel data file, coded appropriately for analysis, and then transferred to a Statistical Package for Social Sciences (SPSS) database. The next three subsections will describe the survey in more detail, explaining how specific research questions were addressed and analyzed both quantitatively and qualitatively.

Research question 1: Prevalence and form of aggression. The first research question aimed to determine how prevalent experiences of aggression are for women leaders, what types or forms of aggression are experienced most often, and what factors (personal, professional or situational) are correlated to experiences of aggression. Both quantitative and qualitative analyses were used to gain greater understanding for these three themes.

Quantitative component. Based on the participants' responses to whether or not they have experienced aggression from other women and the personal and comparative demographic questions, descriptive statistics allowed for a basic review of aggregate data showing what percentage of women claimed to have these experiences. These statistics also provided a general description of who appeared to report more or less of these types of experiences.

To determine if there was a correlation between personal or professional demographics, logistic regression analysis was used with results generally tested at the $p = .05$ level. Logistic regression is the appropriate statistical method because it allows the exploration of the relationship between a dependent variable that has only two discrete values and multiple independent variables (Anderson, Sweeney & Williams, 2011). In this analysis, the respondent's answer to the question about whether they had experienced aggression from women served as the dependent variable (Yes=1, No=0). Personal demographics (Age, Race, and LGBTQ) served as independent variables in the first model to determine if these explained any of the variance. Professional demographics (Years Since Tenure, Years Since Dean, Years at Institution, Highest Earned Degree, and Discipline) were added to a second model to see if they helped to explain the variance further.

Participants who reported experiencing aggression were asked questions from the revised *Negative Acts Questionnaire* (NAQ-R) to determine the form and frequency of aggression experienced. The NAQ-R is an instrument designed by Einarsen, Raknes, Matthiesen and Hellesoy (and revised by Hoel) to measure perceived exposure to bullying and victimization in the workplace ("NAQ," 2009). The questions within the

NAQ-R ask the participant to respond to 22 statements about behaviors related to bullying and asks them to indicate how often they were subjected to these behaviors (Never, Now and Then, Monthly, Weekly, and Daily). It is designed to assess if people are currently experiencing these behaviors. I adapted it slightly, asking participants to respond based on which behaviors they experienced at the time of the aggressive experience they referenced as their critical incident.

This instrument has been used in numerous studies around the world (Jimenez, Munoz, Gamarra, & Herrer, 2007; Tambur & Vadi, 2009; Tsuno, Kawakami, Inoue, & Abe, 2010) and was determined to have both strong reliability (Cronbach's $\alpha=.90$) and validity (when compared to instruments measuring mental health and psychosomatic complaints) (Einarsen, Hoel, & Notelaers, 2009). The instrument has strong reliability for determining overall workplace bullying but also can be used to assess three factors: person-related bullying (mostly indirect behaviors that focus on marginalizing the individual), work-related bullying (behaviors aimed at affecting an individual's work), and physical intimidation (behaviors that are intimidating such as yelling, finger pointing, or threats of violence or abuse).

In addition to the descriptive statistics and the logistic regression models, linear regression analysis (at the $p = .05$ level) was used to further determine what correlations existed between demographics and the reported level and form of aggression experienced. In these models, the participant, aggressor, and organization demographics were used as independent variables (Table 1). The dependent variables included the aggregate NAQ-R score and then specific person-related bullying, work-related bullying, and physical intimidation construct scores. The dependent variables are more specifically

described in Table 2. Descriptions of the regression models used for this research question are provided in Table 3.

Table 2

Dependent Variables for Research Question 1

Description	Coding
Negative Acts Questionnaire (NAQ-R)	
Aggregate Score	Numeric-Scale
Person-related bullying	Numeric-Scale
Work-related bullying	Numeric-Scale
Physical intimidation	Numeric-Scale

Table 3

Regression Models for Research Question 1

#	Survey Respondents	Independent Variables	Dependent Variable
1	All respondents	Personal demographics	Whether or not they experienced aggression
2	All respondents	Personal demographics Professional demographics	Whether or not they experienced aggression
3	Respondents who experienced aggression	Personal demographics	NAQ-R Aggregate
4	Respondents who experienced aggression	Personal demographics Professional demographics	NAQ-R Aggregate
5	Respondents who experienced aggression	Personal demographics Professional demographics	NAQ-R Person-Related Bullying Score
6	Respondents who experienced aggression	Personal demographics Professional demographics	NAQ-R Work-Related Bullying Score
7	Respondents who experienced aggression	Personal demographics Professional demographics	NAQ-R Physical Intimidation Score

8	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Organizational demographics Years Since Aggression	NAQ-R Aggregate
9	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Organizational demographics Years Since Aggression	NAQ-R Person-Related Bullying Score
10	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Organizational demographics Years Since Aggression	NAQ-R Work-Related Bullying Score
11	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Organizational demographics Years Since Aggression	NAQ-R Physical Intimidation Score

Qualitative component. To gather more specific or contextualized information about the prevalence and type of aggression experienced, participants were asked two open-ended questions which would then be used for qualitative analysis:

- In the experience you were thinking of, describe what the woman/women did that you thought/felt were examples of aggression (i.e. what behaviors they demonstrated).
- What factors do you think came into play that caused the person/people to behave the way they did?

These questions were elicited to see if themes emerged around their description of the behavior and around factors contributing to aggressive behaviors.

The qualitative analysis throughout the study included a variety of deductive and inductive approaches. For analysis of responses for the first open-ended question,

structural coding (a.k.a. categorical coding) was used to compare responses to the identified behaviors named in the NAQ-R survey items. Structural coding is a technique that uses a question to identify labels and indexing devices so that researchers can quickly categorize data to examine comparable segments (Saldana, 2013). This coding method can be useful in forming a basis for more in-depth qualitative analysis within or across topics as well as for quantitative applications (Saldana, 2013).

In addition to this structural coding, *descriptive coding* was done simultaneously to identify behaviors not already named in the quantitative instrument. This method summarizes the basic topic of a passage of qualitative data into a word or short phrase (Saldana, 2013). It typically leads primarily to a categorized inventory that is further analyzed in second cycle coding and further analysis (Saldana, 2013). For the second open-ended question this was the primary coding method used for analysis.

After this initial round of coding, descriptive codes were analyzed more closely to help identify emergent categories or patterns. These additional categories were then included in another round of structural coding to determine the frequency in which responses actually appeared in these newly identified categories. The categories with the highest frequency counts were selected for further review within that category. These categories were analyzed further in second cycle coding methods to identify relevant themes or patterns that could provide more understanding of the collective responses. *Focused coding* was used with the descriptive coding results because this method helps identify the most frequent or significant codes in order to develop salient categories (Saldana, 2013). *Pattern coding* was also used as a method designed to develop statements that help to describe a major theme or theoretical construct (Saldana, 2013).

Throughout the qualitative analysis of this study, I also kept analytical memos in order to help document and reflect on coding processes and emerging themes. Saldana (2013) suggests using these memos as a way to reflect on codes as a prompt or trigger for written reflection to allow the researcher to think critically, challenge their own assumptions, and recognize the extent to which our personal biases shape how we see things. The memos written throughout this study helped to make sense of the coding process, caused me to be reflective about my own experiences and biases, and helped focus my analysis more so than if I had immediately started writing the results chapter.

Research question 2: Leader efficacy. The second research question aimed to see what impact the experience of aggressive behavior had on the participant's leader efficacy. The intent of this research question was to determine (1) if the respondents perceived the aggression as having an effect on their efficacy toward leadership at the time of the experience (and if so, what effect) and (2) whether or not the experience had a lasting impact on their current levels of leader efficacy and relationships with other women.

Quantitative component. To assess the participants' leader efficacy, respondents were asked to complete the Generalized Leader Efficacy Questionnaire (GLE). This instrument was developed by Hannah, Avolio, Walumbwa, and Chan and was designed to assess an individual's leader efficacy for action, means, and self-regulation (self-motivation/thought) (Banks, 2012). The GLE asks participants to indicate their level of confidence toward 22 statements about leadership tasks or activities with a 100 point scale. In one of the only studies using this instrument, Banks (2012) found it to have high inter-rater consistency and reliability for each of the three components of general

leader efficacy (GLE Action=Cronbach's alpha of .77; GLE Means=Cronbach's alpha of .71; GLE Self-Regulation=Cronbach's alpha of .81).

I adapted this instrument by changing the 100 point scale to a 10 point scale, which is consistent with what other researchers have done to make administering self-efficacy assessments more manageable (Bandura, 1997). This was done in response to feedback from the pilot study when participants stated that the 100 point scale was overly cumbersome and made them less inclined to complete the survey.

All participants were asked to complete the GLE based on their current sense of efficacy toward leadership. Additionally, participants who stated that they had experienced aggression from women were asked to complete the GLE twice—once for how they felt at the time of the experience and once for how they feel currently.

To assess what variables may have correlated with leader efficacy and potentially influenced how women perceived their leader efficacy at the time of the aggressive experience, multiple regression analyses were used (at the $p = .05$ level). The first set of analyses had the Former GLE Aggregate Scores as the dependent variables. Models were run to include personal demographics, professional demographics, aggressor demographics, and the results from the NAQ-R as independent variables. The NAQ-R results were used four different ways: (1) with the aggregate score, (2) with the three construct scores, (3) with the survey items that the respondents stated to have experienced (1=Experienced, 0=Not), and (4) with the survey items and the frequency score. These same regression models were run for each of the Former GLE constructs as the dependent variables. Table 4 displays the dependent variables for this research question.

Table 4

Dependent Variables for Research Question 2

Description	Coding
Generalized Leader Efficacy (GLE)	
Aggregate Score	Numeric-Scale
Self-Motivation	Numeric-Scale
Action	Numeric-Scale
Means	Numeric-Scale

After assessing what variables may be correlated to leader efficacy scores at the time of the experience, analysis was done to see if there was a significant difference in former and current GLE scores. Specifically, paired sample t-tests were run for each survey item on the GLE, the GLE construct scores, and the GLE aggregate score. Then, to determine what variables may help explain the difference in scores, multiple regression analysis was used with the difference in scores as the dependent variable. Independent variables included personal demographics, professional demographics, aggressor demographics, aggregate NAQ-R aggression scores, NAQ-R construct scores, and individual item scores from the NAQ-R.

After the in-group analysis for respondents who experienced aggression, statistical analysis was done to compare GLE scores between respondents who experienced aggression and respondents who did not. Independent sample t-tests were run to compare GLE aggregate and construct scores for both sets of respondents. Additionally, independent sample t-tests were run for each GLE survey item. For the

survey items that proved to be significantly different between the two groups, linear regression analyses were run to determine what might have influenced the differences in responses to these survey items. The survey item score was used as the dependent variable. Personal demographics, professional demographics, and the answer to the question of whether or not they had experienced aggression from other women served as independent variables.

Finally, to determine whether aggressive experiences were a significant variable in predicting current GLE scores, multiple regression analyses were run two different ways. Initially, the models were run with personal and professional demographics as independent variables and the current GLE aggregate and construct scores as dependent variables. This was run to determine what variables may be correlated to leader efficacy scores. To determine if aggressive experiences were a significant variable in explaining the variance in scores, these models were run a second time and added an independent variable for whether or not the respondent reported to have experienced aggression from women. Table 5 displays the regression models used for the second research question.

Table 5

Regression Models for Research Question 2

#	Survey Respondents	Independent Variables	Dependent Variables
12	Respondents who experienced aggression	Personal demographics	Former GLE Aggregate
13	Respondents who experienced aggression	Personal demographics Professional demographics	Former GLE Aggregate
14	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression Aggregate NAQ-R score	Former GLE Aggregate
15	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R construct scores	Former GLE Aggregate
16	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (1,0)	Former GLE Aggregate
17	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (scale)	Former GLE Aggregate
18	Respondents who experienced aggression	Personal demographics Professional demographics	Former GLE Action Construct

19	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R construct scores	Former GLE Action Construct
20	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (1,0)	Former GLE Action Construct
21	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (scale)	Former GLE Action Construct
22	Respondents who experienced aggression	Personal demographics Professional demographics	Former GLE Means Construct
23	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression Aggregate NAQ-R score	Former GLE Means Construct
24	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R construct scores	Former GLE Means Construct
25	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (1,0)	Former GLE Means Construct

26	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (scale)	Former GLE Means Construct
27	Respondents who experienced aggression	Personal demographics Professional demographics	Former GLE Self-Motivation Construct
28	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression Aggregate NAQ-R score	Former GLE Self-Motivation Construct
29	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R construct scores	Former GLE Self-Motivation Construct
30	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (1,0)	Former GLE Self-Motivation Construct
31	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in career Institutional demographics Years Since Aggression NAQ-R survey items (scale)	Former GLE Self-Motivation Construct
32	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in Career Institutional demographics Years Since Aggression Aggregate NAQ-R Score	GLE Difference

33	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in Career Institutional demographics Years Since Aggression NAQ-R Construct Scores	GLE Difference
34	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in Career Institutional demographics Years Since Aggression NAQ-R survey items (1,0)	GLE Difference
35	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Stage in Career Institutional demographics Years Since Aggression NAQ-R survey items (scale)	GLE Difference
36	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE #3 Score
37	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE #8 Score
38	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE #14 Score
39	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE #19 Score
40	All respondents	Personal demographics Professional demographics	Current GLE Aggregate Score
41	All respondents	Personal demographics Professional demographics	Current GLE Action Score
42	All respondents	Personal demographics Professional demographics	Current GLE Means Score
43	All respondents	Personal demographics Professional demographics	Current GLE Self-Motivation Score
44	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE Aggregate Score

45	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE Action Score
46	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE Means Score
47	All respondents	Personal demographics Professional demographics Aggressive Exp. (Yes, No)	Current GLE Self-Motivation Score

Qualitative component. For the qualitative analysis for this research question, participants were asked open-ended questions relating to the critical incident (most impactful experience) they described in the previous part of the survey. They were asked how they felt at the time they were experiencing the aggression and how this has shaped their current perspective. In particular, they were asked questions around how they felt and how the experience may have shaped their approach to leadership and relationships with other women:

- In what ways, if any, did the experience you described earlier undermine, challenge, or motivate your personal sense of leadership capacity at the time of the experience?
- In what ways do you think this experience diminished or enhanced your current sense of leader efficacy?
- In what ways do you think the experience impacted your relationship with other women?

Analysis was done in the same manner as the qualitative portion for the first research question with both deductive and inductive approaches to identify what themes emerged from the data provided. For each of these questions, a first round of coding

sorted answers into three categories related to the effect on the respondent's leader efficacy: (1) no effect, (2) positive effect, (3) negative effect. Then, responses for positive and negative effects were analyzed more closely to determine what patterns existed within those groups. The first cycle coding included descriptive coding. These codes were then grouped and sorted until they seemed to coalesce into broader categories.

Research question 3: Responses. The third research question aimed to determine how women who have risen to the level of dean navigated through these experiences of aggression from women. Specifically, the goal was to identify what personal or organizational support structures they used and how effective these measures were perceived to be by them. Furthermore, it aimed to identify the most critical elements that helped them through this challenge.

Quantitative component. To assess what behaviors participants used when experiencing aggressive behavior, they were provided with a list of 23 possible responses based on prior research (Keashly & Neuman, 2013). They were asked to indicate which strategies they utilized and whether they felt the selected strategy helped, did not make a difference, or made the situation worse. This helped identify what actions were perceived as most helpful or most detrimental and also allowed for comparison with existing bullying literature that examined response strategies.

Descriptive statistics showed the most commonly used responses and how the respondents felt the selected response affected the situation. Additionally, logistic regression analysis was used for each strategy to determine what variables were correlated with particular responses. Finally, linear regression analysis was used to see if the methods selected correlated with current leader efficacy (GLE) scores. Table 6

displays the regression models used for this research question.

Table 6

Regression Models for Research Question 3

#	Survey Respondents	Independent Variables	Dependent Variables
48-67	Respondents who experienced aggression	Personal demographics Professional demographics Aggressor demographics Organizational demographics	Selected strategy (total=19)
68	Participants who experienced aggression	Response strategies	Current GLE Scores

Qualitative component. While there were a number of options provided in the quantitative questions to assess what strategies respondents may have used to help manage the situation, open-ended questions allowed participants to provide answers that may not have been listed and/or to elaborate on the impact that these support mechanisms had for them. In particular, participants were asked:

- In your own words, please describe the top three strategies that helped when you were navigating through this experience.
- What advice would you give to women who are experiencing a similar type of aggression from other women at work?

Consistent with the prior open-ended questions, both deductive and inductive analysis techniques were used to determine what themes existed among participant responses. For the first question, structural coding was used to categorize responses based on the quantitative survey questions. A spreadsheet was developed with the open-

ended responses in the first column and then the survey items used for the quantitative portion in the first row. If a respondent mentioned that they spoke with their colleagues, then the corresponding category was marked. Additionally, descriptive coding was used to identify strategies used that did not fit into these pre-determined categories. These codes were then grouped together into broader categories. These new categories were added to the survey categories. Responses were then coded again with all of these categories included. Categories were then also compared and grouped together into broader themes.

CHAPTER FOUR

RESULTS

The purpose of this study was to determine to what extent women leaders in higher education experience aggression from other women, how this may affect their self-efficacy toward leadership tasks, and how these leaders successfully navigate through the experiences. This chapter presents the findings for the study. First, details about participant personal and professional demographics are described. Next, reliability analysis for the results from the Negative Acts Questionnaire (NAQ) and Generalized Leader Efficacy Questionnaire (GLE) is offered. Then, results for each of the research questions are presented, including quantitative and qualitative results. The chapter concludes with a summary of these findings.

Participant Demographics

As described in chapter three, the individuals invited to participate in the study were 635 women identified as deans at doctoral granting institutions in the United States. They were invited to complete an anonymous online survey that included demographic questions, three different quantitative instruments and eight open-ended qualitative questions. Of the 635 women invited to participate, 48.2 percent (n=306) responded, completed the online consent to participate, and answered at least one of the questions related to the purpose of this study. The following sections will describe the demographic make-up of the survey respondents.

Demographic Variables

Of the 306 respondents, most answered questions relating to personal and professional demographics. Some respondents preferred not to answer specific questions

but there was no clear pattern to explain why participants chose not to answer particular questions. In quantitative analyses where these demographics serve as independent variables, respondents with missing answers were not included. The following sections describe the personal and professional demographics of the participants.

Personal demographics. Respondents were asked three questions regarding personal demographics including birth year (to assess age), race, and whether they identify as lesbian, gay, bisexual, transgender or queer (LGBTQ). Of the 306 respondents, 82 percent (n=252) provided data to assess age. Ages ranged from 37 to 78, with an average age of 58 (SD=7.01), a median age of 59, and a modal age of 56.

In response to the question related to the respondent's identified race, 99 percent of participants provided an answer. For this question, candidates had the option to select from five descriptive categories: American Indian/Alaskan Native, Asian/Pacific Islander, Black/African American, Hispanic/Latina, or White/Caucasian. Additionally, respondents could choose "Prefer Not to Answer" or "Other" and then provide further explanation. The survey did allow respondents to select more than one option if they identified with more than one category.

Results showed three categories that had fewer than ten respondents (American Indian/Alaskan Native, Asian/Pacific Islander, and Hispanic/Latina). Existing research on suggested minimum values for logistic regression analysis found that fewer than ten data points resulted in biased regression coefficients (Peduzzi, Concato, Kemper, Holford, & Feinstein, 1996). For this reason, these three categories were combined to create a new variable that grouped responses so that they could be included in the analysis. Additionally, because of the high proportion of respondents identifying as

White/Caucasian, individuals who selected both White/Caucasian and an underrepresented group were included in the underrepresented group and excluded from the White/Caucasian category. Table 7 lists the distribution of respondents based on race category.

Table 7

Distribution of Race Categories

Race Category	n	% of Respondents
Amer. Indian, Asian, Hispanic	13	4.25
Black or African American	25	8.27
White/Caucasian	264	86.3
Did not answer	4	1.31

The third demographic variable asked participants whether or not they identified as LGBTQ. This demographic variable was specifically selected because existing literature indicated that individuals who identified as LGBTQ experienced higher rates of bullying behavior in academia (Sallee & Diaz, 2013). Of the respondents in this study, five percent identified as LGBTQ (n=15). Of these 15 respondents, 10 indicated they experienced aggression from other women but only nine completed the NAQ-R and eight completed the GLE. While these numbers do not meet the suggested threshold for regression analyses, they were included as variables because the literature suggests there may be important findings.

Professional demographics. In terms of professional demographics, respondents were asked five questions. These included asking about their highest earned degree, the

number of years since earning tenure, the number of years in the role of dean, and the number of years at their current institution. Additionally, they were asked to report their academic discipline in their dean role. Each of these pieces of information was a variable for this study.

In regard to Highest Earned Degree, 99 percent of respondents provided an answer and the majority of them earned doctorate degrees in their fields of study. Because respondents with medical doctorates (M.D.), dental surgery/dental medicine doctorates (DDS/DMD), and veterinary medicine doctorates (DVM) were each fewer than 10, these variables were combined to create a new variable titled *Medical Doctorate*. Additionally, Master's degrees and Bachelor's degrees were grouped together as a new variable for the same reason. Table 8 shows the distribution based on degree.

Table 8

Distribution of Highest Earned Degrees

Degree Earned	n	% of Respondents
Ph.D.	231	75.49
Ed.D.	23	7.52
J.D.	25	8.17
Medical Doctorate	15	4.90
Masters/BA	10	3.27
Did not answer	2	.65

Regarding the time-related professional demographic questions, the length of time since earning tenure (Years Since Tenure) ranged from two to 51 years with the average

length of time since tenure being 24 years ($SD=8.83$), the median being 24 years, and the mode being 25 years. Length of service as dean (Years as Dean) ranged from less than one year to 31 years, with an average length of service in the position of six years ($SD=5.85$), median of four years, and mode of two years. These results indicate that the data had a higher representation of deans with fewer years of experience. The range of time at their current institution (Years at Institution) ranged from less than one year to 43 years, with an average length of time of 12 years ($SD=10.63$), median of eight years, and mode of two years. Again, the results had a higher distribution of women with fewer years at their institution.

When gathering information about the respondent's discipline, the survey response options were based upon the categorization provided in the Higher Education Directory. Discipline categories with fewer than 10 responses were grouped with like categories to create a group large enough to include in the analysis. Two exceptions were made, however, for Allied Health Sciences and Public Health. While each of these categories had 10 or 11 respondents, they were grouped into a new category of "Other Health Professions" with "Pharmacy" respondents. The rationale behind this was because both categories had less than 10 respondents who answered that they had experienced aggression from other women (which would make models with just those respondents difficult). Table 9 displays the distribution of responses by discipline category in comparison to the identified categories for the entire population of female deans in doctoral granting institutions. In this table, the overarching discipline categories are bolded and italicized.

While most discipline groupings show that the sample was fairly representative of the population of women deans, there were a few that showed significant differences. Examining categories with more than a two percentage point difference, participants from Nursing and Public Service appear to be underrepresented. Within the Public Service category, the significant contributor was the underrepresentation of women deans in the Social Work discipline. It is important to state, however, that because the survey was anonymous, it was not possible to ensure that respondents selected the same category they were assigned when generating the full list of deans. Many of the disciplines appear to overlap (e.g. Art & Science versus Mathematics/Science) so it is possible that some deans selected a different category than the one listed in the Higher Education Directory. For this reason, it is not possible to ensure that the representation of respondents matches exactly with the representation of invitees.

Table 9

Distribution of Discipline Areas Compared with Population

Discipline	n	% of respondents	% of population	Difference
<i>Art & Science</i>	74	24.18	24.72	-.54
Agriculture	5	1.65	1.73	-.08
Art & Science	33	10.89	11.18	-.29
Humanities	6	1.98	2.05	-.07
Journalism/Communications	9	2.97	2.68	.29
Mathematics/Sciences	7	2.31	2.05	.26
Natural Resources	5	1.63	1.26	.37
Social/Behavioral Sciences	9	2.97	3.15	-.18
<i>Applied Science/Business</i>	37	12.09	13.39	-1.30
Architecture	5	1.65	2.36	-.71
Business	22	7.26	7.40	-.14
Computer Science	1	.33	.16	.17
Engineering	8	2.64	2.68	-.04
Technology	1	.33	.63	-.30
<i>Education</i>	44	14.38	15.75	-1.37
<i>Law</i>	20	6.54	5.51	1.03
<i>Medical Field</i>	19	6.21	5.04	1.17
Medicine	6	1.98	2.52	-.54
Dentistry	6	1.98	1.42	.56
Veterinary Medicine	7	2.31	1.10	1.21
Music	0	0.00	.47	-.47
<i>Nursing</i>	41	13.40	15.75	-2.35
<i>Other Health Professions</i>	24	7.84	8.03	-.19
Allied Health Sciences	11	3.63	4.09	-.46
Pharmacy	3	.99	1.26	-.27
Public Health	10	3.30	2.68	.62
Physical Education	0	0.00	.16	-.16
<i>Public Service</i>	15	4.90	6.61	-1.71
Government/Public Affairs	3	.99	1.26	-.27
Political Sci/Int'l Affairs	3	.99	.79	.2
Social Work	9	2.94	4.57	-1.63
<i>Other</i>	32	10.46	N/A	N/A
Fine Arts	10	3.27	3.15	.12
Graduate Programs	2	.65	*	*
Home Economics	3	.99	1.42	-.43
Theology	3	.99	.79	.2
Women's Studies	1	.33	*	*
Prefer Not to Answer	13	4.29	N/A	N/A

*Graduate Programs and Women's Studies were options on the survey list but individuals from these categories in the Higher Education Directory were not included in the list of invitees as their roles and titles varied significantly from institution to institution.

Creation of new variable for “Age+Predicted Age.” As stated earlier, responses with missing data points were excluded from statistical analysis. Because there were 55 missing data points for Age (which equated to 17.97 percent of the respondents being excluded from analysis), linear regression analysis was used to try to predict a respondent’s age. In this model, Age was used as the dependent variable with Years Since Tenure, Years as Dean, and Years at Institution being used as independent variables. Results showed that both Years Since Tenure and Years as Dean proved to be significant variables in predicting age ($p < .001$) and the regression model had both an R^2 and adjusted R^2 of .46, indicating that it explained approximately 46 percent of the variation and variance in results. Using this model, the predicted age for the missing responses was calculated and this new list of true age and predicted age (for missing responses) was used as an additional variable—*Age+Predicted Age*. I did not use this regression model to predict all ages in this variable as the regression model explains less than half of the variance. Statistical models throughout this study were generally run at least three different ways—first with Age, second with Age+Predicted Age, and third with no age variable. These analyses allowed me to see if (1) there was any significant difference between the two age variables and (2) if a respondent’s age was significant in the models at all. In most cases, if Age was significant or near significant, then Age+Predicted Age was the preferred variable because it allowed for more data from other parts of the survey to be used in the analysis.

Reliability Analysis

Cronbach’s alpha measures how well a group of survey items reliably measure a characteristic or construct (Cortina, 1993). Although the first two quantitative

instruments used for this study historically proved to be reliable, Cronbach's alpha was used to measure whether the revised Negative Acts Questionnaire (NAQ-R) and Generalized Leader Efficacy Questionnaire (GLE) maintained their reliability given the slight adjustments made to survey questions and response options. All of the reliability scores for the aggregate and construct scores were above the generally recommended minimum of .70 (Peterson, 1994), with the exception of one. Within the NAQ-R, the Physical Intimidation construct proved to have a Cronbach's alpha of .69 but when running a factor analysis on the instrument, these three questions proved to group together. Table 10 displays the results of this analysis.

Table 10

Cronbach's Alpha for Survey Constructs

Construct/Variable	Cronbach's Alpha	Number of items
Negative Acts Questionnaire (n=169)	.90	22
Person-related bullying (n=177)	.86	12
Work-related bullying (n=183)	.81	7
Physical intimidation (n=188)	.69	3
Generalized Leader Efficacy Questionnaire (n=155)		
At the time of the experience	.95	22
Action (n=157)	.92	7
Means (n=157)	.89	7
Self-Motivation (n=158)	.89	8
Current (n=232)	.92	22
Action (n=236)	.89	7
Means (n=237)	.81	7
Self-Motivation (n=240)	.88	8

Research Question 1: Prevalence, Form and Factors

The first research question of this study asked:

1. To what extent have women in higher education leadership roles experienced aggression from women?
 - a. What personal and/or professional demographic variables are correlated with experiences of aggression from women?
 - b. What type of aggression are women experiencing from other women?
 - c. What situational factors are correlated to experiences of aggression from women?

This research question was addressed quantitatively using descriptive statistic comparisons, logistic and multiple linear regression analyses, as well as qualitatively based on responses to two open-ended questions. First, to answer the overarching research question and the first sub-question about what personal and/or professional demographic variables were correlated with experiences of aggression, descriptive statistics provide an overall percentage of respondents who reported to have experienced aggression and include comparisons based on these variables. Logistic and linear regression analyses identified which characteristics were associated with these experiences. Then, to answer the second sub-question related to what type of aggression women are experiencing from other women, a combination of descriptive statistics, quantitative statistical analysis through linear regressions, and qualitative analysis through thematic content analysis describe what forms of aggression these women faced most often. Finally, to answer the third sub-question related to what situational factors correlate with experiences of aggression, descriptive statistics, quantitative analysis, and

qualitative analysis provide further context around factors that are correlated to aggressive experiences and identifies three theoretical constructs about what respondents believe may be driving the aggressor's behavior.

Prevalence of Aggression Experiences from Women

To answer the overarching research question about the extent to which women leaders in higher education have experienced aggression from other women, descriptive statistics provided data about the prevalence of these experiences. Additionally, logistic and linear regression analysis results demonstrated correlations between personal and professional demographics that could indicate who is more or less likely to have reported these experiences. This section outlines these results.

Descriptive statistics. Descriptive statistics revealed some strong and straightforward answers to help identify how prevalent these experiences of aggression are for women as well as who may be experiencing aggression more often. Whereas the descriptive statistics earlier described the entire pool of respondents, this section differentiates the specific descriptive statistics for respondents identified as having aggressive experiences from women.

Of the 306 respondents, 68 percent (n=209) answered “Yes” to the question that asked whether or not they had ever experienced aggression from other women during their career. This statistic provides an overarching answer to the first research question

regarding the prevalence of these types of experiences for women deans in doctoral granting institutions and suggests that it is quite common.²

When comparing the personal demographics of the women who experienced aggression to the women who did not experience aggression, there was very little difference in the distribution of age, race and sexual orientation. This was confirmed with independent sample t-tests (for the Age variable) and chi-square analyses (for Race and LGBTQ variables) that showed no significant difference at the $p < .05$ level between the two groups. Similarly, when looking at comparisons of professional demographics, the differences between the two groups was very small, with the exception of data related to two of the discipline categories. Chi-square analyses confirmed that there were significant differences for women deans in Applied Sciences/Business (a smaller proportion of women in these fields reported experiences of aggression) and Law (a larger proportion of women in this field reported experiences of aggression). Table 11 displays the comparisons between respondents who experienced aggression and those who did not.

² The final questions of the survey asked participants about whether or not they experienced aggression more often from women or men throughout their career and which experiences were more challenging for them. Of the 161 respondents who answered these questions, 53 percent said that they experienced aggression more from women than men. The majority of respondents (50.31 percent) said that aggression from either gender was equally challenging, and 34.16 percent said experiences of aggression from women were more challenging than experiences of aggression from men.

Table 11

Comparisons of Respondents With and Without Aggression Experiences

Demographics	Respondents Who Experienced Aggression	Respondents Who Did Not Experience Aggression
<i>Personal</i>		
Age		
Range	37-76	41-78
Mean	58	58
Standard Deviation	7.22	6.75
Median	59	59
Mode	56	56
Race		
Black/African American	8.1%	8.3%
American Indian/Asian/Hispanic	4.3%	4.1%
White/Caucasian	86.6%	85.6%
LGBTQ	4.8%	5.2%
<i>Professional</i>		
Average Years Since Tenure	24 (SD=8.59)	24.01 (SD=9.34)
Average Years as Dean	6 (SD=5.85)	5.53 (SD=5.81)
Average Years at Institution	12 (SD=10.12)	12.50 (SD=11.49)
Education		
Ph.D.	73.7	79.4
Ed.D.	8.1	6.2
J.D.	9.6	5.2
Medical Degree	5.7	3.1
Masters/BA	2.9	4.1
Discipline		
Art & Science	23.44%	25.77%
Applied Science/Business*	8.13%	20.62%
Education	16.28%	10.31%
Law*	9.09%	1.03%
Medical Field	5.74%	7.22%
Nursing	12.92%	14.43%
Other Health Professions	7.66%	8.25%
Public Service	5.26%	4.12%
Other	11.48%	8.25%

*Statistically significant difference between the two groups.

Quantitative results. To determine if there were statistically significant correlations between any of the personal or professional variables and the experience of

aggression, a number of regression analyses were utilized. Binary logistical regression analysis was used to determine what variables may be correlated to whether or not the respondents claimed to have had an aggressive experience from women. Then, linear regression analyses were used to determine if any variables correlated with scores from the NAQ-R instrument measuring aggression scores. This section outlines the results from these analyses.

Logistic regression analysis. To determine if there were statistically significant correlations between the demographic variables and the experience of aggression, I utilized binary logistical regression analyses with a forward conditional method. Logistical regression allows for analysis of the relationship between a dichotomous dependent variable and one or more continuous or dichotomous independent variables to estimate the probability that a particular event will occur (Andersen, Sweeney, & Williams, 2011). The forward conditional method in SPSS, which considers multiple independent variables and selects variables in the order based on which is most significant in the model, was chosen because there is no prominent theory that indicates which professional demographic variables would be significant in determining who experiences aggression.

Once the most significant variables were identified, the regression was rerun using the standard method with the identified significant variables. Additional variables were added into the model that had significance levels of less than .20. Then, variables that did not prove to be significant at the $p < .05$ level were removed one at a time (based on the largest significance figure) until only significant variables remained. When running these models, the dependent variable was whether or not the respondent

answered “Yes” when asked if they had ever experienced aggression from other women (Yes=1, No=0).

The first model included only personal demographics as independent variables (Age, Race, and LGBTQ). None of these variables proved to be significant in explaining whether or not someone experienced aggression from women. When adding professional demographics (Years Since Tenure, Years as Dean, Years at Institution, Highest Earned Degree, and Discipline), models were run with and without personal demographic variables to determine if the personal demographics had any effect. Personal demographics still proved to have no effect but two professional demographic variables did prove significant ($p < .001$). Consistent with the descriptive statistics, deans within the Law discipline were more likely to have answered “Yes” to having experienced aggression and deans within the Applied Sciences/Business discipline were less likely to report experiencing aggression from other women. More specifically, while deans in other disciplines had a 69 percent probability of experiencing aggression from women, the probability that a law dean would experience aggression was 95 percent. The probability of applied science/business deans experiencing aggression from women was only 45 percent. This model produced very small R^2 results, however, indicating that these variables explain very little of the variance in responses. Table 12 displays the results of this model.

Table 12

Effect of Professional Variables on Aggressive Experiences (Logistic Regression)

Variable	B	S.E.	Wald	Sig	Exp(B)
Discipline: Law	2.12	1.04	4.20	.04	8.35
Discipline: Applied Science/Business	-.99	.36	7.56	.01	.37
Constant	.82	.14	35.73	.00	2.28

Note: Cox & Snell R square = .05, Nagelkerke R Square = .08, $p < .001$

Linear regression analysis. Linear regression analysis determined what correlations existed between personal and/or professional variables and experiences of aggression as measured by the aggregate scores from the NAQ-R. With this NAQ-R aggregate score as the dependent variable and personal demographic variables as independent variables (Age, Race, LGBTQ), one variable—LGBTQ—proved to be significant. Responses from individuals who identified as LGBTQ were positively correlated with NAQ-R aggregate scores and produced a coefficient of 8.10. With the mean of the NAQ-R aggregate being 16.38 (SD = 12.01) and the constant in the model being 15.90, the coefficient of the LGBTQ variable indicated that women who identified as LGBTQ generally had a 50 percent higher aggregate NAQ-R score than other women. This conclusion is limited, however, because the model produced a very low R^2 of .02 indicating that it accounted for only two percent of the variance in responses. Table 13 displays the results of this regression model.

Table 13

Effect of Personal Demographics on Aggregate NAQ-R Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	15.90	.89		17.90	.00
LGBTQ	8.10	4.06	.15	2.00	.05

Note. $R^2 = .02$, $p < .05$

When adding professional demographic variables to the list of independent variables, the model produced a slightly higher variability explanation with an R^2 of .05 and one significant variable (Table 14). Unlike the previous model, responses from individuals who identified as LGBTQ were not statistically significant at the $p < .05$ level. (It was significant at $p = .61$.) The only variable that proved to be significant was related to Years at Institution. The number of years the respondent reported to have been at her institution proved to be negatively correlated with aggregate NAQ-R scores, indicating that women who were at their institutions longer reported experiencing fewer aggressive experiences. Another way to explain this is to say that women newer to their institutions generally reported more frequent aggressive behavior. This could suggest that women who have had more time to develop relationships with others at their institution are less likely to experience aggression from women when compared to women who have not had as much time to build these relationships.

Table 14

Effect of Professional Demographics on Aggregate NAQ-R Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	T	
(Constant)	19.41	1.28		15.13	.00
Years at Institution	-.27	.09	-.22	-3.11	.00

Note. $R^2 = .05$, $p = .00$

What is particularly notable about these results is how they differ from the logistic regression results. Whereas law and applied science/business disciplines were significant variables in the logistic regression, they were not significant in the linear regression model that evaluated aggression scores based on the types of experiences and frequency of experiences when comparing data only with those who claimed to experience aggression from women. This could indicate that while law and applied science/business deans may be more or less likely to say they have had aggressive experiences, when measuring those experiences quantitatively, there was no significant difference in the types or frequency of aggressive behaviors when compared with deans in other disciplines.

Review of quantitative results. Results examining data for the question related to who experiences aggression from women show that 68 percent of survey respondents claimed to have experienced this behavior, indicating that these experiences could be quite common among women in dean roles. Logistic regression analysis showed that law deans reported experiences of aggression at higher proportions than deans in other

disciplines while applied science/business deans experienced aggression in lower proportions. This finding is interesting given that both of these fields could be considered male-dominated (in which Ely (1994) suggests may be more vulnerable for aggression among women) yet their results contrast, indicating that there may be additional nuances associated with their respective disciplines.

Linear regression looking at the effect of demographic variables on aggression scores as measured by the NAQ-R revealed that when considering personal demographics, women who identified as LGBTQ reported higher aggression scores. When considering all personal and professional demographics, however, Years at Institution was the only significant variable in the model. These results showed that the length of time a woman was at her institution was negatively correlated with aggression scores, indicating that women who were newer to their organizations reported higher aggression scores. This is a significant finding because it suggests that the most important factor in determining the degree to which a woman dean is likely to experience aggression from other women is the length of time she has been at the institution, regardless of age, race, sexual orientation, discipline, degree, and time since tenure.

What Forms of Aggression Do Women Experience

To assess what forms or types of aggression women faced, descriptive statistics, quantitative analysis, and qualitative analysis provided interesting findings. This section will first present the results from linear regression analyses that explain what correlations existed between personal and professional demographics and the specific sub-categories (constructs) of the NAQ-R. Then, descriptive statistics are presented around the most commonly experienced forms of aggression using results from the NAQ-R. Finally,

qualitative analysis of the open-ended question relates what respondents stated about their experiences in their own words and what themes emerged from these responses.

Quantitative results. While the former section described the quantitative results when considering the aggregate NAQ-R aggression scores, further analysis was done to look at what types of behaviors were most commonly reported by participants. One way this was done was by examining the three NAQ-R construct scores for *person-related bullying*, *work-related bullying*, and *physical intimidation*. Person-related bullying behaviors are those that are typically indirect and aim to marginalize the individual. Behaviors within this category include spreading gossip or rumors about the individual, ignoring or excluding them, excessive teasing, or making offensive remarks about the individual's personal life. Work-related bullying behaviors are also generally indirect and aim to more directly impact the person's work and include behaviors like subjecting someone to an unmanageable workload or withholding information which can affect performance. Physical intimidation behaviors are often more direct in nature and can include shouting at someone, finger-pointing, or making threats of physical violence or abuse. Existing research suggests that women use indirect aggressive strategies more often than direct aggressive behaviors (Bjorkqvist et al., 1994; Lagerspetz et al., 1988), which would predict that physical intimidation scores would be reported less frequently than person- or work-related bullying behaviors.

Table 15 shows that when looking at the three constructs, person-related bullying (PR) was mentioned most frequently. Work-related bullying (WR) is the second most frequently named behavior and physical intimidation (PI) was mentioned the least frequently.

Table 15

Frequency of Behaviors by NAQ-R Construct

Construct	Number of Survey Items	Frequency	Average Score	Standard Deviation
Person-Related Bullying (PR)	12	1141	10.39	7.59
Work-Related Bullying (WR)	7	516	4.81	4.59
Physical Intimidation (PI)	3	166	1.17	1.57

To determine if there was any correlation between the respondent's demographics and the type of aggression experienced, linear regression analysis was used for each construct score. For these models, the construct score served as the dependent variable and the respondent's personal demographics (Age, Race, and LGBTQ) and professional demographics (Years Since Tenure, Years as Dean, Years at Institution, Highest Earned Degree, and Discipline) were used as independent variables. The models run for person-related bullying and work-related bullying resulted in statistically significant models, while the model for the physical intimidation score did not produce significant results.

Person-related bullying. When looking at the *person-related bullying* construct score, the linear regression model produced an R^2 of .09 indicating that it explained approximately nine percent of the variance (Table 16). The model was significant at the $p < .001$ level and produced two significant variables. The most significant variable was Years at Institution, which was negatively correlated ($\beta = -.18$) with person-related bullying scores. This result is consistent with the model examining aggregate NAQ-R aggression scores, indicating that women who have been at their institution for shorter periods of time report higher person-related bullying scores.

The second variable was related to whether or not the respondent identified as LGBTQ, which was positively correlated with the construct score. This indicates that respondents who identified as LGBTQ reported experiencing more person-related bullying than other women. Similar to the model looking at the aggregate NAQ-R scores, the large coefficient for the LGBTQ variable ($\beta = 5.65$) indicated that these women's scores were considerably higher than women who did not identify as LGBTQ.

Table 16

Effect of Personal and Professional Variables on Person-Related Bullying Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	12.12	.81		14.99	.00
Years at Institution	-.18	.05	-.24	-3.40	.00
LGBTQ	5.65	2.48	.16	2.28	.02

Note. $R^2 = .09$, $p < .001$

Work-related bullying. When looking at the *work-related bullying* construct, the model produced an R^2 of .06, explaining that the variables explained approximately six percent of the variance. This model was significant at the $p = .004$ level and produced two significant variables (Table 17). The most significant variable was related to discipline, with responses from nursing deans being positively correlated with work-related bullying scores. This indicates that deans in this field reported experiencing more of this type of bullying behavior than deans of other disciplines.

The second variable was related to the number of years the respondent had been at their institution. Similar to the person-related bullying score, the Years at Institution

were negatively correlated with work-related bullying scores, revealing that individuals with fewer years at the institution reported experiencing more work-related bullying than individuals with longer service at their organization.

Table 17

Effect of Personal and Professional Variables on Work-Related Bullying Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	T	
(Constant)	5.28	.52		10.13	.00
Discipline: Nursing	2.34	.97	.17	2.41	.02
Years at Institution	-.07	.03	-.15	-2.06	.04

Note. $R^2 = .06$, $p < .01$

Specific behaviors. When looking at the responses for the specific items in the NAQ-R, these items can be examined by looking at the number of respondents who selected each specific behavior and/or at the average frequency scores selected for this behavior. When responding to how pervasive various behaviors were, respondents had a choice of Never (0), Now and Then (1), Monthly (2), Weekly (3), and Daily (4). When examining the data from both of these perspectives and putting them in order from highest to lowest counts/scores, the ordering of survey items is very similar. In fact, the top five most selected behaviors were in the exact same order when comparing to the highest average frequency scores for each item. Table 18 provides a list of behaviors with the frequency counts and average scores. These descriptive statistics demonstrated that the most frequently reported behaviors experienced were (1) *spreading of gossip or*

rumors, (2) being ignored or excluded, (3) having your opinions ignored, (4) someone withholding information which affects your performance, and (5) being ignored or facing a hostile reaction when you approach. These were both the behaviors most mentioned to have been experienced (frequency count) and those that were rated as happening with the most frequency (average score).

Table 18

Frequency and Average Score Comparisons of Aggressive Behaviors

Behavior	Frequency	% of respondents	Average Score	SD
Spreading of gossip or rumors about you	152	80.4	1.65	1.27
Being ignored or excluded	145	76.7	1.48	1.24
Having your opinions ignored	145	76.7	1.36	1.05
Someone withholding information which affects your performance	142	75.1	1.33	1.19
Being ignored or facing a hostile reaction when you approach	122	64.6	1.22	1.26
Having allegations made against you	116	61.4	.98	1.03
Being humiliated or ridiculed in connection with your work	115	60.8	1.03	1.08
Having insulting/offensive remarks made about your person, attitudes or private life	110	58.2	1.04	1.15
Persistent criticism of your errors or mistakes	109	57.7	.95	1.05
Being shouted at or the target of spontaneous anger	102	54.0	.71	.82
Repeated reminders of errors or mistakes	98	51.6	.74	.90
Hints or signals from others that you should quit your job	78	41.3	.61	.91
Excessive monitoring of your work	69	36.5	.70	1.12

Intimidating behaviors such as finger-pointing, invasion of personal space, shoving, blocking your way	55	29.1	.38	.69
Being ordered to do work below your level of competence	50	26.5	.43	.87
Being exposed to an unmanageable workload	46	24.3	.46	.95
Having key areas of responsibility removed or replaced with trivial or unpleasant tasks	44	23.3	.41	.88
Being the subject of excessive teasing and sarcasm	40	21.2	.28	.62
Being given tasks with unreasonable deadlines	39	20.6	.35	.78
Pressure not to claim something to which by right you are entitled to (e.g. sick leave, holiday entitlement, travel expenses)	25	13.2	.21	.64
Practical jokes carried out by people you don't get along with	12	6.3	.09	.36
Threats of violence or physical abuse or actual abuse	9	4.8	.08	.41

Note. Ordered by frequency count

Review of quantitative results. Quantitative analysis from descriptive statistics and regression models demonstrated what types of aggressive behaviors from women were most frequently reported. The person-related bullying construct had the highest number of reported behaviors with work-related bullying being ranked second and physical intimidation having the fewest reports, which aligns with existing literature suggesting that direct strategies like physical intimidating behaviors are less likely to be used by women when demonstrating aggression.

Linear regression analysis was used to identify which variables were correlated to each of the construct scales. This analysis resulted in significant models for both the

person-related bullying construct and the work-related bullying construct. Responses from women who identified as LGBTQ were positively correlated with person-related bullying scores, indicating that they reported experiencing more of this type of behavior than other women. Responses from nursing deans proved to be positively correlated with work-related bullying scores, indicating that they experienced this type of behavior more often than deans in other disciplines. In both models, the number of years the respondent had been at the institution was negatively correlated with person-related bullying and work-related bullying scores. In alignment with the analysis of the aggregate NAQ-R scores, this indicates that women who are newer to their institutions generally reported experiencing more frequent person-related and work-related bullying behaviors than women who had been at the same institution for longer periods of time.

In addition to looking at the behaviors within the three NAQ-R constructs, descriptive statistics helped identify the most common and frequent specific behaviors experienced. The five most mentioned and most frequent behaviors were (1) spreading gossip or rumors, (2) being ignored or excluded, (3) having their opinions ignored, (4) someone withholding information which affects performance, and (5) being ignored or facing a hostile reaction when approaching. These results are compared with the qualitative results presented in the next section.

Qualitative results. In addition to the quantitative survey assessing responses to predefined options, participants were also asked an open-ended question: *In this experience that you are thinking of, describe what the woman/women did that you thought/felt were examples of aggression (i.e. what behaviors they demonstrated).* Of the 209 respondents who answered that they had experienced aggression from other women

at some point in their career, 85.2 percent (n=178) provided answers to this open-ended question.

For the initial coding of these responses, the NAQ-R survey items were used to assist in structural (also referred to as *categorical*) coding. Statements made directly referencing one of the survey's named behaviors were marked as being included in that category. Descriptive coding was done simultaneously to identify themes that were not included in the NAQ-R.

Once the initial categorical coding was complete, magnitude coding allowed for comparison across responses to see which behaviors were mentioned most frequently. Table 19 displays the frequency as it relates to qualitative answers corresponding to NAQ-R survey items.

Similar to the quantitative descriptive statistics, the most frequent behaviors mentioned belonged to the person-related bullying category with 65 percent (n=116) of responses specifically naming a behavior from this construct. The second highest number of responses belonged to the work-related bullying category with 30 percent (n=54) of responses naming at least one item from this construct. Responses that corresponded with physical intimidation had the smallest aggregate number but still resulted in 25 percent (n=44) of respondents mentioning at least one behavior in this construct, which was higher than expected.

More specifically, in alignment with the quantitative descriptive statistics, the most named specific behavior was related to the *spreading of gossip or rumors* with 29 percent of respondents mentioning this behavior. Similarly, *being ignored or excluded* and *having your opinions ignored* were all responses that ranked higher on the list in both

the quantitative and qualitative responses. While this makes sense due to the fact that it was the same group of respondents referring to the same experience, the fact that these women specifically mentioned these behaviors indicates that these behaviors were memorable to them when recalling the experience. Perhaps more interesting, however, is the fact that the qualitative analysis proved to have higher magnitude coding for *being shouted at, being humiliated or ridiculed in connection with your work, and having allegations made against you*, than what was reported in the quantitative results.

While simply counting similar responses is generally not sufficient to assess outcomes in qualitative research, this coding method was appropriate for this particular question given the goal of assessing the prevalence of different forms of aggression. When selecting the specific categories to examine more carefully, survey items with more than 20 corresponding responses were identified for further review. This resulted in the review for six behavioral categories: (1) *spreading of gossip or rumors*, (2) *being shouted at or the target of spontaneous anger*, (3) *being humiliated or ridiculed in connection with your work*, (4) *being ignored or excluded*, (5) *having allegations made against you*, (6) *having your opinions ignored*.

Table 19

Magnitude Coding of Qualitative Answers Based on NAQ-R Survey Items

NAQ-R Construct	Survey Item	# of responses
PR	Spreading of gossip or rumors about you	52
PI	Being shouted at or the target of spontaneous anger	41
PR	Being humiliated or ridiculed in connection with your work	31
PR	Being ignored or excluded	27
PR	Having allegations made against you	26
WR	Having your opinions ignored	22
WR	Someone withholding information which affects your performance	18
WR	Pressure not to claim something to which by right you are entitled (e.g. sick leave, holiday entitlement, travel expenses)	13
PI	Intimidating behaviors such as finger-pointing, invasion of personal space, shoving, blocking your way	10
PR	Being ignored or facing a hostile reaction when you approach	9
PR	Having insulting or offensive remarks made about your person, attitudes or your private life	8
PR	Persistent criticism of your errors or mistakes	6
PR	Being the subject of excessive teasing or sarcasm	6
WR	Excessive monitoring of your work	5
PR	Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks	4
PR	Hints or signals from others that you should quit your job	3
PR	Repeated reminders of your errors or mistakes	3
WR	Being ordered to do work below your level of competence	3
PI	Threats of violence or physical abuse or actual abuse	2
WR	Being given tasks with unreasonable deadlines	1
WR	Being exposed to an unmanageable workload	1
PR	Practical jokes carried out by people you don't get along with	0

Two of these categories had a lot of overlapping responses: *being ignored or excluded* and *having your opinions ignored*. While in the NAQ-R these are intended to be differentiated based on whether the behavior is more person-related ignoring or work-related ignoring, the qualitative responses often included examples of both or were difficult to categorize into only one category or the other. Because of the significant overlap within the coding for these categories, I merged them into one category called *being ignored or excluded*.

As mentioned earlier, in addition to this categorical coding process, descriptive coding was used to identify behaviors not represented in the NAQ-R survey items. This descriptive coding was done twice—once in the initial categorical coding process and again afterwards as an independent review of the data as a whole. After multiple rounds of review, two new categories emerged with fair representation among responses—*public criticism* (35 responses), and *manipulation* (31 responses). Upon closer review of the public criticism category, I realized that these responses aligned with many of the responses in the *being humiliated or ridiculed in connection with your work* category. Because many of the responses within this category described the respondent being criticized publicly, I replaced the former category with the latter. This change and the addition of the manipulation category finalized the list to six categories of behavior:

1. Gossip
2. Shouting at or spontaneous anger
3. Public criticism
4. False allegations
5. Being ignored or excluded

6. Manipulation

These six categories are described in greater detail below.

Spreading of gossip or rumors. With 52 responses, the most common identified behavior in the qualitative responses was the *spreading of gossip or rumors*. While a closer look at these specific responses revealed many generic statements about how the individual “talks behind my back” or “spread untrue rumors,” a number of responses provided more context. This more contextualized data grouped around three aspects which provides insight about how this strategy was used. First, many responses provided information about *who* the aggressors were gossiping with. Additionally, there were a number of responses that provided information about *what* the aggressors were gossiping about. Finally, analysis of responses also provided information about what the perceived *purpose* was in this behavior. Each of these is outlined here with representative examples of respondents’ statements.

When looking at *who* respondents believed the aggressors were interacting with, responses included a broad range of individuals comprising of both internal and external constituents. While many responses mentioned that this behavior involved faculty members, other examples demonstrated how aggressors would seek the ear of the respondent’s supervisor or other members of the university’s administration. Others mentioned how the women would speak negatively about them to colleagues outside their organization. Additionally, a number of respondents mentioned how the aggressors would involve students. Table 20 provides examples of responses referencing the involvement of people from each of these groups, with specific reference to the group in bold.

Table 20

Examples of Who Aggressors Gossiped With

Who	Response
Faculty	<p>“Negative discussions about me in faculty meetings.”</p> <p>“She gossiped about me to faculty and other constituents in the university to the point where the provost was called in to investigate whether I was creating a hostile workplace.”</p> <p>“Told younger faculty to never ask me about my research—claiming I knew nothing.”</p>
Superiors	“Going around me to my boss (provost) to complain about events taking place in the nursing school and in many cases were false claims.”
External Colleagues	“Gossiping about me to other nurse leaders around the state.”
Students	“Indirect aggression such as working behind my back against the success of my unit, involving students in disagreements with me, and gossiping and rumor-mongering.”

When looking at *what* the respondents thought the aggressors were gossiping about, patterns in the responses joined around three categories: *personal*, *interpersonal*, or *work-related statements*. Personal statements were ones where the aggressor made accusations or assumptions about the respondent’s personal life or made statements that portrayed her as incompetent or unqualified. Interpersonal statements were those that shared negative perceptions about the aggressor’s own interactions with the respondent or observed interactions with others. Work-related statements made reference specifically to the respondent’s ideas or decisions and/or included manipulated information that made

it appear that a problem existed. Table 21 provides examples of representative responses within these categories with specific gossip topics in bold.

Table 21

Examples of What Aggressors Gossiped About

Category	Response
Personal	<p>“Gossiping that [I] was unbalanced, alcoholic, etc. Anything to cast me in a bad light.”</p> <p>“Suggesting that my promotion was to do with my “relationship” with my superior. Ignoring my accomplishments and stating that I was “the favorite” of the supervisor.”</p> <p>“From the beginning they spread rumors an[d] insults... “she knows nothing about research—don’t ever discuss science with her” (I am frequently asked to consult nationally on research and practice)”</p>
Interpersonal	<p>“Spreading unfounded rumors about my reaction to her conduct.”</p> <p>“In a remarkable set of circumstances in which I was by far the superior of the woman involved, she ignored directly my instructions, requests, and authority. I was aware that she was spreading untrue and derogatory information about our interactions.”</p> <p>“Spreading “stories” about the fact that the Chair and the Dean [respondent] “had it in for her.””</p>
Work-related	<p>“Spreading negative, false information about programs in our area . . . Only using a slice of information that suggested a problem that the full picture corrects.”</p> <p>“Talked about my decision making ‘behind my back.’”</p> <p>“Bad mouthing, misrepresenting my accomplishments, manipulating colleagues to view my record unfavorably.”</p>

When examining responses to understand what the perceived *purpose* was behind the behavior, relevant comments tended to offer two different perspectives. The first described how the behavior focused on the target (respondent) and appears to be designed to discredit the individual. Examples provided earlier in this section demonstrate this. For example, the three quotes mentioned in Table 21 that referenced the aggressor gossiping about personal traits all demonstrate intent to discredit the individual.

The second perspective describes an aggressor-focused approach where the individual wants people to sympathize with her, making it seem like she is the victim. One respondent wrote about how the aggressor, “manipulates situations to make it look like she is the victim.” Another woman wrote about how the aggressor spread rumors to community members saying, “The rumors were false and they tended to make her look like a victim and made me look like a sell-out.” Table 22 provides a longer example of a statement for each of these categories.

The large number of responses that mention gossip and rumors, suggest that this is a common and highly prevalent form of aggression used by women. These examples also demonstrate that gossip can take place with any constituency, can be related to personal, interpersonal, or work-related issues, and can often be done to try to discredit the individual and/or make the aggressor look like the victim.

Table 22

Examples of Perceived Purpose of Gossip

Category	Response
Target-focused designed to discredit	“The tenured full professor who demonstrated aggression had moved to partner campus, and I was hired to replace her on the main campus. She embarked on a years-long series of behaviors meant to discredit, insult and marginalize me . She called up her former students, who were my current students, and discredited me, encouraging them to transfer to the partner campus away from me. She told community members in our profession that I was “stealing her students” and encouraged those community members to boycott a summer program I created. She continued for years subsequently to attempt to marginalize and discredit me , as I continued to excel and succeed. She wrote to my superiors to complain about me, after I was featured in a media article, claiming that I was being dishonest.”
Aggressor-focused so that she would look like the victim	“Expressing to others and myself that they felt undervalued and demeaned by me because I questioned their competence regarding mistakes they made in their job duties. Often talking behind my back about how badly they felt I treated them and did not understand their job duties.”

Note. Bolded phrases highlight the perceived purpose of the behavior.

Shouting and/or spontaneous anger. One unexpected finding was the high number of responses related to experiences of shouting and/or spontaneous anger from other women. The quantitative results in the NAQ-R revealed that 102 respondents (54 percent of respondents who experienced aggression) listed having at least one experience like this. Furthermore, there were 42 written responses to the open-ended question that related to this survey item. Whereas prior research indicated that women were less likely to use direct forms of aggression, this response rate indicates a higher prevalence of this type of aggression than previously thought. Examples of responses within this category

include the following two quotations (with direct reference to this type of behavior in bold):

In a meeting of about 20 people . . . I expressed my opinion of a job candidate. The colleague in question gave me a **sharp rebuke**, indicating that it was audacious of me to express so confident an opinion . . . given that I had been in teaching for only one year. I later sought the colleague out to apologize, and **she shouted at me** that she would not make it so easy for me to simply apologize and move on.

As dean, I have had several female faculty members behave in aggressive, unprofessional ways toward me. No male has acted this way. One secretly taped me and a female department chair [talking]. **And then later trapped me in a corner near a soda machine and screamed at me.** (she was unhappy with her annual evaluation.) **Two screamed at me in my office.**

The qualitative findings around this type of aggressive behavior suggest that shouting and spontaneous anger are not as rare as previously thought based on former research. While these behaviors did not prove to be among the most frequently mentioned in the quantitative results, the fact that so many women mentioned it in the open-ended questions suggests that the experience was memorable to them. This could indicate that while it is experienced less frequently than some indirect behaviors, it may have a lasting impression. This explanation is explored when examining the second research question.

Public criticism. In the descriptive coding process of the dataset, thirty-five respondents mentioned reference to the aggressor criticizing them in some sort of public forum. The descriptions provided by the respondents indicated that the public confrontation they experienced was unexpected and did not provide them an opportunity to prepare any sort of response. The purpose behind these behaviors appeared to consistently indicate a desire to damage the respondent's social status in a way that was

unpredictable and thus less defensible in the moment. Two representative examples demonstrating this behavior are noted below:

[She] criticize[d] me and/or my decisions regularly in bi-weekly leadership meetings, taking resources away from my department and announcing plans to do so in front of other department chairs who were not losing comparable resources—opting to call me out publicly rather than discuss issues in one-on-one discussions.

In a meeting of 100 people, most of whom were not academics, [she stood] up and call[ed] out my college as inappropriately excluding others from a function room. I tried to interrupt and the person kept on going. It was out of the blue, this person never spoke to me about any issue before essentially hijacking the topic on the table and using the microphone in this way.

The fact that these women chose to publicly admonish their colleagues rather than speak with them individually may indicate that rather than risk losing an argument, it might seem favorable to voice their perspective publicly where they may feel it is more likely to garner support from others and when it may be less likely for the individual to directly respond.

False Allegations. Another category describing the type of aggression experienced by a high number of responses was *having allegations made against you*. While this type of behavior was not often referenced in the reviewed literature for this study, it does align with prior research claims in that this form of aggression can make it seem as if the aggressor is actually the victim. Of the 24 responses that were included in this category, half of the reports specifically mentioned a claim regarding illegal behavior such as financial impropriety, harassment, or discrimination. In fact, a number of responses indicated that the aggressors accused these women of gender discrimination against them. Two examples include:

The women filed a clearly frivolous gender discrimination complaint against me. It cast many, many decisions I had made in a negative light and suggested they had all been made out of an effort on my part to discriminate against them because they were women. The complaint was fully investigated and found to have had no merit whatsoever.

When we were conducting a faculty search for three positions we interviewed both males and females but the best candidates (and consensus of the faculty) was to offer the positions to the two men. When conducting a third search, I heard that she had told colleagues in another college that I discriminated against women. This was despite the fact that the decisions to hire were based on faculty vote.

Similar to the descriptions provided for the last section on behaviors that involved public criticism, the decision to file a claim of discrimination, harassment, or financial impropriety is an indirect way for individuals to express their dissatisfaction with a colleague and take on the role of victim. This option also often provides some form of protection given that retaliation for making a formal complaint is prohibited by the Civil Rights Act of 1964, which applies to employers including institutions of higher education (“Laws enforced by EEOC,” n.d.).

Being ignored or excluded. Many of the responses described how the aggressor would ignore the respondent or exclude them from discussions, meetings, or other groups. Responses included statements like, “[She] ignored me when I spoke to her,” and “Refusal to participate in a discussion, instead sitting with body slightly turned away from me and glaring at me from time to time.” Some answers, however, provided more context about the demonstrated behavior.

In some cases, the aggressor was described as marginalizing or excluding the respondent. One woman wrote, “[The woman] simply cut me out of all communication.” Another wrote that the aggressor, “worked to remove me from important committee work by changing the name of the committee and replacing me on it.” Another wrote about

how the aggressor appeared to first include her in an exclusionary group but when the respondent voiced a desire to be more inclusive she was then marginalized. She wrote that the aggressor,

Invited me to join her “research group” which excluded other faculty. When I declined and said I wanted to work with everyone, she cut me out of her “inner circle” and took opportunities to indicate why my research/publication was not worthy.

In addition to these exclusionary comments, many women shared how they were ignored by the aggressor. In some cases, the behavior described seemed to be more personal in nature. One respondent wrote, “Ignoring me – my office right next door; wouldn’t say ‘good morning.’” Another woman wrote, “Ignore[d] me when I spoke with her, walk[ed] by without speaking.” Other statements demonstrated this behavior in the context of their work, often describing what would appear to be a power struggle. One woman wrote, “In a remarkable set of circumstances in which I was by far the superior of the woman involved, she ignored directly my instructions, requests, and authority.” These responses in particular demonstrate a strong example of indirect aggression in that the aggressor is literally doing nothing with the intended or unintended aim of devaluing the respondent. Two representative samples that more clearly demonstrate this include:

[She] ignored me at important university functions although we were supposed to be on the same team; refused to discuss issues one would ordinarily discuss in our roles; refused to respond to my reports/messages; refused to speak with me when meeting in the hallway or elevator.

Mostly being ignored. The boss having no idea what your work is and not even caring to learn about it. So, no stories about your faculty and students are told and thus the Board of the university has no idea what takes place in your school or college.

The descriptions provided in many of the responses represent an absence in behavior, making it one of the most indirect forms of aggressive behavior. By refusing to acknowledge the respondent, the aggressor could respond honestly if confronted that they did not do anything to the respondent. These answers reflect, however, that the absence of personal interaction can be quite obvious, disruptive, and potentially detrimental to the recipient.

Manipulation. A number of respondents described the aggressor's behavior as manipulative. This was often described as "stirring the pot" among other people or facilitating a "campaign" against them, indicating that the aggressor(s) attempted to organize a group of individuals to oppose the respondent's views or actions. Similar to what was mentioned about when aggressors engage in gossip, this behavior was described as involving various constituents including university administrators, faculty and students. The intent appeared to be a desire to build an alliance against the respondent so that it would weaken her ability to accomplish her goals. Some statements that serve as examples of this include:

She responded by making a number of allegations against me to upper administration and other people in the African American community. It was a "whisper campaign" against me.

They became agitated and made angry remarks designed to stir up others in the room to join against me, my opinion, and policies, at times making snide remarks in my presence.

Encouraged faculty to call the Ethics Hotline to lodge vague and untrue complaints about me . . . There were about 10 hotline calls all dismissed but made nevertheless. During my 5 year review, there was a campaign to get faculty to write negative things about me; to say that I should step down.

In some cases the respondent referred to the aggressor's attempt to hold them back from advancement opportunities. These statements included the aggressor expressing verbal support when speaking with the respondent but then taking contradictory action to block this advancement. In other cases, the aggressor seemed to block attempts for advancement for no clear reason other than to protect her own status. Responses indicated that the conflicting messages and lack of purpose felt manipulative. Two examples that demonstrate these sentiments are:

I was a faculty member and I was interested in becoming an Associate Dean. I thought she was a mentor but in hindsight she was just trying to keep an eye on me so that I didn't advance in my career . . . When she heard that I wanted to apply for the Associate Dean position . . . she told me that she was going to support me in any way she could. Then, I found out that she went to our Dean and told him that I would be a "step back" for the college because I was too young, I was an Associate Professor, not Full, and that I hadn't done enough research. None of these factors would preclude me from being a successful administrator, but it was clear she didn't want me to advance into the Associate Dean position.

[She] tried to talk me out of going up for full professor. She was on the committee and the only female full professor in the school [and was] actively working against my case. [She] wanted me to wait six years even though I was given time in rank upon my hire that made me eligible for promotion.

Similar with many of the other forms of aggressive behavior, these examples are indirect in nature and demonstrate how the aggressors attempted to shape the perceptions of others in order to put the respondent at a disadvantage. This type of behavior put the respondents in the position of having to take on a defensive approach which can be difficult because it involves reshaping people's perceptions as formed through the aggressor. In some cases, by the time the respondent learned of what was happening, it was too late to fully correct the situation.

Review of qualitative results. The qualitative analysis of the first open-ended question examining what forms of aggression are most prevalent for women validated many of the quantitative results in that it identified that some of the most frequently mentioned aggressive behaviors included the spreading of gossip or rumors and actions that indicated the women were being ignored or excluded. This analysis also highlighted additional behaviors not presented in the quantitative results. Specifically, the respondents' statements demonstrated a high number of responses mentioning being shouted at, being humiliated in connection with your work, and having allegations made against them. Further descriptive and pattern analysis also identified public criticism and the manipulation of others as frequently experienced forms of aggression. The fact that these behaviors were mentioned so frequently in the qualitative analysis but did not produce the highest frequency ratings in the quantitative analysis may indicate that while these behaviors were experienced less frequently among women, they may have been more memorable and had greater impact on them personally.

Additional results based on quantitative and qualitative findings. While the comparison of quantitative and qualitative results has been mentioned throughout this section of the chapter, two additional rounds of qualitative review were completed based on specific quantitative results. Quantitative analysis from the person-related bullying construct showed that responses from women who identified as LGBTQ were positively correlated with higher scores. Additionally, analysis of the work-related bullying construct indicated that nursing deans reported higher scores than deans in other disciplines. Open-ended responses from these two groups—LGBTQ and nursing deans—were examined as distinct groups to identify possible patterns.

Of the women who identified as LGBTQ, eight provided written responses to the open-ended question about the types of behaviors displayed. While the responses provided a broad range of behaviors including rumor spreading, ignoring, yelling, false accusations, ridicule, and withholding information, there was no identifiable pattern in the responses that differentiated these women from the group of full respondents.

When looking at the open-ended responses for nursing deans to see if their responses would reflect more work-related bullying descriptors consistent with the quantitative results (or some other pattern), analysis showed that respondents actually wrote most often about behaviors directed toward them personally—behaviors that would be considered person-related bullying—rather than work-related behaviors. Specifically mentioned in numerous responses were public criticism and spreading of gossip or rumors. This suggests that while nursing deans reported higher quantitative scores for work-related bullying, the person-related bullying may have been the more memorable to them when recalling their experiences.

What Situational Factors are Associated with Aggressive Behavior

To assess what additional situational factors may be associated with aggressive behavior, descriptive statistics, quantitative analysis, and qualitative analysis provided valuable information. This section first provides the descriptive statistics around additional situational factors that were explored in this study including the respondent's stage of career, aggressor comparative demographics, and institutional demographics. Then, results are shared for the previous linear regression models re-run to include these additional factors to determine if they added to the explanation of variance. Finally,

qualitative analysis of respondents' answers to the second open-ended question are presented with relevant themes explained.

Descriptive statistics. In addition to collecting information about the respondent's personal and professional demographics, respondents who answered that they did experience aggression were asked additional questions about the individuals who demonstrated the aggressive behavior, a.k.a. the *aggressors*. Specifically, respondents were asked how the aggressor's age compared with hers, the aggressor's race, whether she had more or less years of experience, and whether she was in a superior, peer, or subordinate role.

When examining race, descriptive statistics showed that 83 percent of aggressors were identified as White/Caucasian. Data was also compared to the respondent's race to determine at what frequency the aggressor's and respondent's race were similar or different. Results showed that 76.5 percent of respondents reported aggression from individuals of the same race. When looking at age, experience and role comparisons, the majority of aggressors were the same age or older than the respondent, generally had more years of experience, and were in a subordinate role. Table 23 displays the descriptive statistics for aggressors.

Table 23

Aggressor Demographics

Aggressor Demographic	n	%
Age Comparison		
Same age	78	38.24
Younger	44	21.57
Older	82	40.20
Years of Experience		
Same	68	33.50
Fewer	45	22.17
More	90	44.33
Position		
Peer	46	22.89
Subordinate	93	46.27
Higher	62	30.85
Race		
Black/African American	23	11.44
American Indian/Asian/Hispanic	12	5.97
White/Caucasian	166	82.59
Same Race	153	76.50
Different Race	47	23.50

Furthermore, respondents who experienced aggression were also asked about the stage of career in which they experienced this behavior, the gender make-up of the institution, and how long ago the experience was. Almost half of the respondents (47.47 percent) reported experiencing the referenced aggression while in their role as Dean. The stage of career that had the least reports of aggression was Associate Professor (6.57 percent). Regarding the gender make-up of the institution, 59.39 percent reported working at a male-dominated institution while only 14.21 percent reported working in a

female-dominated environment and 26.40 considered their institution gender-balanced.

Table 24 displays the descriptive results for these variables.

Table 24

Variables Related to Career Stage and Gender Make-Up of Institution

Variable	n	%
Stage		
Dean	94	47.47
Administrative Role	45	22.73
Full Professor	17	8.59
Associate Professor	13	6.57
Before Tenure	29	14.65
Gender Make-Up of Institution		
Balanced	52	26.40
Male-Dominated	117	59.39
Female-Dominated	28	14.21

To determine if there was a time effect in respondent's answers, Years Since Aggression was included as a variable in further analysis. This was used to help determine if, for example, responses were stronger or weaker depending on whether the experience was more recent or further back in time. When looking at the results related to Years Since Aggression, the range varied from less than one year to more than 20 years. The average length of time was 5.92 years (SD = 6.17). The distribution based on Years Since Aggression was skewed toward more recent experiences. Almost 20 percent of respondents indicated that the experience was within the past year. Figure 8 displays the distribution of responses based on Years Since Aggression.

Figure 8. Distribution of responses for Years Since Aggression

Quantitative results. The same linear regression models used in the prior section were run again but included these additional situational variables to see if they helped further explain the variance in the model. For the first model, the aggregate NAQ-R score served as the dependent variable. Independent variables included respondent personal and professional demographics, aggressor demographics, Stage of Career (for when the aggressive experience took place), the respondent's perception of the institution's gender balance, and Years Since Aggression. The model resulted in an R^2 of .19, explaining that it helped explain approximately 19 percent of the variance. It proved to be significant at the $p < .001$ level and produced six significant variables. Table 25 displays the results of this regression model.

Table 25

Effect of All Variables on Aggregate NAQ-R Aggression Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	15.36	1.86		8.26	.00
Years at Institution	-.20	.08	-.16	-2.36	.02
Discipline: Nursing	5.90	2.44	.17	2.41	.02
Years Since Aggression	-.37	.15	-.19	-2.53	.01
Aggressor Position: Higher	8.93	1.97	.35	4.54	.00
Aggressor Experience: Same	4.97	1.83	.20	2.71	.01
Aggressor Race: American Indian, Asian, Hispanic	6.66	3.37	.14	1.98	.05

Note. $R^2 = .19$, $p \leq .05$

Similar to the initial run of this model without the additional variables, the number of years the individual was at their institution (negatively correlated) and nursing deans (positively correlated) proved to be significant variables. Unlike the earlier models, however, sexual orientation did not prove to be a significant variable in this model when including the additional situational variables.

In addition to Years at Institution and the nursing discipline, four other variables proved to be significant. Three of these variables related to aggressor demographics with the most significant variable being related to the aggressor's position level. When the aggressor was in a higher level position (in comparison to the respondent), there was a positive correlation with the respondent's aggregate NAQ-R aggression score. The

variable's coefficient of 8.93 in comparison to other variables was the highest and when compared to the average aggression score (16.38), indicates that the scores of these respondents were approximately 55 percent higher than respondents whose aggressors were in peer or subordinate roles. Similarly, aggressor experience level proved to be positively correlated to the NAQ-R aggregate scores when the respondents and aggressors had the same level of experience ($\beta = 4.97$). The regression model suggests that these respondents reported approximately 30 percent higher aggression scores than respondents with aggressors that had either more or less experience. The third variable based on aggressor demographics was related to the aggressor's race. Responses where the aggressor was identified to be either American Indian, Asian, or Hispanic proved to be positively correlated ($\beta = 6.67$) with aggregate NAQ-R scores, suggesting that respondents reported approximately 41 percent higher aggression scores when women in these racial categories were the aggressor versus responses when aggressors were Black/African American or White/Caucasian.

Finally, Years Since Aggression did prove to be a significant variable in this model. The number of years since the respondent had this experience was negatively correlated with aggregate NAQ-R aggression scores and indicated that with each year since the experience had passed, there was a reduction in reported aggression scores by approximately 2.4 percent. This indicates that respondents reported higher levels of aggression when the experience was more recent. This finding could suggest that it is more common for women to demonstrate aggression toward others now than in past years or that there is a time effect on the recall of these experiences for women whose experiences were further in the past.

Person-related bullying. When looking at person-related bullying scores and the additional situational factors, the model produced an R^2 of .21, indicating that it explained approximately 21 percent of the variance. Table 26 displays the results of the regression model and demonstrates that there were seven significant variables.

Similar to the results from the analysis done on the aggregate NAQ-R scores, the number of years that the respondent had been at their institution was negatively correlated with person-related bullying scores, indicating that individuals who joined the organization more recently reported higher scores for this construct. Additionally, two of the same aggressor demographics from the aggregate model proved to have considerably strong effects on this construct. Person-related bullying scores from women whose aggressors were in higher level positions were almost four times higher than women whose aggressors were in peer or subordinate roles and scores from women whose aggressors had a similar experience level were twice as high as women with aggressors with more or less years of experience.

Similar to the regression model without the situational variables, sexual orientation was a significant variable in this model, with responses from women who identified as LGBTQ being positively correlated with person-related bullying scores. The fact that this variable proved to be significant both in the earlier model and this one with additional factors included demonstrates its stability. Furthermore, the LGBTQ variable in this regression had the highest coefficient of all the variables ($\beta = 5.85$), indicating that it had the strongest effect on person-related bullying scores.

One additional personal demographic variable and one professional demographic variable also proved to be significant in this construct's regression model. First, Age and

Age+Predicted Age both proved to be positively correlated with person-related bullying scores. Because Age+Predicted Age allowed for the inclusion of more data, the model with this variable was selected as being most relevant. The results for this variable indicate that older respondents reported higher person-related bullying scores when compared with younger respondents. While this is interesting, there was not enough data to provide a hypothesis to help explain this finding. For example, because Aggressor Age was not a significant variable in the model, it should not be concluded that older women are experiencing aggression from younger women. The results indicate only that the reporting of person-related bullying experiences increased with the respondent's age.

The one professional demographic variable that proved to be significant was related to discipline. Responses from women deans in the category of Applied Science/Business were negatively correlated with person-related bullying scores ($\beta = -4.162$), indicating that these respondents reported lower person-related bullying scores than deans in other disciplines. This result was similar to the logistic regression model with the entire respondent sample, further confirming that women deans in this discipline generally reported less aggression than deans in other fields.

Lastly, similar to the aggregate regression model, Years Since Aggression proved to be a significant variable and negatively correlated with person-related bullying scores, indicating that aggression scores decreased with every year since the aggressive experience. As mentioned earlier, this could potentially indicate it is more common for women to demonstrate aggression toward others now than it was in the past or that there is a time effect on the recall of earlier experiences for women whose aggression was experienced further in the past.

Table 26

Effect of All Variables on Person-Related Bullying Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	T	
(Constant)	-1.45	4.59		-.32	.75
Age+Predicted Age	.24	.08	.21	2.98	.00
LGBTQ	5.85	2.43	.17	2.41	.02
Years at Institution	-.22	.05	-.29	-4.10	.00
Discipline: App Sci/Business	-4.16	1.96	-.15	-2.13	.04
Aggressor Position: Higher	4.18	1.24	.26	3.38	.00
Aggressor Experience: Same	2.32	1.16	.15	2.00	.05
Years Since Aggression	-.25	.09	-.19	-2.65	.01

Note. $R^2 = .21$, $p < .001$

Work-related bullying. When looking at work-related bullying construct scores, the model proved to be significant at the $p < .001$ level and produced an R^2 of .23, indicating that the model explained approximately 23 percent of the variance. This model produced four significant variables. Similar to when running the model with just the personal and professional variables, responses from deans of nursing schools were positively correlated with work-related bullying scores indicating that they experienced these behaviors more frequently than deans in other disciplines.

Additionally, two of the same aggressor demographics as the aggregate NAQ-R model and the person-related bullying model were positively correlated with work-related

bullying scores. When the respondent reported that the aggressor was in a higher position, work-related bullying scores were 98 percent higher than when aggressors were reported to be peers or subordinates (when compared to the average work-related bullying score of 4.81). Similarly, when the respondent and aggressor had similar years of experience, work-related bullying scores were 34 percent higher when compared with aggressors with either more or less years of experience.

Lastly, similar to the aggregate and person-related bullying scores, Years Since Aggression proved to be negatively correlated with work-related bullying construct scores, indicating that respondents who reported their experiences to be more recent had higher scores in this area. Table 27 displays the results of the regression model.

Table 27

Effect of All Variables on Work-Related Bullying Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	3.35	.56		5.99	.00
Discipline: Nursing	3.01	.89	.23	3.40	.00
Aggressor Position: Higher	4.73	.72	.48	6.60	.00
Aggressor Experience: Same	1.64	.67	.17	2.44	.02
Years Since Aggression	-.14	.05	-.19	-2.67	.01

Note. $R^2 = .23$, $p < .001$

Physical intimidation. Whereas previous regressions models run for the physical intimidation construct did not produce any significant variables, the model that included

the situational variables produced one significant result. Responses from women who identified their aggressor as either American Indian/Alaskan Native, Asian/Pacific Islander, or Hispanic/Latina were positively correlated with physical intimidation scores. Results indicated that their scores were approximately twice as high as women whose aggressors were Black/African American or White/Caucasian (when compared to the average physical intimidation score of 1.17). Furthermore, because this variable proved to be significant in the aggregate NAQ-R model but not on the person-related or work-related bullying constructs, these results indicate that the impact on the aggregate scores is heavily influenced by the physical intimidation scores. Table 28 displays the results to the regression model related to this construct.

While this could indicate that respondents were more likely to experience this type of aggression when the aggressor was a member of one of these identified racial categories than when the aggressor was identified to be Black/African American or White/Caucasian, a conclusion like this requires caution for a number of reasons. First, there were only 12 aggressors identified as one of these three racial categories, which is a very small sample. Additionally, the model only produced an R^2 of .04, indicating that it explains very little of the variance in the model and giving very little credibility to the results. Further analysis with a larger sample would be needed before an appropriate conclusion could be made about the influence of an aggressor's race.

Table 28

Effect of All Variables on Physical Intimidation Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	1.09	.12		9.42	.00
Aggressor Race: American Indian, Asian, Hispanic	1.24	.46	.19	2.71	.01

Note. $R^2 = .04$, $p = .01$

Summary of quantitative results. Descriptive statistics for the additional situational variables provided information regarding common aggressor demographics and the stage in career when these experiences typically took place. Responses in this study indicated that the majority of aggressors were either older than the respondent (40 percent) or approximately the same age (38 percent). Most aggressors had more years of experience (44 percent) and most were in subordinate roles (46 percent). The overwhelming majority of aggressors were identified to be White/Caucasian (82.6 percent). With 86.3 percent of respondents reporting to be White/Caucasian, most of the respondents were the same race as their aggressor (76.5 percent).

The largest proportion, or plurality, of respondents reported that the aggressive experience that they referenced for the study took place while they were in their role as Dean (47 percent). When asked how long ago the experience took place, the average response was approximately six years. When examining responses in a histogram,

however, it is clear that the majority of reported experiences were more recent. More specifically, almost 20 percent of referenced experiences took place within the past year.

When including situational variables into the linear regression models for the aggregate NAQ-R aggression score and the three constructs, the models produced some interesting results. Two aggressor demographics proved to be significant in three of the four models run. Responses where the aggressor was reported to be in a higher position and responses where the aggressor was reported to have the same years of experience as the respondent were positively correlated to aggregate NAQ-R aggression scores, person-related bullying scores, and work-related bullying scores. The results from all three models indicated large differences in scores based on these two variables. These are particularly interesting findings for a couple of different reasons. First, while the descriptive statistics revealed that only 31 percent of aggressors were in higher level roles, the regression results suggest that women report much more frequent aggression from women in these roles. Similarly, while aggressors identified to have similar levels of experience as the respondent represented 34 percent of the sample, these results suggest that aggression is much more frequent from these women in comparison to aggressors with different levels of experience. To understand why this might be the case, the qualitative analysis provides additional perspective.

The other situational variable that proved to be significant in these models was related to the length of time since the aggressive experience. Years Since Aggression proved to be negatively correlated in the aggregate model and in both the person-related and work-related bullying models, indicating either that women are demonstrating more aggression now than in former years or that there may have been a time effect with the

results and that as more time elapsed since the experience, respondents reported lower aggression scores.

Similar to previous models, nursing deans reported higher overall NAQ-R aggression scores and higher work-related bullying scores when compared to deans in other disciplines. These results suggest that nursing deans may experience more frequent behaviors from women that aim to impede their ability to do their job (when compared to women deans in different fields).

When looking at person-related bullying scores, results still indicated that women who identified as LGBTQ reported significantly higher scores. Additionally, when taking into account other situational factors, Age then became a significant variable (positively correlated) as well as one discipline—Applied Science/Business (negatively correlated).

When looking at the physical intimidation construct, the only significant variable proved to be related to the aggressor's race, indicating that women who identified their aggressors as either American Indian, Asian, or Hispanic proved to have higher aggression scores—both on the aggregate and on the physical intimidation construct. The small number of data points, however, and low explanation of variance give this finding limited credibility.

Qualitative results. To help identify what factors might be contributing to aggressive experiences among women, the second open-ended question in the survey asked respondents: *What factors do you think came into play that caused the person/people to behave the way they did?* Initial descriptive coding of their answers generated approximately 400 individual codes. These codes, based on similar terms,

were then grouped together to form 19 different categories. Throughout this part of the analysis, a repeated question used to help analyze responses was, “Based on their response, what do they say or imply was behind this reaction?” This helped to identify patterns in the responses until the data grouped into three themes: aggression as a result of *personal issues*, aggression as a result of *social comparison*, and aggression as a result of formal or informal *organizational norms*.

Aggression as a result of personal issues. Many respondents attributed the aggressor’s behavior to a personal problem or deficiency. Ten respondents either directly stated that the individual had mental health issues or provided some sort of personal diagnosis of a mental health condition or personality disorder, such as narcissism. While it is unlikely that these respondents were qualified to make this diagnosis for the aggressor, this assessment indicates that the respondent may not have been able to identify a logical and/or reflective explanation as to why the aggressor behaved the way she did.

Other responses included statements around the idea that the aggressor was an unhappy person, was suffering from stress, had a substance abuse problem, or had family problems. Some of these respondents even demonstrated a level of compassion for the aggressor. All of the responses attributed the behavior, however, to a personal characteristic or experience that was independent from a social interaction with others.

Some examples of responses related to personal issues include:

The person was a female dean under lots of pressure, she was quite stressed because of the higher administration and couldn’t take more challenges from a chair underneath her (despite the fact that I am sure she knew that she was wrong imposing something on me that was inappropriate). It happened very rarely as most of the time we got along well and had respect for each other.

I heard that her husband was very sick and when I asked her if that had some bearing on her behavior, she exploded.

She was definitely stressed out and did not have the ability to manage her workload effectively. She was not organized, which made it more difficult to function as an effective Provost. However, I know she is a good person.

She had a premature infant at home and was under a lot of stress. She also had a second pregnancy during the two years she worked for me—and, following her return from maternity leave, things escalated.

Aggression as a result of social comparison. The vast majority of responses about what factors may have contributed to the aggressive behavior grouped into the theme of social comparison among the women involved. These responses demonstrated that the aggressors seemed to compare personal evaluation of their success to that of the respondent's. When the respondent was promoted, acknowledged, or otherwise successful in her position, this was interpreted internally as some sort of diminishment of the aggressor's success or reputation. Overall, these responses demonstrated a deeper level of reflection from the respondents about the aggressor's reactions, suggesting that they tried to look at the situation from the other person's perspective to understand why they might behave the way they did.

Respondents often described the factors behind the aggressor's behavior by naming a feeling such as "jealousy," "insecurity," "lack of confidence," or "threatened." When looking at longer responses that provided more details, more nuanced understanding around some of the issues became evident. In some cases, respondents' answers offered that the aggressor's behavior may have been a result of what one respondent referred to as, "frustration over her own lack of achievement." In these cases, the respondent and aggressor were often peers and the aggressive behavior began as a

result of professional jealousy over the respondent's accomplishments. Other statements that support this idea include:

She was not on track for tenure [and] may have felt intimidated by my willingness to work hard and by my success.

I had a very productive research program and brought a lot of funding in. My sense was that this was harassment as a way to slow me down or cause me angst/embarrassment. It was quite possibly born out of jealousy.

As I look back, I realized that this "friend" had been competing with me for many years . . . I think when this position came up, she thought it would be a good idea, but when I was actually here, I think she felt threatened that I would eclipse her.

In other cases, positive attention from others proved to be the impetus for a negative behavioral reaction. In both cases, the responses indicate that the aggressors may have internalized the respondent's success or favor as some sort of valuation against her own capabilities. Some examples of statements reflecting this notion include:

My colleague was threatened by my presence and goodwill shown toward me by our mutual boss.

Competition for graduate students' attention and students who wanted to work with me instead of the female colleague.

I believe that jealousy was a factor—I was new to the department and over time it became clear that faculty and students liked me and I believe this was interpreted by the other woman as a preference for me and threatening to her.

These statements indicated that one source of aggression may stem from women seeing other women as competition in their own aim for validation.

In some cases, respondents posited that the aggressor felt slighted when the respondent was given an advancement opportunity, particularly a dean's position. Responses included statements like, "She wanted the position," and, "I presume she wished to be dean and felt she could do a better job at it than I could." Another

respondent wrote, “We worked in the same department and I was requested by the President to fill the Interim Dean’s position over her.”

Many of the responses that attributed the behavior to the respondent’s success or advancement, mentioned the added dynamic between demographic differences, in particular age and race. Responses indicated that aggressors often appeared upset by the fact that someone younger was advancing. Additionally, some respondents indicated that they believed some of the behavior was influenced by racial bias. Table 29 provides examples demonstrating this perspective.

Table 29

Examples of Age and Race Dynamics

Age	<p>“She was insecure and jealous of my age, success, or what-ever. She felt threatened that a younger and energetic faculty had joined the group.”</p> <p>“She was perhaps resentful of the possibility that a young ‘up and comer’ was exercising influence in a way that earned the respect of other colleagues—perhaps she felt she would lose some of her own influence to the ‘next generation.’”</p> <p>“I think she was threatened of me. I don’t know why because I am inclusive, ethical, and a ‘straight shooter’ so I had no hidden agenda. I also think she had a very traditional thought process about what it meant to be an administrator (i.e., you have to be of a certain age, you needed a certain amount of external funding, you had to be a full professor, etc.).”</p>
Race	<p>“The person’s own insecurities. Race-based fear or anxiety. Institutional-based fears or anxieties. Lack of experience with me.”</p> <p>“Lack of understanding of cultural differences; . . . allowing others in the department to encourage the person to be disrespectful; some forms of prejudice.”</p> <p>“Their own biases about women of color in leadership positions.”</p>
Age and Race	<p>“Age and race. This person was quoted by many that she said when I was a candidate for this that I did not act like a dean. She had only had older white men as supervisors during her entire 30 year career at this institution.”</p>

While the examples provided demonstrate a dynamic that could exist between peers, in many cases, it seems that the aggressor was someone who had achieved a level of success in their own professional growth but that the emergence of another successful woman was still viewed as a threat to the aggressor’s own value or worth. Many of the statements talked about high achieving women (*trailblazers* in their fields) who still

demonstrated behavior that would indicate they were threatened by new women advancing into leadership roles. One respondent stated that the woman was “very proud of being in a high position, not held usually by a woman, and I think, didn’t want competition.” Another attributed the aggressive behavior to “low self-esteem and the need to be seen as the best and the brightest.” A third respondent stated that she thought the woman was angry “that I had it easier as a woman than [she] had it.”

Additional responses imply that women who have had to struggle to excel in roles traditionally filled by men carry a strong sense of pride in these accomplishments. These experiences seemed to have shaped their identities and as new women advance into leadership positions, there may be a perception that there are a limited number of roles available to women. If these women are unlikely to share these roles, then they may perceive these women as wanting to eclipse or replace them before they feel they are ready to relinquish their position or sense of control. Responses that support these ideas include:

She is a very competitive person and for the first time found someone on campus with the same educational background and who was a woman. This meant that she had a challenge on campus with regard to her own standing as a senior STEM administrator.

While avowing support for women, it seemed that her support was simply to be the iceberg cutter to plow through institutional blockages where she could enter the channels (to use naval terminology), but what happened behind her (with the chunks of ice impacting the pathways of others) is not in her repertoire of care/responsibility. Her need to be the first and achieve at high levels is strong to the point of being almost pathological. And, while she is a higher achiever, she is a poor collaborator.

The analysis and examples provided in this section indicate that women may attach evaluations of their own worth and status by comparing themselves with other

women. The number of varied responses also indicate that this happens at all stages including as peers, in advancing, and even in superior relationships. This idea that someone else's success is an indicator of another person's failure is an interesting concept that warrants further attention in future research.

Aggression as a result of formal or informational organizational norms. The third theoretical construct around what respondents believed caused women to demonstrate aggressive behavior focused on some of the unique aspects of higher education—faculty tenure, in particular. The statements offered by these respondents demonstrated a significant amount of personal reflection on the structural issues within the environment that may have helped foster the aggressive behavior. In this way, many respondents offered explanations that focused less on the individual and more on the environment that cultivated and allowed the persistence of aggressive behavior.

While tenure was designed to protect professors from adverse action taken by university administrators due to views expressed in their pursuit of the expansion of knowledge, this protection can also create an environment where it is difficult to address destructive behavior. In accordance with the AAUP's 1940 Statement of Principles on Academic Freedom and Tenure, the dismissal process for tenured faculty generally includes review by a faculty committee and the governing board of the institution. Because of the extensive process involved, it is often only the most serious cases that are brought forward for consideration.

Statements from respondents reflected sentiments around the security of tenure and the freedom that it provides. A representative statement from one respondent stated, "The faculty member is also tenured and there is no repercussion for the behavior she

exhibited.” Other respondents made statements about how this security deterred other faculty members from addressing the behavior because they did not think it would do any good and did not want to become a target or get involved. For example, one respondent wrote,

There is evidently a long history of this behavior. Faculty believe it cannot be resolved and survive by “keeping their heads low” and appearing to comply despite expressed concern and stress generated by an insistence upon total control of faculty affairs, curriculum and program implementation by these individuals. They are outspoken about the fact that they “cannot be touched” because of their tenured status. Even the most outstanding professors hesitate to cross them.

This “appearing to comply” helps to foster an environment where destructive behaviors not only become permitted but also become acceptable forms of interactions between people. This reluctance for faculty members and administrators to intervene was reflected in a number of statements. One woman wrote that she felt a factor contributing to the situation was, “a long history of tolerance of [the aggressor’s] behavior by my predecessors.” Another said, “The department had enabled this faculty member to behave like this.” This lack of intervention contributes to the development of an organization’s culture demonstrated by another respondent’s statement that, “there was no culture of accountability for actions/words that were destructive.” These statements pertaining to the unique security and hierarchy in higher education positions suggest what prior research has previously posited in that higher education may be a prime environment for bullying type behavior.

Summary of qualitative findings. Qualitative analysis identified three contributing themes that respondents believed may have influenced women aggressors to behave aggressively. Some respondents believed that the aggression was a result of

personal problems that manifested in the workplace. The majority of respondents, however, hypothesized that the aggression was a result of social comparison, where women may see the influx of new women leaders as threatening to their social status. Finally, some respondents viewed the aggression as a result of formal or informal organizational norms that foster and permit this behavior because of the unique stability within the higher education environment implying that there is little that can be done to address the issue nor little threat that the aggressor would be punished if they were reported.

Review of Results from Research Question #1

The first research question of this study aimed to determine the extent to which women in higher education leadership roles experienced aggression from other women. To explore this question, information was gathered and analyzed to determine the prevalence of aggression experiences from women, whether personal and professional demographic variables were correlated to these experiences, the types of aggression most experienced from other women, and the situational factors correlated to these experiences.

When looking at how prevalent aggressive behavior is from women, results revealed that 68 percent of women deans in higher education who responded to this study reported to have these experiences. Additional quantitative analysis showed that law school deans reported aggression in higher proportion when compared to other disciplines and that applied science/business deans generally reported less experience with aggression from women.

When looking at what type of aggression was most experienced, quantitative results demonstrated that person-related bullying was the most common category of aggressive behavior, with women who identify as LGBTQ and women who are newer to their organizations reporting these experiences at higher rates than others. Additionally, nursing deans reported higher levels of work-related bullying than deans in other disciplines. Quantitative and qualitative analysis identified the most commonly reported aggressive behaviors to be spreading of gossip, being ignored or excluded, having allegations made against you, public criticism, shouting at or being the target of spontaneous anger, and manipulation. Most of the described behaviors were indirect in nature (which aligns with previous research) and suggests that aggressors may have been aiming to discredit and/or marginalize the respondent. Additionally, however, descriptions of direct aggression—such as shouting—were mentioned more frequently than anticipated based on former research findings.

When looking at what situational factors correlate with aggressive experiences, there were a number of findings. Similar to the results based on only personal and professional variables, women who had been at their institutions for longer periods of time reported lower aggression scores than newer women. Additionally, nursing deans reported more frequent bullying behaviors than deans in other fields. While further quantitative analysis revealed that nursing deans reported more frequent behaviors in relation to the work-related bullying construct (behaviors designed to impede their work), their responses to the open-ended question indicated that the most named experiences (and thus perhaps most memorable or impactful experiences) were ones where the aggression was more personal (person-related bullying).

Additionally, quantitative results demonstrated that while only about 30 percent of aggressors were in higher level positions, aggression was much more frequent when the aggressor is in a superior role than in peer or subordinate roles. Similarly, while only about 34 percent of aggressors had the same level of experience as the respondent, aggression was far more frequent from these women than from women with varying levels of experience. Qualitative analysis of the respondents' beliefs as to what might contribute to this behavior generated three hypotheses, one of which suggested that this aggression may be a result of social comparison among women with aggressors having an underlying or unconscious assumption that one woman's success diminishes another woman's value. Thus, the aggression may have been an attempt to preserve her own social status or reputation. The qualitative analysis also suggested that aggressive behavior may have been due to personal reasons—such as stress—and/or as a result of formal or informal organizational norms specific to higher education that provide little consequence for this type of behavior amongst faculty.

When accounting for the length of time since the experience with aggressive behavior, responses were negatively correlated with aggression scores demonstrating that aggression scores continued to decrease as the length of time since the experience increased. This variable was significant for the aggregate aggression scores as well as for person-related bullying and work-related bullying constructs. This finding suggests either that women have experienced more aggressive behavior in recent years in general or that there was a time effect where respondents' recollections of their experiences weakened over time.

When looking at additional variables that were significant within the three constructs, person-related bullying scores proved to increase with the respondent's age and when they identified as LGBTQ. In fact, the respondent's sexual orientation had the most substantial impact on construct scores with women identifying as LGBTQ reporting person-related bullying scores five times higher than other women. This result should be interpreted with caution, however, due to the small sample size of women who identified as LGBTQ. The other variable that proved to be significant in the person-related bullying construct was related to discipline and demonstrated that women deans in the applied sciences/business field reported scores much lower than women deans in other fields. This is consistent with the earlier findings comparing aggressive experiences overall where applied sciences/business deans reported fewer experiences of aggression from women.

Lastly, the aggressor's race did prove to be significant in the aggregate aggression score model and the physical intimidation construct. Regression analysis showed that women who identified their aggressor as either American Indian, Asian, or Hispanic reported experiencing physically intimidating aggressive behaviors nearly twice as often as women whose aggressors were either Black/African American or White/Caucasian. Because of the small sample size (the reason these three categories were grouped together), however, any conclusions about this finding should be done with caution.

When considering the regression models, however, it is important to remember that even the models that included all possible variables named in this survey instrument explained only about 20 percent of the variance in scores. This indicates that there are

likely other factors, not included in this study, which contributed to the variance in scores.

The next section of this chapter focuses on the perceived impact of these aggressive experiences. Specifically, it explores what effect these experiences had on the respondent's leader efficacy at the time of the aggression as well and on current leader efficacy and relationships with other women. Results are compared with survey respondents who claimed not to have experienced aggression to determine if there was any significant difference between the two groups.

Research Question 2: Impact on Leader Efficacy

The second research question of this study read:

2. In what ways does aggression among women impact leader efficacy?

The intent of this research question was to determine (1) if the respondents perceived the aggression as having an effect on their efficacy toward leadership at the time of the experience (and if so, what effect) and (2) whether or not the experience had a lasting impact on their current levels of leader efficacy and relationships with other women.

As described in chapter three, when assessing the impact on leader efficacy at the time of the experience, both quantitative and qualitative analyses were used. For quantitative analysis, the Generalized Leader Efficacy Questionnaire (GLE) was used to measure leader efficacy for women who experienced aggression as well as women who did not. Respondents who claimed to have experienced aggression from other women were asked to complete the GLE twice—once representing what they perceived their leader efficacy to have been at the time of the experience and another time as to their

efficacy toward leadership now. Responses were compared both within and between groups. For qualitative analysis, respondents were asked to describe how the experience impacted their efficacy toward leadership at the time, whether they felt it had a lasting impact on current leader efficacy, and how it affected their relationships with other women.

This section will first explain the quantitative and qualitative results around the impact of the aggressive experience on leader efficacy at the time of the described aggressive experience. Then, results are presented about how the experience may or may not have impacted the respondent's current sense of efficacy toward leadership.

Impact of Aggression on Leader Efficacy at the Time of the Experience

To determine what type of impact aggression might have had on a respondent's efficacy toward leadership, information was gathered in two ways. From a quantitative perspective, respondents were asked to complete the GLE based on how they felt at the time of the aggressive experience. These results were used as the dependent variable in linear regression analyses with participant demographics, aggressor demographics, and NAQ-R aggression data as independent variables to determine what correlations may exist between them. From a qualitative perspective, respondents also answered an open ended question about how they felt the experience undermined, challenged, or motivated their personal sense of leader efficacy at the time of the experience.

Quantitative results. To assess whether aggression had an impact on the respondent's leader efficacy at the time of the aggressive experience, linear regression analyses were used to assess what variables might be correlated to the GLE scores that respondents entered in reference to how they remembered feeling at the time of that

experience (also referred to as *former* GLE scores). The dependent variable for the initial analyses was the aggregate former GLE score. Independent variables examined as part of these first models included personal and professional demographics, aggressor demographics, institutional demographics, and responses from the NAQ-R. The NAQ-R results were used four different ways within the analysis as outlined in chapter three in order to assess aggression scores with increasing granularity.

Aggregate former GLE Scores. To be able to determine if the aggressive experience had an effect on former GLE scores, analysis first needed to be done on the personal and professional demographic variables to determine what correlations might exist regardless of specific behaviors experienced. When examining aggregate former GLE scores with only personal demographic variables, the model produced was significant at the $p = .001$ level and produced an R^2 of .08, indicating that the model explained approximately eight percent of the variance. The model produced two significant variables. Responses from women who identified as Black/African American were positively correlated with higher former GLE scores. With the average of GLE scores being 143.92 and a coefficient of $\beta = 29.01$, these results indicate that Black/African American women generally reported former leader efficacy scores approximately 20 percent higher than women of other races. Additionally, Age was a significant variable. In order to allow more data points to be included in the model, however, Age+Predicted Age (which was also significant) was used. This variable was positively correlated with former GLE scores, indicating the older women generally had higher aggregate former GLE scores than younger women. Table 30 displays the results of this regression model.

Table 30

Effect of Personal Demographic Variables on Former Aggregate GLE Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	79.35	24.17		3.28	.00
Age+Predicted Age	1.06	.41	.20	2.60	.01
Race: Black/African American	29.01	10.26	.22	2.83	.01

Note. $R^2 = .08$, $p = .001$

When running the model with the additional professional demographic variables (Years Since Tenure, Years as Dean, Years at Institution, Highest Earned Degree, and Discipline), whether or not a respondent identified as Black/African American still proved to be significant and positively correlated with former leader efficacy scores. Additionally, in this model, the number of Years Since Tenure was also significant and positively correlated, indicating that individuals with more years since earning tenure had higher former GLE scores. Years Since Tenure (which is positively and significantly correlated with Age) replaced Age+Predicted Age as a more significant variable when the linear regression model included both variables and was run with a forward method in SPSS. This method identifies the most significant variable and then runs analysis again to identify the next most significant variable—continuing to do this until all significant variables are identified. This model produced almost the exact same R^2 as the previous model, again indicating that this model explained very little of the variance. Table 31 displays the results of this regression model.

Table 31

Effect of Personal and Professional Variables on Former Aggregate GLE Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	119.57	8.55		13.98	.00
Race: Black/African American	31.24	10.33	.23	3.03	.00
Years Since Tenure	.92	.33	.21	2.77	.01

Note. $R^2 = .09$, $p = .001$

After accounting for all of the personal and professional demographic variables, models were run to include the additional situational variables (Aggressor Demographics, Stage in Career, and Organizational Gender Balance) and data from the NAQ-R responses in the four different ways as described earlier.

Results from the first model looking at aggregate former GLE scores as the dependent variable and including the aggregate NAQ-R score as an additional independent variable demonstrated that the aggregate NAQ-R scores were significant ($p < .001$) and produced an R^2 of .18. The aggregate NAQ-R score proved to be negatively correlated with former GLE scores, indicating that as aggression scores increased leader efficacy scores decreased. Similar to the prior model, Age+Predicted Age and whether or not the respondent identified as Black/African American both proved to be significant variables and positively correlated with former GLE scores. Additionally, the aggressor's position proved to have an effect on GLE scores. This model demonstrated that when the aggressor was in a higher position this was negatively correlated with

former GLE scores. This indicates that the negative effect on leader efficacy at the time of the aggression is greater when the aggressor is in a position of authority. Table 32 displays the results of this regression model.

Table 32

Effect of All Variables and Aggregate NAQ-R Score on Former GLE Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	91.36	24.79		3.69	.00
Age+Predicted Age	1.12	.41	.21	2.73	.01
Race: Black/African American	24.85	10.21	.18	2.43	.02
Aggressor Position: Higher	-13.31	6.00	-.17	-2.22	.03
Aggregate NAQ-R Score	-.62	.23	-.21	-2.71	.01

Note. $R^2 = .18$, $p < .001$

The second model that included the NAQ-R construct scores as independent variables yielded some similar results. This model proved to be significant ($p < .001$) and provided an R^2 of .23, indicating that it explained approximately 23 percent of the variance. In this model, the work-related bullying score proved to be a significant variable in explaining the variance. This variable was negatively correlated with former GLE scores, indicating that as the respondents' work-related bullying scores increased leader efficacy scores at the time of the aggression decreased.

Similar to the previous model, Age+Predicted Age was positively correlated to former GLE scores. Responses for women who identified as Black/African American

were also positively correlated with GLE scores. One aggressor demographic also proved to be significant in this model. Whereas the previous model indicated that the aggressor's position was a significant factor, this did not prove to be significant when taking into account the specific NAQ-R constructs. Instead, the aggressor's race was significant. Specifically, responses when the aggressor was identified as either American Indian, Asian, or Hispanic were positively correlated with former GLE scores. This indicates that respondents of these aggressors reported higher GLE scores than women whose aggressors were either Black/African American or White/Caucasian. Table 33 displays the results of this regression model.

Table 33

Effect of All Variables and NAQ-R Construct Scores on Former GLE Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	95.43	23.19		4.12	.00
Age+Predicted Age	.97	.39	.18	2.51	.01
Race: Black/African American	29.34	9.86	.22	2.98	.00
Aggressor Race: American Indian, Asian, Hispanic	29.82	10.23	.21	2.91	.00
Work-related Bullying Construct	-2.48	.580	-.31	-4.27	.00

Note. $R^2 = .23$, $p < .001$

To see if there was any difference in results based on the frequency rating of the NAQ-R survey items and the mere selection of that behavior as having been experienced,

new independent variables were created for the NAQ-R survey items. These simply tracked whether or not the respondent marked that they had experienced that type of aggression, regardless of how often. Categorical variables were created for each survey item and if the respondent had selected any answer other than “0,” then the response was marked as “1.” Linear regression analysis was run to include personal, professional, and situational demographics as independent variables along with the new NAQ-R variables.

This model proved to be significant at the $p < .001$ level with an R^2 of .28. Table 34 shows the six variables that proved to be significant—two personal demographic variables and four NAQ-R survey items. The personal demographic variables were consistent with earlier models where Age+Predicted Age and whether or not the respondent identified as Black/African American were both positively correlated with aggregate former GLE scores.

Three of the four NAQ-R survey items that proved to be significant in this model included NAQ-R #10 (hints or signals that you should quit your job), NAQ-R #14 (having your opinions ignored), and NAQ-R #21 (being exposed to an unmanageable workload), which were all negatively correlated with aggregate former GLE scores. This indicates that respondents who answered that they experienced these behaviors reported lower leader efficacy scores for the time of the experience. The fourth survey item, NAQ-R #15 (practical jokes carried out by people you don’t get along with), was positively correlated with aggregate former GLE scores, indicating that women who reported to have experienced this type of aggression had more positive leader efficacy scores. Because only 12 respondents indicated that they experienced practical jokes, broad conclusions about this variable should be done cautiously. An appropriate

conclusion would be that that this particular behavior did not appear to have a negative impact on leader efficacy scores.

Table 34

Effect of All Variables and NAQ-R Items (Categorical) on Former GLE Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		t	Sig
	B	Std. Error	Beta			
(Constant)	96.77	24.04			4.03	.00
Age+Predicted Age	1.11	.40	.21		2.81	.01
Race: Black/African American	27.67	9.82	.20		2.82	.01
NAQ-R #10 (hints to quit job)	-12.97	5.81	-.17		-2.23	.03
NAQ-R #14 (opinions ignored)	-13.76	6.43	-.16		-2.14	.03
NAQ-R #15 (practical jokes)	24.44	11.63	.16		2.10	.04
NAQ-R #21 (unmanageable workload)	-24.38	6.87	-.28		-3.55	.00

Note. $R^2 = .28$, $p < .001$

Results from the fourth model looking at the effect of the frequency ratings of the NAQ-R survey items on aggregate former GLE Scores showed that eight variables had significant effect on the variability of scores and yielded the highest R^2 thus far with an overall R^2 of .37. These results indicate that the model explains approximately 37 percent of the variance. When taking these variables into account, Age+Predicted Age and whether someone racially identifies as Black/African American were still significant and positively correlated variables with aggregate former GLE scores. Similar to some of the earlier models, responses that identified the aggressor as either American Indian, Asian,

or Hispanic were significant ($p = .001$) and positively correlated with these scores. These results indicate that women who are older, who identify as Black/African American, or who have aggressors that are American Indian, Asian or Hispanic generally reported higher leader efficacy scores in relation to the aggressive experience.

Additionally, five NAQ-R survey items proved to be significant variables in the model. These included the four survey items found to be significant in the former model with the same correlations and one additional survey item. Similar to the former model, NAQ-R #10 (hints or signals that you should quit your job), NAQ-R #14 (having your opinions ignored), and NAQ-R #21 (being exposed to an unmanageable workload) were all negatively correlated with aggregate former GLE scores and NAQ-R #15 (practical jokes) was positively correlated with aggregate former GLE scores. The additional variable that proved to be significant in this model was NAQ-R #19 (pressure not to claim something to which by right you are entitled), which was positively correlated with aggregate former GLE scores, indicating that individuals with higher scores on this survey item had less of an effect on their leader efficacy when compared with other variables. Table 35 displays the results from this regression model. When considering all four of these models, each appeared to build on the former which indicates that the fourth model is the strongest in understanding the effect of aggression on former leader efficacy scores.

Table 35

Effect of All Variables and NAQ-R Items (Scale) on Former GLE Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	91.12	22.30		4.09	.00
Age+Predicted Age	1.10	.37	.20	2.95	.00
Race: Black/African American	29.01	9.23	.21	3.14	.00
Aggressor Race: American Indian, Asian, Hispanic	33.27	9.69	.24	3.44	.00
NAQ-R #10 (hints to quit job)	-10.70	3.52	-.25	-3.04	.00
NAQ-R #14 (opinions ignored)	-6.71	2.48	-.21	-2.71	.01
NAQ-R #15 (practical jokes)	24.97	7.28	.26	3.43	.00
NAQ-R #19 (pressure not to claim)	8.90	4.49	.16	1.98	.05
NAQ-R #21 (unmanageable workload)	-11.94	3.50	-.30	-3.41	.00

Note. $R^2 = .37$, $p < .001$

Leader efficacy constructs: Action. The GLE Action construct assesses the respondent's confidence specifically related to their ability to inspire followers and get them to work beyond their current capacity. To determine if any personal or professional demographics were correlated to GLE Action scores independent of specific NAQ-R data, a regression model was run with just these variables. Results showed that Age+Predicted Age was a significant variable and positively correlated to former GLE Action scores. Similarly, responses from women who identified as Black/African American were also positively correlated with GLE Action scores. The only other

significant variable was related to discipline where women in the Public Service category (government, public affairs, political science, and social work) generally reported lower GLE Action scores than women in other disciplines. Table 36 displays the results of this regression model.

Table 36

Effect of Personal and Professional Variables on Former GLE Action Construct Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	18.54	8.95		2.07	.04
Age+Predicted Age	.41	.15	.21	2.69	.01
Race: Black/African American	9.53	3.76	.19	2.53	.01
Discipline: Public Service	-13.62	5.10	-.21	-2.67	.01

Note. $R^2 = .10$, $p = .001$

When running the regression models to include NAQ-R data, the GLE Action construct score was used as the dependent variable in four different models described in the last section using (1) the aggregate NAQ-R score, (2) the NAQ-R construct scores, (3) the NAQ-R survey items as categorical variables, and (4) the NAQ-R survey items with frequency scores. The results were similar to the former models where they built upon one another with similar variables proving to be significant.

The strongest model proved to be the fourth that included the NAQ-R survey items as scale variables. This model was significant ($p < .001$) and produced an R^2 of .26, indicating that it explained approximately 26 percent of the variance. Consistent with the model with personal and professional demographic variables, Age+Predicted

Age was positively correlated with GLE Action scores. Similarly, responses from women who identified as Black/African American were positively correlated with the GLE Action score. Furthermore, responses from women in the Public Service discipline still proved to be negatively correlated with former GLE Action scores.

One aggressor demographic yielded significant results. Similar to prior models, responses from women whose aggressors were identified as American Indian, Asian, or Hispanic were positively correlated to former GLE Action scores, indicating that these women reported higher scores than women whose aggressors were Black/African American or White/Caucasian. This could indicate that the effect of aggression from aggressors within these racial categories had less of a negative effect when compared to women with aggressors in other racial categories.

Three NAQ-R survey items proved to be significant variables in this model. Similar to the prior models for the former aggregate GLE scores, NAQ-R #10 (hints or signals that you should quit your job) and NAQ-R #21 (being exposed to an unmanageable workload) were both negatively correlated with aggregate former GLE scores. NAQ-R #15 (practical jokes) was positively correlated with aggregate former GLE scores. Table 37 displays the results of this regression model.

Table 37

Effect of All Variables and NAQ-R Items (Scale Variables) on Former GLE Action

Construct Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	19.48	8.73		2.23	.03
Age+Predicted Age	.43	.15	.22	2.89	.00
Race: Black/African American	8.35	3.64	.17	2.30	.02
Discipline: Public Service	-14.55	5.51	-.19	-2.64	.01
Aggressor Race: American Indian, Asian, Hispanic	11.46	3.82	.22	3.00	.00
NAQ-R #10 (hints to quit job)	-3.41	1.32	-.21	-2.58	.01
NAQ-R #15 (practical jokes)	7.59	2.85	.21	2.67	.01
NAQ-R #21 (unmanageable workload)	-3.22	1.19	-.22	-2.70	.01

Note. $R^2 = .26$, $p < .001$

Leader efficacy construct scores: Means. The GLE Means construct assesses the respondent's confidence in their ability to count on their leaders, peers and/or the organization to advise and support them. To determine if any personal or professional demographics were correlated to GLE Means scores independent of specific NAQ-R data, a regression model was run with just these variables (Table 38). Results showed that Age was not a significant variable in this model but that Years Since Tenure was significant and positively correlated to former GLE Means scores. Similarly, responses

from women who identified as Black/African American were also positively correlated with GLE Means scores.

Table 38

Effect of Personal and Professional Demographic Variables on Former GLE Means Construct Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	30.15	3.41		8.83	.00
Race: Black/African American	12.08	4.12	.23	2.93	.00
Years Since Tenure	.41	.13	.24	3.06	.00

Note. $R^2 = .10$, $p < .001$

When running the regression models to include NAQ-R data, the GLE Means construct score was the dependent variable in four different models described earlier using (1) the aggregate NAQ-R score, (2) the NAQ-R construct scores, (3) the NAQ-R survey items as categorical variables, and (4) the NAQ-R survey items with frequency scores. The results built upon one another with similar variables proving to be significant.

The strongest model proved to be the fourth that included the NAQ-R survey items as scale variables. The model was significant ($p < .001$) and produced an R^2 of .37, indicating that it explained approximately 37 percent of the variance. In this model, the personal (Race: Black/African American) and professional demographics (Years Since Tenure) remained stable.

Additionally, one aggressor demographic yielded significant results. Responses from women whose aggressors were in higher level positions proved to be negatively correlated with GLE Means scores, indicating that they generally reported lower scores in this construct. Being that the construct specifically looks at the individual's confidence in relying on their leaders, it makes sense that when these leaders are the aggressors scores would be lower.

Three NAQ-R survey items proved to be significant and were consistent with prior models for GLE aggregate and Action scores. NAQ-R #10 (hints or signals that you should quit your job) and NAQ-R #14 (having your opinions ignored) were both negatively correlated with aggregate former GLE scores. NAQ-R #15 (practical jokes) was positively correlated with aggregate former GLE scores. Table 39 displays the results of the final regression model.

Table 39

Effect of All Variables and NAQ-R Items (Scale Variables) on Former GLE Means Construct Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	41.25	3.62		11.40	.00
Race: Black/African American	9.50	3.74	.18	2.54	.01
Years Since Tenure	.32	.12	.18	2.60	.01
Aggressor Position: Higher	-7.58	2.29	-.24	-3.31	.00
NAQ-R #10 (hints to quit job)	-3.24	1.36	-.19	-2.39	.02
NAQ-R #14 (opinions ignored)	-4.02	1.02	-.31	-3.96	.00
NAQ-R #15 (practical jokes)	8.37	2.80	.22	2.98	.00

Note. $R^2 = .37$, $p < .001$

Leader efficacy construct scores: Self-Motivation. The GLE Self-Motivation construct assesses the respondent's confidence in their ability to motivate themselves, accomplish objectives, and to maintain their integrity. This construct assesses more personal aspects than the GLE Action construct (which assesses their confidence in leading others) and the GLE Means construct (which assesses their confidence in being able to rely on their leaders). To determine if any personal or professional demographics were correlated to GLE Self-Motivation scores independent of specific NAQ-R data, a regression model was run with just these variables. Results showed that Age was a significant variable in this model and was positively correlated to former GLE Self-Motivation scores. Consistent with all previously run models, responses from women who identified as Black/African American were also positively correlated with GLE Self-Motivation scores. Table 40 displays the results from this regression model.

Table 40

Effect of Personal and Professional Variables on Former GLE Self-Motivation Construct Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	34.82	8.55		4.07	.00
Age+Predicted Age	.42	.15	.23	2.93	.00
Race: Black/African American	9.18	3.63	.19	2.53	.01

Note. $R^2 = .09$, $p = .001$

When running the regression models to include NAQ-R data, the GLE Self-Motivation construct score was the dependent variable in four different models described earlier using (1) the aggregate NAQ-R score, (2) the NAQ-R construct scores, (3) the NAQ-R survey items as categorical variables, and (4) the NAQ-R survey items with frequency scores. The results of these four models built upon one another.

The strongest model proved to be the fourth model that included the NAQ-R survey items as scale variables. This model was significant ($p < .001$) and produced an R^2 of .36, indicating that it explained approximately 36 percent of the variance. This model produced nine significant variables. The variables for Age+Predicted Age and Race: Black/African American remained stable in this model.

When looking at professional demographics, two discipline areas emerged as significant. Deans in the field of Law and those within the Public Service category (government, public affairs, political science, and social work) were both negatively correlated with the GLE Self-Motivation construct score, indicating that women in these fields generally reported lower Self-Motivation scores at the time of the aggression.

One aggressor demographic also proved to be significant in this model. Similar to earlier models, responses that identified aggressors as either American Indian, Asian, or Hispanic proved to be positively correlated with GLE Self-Motivation scores, indicating that women whose aggressors were within this race category generally reported higher Self-Motivation scores than women whose aggressors were White/Caucasian or Black/African American.

There were four NAQ-R survey items that were significant in this model—two within the person-related bullying construct and two in the work-related bullying

construct. Results for NAQ-R #7 (having insulting or offensive remarks made about your person, attitudes or your private life) were positively correlated with Self-Motivation scores, indicating that individuals who reported higher frequency of this type of behavior generally had higher Self-Motivation scores. This could indicate that this type of aggression has a less powerful effect than other behaviors. Results for NAQ-R #10 (hints or signals that you should quit your job), however, were negatively correlated with GLE Self-Motivation scores, indicating that respondents who stated that they experienced this behavior more frequently generally reported lower GLE Self-Motivation construct scores. Similarly, responses for NAQ-R #14 (having your opinions ignored) and NAQ-R #21 (being exposed to an unmanageable workload) were both negatively correlated with Self-Motivation scores, indicating that women who experienced more of this behavior generally reported lower Self-Motivation scores. Table 41 displays the results of this regression model.

Table 41

Effects of All Variables and NAQ-R Items (Scale Variables) on Former GLE Self-Motivation Construct Score

Variable	Unstandardized Coefficients		Standardized Coefficients		t	Sig
	B	Std. Error	Beta			
(Constant)	44.00	8.18			5.38	.00
Age+Predicted Age	.33	.14	.17		2.36	.02
Race: Black/African American	8.35	3.34	.17		2.50	.01
Discipline: Law	-10.36	4.33	-.17		-2.40	.02
Discipline: Public Service	-12.25	5.16	-.17		-2.37	.02
Aggressor Race: American Indian, Asian, Hispanic	10.89	-3.83	.20		2.85	.01
NAQ-R #7 (offensive personal remarks)	2.97	.92	.25		3.22	.00
NAQ-R #10 (hints to quit job)	-3.44	1.24	-.22		-2.77	.01
NAQ-R #14 (opinions ignored)	-2.24	.92	-.19		-2.45	.02
NAQ-R #21 (unmanageable workload)	-2.99	1.12	-.21		-2.66	.01

Note. $R^2 = .36$, $p < .001$

Review of quantitative results. The results from the four models run for the quantitative analysis looking at former leader efficacy scores (as an aggregate and with the three separate constructs) yielded some interesting results. First, in all four models, women who identified as Black/African American reported higher former GLE scores than women of other races. There is no additional information to provide context but based on findings from the previous research question that showed no significant

difference in aggression scores based on respondent race, a hypothesis could be made that leader efficacy in Black/African American women might be impacted less negatively by aggressive behavior from women. To prove or disprove this hypothesis, further analysis is needed with current GLE scores.

Additionally, in models assessing aggregate GLE scores, GLE Action construct scores, and GLE Self-Motivation construct scores, Age proved to be a significant variable. In models assessing the GLE Means construct scores, Age was not significant but Years Since Tenure proved to be significant. Additional analysis on these two variables determined that they were highly correlated with one another, supporting a conclusion that women with longer time since tenure are generally older than women with fewer years since tenure. These results support a hypothesis that older respondents generally reported higher leader efficacy scores than younger respondents, further suggesting that aggression from women may have had less negative impact on older women than younger women.

Professional demographics related to discipline also proved to be significant in two of the leader efficacy constructs. Responses from women in the public service discipline (government/public affairs, political science, and social work) generally reported lower scores for the GLE Action construct and the GLE Self-Motivation construct when compared with women in other disciplines. Additionally, results demonstrated that GLE Self-Motivation construct scores for women law deans were generally lower than women deans in other disciplines. Because there was no significant difference between these disciplines and aggression scores as assessed for the first research question, these results could suggest that perhaps the experienced behavior had a

stronger effect for women in these fields when compared to women deans in other disciplines.

When adding aggressor demographics into the models, two variables proved to be significant. In the model that assessed aggregate leader efficacy scores and in the GLE Means construct score, responses from women whose aggressors were in higher positions reported lower leader efficacy scores than other women deans. Earlier results in this study suggested that women reported more frequent aggression from women aggressors when they were in higher level positions. This result based on GLE scores suggests that this aggressive behavior had a significant and negative effect on the respondent's leader efficacy at the time of the experience.

The other aggressor demographic that proved significant was related to the aggressor's race. Results showed that leader efficacy scores were higher when the aggressor was identified as American Indian, Asian, or Hispanic, indicating that these women respondents had greater leader efficacy levels than women with aggressors of other races. This is an interesting finding, especially given the results from earlier analysis that suggested that women with aggressors within this racial group may experience more frequent aggression (physical intimidation behaviors specifically) than women whose aggressors who are Black/African American or White/Caucasian. This additional result showing that leader efficacy scores were higher when the aggressor was American Indian, Asian, or Hispanic could suggest that while women in this racial group may have demonstrated more frequent aggression toward women this behavior generally did not negatively impact the respondent's leader efficacy.

NAQ-R aggression scores were consistently identified as a significant variable in explaining the variance in leader efficacy scores. These scores were generally negatively correlated with leader efficacy scores, indicating that frequent aggressive behavior may have negatively impacted leader efficacy. The models that included the scale scores for each survey item proved to be the strongest in this analysis. Results indicated that three survey items consistently had negative effects on leader efficacy scores. Responses from women who reported more frequent experiences of aggressors *hinting that she should quit, ignoring her opinions, and/or subjecting her to an unmanageable workload* had the strongest negative effect on leader efficacy. This suggests that these specific behaviors may be particularly harmful to a woman's leader efficacy when compared to other behaviors.

Qualitative results. In addition to completing the GLE, respondents were asked an open-ended question aimed to assess qualitatively how they felt the experience impacted their efficacy toward leadership at the time of the experience. Specifically, the question asked: *In what ways, if any, did the experience you described earlier undermine, challenge, or motivate your personal sense of leadership capacity at the time of the experience?*

Of the 159 respondents who completed the GLE for the time at which they experienced the aggression, 98.7 percent (n=157) provided responses to this question. Of these responses, 12 did not provide enough information to determine whether or not the respondent thought the experience impacted their leader efficacy at the time, leaving 145 responses for further analysis.

Categorical coding was then used to determine if respondents thought the experience had a positive effect, a negative effect, or no effect on their leader efficacy at the time. Of the 145 viable responses, 19.3 percent (n=28) stated that they felt the experience had no effect on their leader efficacy at the time. The largest portion of respondents, 45 percent, (n=65) believed the experience had a negative impact on leader efficacy and 36 percent of respondents (n=53) believed it had a positive impact. (It was possible for respondents to list both positive and negative impact in the answer.)

The responses in both the negative and positive categories were then further analyzed to see what patterns existed. Within each category, additional sub-themes emerged which help to further understand the impact of these experiences for women. The next sections will describe the findings within these negative and positive responses. Additionally, a number of respondents described how the experience increased their awareness about human nature and subsequently made them more skeptical about people and relationships. This theme is included as a separate third category because it could be viewed as associated with both negative and positive effects.

Negative impact: Ways aggression undermined leader efficacy. Forty-five percent of responses to the open ended question to determine how aggression impacted leader efficacy indicated that it had a negative impact on leader efficacy at the time. When describing the negative impact, three themes emerged. The first theme emerged from the qualitative coding of the feelings described by respondents. Women often described the experience as *disorienting* or confusing. The second and third themes demonstrated how women felt they were impacted by the behavior and the feelings associated with it. Many women described how they questioned their *ability* to

demonstrate leadership as a result of these aggressive experiences. Additionally, these aggressive experiences caused a number of women to question their *willingness* to take up leadership. These three themes are further described below.

A disorienting experience. The way in which respondents named their feelings during the experience indicated a sense of disorientation, confusion, discouragement, and helplessness. Their responses indicated that they did not expect or anticipate the behavior and thus had not prepared for how they might identify and address it. One respondent wrote, “At first, I was disoriented and grieving and felt a little helpless. I was not always aware of what was happening until I would finally find myself on the outside.” Another woman wrote, “It was confusing and disturbing.” One respondent’s statement demonstrated how this sense of disorientation somewhat paralyzed her from acting saying, “I lost my bearings in terms of my bottom line ethic leadership—I relied on my superiors to guide me through a difficult landscape of shared governance and remained silent in the face of aggressive behaviors.” Another response revealed the difference in how an individual may view themselves and how others view them. She suggested how difficult that can be saying, “I thought I had lost touch with reality because who the faculty said I was did not match the way I perceived myself in the world.” These statements give the impression that these women did not anticipate the experienced behavior and felt confused and lost when trying to navigate the situation. These quotes highlight the feelings of disorientation and confusion expressed by many of the respondents and their uncertainty as to how to make sense of the situation and proceed.

Questioning overall leadership capability. In addition to describing feelings of disorientation and confusion from their experiences, many women wrote about how these feelings negatively impacted their confidence toward leadership. One women wrote about how the experience “undermined my feelings of efficacy and confidence,” and that “it reduced my confidence in my ability to be an effective team member.” Another respondent wrote about how she had trouble identifying a “path” through the experience, saying, “At the peak of this situation, my confidence plummeted. The negativity in the department was so high and the attacks so personal, that I had trouble for a short time seeing the path forward.” In a statement from one woman that encapsulates the sentiment within this theme, she stated:

My self-esteem took a hit. She was, honestly, the first person I had ever worked [with] that I did not have a good working relationship with. I worked with her for four years, and the last couple of years were very demoralizing until I could chart a path out . . . Given how much of my heart and soul I had put into the position, this was really deflating . . . This really shook my confidence.

Many respondents wrote very specifically about the impact of this experience on their leader efficacy and how they doubted their leadership ability. Some respondents were very succinct and direct making statements such as “It challenged my confidence of being able to provide good leadership,” “I doubted myself and my ability to lead,” or, “Complete loss of self-confidence in my own efficacy as a leader.”

Other respondents offered more context to explain these perceptions. For example, one woman stated that, “It made me second guess every aspect of my leadership capacity and feel unsure about what to do in response to any issue or problem that came up.” Other women described how they questioned specific leadership skills—their decision making abilities in particular. One woman wrote about how she “became hyper

vigilant about all expenditures, spending precious time on account management. I began to doubt my project needs and then under spent grants.” Another respondent explained, “I was worried that I was signing things that would give me problems later on.” A third woman said, “Because I never witnessed faculty under me coming to my defense, I felt very alone as a leader and started to question every decision.”

Although women questioned their leadership capability based on the aggressive behaviors, they often mentioned how these experiences were rare and that the majority of their relationships with women were positive and supportive. Statements by respondents demonstrated how these negative experiences carried more weight, however, than their prior successes. One woman wrote, “The experience I described caused me to question my personal sense of leadership capacity. The few negative experiences tend[ed] to overpower the positive ones.” Another wrote, “It caused me to question my effectiveness, even with plenty of other evidence that suggested my leadership has been highly effective. It also had more emotional impact than I would have guessed it would.” These results suggest that when self-evaluating their leadership capability, the effect of these negative experiences may be stronger than positive interactions with other women.

Responses also demonstrated that some women internalized and personalized these attacks instead of seeing the behavior related to circumstances or their role. In many cases, the respondents interpreted the aggressor’s behavior as a reflection on themselves. This sentiment is demonstrated in responses such as, “The experience . . . undermined my sense of leadership for a while in that it made me doubt my own skills and wonder if in fact I was not worthy of the praise, etc.” and, “I wasn't sure if I was going to be able to succeed myself, so the thought of leading others seemed foolish.”

These statements suggest that if women perceive there to be credibility in the aggressor's negative opinion, it can amplify their insecurities and cause them to question their ability to lead, even in the face of past experiences that have indicated they are capable leaders.

Questioning of willingness to take up leadership. Another theme that many women wrote about was how they questioned their willingness to take up leadership. They talked about doubting whether or not to apply for positions and whether or not they should stay in their role. One respondent explained, “[It] made me question if it was worth going through the trouble of leadership.” Other example statements where women mentioned stepping out of their leadership roles are provided below with specific reference to leaving the position in bold:

It made me second guess every aspect of my leadership capacity and feel unsure about what to do in response to any issue or problem that came up. It gave me a sense of hopelessness. **I came very close to resigning many times.** It am usually a pretty confident person, but this took away all of my confidence.

I did not discuss the situation with anyone else on campus with whom I regularly interacted, because it seemed unprofessional. Finally I did go to HR and talk with a counselor. Following a couple of meetings **I realized that it was time for me to move on.**

I was a new dean and for the next year **I walked into just about every meeting of this group and/or the provost with a letter of resignation in my pocket.**

This event is currently ongoing. Obviously, **it challenges my commitment to this organization.**

These responses demonstrate how aggression can create self-doubt among women regarding their capacity to do their job. Women often internalize the behavior and feel it may not be worth the trouble to continue in a leadership role, especially if they feel they do not have a support system within the organization to help address the concerning behavior.

Positive impact: Ways aggression enhanced leader efficacy. Of the respondents who answered this open-ended question, 36.5 percent (n=53) of women indicated the experience had a positive impact on their leader efficacy. Four themes emerged from their comments. First, many women wrote about how the experience made them committed to being a more ethical and effective leader. Second, many wrote about how the experience built up their confidence to stand up against bullying behavior. Additionally, women wrote that getting through the experience successfully showed them that they could persevere in difficult circumstances. Finally, the last theme demonstrated how the women felt the aggressive experiences helped them learn to believe in and trust themselves and thus increased overall self-confidence.

Commitment to be a better leader. Of the responses that indicated the experience had a positive impact on the respondent's leader efficacy, most of the individuals mentioned how the experience motivated them to be a better leader. A number of respondents addressed this very directly writing, "The experiences of dealing with challenges encountered with women in the department actually motivated me to press forward and strengthened my leadership abilities," and, "Overall, the whole experience motivated me to be a better leader." Some women wrote about how the feeling that they had failed in leadership motivated them to learn to be better. For example, one respondent wrote,

I lost my bearing in terms of my bottom line ethic leadership—I relied on my superiors to guide me through a difficult landscape of shared governance and remained silent in the face of aggressive behaviors. As a new Dean, I did not lead as well as I had hoped. And this sense of failure motivated me to learn and grow as a leader.

Some respondents wrote about how the situation motivated them to practice specific leadership skills. For example, a number of respondents mentioned how the experience helped them learn how to maintain their composure in difficult situations. Other skills mentioned by respondents included learning to listen differently and learning to provide constructive feedback. Table 42 provides some examples of these statements.

Table 42

Examples of Responses Related to Specific Leadership Skills

Skill	Response
Composure	<p>"I was highly motivated to learn to lead without losing my temper. I strongly believe that such loss undermines one's effectiveness."</p> <p>"The experience re-affirmed my ability to hold my temper and deal with the situation in an effective manner."</p>
Providing Feedback	<p>"It made me more confident in the importance of providing feedback and then following through to either strengthen the performance of an employee, or find a better fit for the individual."</p>
Individualized Support and Listening	<p>"It gave me a renewed sense of responsibility for those I lead and with whom I am peer. It challenged me to be a better research team leader of my doctoral students, to invest in them individually, and provide them individualized support, but also clarity of expectations . . . And, I listen differently -- not just is the department meeting its targets, but also whether the faculty are getting the support they need."</p>

Other respondents wrote about how the women aggressors served as negative exemplars for leadership, showing these women what behaviors they did not want to demonstrate. For example, one respondent wrote, "[It] made me vow never to do that to others." Another wrote, "I used the experience as an example of what not to do and

developed a nuanced and supportive approach to leadership.” Their statements typically included reference to the negative behavior and the respondent’s commitment to adopt a different kind of behavior. Table 43 provides three examples of these types of statements.

Table 43

Examples of Responses Demonstrating Commitment to Be a Better Leader

Respondent	Reference to aggressor’s behavior	Resulting leadership commitment
A	“I learned what not to do from her.	Instead I lead with respect, motivation, and rewards.”
B	“Being under relentless attack...	Motived me to model civility, decency and strength in different ways than I ever had before.”
C	“Experience serves as a negative model;	I carefully mentor junior faculty and ensure not to be pulled into political camps”

Along these lines, many respondents stated or implied that the aggressor behaved in an unethical manner and then wrote about how the experience made them more committed to their own ethics. One respondent wrote, “I vowed to try and treat people equally, get all sides of any story, and lead with my internal/ethical compass.” Another wrote, “Safeguarding my honesty and dignity became very important. This motivated my sense of leadership capacity.” A third stated, “The experience helped me to understand that other’s motivations can be destructive and for self-gain rather than the good of the whole. The experience made me understand my moral code and reinforced that I even HAVE a moral code.” These responses demonstrate that for many women, the negative

experiences actually motivate them to focus on their ethics and ensure their behaviors align with these values. Whereas many of these women perceived the aggressors to be motivated to serve their own self-interests thus driving them to act disrespectfully or dishonestly toward other women, these respondents were driven to help ensure they did not lose perspective on their goals and ensure they behaved in a way that was aligned with their commitment to supporting others.

Confidence to stand up to bullying behavior. Respondents frequently wrote about how they felt more confident addressing bullying type behavior as a result of their experiences. One respondent wrote, “I also vowed to address bullying when I see it. It is THE most destructive departmental behavior I have ever experienced.” Another wrote, “It made me realize that I needed to have enough confidence to say, ‘You need to leave and come back when you can speak to me appropriately.’” A different respondent wrote, “It actually motivated me to stand up against it and also empower others to not tolerate such condescending behavior.” One response referenced the support the respondent received from others that helped her to address aggressive behavior. Her statement read,

I had many friends who helped me see what was going on. And I would not just sit back and take it. I knew the behavior of this woman was wrong at the time. I was one of the few people who stood up to her. I did it in, mostly, a respectful way. For those reasons it made me a better leader, more able to speak the truth when it was needed and to stand up for someone who was bullied.

Results presented earlier regarding prevalent forms of aggression suggested that aggressive behavior is often unexpected. The analysis of results here demonstrated that aggressive experiences can feel disorienting for some. The responses from women stating that they felt more confident in addressing this type of behavior suggest that the

experiences helped better prepare them for future encounters (whether happening to themselves or others) so that they could respond more directly.

Ability to persevere. When referring to how their experience with the aggressor enhanced their leadership capacity, some women wrote about how it motivated them to work harder and persevere despite the aggressor's behavior. These women's statements intimated that they either already had enough confidence to persevere in the face of conflict or developed this confidence as a result of making it through the experience. For example, one woman referenced past experiences and the actions these experiences motivated in her to take. She said, "Negative past experiences have generally been a source of motivation to persevere and find alternative strategies to achieve my goals." Another woman who referenced how the experience motivated her to press forward said, "It made me work even harder. I knew her motivation and did not let it hinder me in meeting my goals." Another woman wrote, "[It] motivated me to stay focused on the task at hand and the relationships necessary to move the work forward."

In many cases, the women described how they were motivated to succeed in order to prove the aggressor wrong. This sentiment is represented in one woman's statement saying, "I subsequently felt challenged to succeed despite her attempts to undermine me, and quickly began to ignore and deflect anything I heard about her attempts to undermine me." Another woman wrote something similar saying, "It went on for so long that I became a bit numb to that and it just inspired me to continue what I was doing and to prove her wrong."

These responses provide a few examples of how being faced with a challenging colleague sometimes motivated individuals to succeed despite the aggressor's attempts to

discourage them. Some responses indicated that despite the difficulty of the situation at the time, when they were able to reflect upon the experience later they realized that surviving it actually helped “increase confidence.”

Enhanced self-confidence through self-reliance. Some of the respondents wrote about how the experience made them tougher or taught them to believe in themselves. They referenced learning not to take someone’s behavior personally, demonstrating a recognition that the behavior was less about themselves and more about the aggressor or the circumstances. Examples of statements that demonstrate this increased self-assurance include, “[It] taught me better patience and gave me an ability to ‘ride things out.’ [It] helped me to understand that one can’t take things too personally. Thickened my skin.” Another respondent wrote,

I feel motivated because as part of my processing I have understood human nature more and so I really haven’t taken this too personally as far as the incident with my subordinate is concerned, but instead am frustrated at the way it has affected my superior’s behavior toward me. Overall, I feel more capable and less likely to take something personally.

Other respondents wrote about how the experience challenged them to believe in themselves. One respondent wrote that the experience, “Challenged me to count on myself, develop my own sense of priority and to build and stand by my “case” for change.” Another wrote, “I felt challenged in the earlier settings but I’ve been able to learn from that period of time on how to over-come and depend upon myself to accomplish goals and overcome challenges.”

Other women wrote that these experiences taught them to take care of themselves. One respondent stated, “[The experience] just made me feel sorry for her and resolve to take care of myself—personally, emotionally, spiritually and physically—to guard

against becoming someone like that.” Another woman wrote about how she learned to promote her accomplishments saying, “I learned to present/document my work when I did it and made sure others heard about it.”

These statements reveal how some respondents were able to move past the frustration and/or hurt feelings, put the experiences in perspective and focus on how to take care of themselves so that they could be successful. These statements represent an important distinction between perceiving the aggressive behavior from a victim’s perspective to one that is broader and does not attach the aggressor’s behavior or assessment to the respondent’s own self-worth.

Increased awareness of interpersonal dynamics. In addition to statements made about how experiencing aggression from women either diminished or enhanced their efficacy toward leadership, a number of respondents made statements about how the experienced helped them develop an increased awareness of interpersonal dynamics. Specifically, they made statements indicating that they learned to differentiate between self and role but that they were also less trusting of people. It is difficult to categorize these statements as clearly enhancing or diminishing leader efficacy because they made statements that could be interpreted in both ways. While their statements demonstrated that increased knowledge of interpersonal dynamics helped them in their leadership roles, they also demonstrated an increased level of cynicism where they no longer felt they could trust others.

In order to function in their role, leaders must learn how to differentiate between self and role. When leaders are unable to make this distinction, they perceive the aggressor’s criticisms and hostility to be toward themselves when in reality the

respondent represents a role and the negativity is often associated with that role.

Comments by respondents reflected this learning as a result of their experiences of aggression from women. Two quotes that express this sentiment were:

Many folks expect only perfection in their leaders and thus anything that is not perfect to them is bad. I learned [that], as much as I try, I am not perfect but must make the best decision based on being able to look myself in the mirror.

[The experience] undermined my confidence in unhealthy ways. It took me some time to relearn the line between carefully considering that someone's criticism of me might reveal to me areas I need to improve, and "owning" undeserved and overly critical complaints about me to the point I felt unqualified. [This experience] challenged me to find a way to navigate the kind of criticism that comes with positions of authority (especially, I think to women who hold those positions) with positivity, optimism, and integrity to my own values as well as the institution's values.

When a leader learns to recognize behavior toward their role rather than to them as a person, they are better able to manage those interactions and it is less likely to affect them personally.

In addition to writing about lessons learned around interpersonal dynamics, some respondents wrote about how they were less trusting toward others as a result of their experience. One respondent wrote, "I'm a bit more guarded about sharing information with others." Another wrote, "I'm less trusting of my superiors and try to build wide networks so that my success does not rely on single individuals." Another woman said,

I did learn not to trust some folks, as I feel that there are others who like to stir up trouble and will say or do anything that will accomplish stirring up the organization . . . I believe less in Win-Win scenarios than before.

Many people would argue that a less trusting attitude toward people is generally a negative thing because trust is seen as essential to building relationships and working cooperatively together. One could debate this point, however, and argue that this

increased awareness and perspective is an asset in that it helps leaders to better understand group dynamics and potentially build skills for identifying root causes to problems. If a leader is able to use this new perspective to better understand human nature, it might actually help them to be able to trust people in the future because they are able to better understand the person's motivations and perspectives.

One comment that clearly demonstrated both the respondent's increased cynicism and how she uses this perspective in her leadership role read:

Prior to the experience I believed that people would work toward the greater good and were able to put self-interests secondary. Today, I believe many pursue self-interest and as a leader I try to tap into what [it] is to provide incentives to accomplish a college priority. The earlier experience caught me totally off guard by people that I thought I knew and valued me as I did them. Today, I do not assume anyone values me personally, but respond instead to the role I carry and how that role can help them achieve personal and professional goals. I am still friendly, supportive and caring, but no longer trusting that others are genuine in their words and actions related to work. In some ways, this perspective has spilled over into personal relationships as well. I believe what people told me, but today I withhold belief until actions demonstrate others' priorities and interests.

This statement serves as an example of how the experience helped the respondent be able to view people's perspectives and motivations differently and how not to attach their criticism to her in a personal way. It also indicates how the experience led this woman to lose all trust in others.

Review of qualitative results. Qualitative analysis of the responses to the open-ended question produced some valuable insights. First, approximately 20 percent of respondents felt that the aggressive experience from other women had no effect on their leader efficacy at the time of the aggression. The largest proportion of respondents (45 percent), however, felt that the experience had a negative impact on leader efficacy at the time of the event. These respondents provided statements demonstrating that the

experience was disorienting and confusing which contributed to a diminished sense of leader efficacy and willingness to take up leadership. This was largely due to the level of frustration and stress that the situation caused them.

On the other hand, approximately 37 percent of respondents provided responses indicating they felt the experience had a positive effect and that it motivated their sense of leader efficacy at the time of the experience. These respondents provided statements about how the experience motivated them to be a better leader, gave them confidence in standing up to bullying behavior, confirmed their ability to persevere despite the aggressor's efforts, and taught them to believe in and take care of themselves. Additionally, while some respondents made statements referencing an increased awareness of interpersonal dynamics, an understanding of the distinction between role and self, and that lessons were learned about how to help manage the varying dynamics among teams, many of the women told stories of how they had developed a level of cynicism and mistrust of others.

Impact on Current Leader Efficacy

After analyzing results of the respondents' leader efficacy at the time of the aggressive experience, analysis was done to assess whether or not the experience had any lasting effect on leader efficacy. This section first reviews results from the quantitative analysis based on paired sample t-tests and regression analyses to understand the differences between women who reported experiencing aggression from women and those who did not. Then, results are presented from the qualitative open ended questions that asked about their perceptions of how the experience may have impacted their current

self-efficacy toward leadership and how the experience influenced their relationships with other women.

Quantitative results. The quantitative analysis to assess the respondents' current self-efficacy toward leadership was done in multiple ways. First, statistical analysis was used to determine findings within the group of respondents who experienced aggression from other women. After these in-group analyses, between-group analyses were done to determine what differences, if any, there were in current GLE scores for women who had experienced aggression and those who did not.

Within group analysis. To examine variances within the group of women who experienced aggression from other women, two different statistical methods were used. Initially, paired sample t-tests were done to determine if there was a significant difference between how respondents who had experiences of aggression perceived their leader efficacy at the time of the experience and now. Then, linear regression analyses were run to determine what variables were significant in explaining the variance in the differences between former GLE scores and current GLE scores for respondents who had experiences of aggression.

Difference in former and current GLE scores. Paired sample t-tests comparing former and current GLE scores for each of the 22 survey items, the GLE constructs (Action, Means, and Self-Motivation), and the aggregate GLE scores all proved to have significant positive differences between the former GLE score and current GLE score. Appendix C displays the results from this analysis. These results indicated that respondents generally reported significantly higher current GLE scores than former GLE scores, implying that the respondents' leader efficacy improved over time.

Variables that explain differences in scores. Linear regression analysis was used to see what variables may be significant in helping to explain the difference in former and current GLE scores. A new variable was created for the dependent variable (*GLE Difference*), which involved subtracting the former GLE aggregate score from the current GLE aggregate score. Of the 159 individuals who completed both GLE questionnaires, 5.7 percent (n=9) indicated there was no difference in aggregate scores, 9.4 percent (n=15) indicated that their current GLE scores were lower than their former scores and 84.9 percent (n=135) reported that their current GLE scores were higher than former scores.

When initially run, the analysis included all of the personal, professional, and additional situational variables that have been used throughout this study along with aggregate NAQ-R aggression scores to determine if any were significant in explaining the variance in scores. This also included Years Since Aggression to determine if the length of time since the aggressive experience influenced the difference in leader efficacy scores. Table 44 shows the regression model with all significant variables.

Table 44

Variables Contributing to Difference in GLE Scores (Between Former and Current)

Variable	Unstandardized Coefficients		Standardized Coefficients		t	Sig
	B	Std. Error	Beta			
(Constant)	15.75	4.67			3.38	.00
Degree: Ed.D.	21.67	9.85	.17		2.20	.03
Stage: Before Tenured	20.14	7.89	.19		2.55	.01
Aggressor Race: American Indian, Asian, Hispanic	-26.62	10.38	-.20		-2.57	.01
Aggregate NAQ-R Score	.76	.22	.26		3.40	.00

Note. $R^2 = .17$, $p < .001$

The results showed that the most significant variable in determining the difference in former and current GLE scores was the aggregate NAQ-R aggression score. This variable was significant at the $p = .001$ level and was positively correlated with the difference between the former and current GLE scores. This indicates that respondents who reported higher aggression scores also reported the greatest difference in former and current GLE scores.

While many variables did not prove to have a significant effect on the model, including Years Since Aggression, significant variables included factors related to highest earned degree, stage of career when the aggression was experienced, and the aggressor's race. Responses from women whose highest earned degree was an Ed.D. were positively correlated with the difference between former and current GLE scores, indicating that these respondents had a greater difference in scores when compared with

respondents with different degrees. Additionally, responses from individuals who claimed to have experienced this aggression before they earned tenure were also positively correlated with the difference in former and current GLE scores, indicating that these individuals also had a greater difference in scores. These results could suggest that the aggression experiences had a perceived stronger effect for individuals with these degrees and/or with individuals whose experiences were prior to earning tenure. In other words, they had the most growth in leader efficacy over time.

Similar to previous models, the aggressor's race proved to be a significant variable when the aggressor was identified as either American Indian, Asian, or Hispanic. In this model, aggressor race was negatively correlated with the difference in former and current GLE scores, indicating that individuals who identified their aggressor in this race category actually had a smaller difference between scores. To determine if there was significant difference in current leader efficacy scores between respondents with aggressors in this race category and others, I conducted independent sample t-tests and found that no significant difference existed. Thus, while the current leader efficacy scores did not differ based on the race of the aggressor, the difference between scores for women whose aggressors were American Indian, Asian, or Hispanic was less than the difference in scores for women whose aggressors were Black/African American or White/Caucasian. This suggests that the aggression from American Indian, Asian, or Hispanic women may have been less detrimental on leader efficacy at the time of the experience than when compared with respondents whose aggressor was Black/African American or White/Caucasian. This is consistent with the findings from the regression models assessing former leader efficacy scores (Table 35) that showed that responses

from women whose aggressors were American Indian, Asian, or Hispanic were generally higher than efficacy scores for women with aggressors of other races.

When the model was run to include the NAQ-R construct scores as independent variables (rather than the aggregate NAQ-R score), the results were similar to the former model and to earlier models looking at the impact of construct scores. Table 45 shows that the most significant variable proved to be the work-related bullying construct score. This variable was positively correlated with the difference in former and current GLE scores, indicating that respondents who reported higher work-related bullying scores showed a greater difference in former and current GLE scores.

Table 45

Variables Contributing to Difference in GLE Scores (Between Former and Current with NAQ-R Construct Scores)

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	T	
(Constant)	16.29	3.94		4.13	.00
Degree: Ed.D.	19.36	9.63	.15	2.01	.05
Stage: Before Tenured	18.33	7.70	.18	2.38	.02
Aggressor Race: American Indian, Asian, Hispanic	-23.33	10.04	-.17	-2.33	.02
Work-related bullying Construct Score	2.52	.57	.33	4.44	.00

Note. $R^2 = .21$, $p < .001$

When running the model a third way with NAQ-R survey items as categorical variables and a fourth way with NAQ-R survey items as scale variables, the fourth model

proved to be stronger and resulted in the same survey items being significant. The model proved to be significant ($p < .001$) and produced an R^2 of .29, indicating that it explained approximately 29 percent of the variance. This model produced six significant variables, three of which were specifically related to behaviors mentioned in the NAQ-R. Table 46 displays the results for this model.

The two most significant variables in explaining the difference between former and current GLE scores were related to the scores the respondents listed for NAQ-R question #14 (having your opinions ignored) and NAQ-R question #21 (being exposed to an unmanageable workload). Both of these variables were positively correlated with the difference between former and current GLE scores, indicating that respondents who reported higher scores on either of these two items also reported a greater difference in former and current GLE scores. Additionally, both items were within the work-related bullying construct. The third NAQ-R survey item that proved to be significant was question #15 (practical jokes carried out by people you don't get along with). This variable was negatively correlated with the difference in current and former GLE scores, indicating that respondents who reported experiencing more of this type of behavior reported less of a difference in GLE scores.

In addition to the variable related to the aggressor's race being American Indian, Asian, or Hispanic, two variables related to Stage in Career were significant. Responses from women who experienced aggression before earning tenure and those who experienced the behavior while pursuing or being in an administrative role were positively correlated with the difference in former and current GLE scores, suggesting that the impact of the aggression at the time was stronger for these women at the time of

the experience when compared to women who experienced aggression during other career stages.

Table 46

Variables Contributing to Difference in GLE Scores (Between Former and Current with NAQ-R Survey Items as Scale Variables)

Variable	Unstandardized Coefficients		Standardized Coefficients		t	Sig
	B	Std. Error	Beta			
(Constant)	12.31	4.37			2.82	.01
Stage: Before Tenured	17.94	7.89	.17		2.27	.03
Stage: Administrative Role	13.07	6.12	.16		2.14	.03
Aggressor Race: American Indian, Asian, Hispanic	-20.06	9.91	-.15		-2.02	.05
NAQ-R #14 (opinions ignored)	8.00	2.45	.26		3.27	.00
NAQ-R #15 (practical jokes)	-17.38	7.03	-.19		-2.47	.02
NAQ-R #21 (unmanageable workload)	12.09	3.10	.32		3.90	.00

Note. $R^2 = .29$, $p < .001$

Between group analysis. To examine variances between the women who experienced aggression from other women and the women who did not have these experiences, two different statistical methods were used. Independent sample t-tests were done comparing current GLE scores to see if there was a significant difference. Additionally, linear regression analysis was used to see what variables may influence current GLE scores, regardless of aggressive experiences. Then, the same regression

analysis was run to include whether or not the respondent experienced aggression to determine if that variable was significant.

Comparisons of current GLE scores. When determining what effect aggression may have had on current leader efficacy scores, it is important to determine if there is any difference between the respondents who did experience aggression from those who did not experience aggression. To do this, analysis was done two ways. First, independent sample t-tests were conducted to determine if there was a difference in mean GLE scores between the two groups. Then, regression analysis was done on survey items that had significant differences to determine what correlations existed between variables in the study and respondents' answers.

When conducting independent sample t-tests on current aggregate GLE scores and construct scores, there was no significant difference between the respondents who claimed to have experiences with aggression and those who did not. When t-tests were run looking at each item within the GLE instrument, however, the following items had significant differences:

- GLE 03 (Means) - Count on my leaders to support high standards of ethical conduct
- GLE 08 (Means) - Go to my superiors for advice to develop my leadership
- GLE 14 (Self-Motivation) - Develop detailed plans to accomplish complex missions
- GLE 19 (Means) - Count on others to give me the guidance I need to complete work assignments

Recognizing that there were significant differences between the two groups of respondents' current assessment on these particular scales, further analysis was done to determine whether aggressive experiences were significantly correlated with the respondents' scores on these items. Spearman correlation analysis revealed no significant correlation between experiences of aggression and current GLE aggregate scores.

To determine what might have influenced the differences in responses to these specific survey items, linear regression analysis was done to see what correlations may exist between the variables within this study and the current GLE scores for these particular survey items. For each of these regression models, the GLE item score referenced above was used as the dependent variable. Personal demographics (Age, Race, and LGBTQ) and professional demographics (Years Since Tenure, Years as Dean, Years at Institution, Highest Earned Degree, and Discipline) were used as independent variables. Additionally, the respondents' answers about whether or not they experienced aggression from other women were included as an independent variable (Yes=1, No=0).

When looking at GLE 03 (counting on leaders to support high standards of ethical conduct), the results produced a model that was significant at the $p = .001$ level and provided one significant variable—Aggressive Experience. Responses from individuals who reported experiencing aggression from other women were negatively correlated with scores for GLE 03. This indicates that women who experienced aggression reported lower scores for counting on their leaders to support high standards of ethical conduct. This model, however, only produced an R^2 of .04, indicating that this result only explained approximately four percent of the variance. Table 47 displays the results from the regression model.

Table 47

Effect of Aggression Experience on GLE #3

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	8.71	.20		43.20	.00
Aggression Experience (Yes=1)	-.81	.25	-.21	-3.24	.00

Note. $R^2 = .04$, $p = .001$

For GLE 08 (going to superiors for advice to develop my leadership), the results produced a model that was significant at the $p < .05$ level and provided two significant variables. Similar to the last model, responses from individuals who reported experiencing aggression from other women were negatively correlated with scores for GLE 08. This indicates that women who experienced aggression reported lower scores related to going to their supervisor for advice to develop their leadership skills. The other significant variable was related to discipline. Responses from women whose discipline was included in the Other category were positively correlated with this survey item, indicating that these women felt more confident in going to their superiors for advice to develop leadership skills than women in other disciplines.

Similar to the last model, however, the R^2 for this model was very low (.04), indicating that it explained very little of the variance. This, combined with the fact that the model was significant at the $p < .05$ level (rather than .001 level), brings cause for concern in giving this data much value. Table 48 displays the results from the regression model.

Table 48

Effect of Aggression Experience on GLE #8

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	7.85	.26		30.26	.00
Discipline: Other	1.15	.51	.14	2.26	.03
Aggression Experience (Yes=1)	-.67	.32	-.14	-2.11	.04

Note. $R^2 = .04$, $p = .01$

For GLE 14 (confidence in developing detailed plans to accomplish complex missions), the model proved to be significant at the $p < .001$ level and produced three significant variables. Responses from women in the disciplines of Medicine (Medicine, Dental, and Veterinary Medicine) and Law were negatively correlated with GLE 14 scores, indicating that they generally reported feeling less confident in developing detailed plans to accomplish complex missions when compared to women deans in other disciplines.

The third variable was related to whether or not the respondent reported to having experienced aggression from women. Responses from women claiming to have had these experiences were positively correlated with GLE 14 scores. This would infer that these women actually felt more confident about developing detailed plans to accomplish complex missions than women who had not had these experiences.

The R^2 in this model was higher than the previous GLE survey items at .10. This indicates that the results account for approximately 10 percent of the variance. Although

this was higher, the generally low R^2 still points to the limited value of these results.

Table 49 displays the results from this regression model.

Table 49

Effect of Aggression Experience on GLE #14

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	8.13	.17		46.88	.00
Discipline: Law	-1.31	.48	-.17	-2.71	.01
Discipline: Medical	-1.48	.39	-.24	-3.78	.00
Aggression Experience (Yes=1)	.50	.2	.15	2.34	.02

Note. $R^2 = .10$, $p < .001$

For GLE 19 (confidence in counting on others to give guidance needed to complete work assignments), the model proved to be significant at the $p < .01$ level and produced two significant variables. Similar to the other three models for GLE scores, whether or not the respondent reported to have experienced aggression from women proved to be a significant variable in the model. In this case, responses from women who stated they did have these experiences were negatively correlated with GLE 19 scores. This would indicate that they felt less confident in counting on others to give guidance needed to complete work assignments when compared to women who did not have these experiences.

The second variable was related to highest earned degree. Responses of women who reported their highest degree to be an Ed.D. were positively correlated with the GLE

score. This would infer that these women were more confident in counting on others to give guidance needed to complete work assignments.

Similar to all of these models, however, this model produced a very low R^2 of .05, indicating that it only explained about five percent of the variance. Combined with the reduced significance level of the model, the value in this finding is questionable. Table 50 displays the results from this regression model.

Table 50

Effect of Aggression Experience on GLE #19

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	7.45	.24		30.53	.00
Degree: Ed.D.	1.48	.60	.16	2.49	.01
Aggression Experience (Yes=1)	-.76	.30	-.16	-2.53	.01

Note. $R^2 = .05$, $p < .01$

Overall, results from comparison of GLE scores for respondents who experienced aggression from women and respondents who did not have this experience revealed no significant differences in overall leader efficacy scores or construct scores for the three GLE constructs. When comparing responses for each survey item, however, there were four significant differences. Three of these items assessed the respondent's belief in their ability to count on organizational leaders, superiors, or colleagues to support their success. Results showed that women who experienced aggression from women generally had lower scores on these items than women who did not experience aggression. When asked about their confidence to develop detailed plans for complex problems, however,

women who experienced aggression reported higher efficacy scores in relation to this task than women who did not have these experiences.

Regression analysis of leader efficacy scores excluding aggression experiences.

To determine if aggression had a significant effect on leader efficacy scores, it is important to first see what variables were correlated to GLE aggregate and construct scores without taking into account whether or not the respondents reported experiencing aggression from women. In these models, the independent variables included the respondent's personal and professional demographics. The first model's dependent variable was the current aggregate GLE score. The next three models used the current GLE construct scores (Action, Means, and Self-Motivation) as dependent variables. While the models each reported a few significant variables, none produced an R^2 of more than .08. Table 51 reviews the results of these four regression models.

Table 51

Effect of Personal and Professional Demographic Variables on Current GLE Scores

Dependent Variable	R2	Significant Variables	B	Sig.
Current Total GLE Score	.08	Discipline: Law	-15.97	.02
		Race: Black/African Am.	11.13	.04
		Years Since Tenure	.33	.05
		Degree: Ed.D.	17.34	.01
Current Action GLE Score	.04	LGBTQ	5.57	.03
		Discipline: Law	-5.70	.03
Current Means GLE Score	.04	Degree: Ed.D.	5.93	.03
		Discipline: Other	4.66	.03
Current Self-Motivation GLE Score	.06	Discipline: Medicine	-5.96	.00
		Discipline: Law	-6.29	.01

The model looking at aggregate GLE scores showed that responses from law deans were negatively correlated with GLE scores. This would indicate that these individuals generally reported lower leader efficacy scores than deans in other disciplines. This same negative correlation appeared within the regression models looking at the Self-Motivation and Action construct scores. In general, law deans reported lower levels of leader efficacy than deans in other disciplines.

Two other discipline groups were significant in the construct scores. Responses from deans within the Medical discipline (Medicine, Dentistry, and Veterinary Medicine) were negatively correlated with GLE Self-Motivation construct scores, indicating that these women generally reported lower scores in this part of the GLE. Responses from deans in disciplines that were included in the Other category were positively correlated with GLE Means construct scores, indicating that these women generally reported higher leader efficacy scores in this part of the GLE.

Two personal demographics proved to be significant in these models. Responses from women who identify as Black/African American were positively correlated with aggregate GLE scores. This indicates that these women generally reported higher levels of leader efficacy when compared with women of other races. Additionally, responses from women who identified as LGBTQ were positively correlated with GLE Action scores, indicating that they generally reported higher leader efficacy scores within this construct.

Effect of aggressive experience. The next four models ran simulated the same models as the previous four but added an additional independent variable—whether or

not the individual answered “Yes” to the question about having experienced aggression from other women. Whether or not a respondent reported to have experienced aggression from women was only significant in one model.

When running models for the aggregate GLE score, the Action construct scores, and the Self-Motivation construct scores, the independent variable about whether or not the respondent said she experienced aggression from other women (Yes=1, No=0) did not have a significant effect. This would indicate that these experiences did not have a lasting effect on current leader efficacy levels that differentiated them from women who did not have aggressive experiences.

The model where the aggressive experience was a significant variable was in regard to the GLE Means construct score. This model proved to be significant at the $p < .005$ level and produced an R^2 of .06. Responses for women who said that they did have aggressive experiences were negatively correlated with the GLE Means construct score, indicating that these women generally reported lower current GLE Means scores. While one might be tempted to infer that the aggressive experience may have had a lasting effect on leader efficacy scores toward Means, with an R^2 indicating that this accounts for only six percent of the variance it would seem questionable. Table 52 displays the results from the regression model looking at the GLE Means construct score.

Table 52

Effect of Aggression Experience on GLE Means Construct Score

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	52.27	1.11		47.13	.00
Discipline: Other	5.19	2.17	.15	2.39	.02
Degree: Ed.D.	6.68	2.70	.16	2.48	.01
Aggression Experience (Yes=1)	-3.11	1.37	-.14	-2.26	.03

Note. $R^2 = .06$, $p < .005$

Whereas the last section showed that there was very little difference in leader efficacy scores between respondents who experienced aggression from women and those who did not, data in this section confirmed that the experience of aggression did not have a significant effect on leader efficacy scores. In the only model that showed that aggressive experiences were significant (the GLE Means construct), the model proved only to explain six percent of the variance in scores. These results suggest that the experience of aggression from women did not have a significant lasting effect on leader efficacy.

Review of quantitative results. The in-group analysis looking at current leader efficacy scores for respondents who experienced aggression showed that there was a significant and generally positive difference between former GLE scores and current GLE scores. Results indicated that the respondents believed that their leader efficacy generally improved since the aggressive experience. When looking at which variables were most correlated to these differences in scores, aggression scores from the NAQ-R

did prove to have a significant and increasing effect. The behaviors that seemed to have the strongest negative effect were examples of work-related bullying and involved ignoring the respondent's opinions and presenting them with an unmanageable workload. Additionally, results showed that whether or not the aggressor was either American Indian, Asian, or Hispanic was correlated with the difference in scores. Because there was no significant difference in current GLE scores for women with aggressors with different races, this result suggests that the impact of aggressive behavior from these women may have been less than when the aggressors were Black/African American or White/Caucasian. Again, however, this finding should be considered with caution due to the low representation of aggressors within this race category.

Between group analysis showed that there were few differences in current leader efficacy scores when looking at women who experienced aggression and those who did not. Paired sample t-tests revealed no significant difference for aggregate GLE scores and construct scores. When looking at each survey item individually, however, four proved to have significant differences. These results indicated that women who experienced aggression reported lower efficacy scores in relation to counting on leaders to support high standards of ethical conduct, going to superiors for advice in developing their leadership, and counting on others to give the guidance they need to complete their work. These women did, however, report higher efficacy scores when it came to developing detailed plans to accomplish complex missions than women who did not experience aggression.

The final analysis of this section involved linear regression analysis on current leader efficacy scores to determine if aggressive experiences were a significant factor in

explaining the variance. This variable did not prove to be significantly correlated to overall leader efficacy scores, nor did it prove to be correlated to the construct scores around Action or Self-Motivation. It did prove to be significant when considering the construct scores around Means which aligned with the findings from the independent t-test results relating to the specific GLE questions. The three questions that demonstrated lower leader efficacy toward relying on others for guidance and advancement are all part of the GLE Means construct. The regression model looking at the impact of aggression on this construct score, however, explained very little of the variance. Overall, these results indicate that when looking at the quantitative data, the aggressive experiences did not have a lasting or significant effect on women's efficacy toward leadership, with the exception that women may have less trust or confidence in their superiors and/or colleagues.

Qualitative results. Of the 159 individuals who completed the GLE, 97 percent (n=154) of respondents answered the question: *In what ways do you think this experience diminished or empowered your current sense of leader efficacy?* Of the 154 responses, 30 responses did not adequately address the question, leaving 124 responses to be included in the analysis. Of that 124, approximately 10.5 percent (n=13) of respondents stated that they did not think the experience had any effect on their efficacy toward leadership. In contrast with the results about how women felt at the time of the experience, the majority of women, 68.5 percent, (n=85) made statements indicating that they felt the experience empowered their efficacy toward leadership while only 16.1 percent of respondents (n=20) made statements indicating that they felt the experience

diminished their confidence toward leadership. The following sections will review the themes that emerged from these positive and negative statements.

Positive impact: Ways aggression enhanced leader efficacy. Approximately 68.5 percent (n=85) of the respondents stated that the experience of aggression from other women enhanced or empowered their current sense of leader efficacy. From these eighty-five responses, three themes emerged. The first theme was related to how the respondents felt they had an increased ability toward resilience and confidence in their leadership. The second theme was that the experience was valuable to the respondents because of the lessons learned that brought them increased awareness and/or savviness in dealing with these types of issues. The third theme incorporated much of the first two themes and explained that these women felt the experience helped them to become a better leader.

Increased resilience/confidence. Many of the women mentioned how the experience helped to increase their confidence in themselves because of the fact that they felt *tougher* for having persevered through it. One respondent stated it very simply saying, “[It] just gave me a thicker skin.” Another respondent with the same sentiment said, “I think it helped toughen me up.” Elaborating a bit more on this concept of developing a thicker skin, another respondent wrote, “It has made me stronger. I had to develop a bit of a thicker skin to deal with people who might be jealous or who are intentionally trying to bring you down.”

Some of the responses demonstrated how these women began to develop more self-confidence and relied less on validation from others. One example of this sentiment

is a statement provided by a women referencing the struggle that many competent women have regarding *likability*, saying,

Overall, it was empowering. To some extent, I got over the typical feminine concern about being liked. Or, maybe I should say that I have become more able to internalize the rational argument that not everyone will like everything I do as a leader. And being a leader will of course mean some criticism from others.

Another woman's response demonstrated this sentiment by providing a concrete example of how she was less dependent upon support from others saying, "Today, I believe it is my own self-confidence and goals that keep me motivated and I do not expect any genuine support from the provost or president." Being able to move past the desire for approval or anxiety in dealing with others' perceptions appears to help develop a new level of self-assurance in women who had these aggressive experiences. A third respondent whose response reflected this sentiment explained how her experience allowed her the freedom to make and learn from mistakes saying,

The experience made me understand what and how I could effectively lead, where to tread and where not to tread, when and how to deal with others' prejudices, and provided me with confidence that I can make mistakes and learn from the mistakes.

Other respondents spoke about how the experience helped give them the confidence to trust their instincts related to leadership. One respondent wrote how the experience impacted her leader efficacy saying, "[The experience] enhance[d] it— showed that confronting the behavior head on that I could resolve it." Another mentioned how it gave her more confidence in her own judgment saying, "If anything, it empowered me to believe that I should stick to what I think is right." Another mentioned how the experience helped develop conflict management skills saying, "Over the years it has empowered me. I am much better at dealing with conflict and do not let people like

this undermine my ability to lead or achieve goals.” Another respondent stated how working through the experience helped reassure her that her ideas had merit, saying, “[It] helped me to see that it was not something I did and that my goals and plans were [s]olid.”

There were so many statements about how the experience helped to strengthen these women because they survived despite the aggression. A statement offered by one woman summed up the sentiment saying, “I am a better leader for having survived while staying true to myself.”

Increased savviness in navigating group dynamics. In addition to the experience giving some women a lasting sense of confidence and ability for resilience, many respondents explained how the lessons learned from the experience gave them increased awareness about the complexities of these situations and enhanced their savviness as to how to navigate through them. Whereas the prior reference to increased understanding of interpersonal dynamics (from the time of the aggressive experience) was described with a more skeptical tone, when referencing their current leader efficacy respondents portrayed this learning in a more positive light. One respondent explained, “It made me wiser and more politically savvy.” Another commented that, “In the long run, I am a better informed leader, now that I know a bit more about the “underbelly” of faculty dynamics.”

Many women spoke about how the experience increased their awareness around these complicated interpersonal interactions and the impact that they can have on people. Their responses demonstrated a deeper level of understanding as to how the aggression had more to do with the aggressor and less about themselves. One woman wrote about how she now understands the dynamics of the situation involving race and age saying,

I know what the situation was all about. I was a younger, African American and she was an older white woman. As such, that caused a major rift as she often . . . suggested that I received the job based on my race and ethnic background.

Another example of how respondents recognized that the attack was not personal and thus could shift their perspective was reflected in this response from one respondent, “[I] have been working through the aggression aimed at me to not take it personally. I have compassion for the women who are bound to their ways, seemingly motivated by anger and whatever has wounded them.”

Results from earlier qualitative and quantitative analyses showed that leaving the institution was one strategy that some women described as having a positive effect on leader efficacy scores. This positive effect was further described in some of the responses to the question asking how they feel the experience impacted their current leader efficacy. The respondents mentioned how their experience at one institution helped to inform how they approach leadership at another institution. One respondent wrote that she, “feel[s] more empowered because [she] learned some valuable lessons from the experience.” Another woman’s response demonstrates how she feels better equipped to identify problematic behaviors, address behaviors, and keep things in perspective saying,

I’m in a different institution and if I see some of the similar behaviors popping up, I am in a sense more wise. I see them for what they are. I generally address them sooner—but not always. But I can keep things in perspective a bit better.

Overall, it seemed that the experiences of aggression provided different perspectives for women to view interpersonal dynamics. When reflecting on those experiences, many women described how these experiences helped to inform their current actions in being a more effective leader.

Increased leadership empowerment. Similar to the statements made about how the experience impacted their leader efficacy at the time of the incident, many respondents indicated that they believed the experience empowered them to become a more effective leader. Some respondents noted how the experience showed them what characteristics they did not want to emulate. One respondent wrote,

I think it helped me be a better leader. I learned how not to treat people who were competent and had the ability to move forward as a leader. I am better at determining how to work with colleagues so we can all succeed.

Another response demonstrating this same sentiment was, “I recognize good leadership qualities—and the poor ones too—the ones I want to avoid. I do feel like a better, more confident leader now.”

Similar to the responses regarding how women felt at the time of the aggressive experience, some respondents wrote about how they now felt more comfortable standing up to individuals who behave in an aggressive manner. One woman wrote,

It empowered me, once more as it was not the only experience in my academic life. I got used to these challenges and that they are part of the environment in which we function, but I also learned to call on people when they are offensive and rude and this works best when you do it in front of everyone when it is actually happening. In a very polite manner let the person know how offensive and/or insensitive their behavior or comments may be.

Another wrote “that confronting the behavior head on [showed] that I could resolve it.”

Another woman wrote, “It empowered me with dealing with difficult people. It made me handle situations head on instead of hoping they would improve.”

Most responses that indicated they felt the experience made them a more empowered leader credited the fact that particular leadership traits were enhanced. One respondent, for example, acknowledged the challenge and hurt of the experience while

also describing how it helped to enhance her confidence toward leadership saying, “This experience made me question my own competence at the time. However, I believe that it empowered me to be a more reflective and sensitive leader.” Other examples of quotes related to how the respondents felt it enhanced their leadership are listed in Table 53.

Table 53

Responses Related to How the Experience Helped Develop Leadership Skills

Skill	Response
Build strong teams	“The experience empowered me to focus on the need to develop strong teams and to review and adjust team membership to effectively work toward the greater good.”
Strategically implement projects	“I feel more empowered now to be able to strategically implement collaborative projects and structures.”
Reflective	“I[t] made me even more reflective. It enhanced my coaching and leadership style.”
Managing Conflict	“Over the years it has empowered me. I am much better at dealing with conflict and do not let people like this undermine my ability to lead or achieve goals.”
Managing Group Dynamics	“I think it made me a much more effective leader. I know now what to watch for in group dynamics, and I am much more sensitive and responsive to the underlying “chatter” that can build to a crisis point. I am also more effective at using my leadership team to diffuse situations with faculty and staff. And finally, I am more clear in my expectations and in setting boundaries of acceptable behavior. I do not attempt to be everyone’s friend—or become rattled when I realize someone is angry with me. I have learned to live with discomfort in myself and others.”

Negative impact: Ways aggression diminished leader efficacy. While the majority of respondents felt the aggressive experience ultimately had a positive impact on their current leader efficacy, sixteen percent of respondents (n=21) made statements

about how they felt the experience diminished it. Responses within this category suggested that the uniqueness of higher education politics contributed to the respondent's negative perception which led many to want to leave the organization. Additionally, most of the responses within this category were from respondents whose experiences were fairly recent, indicating that they may not have had enough time to gain perspective on the situation. Other responses from women whose experiences were longer ago, however, indicated there may have been a lasting negative effect on their self-esteem.

The unique structural aspects of shared governance between faculty and administration and the challenges associated addressing aggressive behavior within this system were mentioned in a number of responses to explain how they contributed to the respondents' diminished leader efficacy. One respondent, in reference to the divide between faculty and administration wrote,

It diminished my current sense of leader efficacy in the sense that I am not sure how to please the faculty. I thought we had built a strong community and sense of shared purpose. The event in the meeting, and then the subsequent "faculty only" meetings made me feel as if there are stronger barriers between "us" and "them" than I had perceived ("us" being administrators, and "them" being faculty).

Another respondent also referenced divisions between groups of people saying, "The experience slightly diminished my sense of leader efficacy because I could not persuade the person or the groups involved to accept my position on the changes." One woman whose experience was within the past year wrote, "Without opportunities to reassign two faculty members elsewhere in the University, or to otherwise find ways to diminish their influence and intimidation tactics, I find myself without any real power to affect the direction of the unit."

This lack of cohesion challenged women and their belief in their ability to successfully navigate the politics of their organizations. Their responses demonstrated how complex these political environments are and highlight the sense that there are limits in what leaders can do. For example, one respondent wrote,

This experience, the political environment at the university and the reluctance of this university to take a hard stance on issues makes me much more skeptical regarding what support I would receive if important issues emerge around politically-charged issues.

Another respondent wrote about how she sensed these limits even after overcoming the initial challenges saying, “In many ways, I think I overcame that initial experience, but there is always a concern that if I push too hard against prevailing entrenched entities, I’ll be marginalized and ignored.”

Other responses mentioned about how the experiences convinced the women that they would not be successful at the organization. One woman whose experience was within the past year specifically stated that she still had confidence in her leadership capacity but, “I do not feel I can be effective at this institution under this leadership.”

Other women expressed this sentiment in mentioning their decision to leave the institution. One woman stated, “The experience does diminish my sense of leader efficacy. Knowing that my leadership has been questioned influenced my decision to retire sooner.” Another stated, “The dean had sufficiently undermined my position and had created division in the department. I felt I had no choice other than to leave.”

Another respondent wrote,

It diminished my sense of leader efficacy in so far that I left the institution where I had served for 12 years with the support of the department. The dean had sufficiently undermined my position and had created divisions in the department. I felt I had no choice other than to leave. It was not a unit or university in which I

wished to stay. I certainly had no desire to stay in a college where the dean presided.

The fact that these women perceived the situation to be hopeless in many cases could be perceived as frustrating. Their responses also reflect, however, that they were perhaps wise enough to realize when they could not change the situation and they may have saved themselves from further frustration.

Many of the responses about how these experiences diminished leader efficacy were from women whose experiences were quite recent. While the average length of time since the aggressive experience for all respondents who had experienced aggression was approximately six years, for these 21 responses, 47.6 percent (n=10) were from individuals whose experiences were within the past year and 67 percent (n=14) were from women whose experiences with female aggression were within the past three years. These more recent responses sounded similar to responses provided by respondents earlier in the survey when answering how they felt at the time of the experience. In other words, these respondents who referenced the negative impact of the behavior on current leader efficacy could be considered still *in* the experience.

Of the seven responses where the experience was more than three years ago, most of the responses also included some positive statement about their leader efficacy in addition to the negative statements. The fact that these women with more time since the experience made mention of a positive outcome (in addition to a negative outcome) could indicate that individuals are able to gain perspective and transition their negative perspective into something positive as time progresses.

There were a few disconfirming statements, however, that are important to mention. While the majority of respondents were speaking from experiences within the past three years, a few women whose experiences were longer ago indicated that the experience had lasting effects. One woman whose experience was more than five years ago wrote, “Now I am in recovery. I vacillate between a deep sense of peace being out from under the ugliness and moments of utter hurt when I wrap my head around the cruelty and unfairness of what I lived through.” Another woman whose experience was 10 years ago wrote, “I sometimes joke that I have a bit of PTSD from my previous institution—only it isn’t really a joke.” These statements indicate the powerful and lasting effects that these experiences can have for some women. It is important to recognize that while many women are able to successfully navigate through the experience, it may have a long term effect on how they see the world and relationships.

Impact on relationships with other women. The third open ended question asked in this section of the survey was: *In what ways do you think the experience impacted your relationship with other women?* The purpose of asking this question was to help assess whether the experience with aggressive behavior had a lasting impact on how the respondents interact with other women. While one might inquire as to why these responses were not integrated into the previous sections about how respondents felt the experiences impacted their leader efficacy, women deans sometimes wrote about how the experience had a positive impact on leader efficacy but had a negative impact on their relationships with women. Thus, this section reviews the results for this particular question. Of the 154 responses to this question, 139 provided statements that adequately answered the question. The highest proportion of statements included 35 percent of

respondents (n=54) who said they did not believe the experience had an impact on other relationships with women. Of the remaining answers provided, 25 (n=39) percent of women felt the experience strengthened their relationships with other women and 30 (n=46) percent felt it had a negative impact.

As stated, 35.1 percent of respondents (n=54) stated that they did not believe the experience had an impact on other relationships. Many of them explained that they really saw these women as “outliers” and that most of their relationships with other women were positive. One woman wrote, “The vast majority [of women] are not self-concerned in this way and are wonderful colleagues.” Another wrote, “I like to work with women in general, she was an outlier.” Respondents explained that because they attributed the behavior specifically to these women, it did not impact their relationships with other women. One respondent stated, “Everyone is an individual. I do not apply that baggage to other women.” Another explained, “I see the behavior as specific to the individuals and do not think it impacted my behavior toward other women in general.” These statements echo results from prior research that showed that these negative experiences do not subsequently reflect the majority of female relationships (Jones & Palmer, 2011).

Twenty five percent of respondents (n=39) made statements in their response explaining that they believe their experience with the aggressor(s) actually helped to create more positive relationships with other women. The majority of these respondents talked about how they were more committed to supporting and mentoring women as a result of their experience. One woman wrote that the experience, “helped me to be able to better mentor other women, and to listen better to both their words and their underlying (sometimes unspoken) concerns.” Another wrote, “I try to be a good mentor to all those

who report to me.” Others wrote, “It made me more committed to being a good mentor to junior women,” and “I am very proactive in mentoring, developing and promoting the women who work for me.”

What is interesting about these statements, however, is how the respondents generally spoke from a perspective of influence and power. They mention mentoring *junior* women or those who report to them. These statements make sense in that many of these women may have had aggressors in higher level positions which secured their commitment to be a different type of leader. On the other hand, the lack of reference to peers and/or women in higher positions may indicate something more. For example, it would seem easier to commit to supporting women who are junior because they would seem less likely to serve as a threat to the woman’s position or authority. The dynamic may differ, however, when referring to supporting peers or superiors.

A greater percentage of women (approximately 30 percent of respondents (n=46)) stated that they believed their experience had a negative impact on their relationships with other women. These responses generally stated that they were more “cautious” or “guarded” with other women and less trusting as a result of their experience. Many respondents stated that they were less likely to be candid and open about their personal lives with women they did not know well. A number of respondents mentioned how they are more cautious about the types of relationships they develop with women. One woman wrote, “[It] made me very cautious about developing personal versus professional relationships with female co-workers—best to keep my personal female relationships outside of the workplace.” Another wrote, “I believe I have been more cautious in forming relationships with other women in academic positions.” One respondent

provided further explanation and a comparison to how these relationships compare with men saying,

I am likely more guarded with women than with men, in particular because the conflicts I have had with women in higher education have revealed that they will treat me differently in private than they will in public. Men who I have conflicts with are more open about this, and this honesty is helpful.

Many of the respondents specifically referenced their caution toward women in higher level positions. One woman wrote, “It made me suspicious of other, more senior, faculty’s motives in other situations. It certainly heightened my sense [of] caution in trusting more senior women.” Another wrote that she was, “Guarded with women in authority as to their motives and trustworthiness.” Another respondent stated this same sentiment and explained how this can likely happen because of the automatic association of the experience these women might have in saying, “Initially, I was wary of the first Provost I worked for when I became dean. Her personal circumstances were surprisingly similar to the dean noted in this report.”

While some respondents wrote about the negative impact on relationships with aggressors or aggressors’ allies, most made broader statements about the experience having a negative impact on relationships with women in general and, in some cases, men. One person wrote, “I am slower to build relationships with women because I have to wait and see what their ethics are and how they treat women.” Another wrote, “It also has made me wary of trusting anyone—male or female—at work.” Another wrote, “It made me more wary of senior leaders—but both male and female.” These results suggest that these types of experiences may have a damaging effect on relationships in general—not just relationships with women.

While many of the positive comments mentioned earlier by women who had experienced aggression were focused on their willingness to support junior women, many of the comments here demonstrate a less trusting attitude toward people who are in higher positions in the organization—both men and women. A representative example of this was, “I have become more cautious toward women in leadership roles and I try to avoid situations that could place me in direct competition with women, especially women who are my senior or higher in rank.”

These attitudes support the hypothesis offered earlier that it may be easier for women to support female colleagues who are lower in rank and have less authority over the woman’s success. When it comes to trusting more senior colleagues, the women in this study indicated a tendency to trust these women less and to build relationships more slowly.

Review of qualitative results. While the quantitative results indicated that the aggressive experiences did not have a lasting and significant impact on leader efficacy scores, the qualitative results demonstrated that approximately 90 percent of respondents felt that these experiences impacted their current efficacy toward leadership. The majority of women (68 percent) felt that the experience had a positive impact, making statements about how they felt increased confidence around resilience, that they were savvier in navigating interpersonal dynamics, and that they felt it empowered them as a leader to address and manage conflict and develop further leadership skills.

While sixteen percent of women made reference to how the experience negatively impacted their leader efficacy, the majority of respondents with these statements had experiences that were within the past three years, and 47 percent of responses represented

experiences within the past year. The fact that these events are so recent suggest that a respondent's perspective may change as time passes and they are able to view the experience differently.

When asked how the experience impacted relationships with other women, the responses were broken generally into thirds. One third of respondents felt that it did not affect relationships, mainly because they saw these aggressors as outliers and not representative of experiences with women in general. Another third (actually about a quarter of respondents) voiced that they felt the experience enhanced their relationships with other women, with many respondents noting that they were more committed to helping to mentor and support other women. Often, however, women mentioned willingness to mentor someone junior to them. The last third of the women explained that they felt the experience had a negative effect on their relationships with other women, often stating that they are now less trusting and slower at building relationships. This attitude was specifically referenced when discussing relationships with women in positions of authority. These results indicate that while experiences of aggression may have positive effects on women when they interact with junior women, it may have negative effects when women interact with women in senior level roles.

Review of Results from Research Question #2

When analyzing the effects of aggressive behaviors by women toward women and the impact on leader efficacy scores, there were a number of findings. First, when examining the perceived effect on leader efficacy at the time of the aggression, quantitative results demonstrated that aggressive experiences did have a negative effect on leader efficacy scores. Qualitative data analysis confirmed this finding. Specifically,

the women in this study explained that their leadership was influenced by feeling disoriented which caused them to question their leadership capability and to reconsider whether or not they were willing to take up leadership roles.

When comparing leader efficacy at the time of the aggressive act versus their current leader efficacy, there proved to be a significant and positive difference for most women, demonstrating that their efficacy toward leadership tasks improved with time. Additionally, quantitative analysis revealed no significant difference in overall leader efficacy scores between women who experienced aggression from women and those who did not. Qualitative analysis, however, revealed that some women actually felt that the aggressive experience *enhanced* their current sense of leader efficacy, stating that they believed it increased their confidence and made them a more empowered leader. When asked how the experience impacted their relationships with other women, the answers were split in approximate thirds with some respondents stating that the experience did not impact relationships, others explaining that they are more committed to helping women (particularly junior level women), and others explaining that they are less trusting with women (particularly senior level women).

Research Question 3: Responses

The third research question asked:

3. What themes around strategies and responses emerge amongst women leaders who have experienced aggression from women?

The intent of this research question was to determine what strategies most women used to help navigate through these experiences and whether they felt these strategies were effective. For the quantitative analysis for this question, respondents answered

questions from a survey based on research by Keashly and Neumann (2013) as explained in chapter three. Respondents were asked to select which strategies they used to address or help manage the aggressive behavior and whether they felt the strategy had no effect, helped the situation, or made the situation worse. Descriptive statistics provided information about the most commonly used strategies and their effects. Logistic regression analysis was also used to determine if there were correlations between different variables and the strategy used. For the qualitative analysis, respondents were asked two open-ended questions about their top three strategies used and what advice they would give to other women who are experiencing a similar type of aggression from other women. Categorical coding along with additional descriptive and comparative coding helped to identify four overarching categories of responses women tended to use.

Quantitative Analysis

For the quantitative analysis of these results, descriptive statistics provided an initial assessment regarding which strategies were most often used and whether or not respondents felt the strategy helped, hindered, or had no effect on the situation. Logistical regression analysis for each strategy also allowed for more in depth analysis to see what variables may influence women to utilize particular strategies more or less often.

Descriptive statistics. Of the 209 respondents who stated that they had experienced aggression from other women, approximately 72.2 percent (n=151) responded to the survey questions about responses. Table 54 provides the frequency counts for each response and the percentage of respondents who felt this strategy made the situation better, had no effect, or made the situation worse.

Table 54

Strategies Used and Perceived Effectiveness

Strategy			Better		No Effect		Worse	
	n	%	n	%	n	%	n	%
Stayed calm	151	94.4	99	65.6	39	25.8	3	2.0
Spoke with family and friends	139	86.9	76	54.7	52	37.4	1	.7
Spoke with co-workers	137	85.6	68	49.6	55	40.1	6	4.4
Avoided the person	99	61.9	38	38.4	46	46.5	9	6.0
Told supervisor	97	60.6	35	36.1	44	45.4	14	14.4
Asked colleagues for help	95	59.4	48	50.5	33	34.7	3	3.2
Acted like she didn't care	76	47.5	22	28.9	41	53.9	7	9.2
Asked the aggressor to stop	75	46.9	10	13.3	41	54.7	18	24
Acted extra nice	65	40.6	14	21.5	40	61.5	7	10.7
Ignored	60	37.5	13	21.7	30	50	8	13.3
Tried not to take it seriously	49	30.6	16	32.7	22	44.9	5	10.2
Went along	49	30.6	7	14.2	22	44.9	17	34.7
Told HR	38	23.8	9	23.7	22	57.9	3	7.9
Someone spoke with the aggrssr	37	23.1	4	10.8	26	68.4	2	5.4
Filed a formal complaint	24	15.0	2	8.3	15	62.5	4	16
Lowered her productivity	22	13.8	3	13.6	13	59.1	4	18.2
Told the union	14	8.8	1	7.1	12	85.7	1	7.1
Threatened to tell	14	8.8	1	7.1	11	78.6	0	0.0
Requested a transfer	12	7.5	2	16.7	9	56.3	1	8.3

Of these responses, the most common strategies used were *speaking with co-workers*, *speaking with family and friends*, and *staying calm*. These strategies were also perceived to be among the most effective approaches in making the situation better.

While none of the 19 strategies showed an overwhelming response indicating that it made

the situation worse, there were some strategies that showed higher percentages indicating they helped to worsen the situation. Specifically, *going along with the behavior*, *asking the aggressor to stop*, and *lowering productivity* were strategies reported to worsen the situation most often.

The results of this descriptive overview appear to confirm findings from existing literature. Overall, women tended to pick strategies that did not involve direct confrontation with the aggressor and when they did use those more assertive strategies, they felt that these typically had no effect or made the situation worse.

Logistic regressions. To determine if there was any relationship between respondent or aggressor characteristics and the type of response utilized, logistic regression analysis was used. In these models, the selected strategy was used as the dependent variable and respondent, aggressor and organizational demographics were used as independent variables. Table 55 shows the results for each regression model.

Of the 19 models run, 17 produced some result. Of those 17, three produced a Nagelkerke R-Square of above .20. The model that produced the highest Nagelkerke R-square was for the strategy of *avoiding the person*. This strategy produced a Nagelkerke R-square of .35 and Cox & Snell R-Square of .26. In this model, there were five significant variables.

Table 55

Logistic Regression Results for Each Strategy as a Dependent Variable

#	Dependent Variables	Cox & Snell R ²	Nagelkerke R ²	Significant Variable(s)	B
1	Spoke with coworkers	.03	.05	Stage: Admin Role	-.991
2	Spoke w/ family/friend	.07	.13	# Yrs Since Tenure	-.069
				Discipline: Health Professions	-1.601
3	Stayed Calm	.02	.06	Stage: Full Professor	-1.716
4	Avoided the person	.26	.35	Race: Black/Afr. American	-2.823
				Discipline: Other	3.987
				Aggressor Position: Higher	1.674
				Degree: Ed.D.	-1.515
				Degree: Medical	-1.619
5	Told supervisor	.07	.09	Aggressor Position: Higher	-1.011
				Discipline: Law	-1.229
6	Act like you don't care			None	
7	Ask colleagues for help	.07	.09	Discipline: Nursing	1.398
				Stage: Full Professor	-1.540
8	Ignored	.03	.04	Institution: Female-dominant	.958
9	Asked to stop	.15	.21	Aggressor Position: Higher	-1.168
				Discipline: Nursing	1.047
				Stage: Admin Role	1.014
				Aggressor Race: AI/A/H	1.974
10	Extra Nice	.08	.10	Yrs Since Tenure	-.051
				Aggressor Race: Black/AfrAm	1.414
11	Went along	.07	.10	Discipline: Other	1.400
				Aggressor Position: Higher	.872
12	Lowered productivity	.02	.04	Aggressor Position: Higher	.844
13	Not take seriously	.04	.06	Stage: Associate Professor	1.788
14	Told union	.03	.06	Aggressor Position: Higher	1.169
15	Told HR	.03	.05	Aggressor Race: AI/A/H	1.453
16	Someone spoke w/ agg			None	
17	Filed a formal complaint	.08	.14	Discipline: Other	1.849
				Stage: Before tenure	1.368
18	Transfer request	.09	.22	Stage: Before Tenure	1.863
				Stage: Associate Professor	2.962
19	Threatened to tell others	.07	.15	Discipline: Other	1.493
				Stage: Before tenure	1.539
				Stage: Associate Prof	1.887

Note. Models with Nagelkerke R-squares are greater than .20 are bolded.

Responses for women who identified their aggressor to be in a higher position were positively correlated with the response of avoiding the person, indicating these respondents were more likely to employ this strategy than for women whose aggressors were peers or subordinates. In fact, women whose aggressors were in a higher position had an 87 percent probability of using this strategy. Additionally, responses for women whose discipline was within the Other discipline category were also positively correlated to this response. Responses from women who identified as Black/African American and those whose highest earned degree was either an Ed.D. or a Medical Doctorate were negatively correlated with avoiding the person, indicating that they were less likely to choose this strategy when compared with other women.

The model with the second largest amount of explanatory power was for the response strategy of *requesting a transfer*. This model produced a Nagelkerke R-Square of .22 and Cox & Snell R-Square of .09. This model produced two significant variables, both of which had to do with the stage of career when the aggressive experience was reported to have happened. Responses for women who said that the aggressive experience happened either before obtaining tenure or when they were at the associate professor level were positively correlated, meaning that these women were more likely to request a transfer compared to women in higher level positions (e.g. Full Professor, Administrative Roles, and Deans). In fact, while most respondents had only a three percent probability of choosing this response, individuals who experienced the aggression prior to earning tenure had an 18 percent probability of requesting a transfer and individuals who experienced the aggression as associate professors had a 40 percent probability of requesting one.

The third model that produced a Nagelkerke R-square above .20 was related to *asking the aggressor to stop the behavior*. This model had four significant variables. Responses for women who identified their aggressor as being in a higher level position were negatively correlated with this strategy, indicating that these respondents were less likely to have asked the aggressor to stop. This could be viewed as a reasonable response given the fact that people may fear confronting their superior because these individuals are in a position of authority and power.

The other three variables—the nursing discipline, the administrator stage of career and the aggressor's race—were all positively correlated to asking the aggressor to stop, indicating women were more likely to use this strategy than other strategies. Nursing deans generally reported asking the aggressor to stop more than women in other disciplines. While there is no data to suggest why this might be true, one could hypothesize that perhaps there is something unique about the nursing field that makes addressing someone about concerning behavior a favorable option. Further research could explore this hypothesis. Additionally, women who reported the aggressive experience to have happened when they were in an administrator role also asked the aggressor to stop more than women who experienced it at other stages of their career. These women may feel more comfortable than others, in part because they are more likely to have been at the institution for a considerable amount of time. Whereas deans are often hired from outside the organization, other administrative roles such as associate dean or department chair are often filled internally by individuals with some tenure at the institution. Being that earlier results demonstrated that women with more time at their institution were less likely to experience aggression, one could suggest that these

administrators feel safer in confronting individuals more than women in lower level positions or women who are newer to the organization. Finally, responses from women who identified their aggressor as either American Indian, Asian, or Hispanic were also positively correlated to this strategy, indicating they reported asking the aggressor to stop more often than women whose aggressors were White/Caucasian or Black/African American. These findings imply that perhaps women felt more comfortable approaching women in these racial groups and less comfortable approaching White/Caucasian aggressors or Black/African American aggressors.

Response effect on leader efficacy scores. To assess the potential effectiveness of these different strategies, linear regression analysis was used to determine which strategies were correlated to current leader efficacy scores. With the aggregate current GLE score as the dependent variable, the 19 different strategies were used as independent variables. The resulting model proved to be significant ($p = .003$) and produced an R^2 of .09, indicating that it explained approximately nine percent of the variance. The model produced three significant variables.

The strategies of *being extra nice* and *not taking it seriously* proved to be negatively correlated to current GLE scores, indicating that individuals who utilized those strategies generally reported lower leader efficacy scores than other women. This implies that these strategies were counterproductive to addressing the aggressive behavior. The only strategy that proved to be positively correlated to leader efficacy scores with any significance was *requesting a transfer*. This strategy proved to have a large coefficient ($\beta=22.81$) which suggested that women who used this strategy generally reported leader efficacy scores approximately 13 percent higher than women who did not use this

strategy (when compared to the average GLE score). This result requires further exploration and the qualitative results in the subsequent section provides additional data to understanding this finding further. Table 56 displays the results of the regression model.

Table 56

Effect of Response Strategy on Current Leader Efficacy Scores

Variable	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
(Constant)	179.99	2.75		65.51	.00
Not taking the behavior seriously	-11.09	4.59	-.21	-2.42	.02
Act extra nice	-8.86	4.11	-.18	-2.16	.03
Request a transfer	22.81	7.91	.25	2.88	.01

Note. $R^2 = .091$, $p = .003$

Review of quantitative results. Quantitative analysis for this research question was conducted in four different ways. First, descriptive statistics provided information about the strategies most often utilized and which strategies were perceived as most effective in making the situation better. Results showed that staying calm, speaking with family and friends, and speaking with co-workers were the most utilized strategies. These strategies were also three strategies that were perceived to have helped the situation to improve.

The second way data was analyzed included logistic regression models for each of the 19 strategies to determine what other variables might influence the respondent's choice in strategies. Of the 19 models run, only three produced results with R-Squares

above .20. One model showed that when the aggressor was in a higher level position, women were more likely to choose avoiding the aggressor as part of their response strategy. Another model looked at who was more likely to ask the aggressor to stop and suggested that nursing deans, women in administrative roles, and women whose aggressors were either American Indian, Asian, or Hispanic were all more likely to use this avoidance strategy when compared to other women. Finally, when looking at who was more likely to make a transfer request, women who had not yet earned tenure or were at the Associate Professor level were more likely to choose this strategy than women in other roles.

The third way data was analyzed aimed to determine which strategies were correlated with leader efficacy scores. Using linear regression analysis, current leader efficacy scores were used as the dependent variable and the 19 different strategies served as independent variables. The model showed that three strategies were significant in explaining a small amount of the variance (nine percent). Not taking the behavior seriously and acting extra nice both proved to be negatively correlated with leader efficacy scores, suggesting that women who used these strategies reported lower leader efficacy scores. This demonstrates that these strategies were ineffective in helping the situation. Making a transfer request, however, was positively correlated with leader efficacy scores, indicating that women who used this strategy reported considerably higher confidence in their ability to demonstrate leadership. The next section reviews the results from the qualitative analysis, which allows for comparison with these quantitative results in order to more fully understand the experiences of these respondents.

Qualitative Results

Of the approximately 160 respondents who completed the survey about response strategies, 96 percent (n=153) offered answers to the open ended questions. The first question asked: *In your own words, please describe the top three strategies that helped when you were navigating through this experience.* In the first coding cycle for this data, descriptive coding was used to help comb through the data and ensure that responses met the criteria for the question. For example, only responses that mentioned *strategies* that *helped* the respondent through the experience were included for analysis. Responses that could not be clearly identified as a strategy, like “feminism,” and “compliance,” were excluded, along with strategies that were described as ineffective. For example, one respondent wrote, “Provost hired a leadership coach which only served to make the situation worse. Person I was told to confide in was really a mole.”

Usable responses were listed and then compared to the categories offered in the survey. Codes that appeared numerous times but that did not fit those predefined categories were added as new categories. These categorical codes were reviewed to determine what broader categories the individual codes group into. This analysis resulted in four broader categories: *individual response*, *engaging others*, *confronting the aggressor*, and *leaving the position*.

Individual response. Of the 373 codes identified, 50.9 percent (n=190) grouped into the overarching category of an individual response. These response strategies focused on the respondent’s personal or internal response that did not directly involve other people and would not necessarily have been noticeable by the aggressor. This category was further broken down into two subcategories: *respondent-focused* and

aggressor-focused. Table 57 lists the categories used for coding for these two subcategories and the number of responses for each item.

Table 57

Individual Response Strategies

Individual Response Sub- Category	Strategy	n
Respondent focused	Stayed calm	32
	Focused on goals/work*	28
	Continued to act with integrity*	23
	Focused on other activities*	16
	Believed in herself and decisions*	11
	Ignored or did nothing	11
	Personal reflection/assess what role she (respondent) may be taking*	9
	Avoided the individual	6
	Work around it*	5
	Acted as if I didn't care	1
	Lowered productivity	0
	Not take behavior seriously	0
Other focused	Saw the situation for what it was and didn't take it personally*	20
	Be strategic in planning communication (in order to work around it)*	11
	Behaved extra nicely	9
	Tried to understand/empathize with aggressor*	8
	Went along with the behavior	0

* indicates the category was developed through descriptive coding

Respondent-focused. Categories that were identified as respondent-focused individual reactions were those where the respondent internalized their response to try to manage the situation. These would not have necessarily been visible to others as they were internal coping mechanisms used to help the respondent make sense of the situation and determine how to move forward. They did not involve anyone else, including the aggressor. Examples of codes from the survey that fit within this sub-category are: *stayed calm, avoided the individual, ignored it or did nothing*. Additional codes that

emerged from the descriptive coding that did not fit into these pre-determined categories included: *personal reflection/assessment of how she (the respondent) may be contributing to the situation, working around the behavior, focusing on goals/work, continuing to act with integrity, believing in herself and her decisions, focusing on other activities (e.g. prayer, exercise, meditation, vacation).*

Of the 190 responses involving an individual response, 74.7 percent (n=142) were within this respondent-focused category. The most commonly mentioned responses were staying calm (n=32), focused on goals/work (n=28), continuing to act with integrity (n=23), and focusing on other activities (n=16). Some examples of responses within these categories are included in Table 58.

Table 58

Examples of Quotes Representing Respondent-Focused Individual Responses

Respondent-Focused Strategy	Quote
Stayed calm	"I put it in context, I felt I was calm and professional, so I felt good about my reaction, I did explain my position without being aggressive about it"
Focused on goals/work	"I concentrated on doing my job well and serving the larger institutional role rather than taking cues and direction from the individual. In the long run, that was much more effective."
Continued to act with integrity	"Relying on the integrity of my approach; staying consistent in order to win trust from others in the hope that eventually that trust would prevail."
Focus on other activities	"Spending time with family and friends. Writing for "fun," I started a food column, a tremendous escape. Exercise." "Praying about it."

Other-focused. Categories that were identified as *other-focused individual reactions* were those where the respondent took individual action that indirectly involved another person (typically the aggressor). Some of the behaviors in this category could have been visible to others if they were aware of the respondent's efforts. The distinction between this category and the former (respondent-focused) is that while the former focused on thoughts or behaviors directed toward themselves, these other-focused behaviors are those that involved the aggressor (even if the aggressor did not realize it). Examples of codes from the survey that fit within this sub-category are: *behaved extra nice* and *went along with the behavior*. Additional codes that emerged from the descriptive coding included: *saw the situation for what it was and didn't take it personally, be strategic in communication/action (in order to work around it), and try to understand/empathize with the aggressor*.

Of the 190 responses in the individual response category, 25.3 percent (n=48) were in this other-focused grouping. The most common response was *seeing the situation for what it is and not taking it personally* (n=20). Some examples of these responses are included in Table 59.

Table 59

Examples of Quotes Representing Other-Focused Individual Responses

Example Response	Quote
Seeing the situation for what it is and not taking it personally	“Realizing that this situation had very little to do with me or anything I could control.”
	“Realized that she was jealous and decided not to “feed” the alligator. Basically, I continued to lead our college and not worry about her criticism.”
	“Trying to remember her actions were coming from a place of weakness and damage.”
Being extra nice	“Killing with kindness as a signal that I would not be negatively impacted by this behavior.”
	“Showed compassion without lowering standards.”

These internal strategies reflect the respondents’ attempts to manage the situation internally and indirectly rather than addressing the behavior directly with the aggressor. The fact that such a large portion of the respondents selected these types of strategies (51 percent) helps confirm findings from past research that individuals are more likely to choose passive, indirect and informal strategies to address aggressive behavior (Keashly & Neuman, 2013).

Engaging others. The second main category of responses was around engaging others in discussion about the aggressive behavior. Of the 373 codes, 36.7 percent of responses (n=137) were within this category. These responses mentioned speaking with others in order to gain reassurance, perspective, or support. Some were done from a personal perspective that did not involve individuals at the organization, such as: *talked*

with family and friends, therapy/counseling, external coach/leadership courses, or obtaining legal counsel. Others involved people at the organization like: *talked with co-workers, asked colleagues for help, talked with supervisor, told union, told human resources, or made a formal complaint.* Table 60 shows the frequency distribution for each of these categories.

Table 60

Engaging Others Strategies

Engaging Others	Strategy	n
	Talked with co-workers	51
	Talked with family and friends	36
	Talked with superiors	26
	External coach/leadership courses*	6
	Therapy/counseling*	5
	Told HR	4
	Asked colleagues for help	4
	Legal counsel*	3
	Told union	2
	Made formal complaint	0

* indicates the category was developed through descriptive coding

The most mentioned response was *talking with co-workers* and respondents typically explained that they did this to help make sense of the situation or to make allies and build a support system. In addition to gathering that support from colleagues, respondents indicated that they utilized support by *talking with family and friends* to gain perspective from individuals they trust. The other category with large representation involved *talking with superiors*, which once again was typically done to garner support and build alliance, similar to talking with co-workers. Examples of quotes within these categories are included in Table 61.

Table 61

Examples of Responses Involving Talking with Others

Strategy	Quote
Talked with co-workers	“Spoke with select colleagues that helped me to work around the individual and complete the task”
	“Approached a senior colleague whom I trusted and asked for advice and counsel. The senior colleague advised me and protected my interests going forward. Became an ally.”
	“Telling others was not in the reporting sense but more in managing my own mental health and stress. Venting.”
Talked with family and friends	“Venting with family and friends who helped me self-reflect on my own issues and contributions to the situation.”
	“I talked it out with trusted friends and family members, helping to formulate my response.”
	“Having a good personal support system to help remind me that I was a capable individual.”
Talked with superiors	“Talking with my boss, the Provost, he offered ways to handle the individual and also backed me in any attempts to mitigate the situation.”
	“Informing my superiors at all times of the situation to insure that they got the info with evidence from me. (Because she had a 30-yr history, she felt she had more clout than I did and was also talking to some of my superiors about me.)”

While talking with co-workers and supervisors were two of the most utilized strategies, a few women wrote about how they intentionally did not speak with co-workers because they felt that it would be unprofessional to do so. The fact that they

specifically mentioned this when it was not directly related to the question highlights this as a significant issue in their mind. A response that represents this sentiment explains,

I did not talk about it with my co-workers or anyone in the organization. It was a personal point of pride with me that I did not stoop to trying to undermine her . . . It would have been beneath me to try to expose her or return favor for favor.

This perspective offers a contrasting perspective that requires further reflection, specifically regarding how a respondent's strategy for speaking with colleagues or a supervisor may align with the aggressor's strategy when employing gossip as an aggressive behavior.

Confronting the aggressor. The third overarching category of responses involved confronting the individual in some form. The survey offered three categories for this group but only one—*asked the individual to stop*—had responses mentioned in these qualitative responses. Based on the descriptive coding with responses that appeared to closely match this category, the title was adjusted to include *confronting the individual*. The other two categories that emerged from the descriptive coding were: *speaking with the individual to listen to their side and work to find a solution together* and *addressing the behavior through disciplinary measures*.

Only 8.8 percent of responses to this open-ended question involved confronting the individual. Table 62 shows the frequency distribution based on the question and demonstrates that the most common response in this category was *asking the individual to stop/confronting the individual* with 21 responses. Many of these responses reflected how the respondent attempted to address the situation calmly and others illustrated more assertive approaches when the respondent's frustration level required a different approach. A few examples of responses within this category are included in Table 63.

Table 62

Strategies Used to Confront the Aggressor

Confronting the Aggressor	Strategy	n
	Asked the individual to stop/confronted them	21
	Spoke with the individual, listened and tried to work through it	10
	Addressed behavior from a disciplinary stance*	2
	Had someone speak with the individual*	0
	Threatened to tell others	0

* indicates the category was developed through descriptive coding

Similar to the reflection offered in the previous section, some responses related to confronting the individual in a way that could potentially be perceived as aggressive in itself. For example, the last two quotes offered in Table 63 demonstrate that one respondent made a decision to move the aggressor's office and another respondent "counteracted her behavior with aggressive behavior," referencing her raising her voice. While the respondent may feel justified in their behavior and may feel that it had a positive outcome, one could argue that the aggressor may have viewed the situation differently and seen the respondent as the aggressor.

Table 63

Examples of Responses Involving Confronting the Aggressor

Strategy	Quote
Asking them to stop/ confronting the individual	“Talking directly to the woman more than once and saying what she was doing was not ok. (She literally turned her back on me and walked away more than once.)”
	“I talked to the person privately pointing out the unacceptable behaviors.”
	“When she slammed books and yelled at me in the presence of others, I pulled her into my office, closed the door, and told her I would arrange to move her to another office.”
	“During these episodes of aggression, I counteracted her behavior with aggressive behavior (raised my voice). After a while, I felt that she respected me more because I stood up to her.”

Leaving the position. The fourth overarching category of responses was related to leaving the position. The survey offered an option of *asked for a transfer*, but none of the respondents mentioned utilizing this response. Thirteen respondents (3.5 percent of the total respondents for this question) did, however, specifically mention that they chose to leave the organization or the position. Many mentioned that this was due to the fact that they did not feel they had the support needed to navigate the behavior and/or that there was nothing they could do to change the environment. Examples of responses mentioning the decision to leave the organization are included in Table 64.

Table 64

Examples of Responses Involving Leaving the Organization

Strategy	Quote
Left the position	<p>“Look[ed] for other employment—which was the best decision I’ve ever made.”</p> <p>“I plotted my way out of the situation. I knew from the beginning that I would be leaving that job, so I set things in motion to get on the market for a better position.”</p> <p>“I spoke with family . . . and friends . . . who reminded me that I was not the problem! Began looking for other positions! I saw I was marketable and that re-built my confidence in my leadership abilities!”</p>

Quantitative results showed that responses from women who said they requested a transfer were positively correlated with current leader efficacy scores, indicating that women who selected this strategy were more confident in their abilities around leadership. The statements presented in response to the qualitative question help explain this result further. The responses from women who decided to leave the organization indicate that they were able to recognize that the conflict was context specific and they believed they could be successful in a different environment.

Advice from respondents. The second open ended question asked respondents, *“What advice would you give to women who are experiencing a similar type of aggression from other women at work?”* Responses were coded using descriptive coding and then re-coded multiple times until answers seemed to group into broader categories. Table 65 displays these broader categories and the frequency by which they were mentioned in response to this question.

Many of the categories mirrored responses for the previous open ended question. Many respondents, for example, advised women to stay calm and composed in the face of aggression. One example provided by a respondent said, “Remain calm and professional. There is tremendous power in staying calm.” Others wrote about taking the *high road* and “keeping on track with your own agenda and your own set of ethics.” Others wrote about how women need to remember that the aggression is not about them personally but is rather related to the individual’s role in the organization. One respondent described this clearly in stating, “Be prepared to subordinate your ego to the greater good of the institution. You are an instrument of the institution. Much as you may wish to think so, these confrontations aren't about you personally, so don't react personally.”

The majority of responses, however, suggested that women talk with their aggressors and/or confront the aggressive behavior. This is interesting that this response strategy was rated so high yet it was not a strategy used by the majority of women in the study. This suggests that while many did not employ this strategy, they believe women should use it.

Table 65

Advice for Other Women

Category	n
Have a conversation with the aggressor/confront her	43
Consult with others	39
Take the “high road” and let your ethics guide you	25
Stay calm/composed	23
Focus on the larger goals	23
Talk with your supervisor	19
Remember that it is not about you/Don’t take it personally	15
Leave the position	13
Believe in yourself	10

Review of qualitative results. The qualitative analysis related to effective strategies for helping to navigate aggressive behaviors from women colleagues suggests that these women leaders chose individual responses most often when facing this challenge. The most common strategies used included staying calm and focusing on the larger goals. The next most frequently used strategies involved engaging others. While the first category was used most often overall, the most common specific strategies from all of the options was talking with colleagues and talking with friends and family about the situation, indicating that it is common for women to reach out to others for perspective and support. In addition to reaching out to colleagues, many women spoke with superiors about the situation, seemingly again to garner support for their cause. Only 8.8 percent of respondents mentioned confronting the aggressor directly indicating that this is still a response that women are less comfortable with. Finally, 3.5 percent of women stated that they left the position as a strategy for navigating through the experience, mainly because they did not feel they had the support to overcome it. Statements from these women generally displayed a positive perspective on leaving the organization in that they realized the situation was context specific and believed they could be successful elsewhere.

When asked what advice these women would offer to other women experiencing similar behavior, many suggested strategies that mirrored the strategies they used such as staying calm, speaking with colleagues, and speaking with supervisors. Interestingly, however, the most frequently offered piece of advice was to stand up to the aggressor and discuss the situation with them. The proportion of women who advised this strategy was larger than the proportion of women who actually employed this strategy. This suggests

that while women realize this would be the advised strategy, they are reluctant to use it themselves.

Review of Results for Research Question #3

When comparing the quantitative and qualitative results, responses regarding the strategies used to help address and/or manage the aggressive behavior grouped into four categories. The strategies most often utilized were identified as *individual focused*. The second category of responses most frequently named involved *engaging others* and typically included speaking with colleagues, friends and family, or superiors about the situation. These strategies were also identified by respondents as some of the most effective in helping to improve the situation.

The third category of responses involved *confronting the aggressor* and included behaviors like *asking the aggressor to stop* or *asking someone to speak with the aggressor*. These were also the strategies that respondents advised other women to use in situations of aggression. Results indicated, however, that women who used this strategies reported that they felt these often had no effect or made the situation worse. These results help provide understanding for why women may not utilize these strategies more often. If confronting the aggressor does not help improve the situation and can, in fact, make the situation worse, then it does not seem to be an attractive tactic.

The category with the fewest responses was related to *leaving the position*, with only 7.5 percent of respondents selecting this in the quantitative survey and 3.5 percent of respondents mentioning it in qualitative responses. This strategy, however, proved to have the largest impact on leader efficacy scores when compared to all other response options, with women using this strategy reporting approximately 13 percent higher leader

efficacy scores than women who did not use it. The qualitative responses confirmed this finding, further suggesting that women who left recognized that the aggressive behavior was related to the situation at that particular institution and that they could be happy elsewhere.

CHAPTER 5

DISCUSSION

While there is currently almost no research on the effect of aggression on leader efficacy, especially when looking at women leaders in higher education, this study was designed to begin to address this problem. In this mixed methods study I examined the prevalence of aggression among women in the workplace, the effect of this behavior on leader efficacy, and the strategies most used that helped successful women navigate through these experiences. Data from this study came from responses to an online survey that was sent to women deans at doctoral granting institutions in the United States. This chapter includes a discussion on the findings of this study.

In this final chapter, I will present a summary of this research study to include the purpose of the study, research questions, and a review of the methodology. The findings, which were presented in chapter four are summarized and then discussed in reference to their contribution to existing literature and research. The chapter concludes with an explanation of the limitations and delimitations of the study, recommendations for future research, and the significance of this study.

Purpose of the Study

The purpose of this study was to determine to what extent women leaders in higher education experience aggression from other women, how this may affect their self-efficacy toward leadership tasks, and how leaders successfully navigate through it. This was explored by exploring three research questions. These questions were:

1. To what extent have women in higher education leadership roles experienced aggression from women?

- a. What personal and/or professional demographic variables are correlated with experiences of aggression from women?
 - b. What type of aggression are women experiencing from other women?
 - c. What situational factors are correlated to experiences of aggression from women?
2. In what ways does aggression among women impact leader efficacy?
 3. What themes around strategies and responses emerge amongst women leaders who have experienced aggression from women?

Review of Methodology

This study gathered data through an online survey sent to 635 women deans at doctoral granting institutions in the United States and yielded a 48.2 percent response rate. The survey consisted of demographic questions and then a question about whether or not they had ever experienced aggression from other women in their academic career. Respondents who answered “Yes” were asked to think of the most impactful experience of aggression from women and to use that case as a reference when answering the rest of the survey questions. This technique is referred to as the *Critical Incident Technique* and was developed by Flanagan (1954) as a form of narrative inquiry used to help provide more descriptive accounts of events.

To address the first research question, respondents who said they had experienced aggression from women were then asked to complete the revised Negative Acts Questionnaire (NAQ-R), which consisted of 22 survey items. These items asked about whether or not the respondent experienced specific behaviors and, if so, how often these were experienced (Never, Now and Then, Monthly, Weekly, or Daily). They were also

asked (with open ended questions) to describe in their own words what behaviors these women demonstrated that they considered aggressive and what factors they believed contributed to this behavior. Logistic and linear regression techniques were used to analyze the quantitative data, while structural, descriptive and pattern coding were used to analyze the qualitative data.

The survey then asked respondents to complete the Generalized Leader Efficacy Questionnaire (GLE). This instrument consists of 22 survey items assessing a person's efficacy toward leadership tasks. Respondents who answered that they had experienced aggression from other women were asked to complete this instrument twice—once in relation to how they felt at the time of the referenced aggressive experience and once in relation to how they currently feel. Respondents who answered that they had not experienced aggression from other women were asked to complete this instrument for how they feel now. This allowed for comparison between the two groups.

Women who said they did have an aggressive experience were also asked some open ended questions about how they felt the experience impacted their leader efficacy at the time of the experience, what effect it had on their current leader efficacy, and how they felt the experience impacted their relationship with other women. Paired sample t-tests and linear regression models were used to analyze results related to leader efficacy scores at the time of the experience. Independent sample t-tests and regression analysis were used to compare leader efficacy results between the women who had aggressive experiences with women and the women who did not have these experiences. Structural and descriptive coding was used in the qualitative analysis of the open ended questions.

The third section of the survey asked respondents who had experienced aggression from women to complete a survey about the types of strategies they utilized at the time of the aggressive experience. This questions, based on a survey developed by Keashly and Neumann (2013), asked respondents to select whether or not they used particular strategies and whether they felt these strategies helped, had no effect, or worsened the situation. Additionally, respondents were asked open ended questions about what strategies they used to help navigate through the experience and what advice they would give to other women. Linear regression analysis was used to determine what variables correlated with selected response strategies as well as to determine which strategies were correlated with leader efficacy scores. Structural and descriptive coding strategies were used for the qualitative analysis for the open ended questions.

Summary of Findings

While the results were explained in detail in chapter four, I will provide a brief overview here. First, I will describe the results from the first research question, which examined prevalence, form and factors involved in aggressive behavior from other women. Then, I will describe the results related to how these aggressive experiences impacted leader efficacy. Finally, I will review the results around the response strategies chosen and their perceived effectiveness.

Research Question #1

The results that respond to the first research question provided information to help understand aggressive behavior from women from three perspectives: prevalence of aggression, forms of aggression, and situational factors associated with aggression. When looking at the prevalence of experiences of aggressive behavior, results

demonstrated that 68 percent of respondents reported having an aggressive experience with another woman during their academic career. Of this 68 percent, women law deans had a 95 percent probability that they experienced aggression from women. Whereas most deans had a 69 percent probability of these types of experiences, deans in the Applied Sciences/Business fields (business, architecture, engineering, and technology) had only a 45 percent probability of experiencing aggression from other women.

When looking at aggregate scores from the revised Negative Acts Questionnaire (NAQ-R) to examine who experienced greater aggression (as determined by frequency), the analysis included personal demographic variables and professional demographic variables. When considering only personal demographics, women who identified as LGBTQ reported higher aggregate aggression scores than other women. When considering professional demographics, the length of time a woman had been at her institution (Years at Institution) was negatively correlated with aggression scores, indicating that women with fewer years at their institution reported higher aggression scores.

To study what form of aggression women deans experienced, both quantitative and qualitative analysis were used. For the quantitative analysis, linear regressions were used to examine the effects of variables on the NAQ-R constructs—*person-related bullying* (indirect aggressive behavior aimed to marginalize the individual), *work-related bullying* (behaviors aimed to impact the individual's ability to perform their work), and *physical intimidation* (more direct aggressive behavior intended to intimidate the person)—and the individual NAQ-R survey items. Additionally, qualitative analysis was done based on the open ended question asking respondents to describe the behavior

experienced. In both sets of analyses, person-related bullying proved to be the construct most often mentioned.

When considering only personal and professional demographic variables, the quantitative analysis showed that women who identified as LGBTQ and women who were newer to their institutions generally reported higher person-related bullying scores when compared to other women. When looking at work-related bullying, the significant variables were related to the respondent's discipline and years at their institution. Nursing deans and deans newer to their institutions generally reported higher work-related bullying scores than other women. There was no significant model identified for the physical intimidation construct when taking personal and professional demographics into consideration.

Data was further analyzed to identify which specific behaviors were experienced most frequently. The most common behaviors reported when considering both the frequently selected items from the NAQ-R and the qualitative analysis of the open-ended questions included *spreading of gossip or rumors, being ignored or excluded, having false allegations made, public criticism, shouting at or being the target of spontaneous anger, and manipulation.*

For the final part of this research question, additional variables were included in regression analyses to determine if they had a significant effect on aggression scores. Additionally qualitative analysis was used to understand responses to an open-ended question asking respondents what factors they think contributed to the aggressor's behavior. For the quantitative analysis, the following variables were assessed as descriptive statistics and added to the same regression models run earlier to determine the

impact on NAQ-R aggression scores and the three construct scores related to person-related bullying, work-related bullying, and physical intimidation: Stage in Career, Aggressor Comparative Demographics (age, race, experience, and position level comparisons with the respondent), and Organizational Gender Balance.

Descriptive statistics showed that most respondents reported that the experience happened when they were in the dean role (48 percent). Additionally, the majority of aggressors were reported to be the same age (38 percent) or older (40 percent) than the respondent, had more years of experience, and were in subordinate roles. The majority of aggressors were White/Caucasian women (83 percent), with 11 percent being Black/African American and six percent being either American Indian, Asian or Hispanic (these variables were grouped together because less than 10 aggressors were identified for each of these categories separately).

When taking all factors into account in relation to NAQ-R aggression scores, regression analysis showed that four variables were positively correlated with aggression scores, indicating that respondents with these characteristics experienced more frequent aggression from women than respondents with different characteristics: discipline (Nursing), aggressor position (higher), aggressor experience (same), aggressor race (American Indian, Asian, or Hispanic). Additionally, results provided two variables that were negatively correlated with aggression scores. The number of years a respondent was at their institution was negatively correlated with aggression scores, indicating that deans newer to their institution reported higher aggression scores than deans who had been there longer. This could suggest that women who have had more time to build relationships and establish their reputation at an institution are less likely to experience

aggression than women who are newer and have not had the opportunity to do this to the same degree; more research is needed, however, to confirm this idea. Additionally, Years Since Aggression was negatively correlated with aggression scores which could suggest that either aggression experiences have increased generally over time or that there is a time effect in the respondents' recall of the experience where their impression of the experience weakened over time. This model explained 19 percent of the variance.

When looking at the person-related bullying construct specifically and taking all factors in account, four variables were positively correlated with construct scores: age, LGBTQ identification, aggressor position (higher), and aggressor experience (same). These results imply that older women, women who identify as LGBTQ, and women whose aggressors were in higher level positions and/or had the same years of work experience reported higher levels of aggression than other respondents. Additionally, three variables were negatively correlated with person-related bullying scores: discipline (applied sciences/business), the number of years the individual had been at the institution, and the number of years since the aggressive experience. These results indicate that deans within these fields (architecture, business, engineering and technology) generally reported lower person-related bullying scores than women in other disciplines. Consistent with the NAQ-R aggregate aggression scores, women who were newer to their institutions reported higher scores than women who had been at their institutions longer. This model explained approximately 21 percent of score variance.

Results from analysis run for work-related bullying were consistent with the prior models in that scores were generally higher when the aggressor was in a higher position, had the same level of experience, and when the experience was more recent. The only

other variable that proved to be significant was related to discipline where nursing deans reported higher work-related bullying scores than deans in other disciplines. This model explained 23 percent of score variance.

When looking at the physical intimidation construct, the only variable that proved to be significant was the aggressor's race. Respondents who identified their aggressor as either American Indian, Asian or Hispanic reported higher physical intimidation scores. While this could indicate that these aggressors demonstrated this type of behavior more than aggressors of other races, the model only explained four percent of the variance in scores, which does not grant a lot of credibility to the finding.

Qualitative analysis of the open ended question asking about what factors may have contributed to the behavior resulted in three theoretical constructs. First, some respondents felt that the aggression demonstrated was a result of the aggressor's personal issues. Respondents stated that they felt the aggressor had mental health issues, a personality disorder, substance abuse problems, family problems, or was under a lot of stress. These responses demonstrated a level of frustration for the respondent and made it seem like the hypotheses came from them being hurt or angry rather than trying to deeply understand any additional contextual factors.

Most respondents provided answers that indicated that they believed the aggression was a result of social comparison. These respondents made statements hypothesizing that the aggressors felt another woman's success might diminish her value. These responses demonstrated a deeper level of reflection on the part of the respondents in trying to understand where the behavior may be manifesting from.

The third construct that emerged was the idea that the aggression may be a result of formal or informal organizational norms. Responses demonstrating this construct talked about challenges in addressing problems when the aggressors have the security of tenure and/or when the behavior has historically been tolerated with people not willing to address it.

While the regression models provided results that explained approximately 20 percent of the variance in aggression scores and the qualitative responses provided perspective from the respondents' own voices, it is important to recognize that there are other factors that likely contributed to the aggression experiences that are not accounted for in this study. Of course, there is no definitive way to know from this study what those other variables are but, as an example, the fact that the average length of time since the aggressive experience was six years—the exact length of time from the most recent economic recession—could suggest that this might be a possible additional variable. Future studies could explore this and other additional factors that might influence these experiences.

Research Question #2

The second research question examined the impact of aggressive behavior on leader efficacy. Data was collected in reference to how respondents assessed their leader efficacy at the time as well as currently using the Generalized Leader Efficacy Questionnaire (GLE). This was compared to current leader efficacy assessments from respondents who claimed not to have experienced aggression from women. Additionally, respondents were asked open ended questions about how their experiences contributed to their efficacy toward leadership and impacted their relationships with other women.

Respondents generally reported lower leader efficacy scores at the time of the aggressive experience than their current assessment. To look more closely at what might have impacted former leader efficacy scores, regression models included personal, professional and situational variables as well as aggression scores from the aggregate, the separate constructs, and the individual NAQ-R items. The model that explained the largest proportion of variance in scores (37 percent) showed that older women, Black/African American women, and women whose aggressors were either American Indian, Asian, or Hispanic all reported higher leader efficacy scores at the time of the experience when compared with other women. Additionally, three behaviors proved to have a significant negative impact on leader efficacy scores at the time of the experience. Respondents who reported receiving hints to quit their job, having their opinions ignored, and being subject to an unmanageable workload all reported lower leader efficacy scores at the time of the experience than other respondents who did not report these behaviors.

Results were also analyzed for the three constructs (Action, Means, and Self-Motivation) within the GLE for the time of the experience. In all three constructs, Black/African American women reported higher scores than women of other races. Additionally, the respondent's age or the number of years since earning tenure (which was highly correlated with age) were positively correlated with GLE scores, indicating that older women tended to report higher leader efficacy scores for when they were experiencing the aggression. Furthermore, one behavior from the NAQ-R proved to be significant and negatively correlated in all three constructs. Respondents who experienced people making hints that she should quit her job consistently reported lower leader efficacy scores for the time of the experience.

Other variables proved to be significant within each of three specific GLE constructs. The model looking at the effect of variables on the GLE Action construct (confidence in their ability to motivate followers) showed that responses from deans in the Public Service discipline (government, public affairs, political science, or social work) were negatively correlated with GLE Action scores. Additionally, respondents who were subjected to an unmanageable workload also reported lower leader efficacy scores related to the time of the aggression. Respondents who experienced aggressors playing practical jokes reported more positive scores, which indicates that this type of behavior did not appear to have a negative effect when compared with other behaviors.

When looking at the GLE Means construct (confidence in support from superiors, peers or organization to offer advice and support) at the time of the aggression, women whose aggressors were in higher positions generally reported lower GLE Means scores. This makes sense given that aggressive experiences from women in higher positions could likely make the respondent unsure or skeptical about receiving the support they needed from superiors. In this construct, respondents who reported that they had their opinions ignored also reported lower leader efficacy scores. Similar to the GLE Action construct, respondents who reported having practical jokes carried out by people they did not get along with did not have a negative effect on leader efficacy.

Results for the third construct for Self-Motivation (confidence in their ability to motivate themselves and to maintain their integrity) revealed that deans within the disciplines of Law and Public Service both generally reported lower leader efficacy scores for the time of the aggression than deans in other discipline. This is an interesting finding especially given the fact that these particular disciplines rely so heavily on ethics

and integrity for the function of their roles. Perhaps these lower scores are a result of the higher ethical standards within these fields—more research is needed to explore this further. Additionally, in this construct having their opinions ignored and being subject to an unmanageable workload had a negative effect on Self-Motivation scores. When aggressors were reported to have made offensive personal remarks, however, there was a positive correlation with scores indicating that this behavior did not have a negative impact.

Qualitative results demonstrated that 20 percent of respondents felt the experience had no effect on their leader efficacy at the time, 45 percent of women felt it had some sort of negative effect, and 36 percent of women felt the experience had a positive effect. Women who said that they felt the experience had a negative impact described the experience as disorientating and wrote about how it caused them to question their overall leadership capacity and willingness to take up leadership. Of the women who said that they felt it had a positive effect, they indicated that they felt the experience made them more committed to being a better leader, more empowered to stand up against bullying behavior, gave them increased confidence in their ability to persevere in challenging situations, and helped to build their general self-confidence. Additionally, many respondents wrote about how the experience helped to increase their awareness around interpersonal dynamics. When describing this perspective in reference to leader efficacy at the time of the experience, answers portrayed neither positive nor negative effect. While responses indicated that people were less trusting (which would generally be viewed as negative), they also indicated that the women had increased awareness and were savvier when dealing with interpersonal issues.

In addition to looking at leader efficacy at the time of the aggressive experience, analysis was done on the respondents' perceptions of current leader efficacy at the time of taking the survey. Quantitative analysis showed that there was a significant and positive difference between former and current leader efficacy scores, indicating that women who experienced aggression perceived their leader efficacy to have improved since the aggressive experience. When examining the differences in current and former GLE scores, there were some variables that were significantly correlated with these differences. Two variables were related to the respondent's stage of career in which the experience happened. Women who experienced aggression before obtaining tenure or when in an administrative role (or pursuing one) proved generally to have a higher difference in scores (from the time of the aggression to the current time frame) than women whose experience was during other stages of their career. Because these career stages were not significant variables in explaining the variance among former leader efficacy scores, this result suggests that while the impact at the time of the aggression was not significantly different than women in other career stages, women who experienced the behavior before tenure or while in administrative roles had the greatest growth in leader efficacy since the experience. Additionally, one aggressor demographic proved to be significant. Responses from women who identified their aggressor as being either American Indian, Asian or Hispanic were negatively correlated with the difference in GLE scores. Because there was no significant difference in current GLE scores for women with these aggressors, this result suggests that the impact of aggression from women in these racial categories was less detrimental on leader efficacy than when the aggressor was either White/Caucasian or Black/African American.

Three NAQ-R behaviors proved to be significant in this difference of GLE scores. Behaviors where the aggressor ignored the respondent's opinions and presented the respondent with an unmanageable workload were positively correlated with the difference in current and former GLE scores, indicating that there was a larger difference in scores for women who experienced these behaviors. Combined with the results that these behaviors were negatively correlated with former leader efficacy scores and that there was no significant difference in current leader efficacy scores between them and other women who did not experience these behaviors, this result suggests that while these behaviors had significant impact at the time of the experience they generally had no long term impact on the respondents' leader efficacy. Responses from women who reported experiencing practical jokes from people they do not get along with were negatively correlated with the difference in scores, indicating that there was a smaller difference in scores for women reporting this behavior. Combined with the results showing that women who experienced these practical jokes reported higher former leader efficacy scores, this result helps confirm that this behavior had little impact on leader efficacy.

In addition to analyzing the leader efficacy scores within the group of respondents who experienced aggression, it was important to compare the results with results from respondents who claimed not to have aggressive experiences to determine if there were differences between the two groups. This comparison helps determine if experiences of aggression from women is a significant factor in explaining any variance in leader efficacy scores among women deans. It would be helpful to know, for example, if women who experience aggression from women generally report lower leader efficacy

scores than women who do not experience aggression to help determine if aggressive behavior from women has a long term impact on leader efficacy.

Paired sample t-tests showed that there were no significant differences in aggregate GLE scores or GLE construct scores. There were significant differences between the groups, however, for paired sample t-tests on four survey items. Women who experienced aggression reported lower scores on GLE items related to *counting on leaders to support high standards of ethical conduct*, *going to supervisors for advice to develop leadership*, and *counting on others to give guidance needed to complete work assignments*, all three of which are part of the GLE Means construct. Women who reported aggression experiences, however, actually reported higher scores on the survey item related to *developing detailed plans to accomplish complex missions*, which is part of the GLE Self-Motivation construct. Regression analyses run for each of these specific survey items confirmed that aggressive experiences were significantly correlated with responses to these survey items. These results suggest that there was no difference overall between overall leader efficacy scores for women who experienced aggression and women who did not, the experience impacted very specific thoughts around relying on others (negatively impacted) and believing in themselves to develop plans for complex problems (positively impacted).

Finally, to determine if there were differences between leader efficacy scores for women who experienced aggression and those who did not, regression analysis was used to see what variables were correlated with current GLE scores. The first models for the aggregate GLE score and construct scores included personal and professional variables to see what factors might correlate with current leader efficacy scores, regardless of

aggression. A second set of models were run the same way except that they included the question related to whether or not the respondent experienced aggression from other women. Regression analysis for the aggregate GLE score, the Action construct score, and the Self-Motivation construct score demonstrated that whether or not the respondent said she experienced aggression from other women did not have a significant effect. The GLE Means score (related to their confidence in garnering support from superiors, peers or the organization), however, did show that aggressive experiences were negatively correlated with Means scores, indicating that women who had these experiences generally reported lower efficacy scores related to expecting support from their superiors, peers or organization. Given that prior results demonstrated that women whose aggressors were in higher positions had lower former leader efficacy scores for the GLE Means construct and that the three GLE survey items showing lower leader efficacy were related to relying on others, this finding further builds on these results and suggests that aggressive behavior may have a lasting effect on women's leader efficacy specifically around relying on superiors and colleagues.

Similar to the qualitative results for how the respondent felt at the time of the aggression, respondents were asked to describe whether they felt the aggressive experience had no effect, a positive effect or a negative effect on their current leader efficacy. Approximately 11 percent said they felt the experience had no impact on leader efficacy, 68.5 percent made statements about how the experience had a positive effect and 16.1 percent made statements about how the experience had a negative effect.

For women who said that the experience had a positive impact, analysis of the data showed that women generally felt an increased sense of resilience and confidence,

increased sense of awareness and/or savvy in dealing with these types of issues, and that the experiences helped them to become a more empowered leader. Of the women who felt the experience had a negative impact, their experiences tended to be more recent with almost half indicated the aggressive experience happened within the past year and 67 percent within the last three years. Women whose experiences were longer than three years ago typically named both positive and negative effects of the experience on leader efficacy. These results indicate that over time women generally felt that the aggressive experience had a positive impact and helped them to become a more empowered leader. These results, in comparison to the quantitative findings, suggest that while there was little statistical difference in leader efficacy between women deans who experienced aggression and those who did not, the women who experienced aggression generally perceived there to be a long term impact on their leader efficacy.

Respondents were also asked about whether or not they felt the experience impacted their relationships with other women. Of these respondents, 35.1 percent felt the experience did not impact these relationships, explaining that they saw these aggressors as “outliers.” Twenty five percent of respondents indicated that they felt the experience had a positive impact on relationships with other women, stating that they were now more supportive of women, especially junior level women for whom they spend more time mentoring and advocating for. Thirty percent of respondents indicated that they felt their experience had a negative impact on their relationships with other women, stating that they were generally more “guarded” and less trusting, especially of women in positions of authority. This mix of results demonstrates that the impact on

relationships with other women can vary significantly based on the woman's specific experience and perspective.

Research Question #3

The third research question intended to identify the strategies most often used by women when experiencing aggression from other women at work and which of these strategies were perceived to be most successful or impactful on leader efficacy scores. Respondents were asked to complete a survey based on research by Keashly and Neuman (2013) about behavioral responses to aggression in addition to two open ended questions about the strategies they used to address the aggressor and/or manage the situation and what actions they would recommend to others.

Descriptive statistics showed that the most common strategies used involved *speaking with co-workers, speaking with family and friends, and staying calm*. The majority of respondents that used these strategies also felt that they helped make the situation better (versus no effect or making it worse). Logistic regression analyses run on each of the 19 survey items to see what variables were correlated, resulted in three models with R-square results at the .20 level or higher—*avoiding the person, asking the aggressor to stop, and requesting a transfer*.

Avoiding the person proved to have a fairly reliable regression model which indicated that women whose aggressors were in higher level positions were more likely to use this strategy. Black/African American women, however, were less likely to use this strategy, even when the aggressor was in a superior position. *Asking the aggressor to stop* proved to be a strategy less often used when the aggressor was in a higher level position, which is consistent with the previously mentioned strategy where women were

more likely to avoid the person when in a superior role. Results suggested that respondents whose aggressor was American Indian, Asian, or Hispanic, however, were more likely to use this strategy even when the aggressor was in a higher position. Nursing deans and women whose experiences happened while in an administrator role were also more likely to use this strategy, however, if the aggressor was in a higher position, this could reduce this likelihood. Finally, the regression model that examined making a *transfer request* showed that women who had not yet earned tenure or who were in the Associate Professor role were more likely to use this strategy than women in other stages of their career. This could be due to the fact that mobility at these positions is more common and easier than once someone is promoted to full professor (which is less likely to transfer to another institution) or an administrative role.

To determine what effect these strategies had on leader efficacy scores, linear regression analysis was used with the 19 strategies as independent variables and the current aggregate GLE score as the dependent variable. This analysis showed that *not taking the behavior seriously* and *acting extra nice* proved to be negatively correlated with GLE scores, indicating that women who used these strategies generally reported lower leader efficacy scores than women who did not use these strategies. Women who requested a transfer, however, reported leader efficacy scores that were generally higher than other women. This suggests that women who transferred may have realized that the experience was context specific and that they could be successful in a different environment, rather than women who stayed and may have continued to endure the hostile behavior.

Qualitative results of the open ended responses showed that the strategies women named fell into four categories: *individual response*, *seeking assistance from others*, *confronting the aggressor*, and *leaving the position*. Individual responses were those that focused on the respondent's personal or internal response that did not directly involve other people and may not have been noticeable by the aggressor. These responses tended to be either respondent-focused or other-focused. Respondent-focused strategies were ones where the respondent internalized their response to try to manage the situation and included behaviors like staying calm, focusing on larger goals or work, and continuing to act with integrity. Other-focused internal strategies were those where the respondent took individual action but it involved relating to or interacting with the aggressor. These responses included behaviors like recognizing the situation was not about themselves, finding ways to work around the behavior, being extra nice, or trying to empathize with the aggressor.

Responses within the category of *engaging others* involved speaking with other people about the situation in order to gain reassurance, perspective or support. Some of these responses included talking with family and friends, talking with co-workers, or talking with her supervisor.

Response strategies that involved *confronting the aggressor* included asking them to stop or speaking with the aggressor to try to work through the issues. Only 8.8 percent of respondents wrote about a strategy in this category. Responses involving both of these strategies sometimes described aggressive type behavior that was similar to responses about the aggressor's behavior earlier in the study. This suggests that these behaviors might be perceived differently based on the individual's perspective. The respondent, for

example, perceived their behavior as standing up for themselves. The aggressor, however, could likely have described the respondent's behavior as aggressive.

The fourth group of strategies was related to *leaving the position* and included responses about how respondents requested a transfer or chose to resign. Some women discussed how they did not see how the situation was going to improve and decided they needed to leave. Many of these responses demonstrated a very positive outlook regarding their decision to leave. Respondents made statements indicating that they knew they could be successful in a different environment. This aligned with quantitative results that showed requesting a transfer correlated with higher leader efficacy scores.

When women were asked what advice they would give to women in similar situations, the majority of responses suggested talking with their aggressors and/or confronting the behavior. This was an interesting finding given that so few women actually claimed to have done this themselves and how many rated this as one of the least effective strategies on the quantitative survey. Other common responses included staying calm, taking the "high road," and consulting with others. When giving advice to consult with others, many women suggested speaking with colleagues to gain support through "allies" which, given the purpose of building support against the other aggressor, could potentially be interpreted as gossip by the aggressor. The concern around this strategy is similar to that of confronting the aggressor (when done in an aggressive way) in that the advice provided by women might contribute to perpetuating a cycle of aggressive behavior.

Discussion of Findings

Given that this research combined perspectives from different fields of study, the results offer a number of contributions to the current literature. First and foremost, this is the first study to provide data around how prevalent aggressive behaviors from other women are for women in leadership positions and specifically for women deans. Results showed that more than two-thirds of women deans claimed to have experienced aggression from other women within their career, suggesting that the prevalence of this behavior is quite high for women in leadership roles. While this percentage is not directly generalizable, it does suggest that this behavior may be more prevalent than previously realized which is important for women to recognize when considering these positions.

The following sections review additional findings in comparison to existing literature and research. First, findings are discussed related to how personal demographic variables (age, race, and sexual orientation) are correlated with aggression experiences and leader efficacy. Then, findings related to specific disciplines are discussed followed by results showing how aggressor demographics correlated with behavior and leader efficacy. Next, findings are shared around what factors respondents perceived contributed to the aggressive behavior. Then, findings related to leader efficacy are compared with existing literature. Finally, comparisons are made regarding the current literature on response strategies and how those compare with this study's findings.

Personal Factors

This study yielded some significant findings about the effect of personal demographic factors on aggression and leader efficacy. This section reviews these findings in context of the current literature.

Age. While existing literature did not provide information regarding how age may correlate with aggressive experiences or leader efficacy among adults, results from this study revealed some findings related to how age may be related to these variables. When considering age on its own or when including only personal and professional factors, it did not prove to be a significant factor in explaining the variance in aggression scores. It did prove to be significant, however, when additional situational variables were included such as aggressor demographics (e.g. position and experience level) for the person-related bullying construct. When controlling for these variables, age proved to be positively correlated with person-related bullying scores, suggesting that older women reported more frequent experiences of aggression from women than younger women reported. The fact that this variable kept falling in and out of significance in these models would indicate instability and would cause question in assigning too much meaning to this finding. However, the qualitative analysis of the open-ended questions also indicated a connection related to age and aggression.

In the qualitative analysis looking at what factors might contribute to aggression among women, one of the theoretical constructs that developed out of the responses was that aggression may have been a result of social comparison between the aggressor and the respondent. Some of the respondents specifically referenced age as a significant factor, stating that they thought the aggressors felt threatened or resentful of younger

women who appeared to be advancing faster in their careers or past them in the organization's hierarchy. Some respondents even mentioned how older women who were in superior positions worked against their advancement because the respondent did not fit the typical model of an older, established woman moving into leadership roles.

To determine if there was any relationship between age and leader efficacy, analyses were run for both former and current leader efficacy. While age failed to have any significant correlation to current leader efficacy scores, it did appear to significantly correlate to former leader efficacy scores and was a stable variable proving to be significant both on its own and with other variables included in the model. It was significant for the aggregate former leader efficacy scores as well as the construct scores toward actions (confidence in leading others) and self-motivation (confidence in motivating herself and maintaining her ethics). In all of these models, age proved to be positively correlated with these scores, indicating that older women had higher former leader efficacy scores than younger women. Because it was not significant in current leader efficacy scores, this could indicate that the aggressive experience had less of an effect as the age of the woman increased. In other words, the quantitative results would indicate that the aggressive experience caused younger women to question their ability toward leadership tasks more so than older women at the time of the experience.

This makes sense anecdotally given that older women are likely to have more experience. Their more extensive experience may provide additional reassurance and confidence in completing tasks, especially if they have been successful with leadership tasks in the past.

Race. Consistent with former studies that found people of color having experienced higher levels of bullying (Sallee & Diaz, 2013) and reporting lower levels of self-efficacy (Buchanan & Selmon, 2008), the respondent's race proved to be a significant variable throughout this study—although these results were not always consistent with prior research. In terms of frequency or types of aggressive behaviors demonstrated, in contrast with prior research, no race variables proved to be significantly correlated. Sallee and Diaz (2013) suggested that racial minorities report higher rates of bullying behavior than White/Caucasian individuals. However, in this study the respondent's race did not prove to be a significant factor in predicting aggressive experiences. It should be acknowledged that women of color were significantly underrepresented in this study at only 13 percent, which makes true comparison difficult.

While the quantitative analysis of aggression scores did not suggest any results around race, some respondents did comment on how they believed race played a role in experiences of aggression from women. Within the qualitative analysis, the majority of respondents felt that the aggression was a result of comparison between respondent and the aggressor. Some of the Black/African American respondents, in particular, mentioned how they felt that race was a variable in what contributed to the aggressor's behavior. One woman stated, for example, that she believed the behavior was a result of, "Their own biases about women of color in leadership positions."

While race was not a significant variable in evaluating aggressive experiences, it was significantly correlated to leader efficacy scores. While existing literature suggests that women of color may report lower self-efficacy scores than others (Bandura, 1997; Buchanan & Selmon, 2008), this study reported conflicting results for women of color

who participated. Black/African American women actually reported higher leader efficacy scores than women of other races both at the time of the aggressive experience and currently. This suggests that these respondents may have higher levels of confidence in their leadership ability than women of other races. Women who identified as American Indian, Asian, or Hispanic, however, reported no significant differences in former or current leader efficacy scores when compared to White/Caucasian respondents. While on the surface this lack of difference between racial categories appears interesting, it is important to note that only four percent of respondents were included in this category and the fact that the category includes three races makes this finding extremely limited in applicability. More research is needed to explore the experiences of women in these racial groups.

These results are important in interpreting the data because it would be easy to make a potentially false conclusion that Black/African American women are less impacted by aggressive experiences by women based on the fact that their leader efficacy scores at the time of the experience were higher than other women. That fact that their current leader efficacy scores were also higher, however, might indicate that Black/African American women simply had higher rates of leader efficacy in general. Comparing the scores based on race and the differences between current and former leader efficacy scores did not help to provide further clarification.

In terms of response strategies, race was analyzed to determine if there were particular strategies that different racial groups of women were more or less likely to utilize. The only finding related to race came from the responses of Black/African

American women. Results showed that they were significantly less likely to avoid the aggressor in comparison to women in other racial groups.

These results present important new findings that contradict existing literature. Whereas prior research indicated that women of color would experience more aggression and might have lower leader efficacy, this did not prove to be true in this study. While some women of color mentioned race dynamics as perhaps playing a role in why their aggressor acted the way she did, there was not enough evidence to suggest that their experiences were significantly different than White/Caucasian women. Furthermore, the fact that Black/African American women proved to have higher leader efficacy scores than women of other races (both at the time of the aggression and currently) is an interesting and important finding that should be further explored in future research given the generally small sample size of Black/African American women in this study.

Sexual orientation. Existing literature suggests that individuals who identify as LGBTQ are more likely to experience bullying behavior than other individuals (Sallee & Diaz, 2013). Results from this study support this finding as women deans who identified as LGBTQ reported higher aggression scores than other women when considering only personal demographics (age, race, sexual orientation). When incorporating other variables (professional and situational), however, sexual orientation did not prove to be significant on the aggregate aggression score.

More specifically, sexual orientation did prove to be significant and stable when assessing person-related bullying. The average person-related bullying score for women who identified as LGBTQ was 60 percent higher than the average score for non-LGBTQ respondents. It is important to point out that only nine women who identified as LGBTQ

completed the NAQ-R, which could have affected the co-efficients in the regression model (Peduzzi, Concato, Kember, Holford & Feinstein, 1996) and limits the generalizability of this finding.

Despite the finding that these women report experiencing higher rates of person-related bullying, there did not appear to be significant differences in leader efficacy scores for women who identified as LGBTQ. Additionally, women who identified as LGBTQ were not found to be more or less likely to use particular response strategies. Once again, however, it is important to consider the small sample size before drawing overly broad conclusions.

Disciplines

Throughout the study, discipline was included as a variable to determine if it was correlated with aggression frequency or type, leader efficacy scores, and responses. Prior research suggests that women who work in male-dominated fields would be considered less likable (Heilman, 2004), may be subjected to more aggression (Ely, 1994), and may report lower levels of self-efficacy (Betz & Hackett, 1981; Dugan, 2013). Most of this research defines male-dominated fields as STEM fields (science, technology, engineering and math) or business related fields (accounting, drafter, engineer, math). When reviewing the dean population in preparation for survey distribution, the number of women deans was compared to the overall number of deans in that discipline which helped to determine which fields might be considered male-dominated. Because women represented over 50 percent of deans in only one discipline (social work), a different percentage had to be selected when determining what would be viewed as male-dominated. When looking at disciplines where women made up less than 15 percent of

dean roles (consistent with Ely's research looking at male-dominated law firms), engineering, technology and computer science all indicated that less than 15 percent of deans were women. Additionally, women only made up about 18.6 percent of business deans (which were included with these three disciplines in the Applied Science/Business category). The other disciplines that reported less than 15 percent to be made up of women were disciplines that had been combined with others due to low response rates (natural resources and music).

Four disciplines proved to have significant results in relationship to aggression and leader efficacy throughout this study and are explained further below. First, results related to women in the Applied Science/Business discipline are discussed. Then, discussion is presented around the findings related to Law deans. Next, focus is given to deans in Nursing. Finally, discussion is provided for deans in the field of Public Service.

Applied Sciences/Business. While existing literature suggests that women in male-dominated fields like Applied Science/Business might be seen as less likable and thus subject to more aggression (Heilman, 2004), or that these women have lower self-efficacy in their ability to be successful when compared to men or women in other fields (Betz & Hackett, 1981; Dugan, 2013), results from this study contradict these findings. Results from this study demonstrated that deans included in the discipline category of Applied Sciences/Business (which included architecture, business, engineering, and technology) reported experiences of aggression in a lower proportion, suggesting that they perceive themselves as having these experiences less often than women in other disciplines. Furthermore, when considering aggression scores based on the NAQ-R, there was no significant difference in aggregate scores between women in this discipline

versus others. When looking at the construct scores, responses for women deans in Applied Sciences/Business were actually negatively correlated with person-related bullying scores, indicating that women reported experiencing significantly less of this type of behavior in comparison to women in other fields. All of these results indicate that women deans in these fields may experience (or perceive to experience) less aggression from women than women deans in other disciplines.

Additionally, in regard to leader efficacy scores, there was no significant difference for women deans in the Applied Sciences/Business discipline compared to other deans. This was particularly relevant to research where results showed that women in male-dominated fields demonstrated lower self-efficacy than women in female dominated fields (Dugan et al., 2013; Heilbrunner, 2013; Marra et al., 2009). This study would suggest that the difference between disciplines identified in research for undergraduate students may not translate into other contexts such as adult women in leadership roles.

Law. Existing literature specifically in the field of Law demonstrated that women in male-dominated law firms (less than five percent women) reported higher levels of perceived hostility than women in more sex-integrated firms (greater than 15 percent women) (Ely, 1994). Of the 20 women law school deans who participated, 19 said that they experienced aggression and 15 of those women perceived their organization as male-dominated. Consistent with Ely's research, when initially looking at who reports experiencing aggression from other women, law deans were shown to have reported these experiences at a higher proportion than when compared to deans in other disciplines. When looking at aggression scores, however, the scores of law deans were not

significantly different than the average scores for deans in other disciplines. This indicates that while law deans are more likely to report experiencing aggression, the type of aggression that they experience is similar to deans in other disciplines. In other words, the aggression was not necessarily *worse* for law deans but it did happen to more of them.

When looking at leader efficacy scores, law deans also reported generally lower current leader efficacy scores when compared with other disciplines. Specifically, they reported significantly lower scores for the GLE Action construct (confidence in their ability to motivate followers) and GLE Self-Motivation construct (confidence in their ability to motivate themselves and maintain their ethics). Because aggressive experiences did not prove to be a significant variable in current leader efficacy scores, one cannot make a connection between aggression experienced by law deans and leader efficacy scores. When comparing results to leader efficacy scores at the time of the aggressive experience, law deans were only significant in the Self-Motivation construct. This additional data piece could suggest that there may be a lasting effect for law deans regarding this particular construct and their confidence in their ability to stay motivated to complete their goals and maintain their ethics.

Nursing. While existing literature suggests that women in male-dominated fields may experience higher rates of bullying behavior (Ely, 1994; Tolbert et. al, 1995), the only discipline in this study to have significantly higher aggression scores was Nursing which is a female-dominated discipline. These results suggesting that women in this discipline may experience higher rates of aggression was confirmed with a search in the Academic Search Premier database using key words of *bullying*, *workplace* and *nursing* which resulted in sixteen articles about these types of experiences within the nursing

field. In fact, one article described the development of an instrument specifically designed to assess aggressive behavior within hospitals called the Hospital Aggressive Behavior Scale (Waschler, Ruiz-Hernandez, Llor-Esteban, & Jimenez-Barbero, 2013). While most of these articles do not compare aggression between nursing and other disciplines, it does show that there is interest in assessing aggressive behavior within this field.

Results from this study showed that nursing deans reported significantly higher aggression scores when looking at work-related bullying in comparison to women in other disciplines. Despite this finding, however, women deans in this field proved to have no significant difference in leader efficacy scores when compared to other women. This could indicate that while nursing deans report higher levels of work-related aggression, it may not impact them any more than other women having aggressive experiences.

In terms of response strategies, nursing deans did prove to select the strategy of *asking colleagues to help* more often than women in other disciplines. This could suggest that there might be something unique about the environment within this discipline that makes this option attractive when trying to determine how best to address aggressive behavior.

Public Service. The fourth discipline that proved to have significant results was the Public Service discipline (government, public affairs, political science, and social work). Results did not reveal any significant differences in the level or type of aggression experienced by women deans as described in the NAQ-R. When looking at leader efficacy, however, deans in these fields reported lower leader efficacy scores at the

time of the experience (*former leader efficacy*) in comparison with women in other disciplines. Specifically, public service deans reported lower scores for the GLE Action construct (confidence in motivating others) and the GLE Self-Motivation construct (confidence in their own abilities and in maintaining their ethics). Regarding current levels of leader efficacy, however, these deans' responses proved to have no significant difference compared to other disciplines. This could indicate that while these women do not report aggression levels that are any higher than other deans, aggressive behavior could potentially have a stronger effect on women at the time of the experience than women deans in other disciplines. There does not seem to be a lasting effect, however, on their leader efficacy.

Summary of findings related to discipline. The combination of findings related to discipline warrant a little more attention in regard to how they relate to prior research. As stated at the beginning of this section, earlier research suggested that women who work in male-dominated fields may be considered less likable (Heilman, 2004), may be subjected to more aggression (Ely, 1994), and may report lower levels of self-efficacy (Betz & Hackett, 1981; Dugan, 2013). When reviewing existing literature and the respondents who participated in this survey, three of the four disciplines discussed in this section—Applied Science/Business, Law, and Public Service—would be considered male-dominated. Prior research would indicate that the results for deans in these disciplines would be consistent yet this was not the case in this study.

While the results for the law deans was consistent with prior research showing a higher number of reports of aggression, results for public service deans showed no significant difference for the frequency of aggression and applied science/business deans

actually showed fewer reports of aggression. Furthermore, nursing deans which is a female-dominated field showed higher frequency of work-related bullying than deans in other disciplines.

When looking at leader efficacy, law deans proved to have lower current leader efficacy scores, aligning with prior research but public service deans and applied science/business deans showed no significant difference in current leader efficacy scores when compared to deans in other fields. These inconsistent results in male-dominated disciplines may indicate that there are additional contextual factors in discipline areas that have more influence on the frequency of aggressive behavior and/or leader efficacy. More qualitative research could be helpful here to understand these contextual factors.

Aggressor Demographics

Existing research suggested that most aggressors were superiors although peer aggression could be almost as frequent, according to some studies (Keashly & Neuman, 2013). The results of this study, however, somewhat contradict these findings. The majority of aggressors as reported by women deans in this study were subordinates. Most of the deans in the study named faculty members as the aggressors. The perception of many of the respondents was that faculty job security due to tenure may make them more willing to act aggressively than subordinates in other fields where job security is not as strong.

When examining the statistical analysis included in this study, however, there were two aggressor demographics that emerged a number of times. First, aggressors who were in higher level positions, although not the majority (31 percent), seemed to have the strongest effect on leader efficacy. These results indicate that the experience and the

effect of aggression from a woman superior may be the most challenging and impactful in breaking someone's confidence. Again, however, these did not prove to have lasting effects on leader efficacy. When examining response strategies in relation to aggressors in higher positions, deans in this study were more likely to avoid the aggressor and less likely to ask the aggressor to stop. These results suggest that women deans may be less willing to ask their manager or an organizational leader to behave in a particular way because of the perceived power and control in their relationship.

The other aggressor demographic that proved significant in a number of models was related to race. Aggressors who were identified as either American Indian, Asian or Hispanic were grouped together for statistical purposes. These individuals as an entire group were positively correlated with aggression scores (specifically physical intimidation scores). This group of aggressors, most often engaged in bullying behavior that was in the form of yelling at the respondent. Interestingly, however, aggressors in this racial category were also positively correlated with leader efficacy scores at the time of the aggression, indicating that the effect of the experience did not have as strong an effect on leader efficacy when compared to aggressors who were Black/African American or White/Caucasian. When looking at response strategies chosen by individuals whose aggressors were identified to be either American Indian, Asian, or Hispanic, results also indicated that deans were more likely to ask the aggressors to stop than women whose aggressors were in other race categories.

These results together might suggest that while aggressive behavior may be more frequently exhibited by American Indian, Asian, and Hispanic women, respondents felt more comfortable confronting individuals from these racial groups and thus the behavior

had less of a negative effect on leader efficacy than aggression in other forms or by other women. Conclusions about these results, however, should be made with caution. The small numbers of aggressors identified within this category and the mix of races included make it difficult to support broad inferences. Future studies with a larger sample should explore whether race was the significant factor or whether it was the form of aggressive behavior that limited impact on leader efficacy and allowed confronting the aggressor to be a favorable response. For example, perhaps it is easier or perceived by women to be more acceptable to confront or dismiss behavior that is done out in the open than for indirect behavior that takes place behind the scenes.

Factors Contributing to Aggression

Existing literature provides some perspective on what might drive women to act aggressively toward other women. Prior research suggests that women may behave aggressively toward other women if there is a perceived power imbalance where they feel their social status is threatened or if they think others are likely to form exclusionary alliances that would put them at a social disadvantage (Benenson, 2011; Crocker & Luhtanen, 1990; Salin, 2003).

Analysis of the open-ended responses related to what may have contributed to the aggressive behavior aligns with research that argues that women are more likely to act aggressively when their social status is threatened and provides additional ideas for what might contribute to this behavior. Respondents' answers generally fell into three categories or theoretical constructs for what they perceived to be driving aggression. The majority of respondents made statements about how they believed the aggression was a result of social comparison where the aggressor perceived the respondent's success as

something that could potentially diminish the aggressor's value in the organization. In situations where the aggressor had previously been the token female and took pride in that status, for example, the perception was that these women were threatened by another woman who was seen as successful.

A second theoretical construct presented by respondents was related to their belief that the aggression they experienced was a result of the aggressor's personal issues. While some of the respondents made personal assessments of the aggressor's mental health, others wrote about how the aggressor was under stress or had family issues (which likely increased stress levels). Their increased stress could potentially have been related to the construct around social comparison. If a woman viewed another woman's emerging success as threatening, for example, the stress that results from this could lead to engaging in undesirable behavior, including acts of aggression.

Understanding these potential drivers in aggressive behavior is important for women in leadership roles or those who are pursuing leadership roles. This data demonstrates that the behavior may not be about what the victim has done but is instead more about potential insecurity of the aggressor. As demonstrated in some of the responses from women in this study, understanding this distinction may help women to take the behavior less personally and prevent themselves from questioning their own ability for leadership tasks. Furthermore, this perspective is valuable for women more generally—by understanding how individual insecurities may manifest in behavior toward other women, individuals might actually be able to prevent or minimize the aggressive behavior by addressing the underlying issue.

Another reason presented in the literature for why women may act aggressively is related to the unique environment of higher education. Twale and DeLuca (2008) refer to higher education's governance structure and campus politics as motivating structures and processes that contribute to bullying. Bjorkqvist, Osterman, and Lagerspetz (1994) describe the effect/danger ratio, positing that people assess the risk associated with a selected behavior and explain that if the effect outweighs the risk (danger), the individual is more likely to take action. The unique aspect of tenure that faculty members in higher education have provides security from serious repercussions of poor behavior (Twale & DeLuca, 2008).

The results of this study confirm these sentiments in that the third theoretical construct was that aggression was a result of formal or informal organizational norms. Respondents made statements demonstrating that the security of tenure and expectation for debate were perceived as almost granting permission for poor behavior. Additionally, respondents felt that informal norms kept colleagues from stepping in to confront poor behavior because they felt it would not make a difference or because they had something to lose as these aggressors may be part of the peer review process. These results are consistent with Myers's (2012) research that explains that bystanders are reluctant to challenge their colleagues because they are afraid of accusations being made against them about violating the aggressor's freedom of speech.

These three theoretical constructs for what may drive aggressive behavior among women—aggression as a result of social comparison, aggression as a result of personal issues (stress), and aggression as a result of formal or informal group norms—provide relatable hypotheses that can be further examined in future research. Being that these

reasons come from the respondent's perspective, more research is needed to explore these issues from the aggressor's perspective.

Effects on Leader Efficacy

This study looked at the relationship between aggression and leader efficacy in two ways—first, as to whether or not the respondents felt that aggression impacted leader efficacy at the time of the experience and perhaps more importantly, whether or not it had a long term impact. Existing literature examining the effect of aggression on leader efficacy does not exist, making this study one of the first to examine this relationship. More specifically, it is the first to examine how aggression from other women impact leader efficacy for women in higher education leadership roles.

The closest related literature that exists explores what experiences help to build self-efficacy. As mentioned in chapter two, Bandura (1997) asserts that one of the four ways to build self-efficacy involves verbal persuasion. Research studies examining this assertion show that positive verbal persuasion can help increase an individual's self-efficacy (Banks, 2012; Buchanan & Selmon, 2008; Cox, 2008; Montas-Hunter, 2012; Rayle, 2005). In the only identified study looking at the impact of negative persuasion, Lei et. al (2012) showed that negative persuasion by followers led to lower leader efficacy in leaders. These results aligned with results from this study in that data suggested that leader efficacy may have been negatively affected by aggressive behavior at the time of the aggressive experience.

When examining the impact of aggression, 80 percent of respondents stated that they felt the experience with aggression had an effect on leader efficacy at the time of the experience. While 36 percent felt that the experience had a positive impact at the time,

the largest proportion of respondents (45 percent) felt that the experience had a negative effect on leader efficacy—stating that it made them feel disoriented, made them question their leadership capability, and made them question their willingness to take up leadership. Quantitative results confirmed the qualitative results in that they demonstrated that respondents generally rated their leader efficacy lower at the time of the experience.

In particular, the quantitative results showed a significant and positive increase in scores when comparing former leader efficacy scores with current leader efficacy scores. Additionally, results indicated that the stage of career in which the incident happened, the aggressor's race, and a few specific behaviors contributed to this growth in scores but only explained about 30 percent of the variance. It is important to acknowledge, therefore, that there are many factors that likely influenced the positive increase in scores, many of which were not presented as options to respondents. Bandura (1997) names four sources that contribute to self-efficacy—mastery experiences, vicarious experiences, verbal persuasions, and physical and emotional states—all of which one could reasonably assume played significant roles in the experiences of these respondents.

Perhaps one of the most relevant questions this study aims to answer is whether or not there is a lasting effect of aggression on leader efficacy. No prior research was located regarding the lasting effects of aggression on leader efficacy levels, making this study the first to explore this concept. Quantitative results indicated there was no significant difference in current leader efficacy levels between women deans who experienced aggression and women deans who did not. In other words, the quantitative results would indicate that there was no significant and lasting effect on overall leader

efficacy. Results did show, however, that there were three specific leader efficacy attributes that differed between women deans who had experienced aggression and women deans who did not. Deans who had experienced aggression reported lower leader efficacy, or belief in their ability, to count on others (organizational leaders, superiors and others) to support high ethical standards, provide advice to develop leadership, or to give guidance to help complete work assignments. These three items illustrate the impact of broken relationships and absence of trust of others within an organization. This aligns with some of the qualitative answers from respondents who felt that the experience had a negative effect on their current leader efficacy. In fact, approximately 30 percent of respondents commented on how the aggressive experience had a negative impact on relationships with other women. Responses indicated that these women were more cautious, guarded, and less trusting.

These same women deans, however, did report higher leader efficacy, in their ability to develop detailed plans to accomplish complex missions. This aligns with the qualitative results that indicate that vast majority of women deans (68.5 percent), felt that the experience had a positive impact on their current leader efficacy. They explained that they felt it helped them develop increased resilience and confidence, increased their awareness about and savviness to address these types of interpersonal dynamics, and helped empower them to be a more committed and effective leader. Persevering through the experience provided encouragement to these women about their ability to work through difficult interpersonal issues and this disposition seemed to have a lasting effect on them—giving them the grit needed to address future challenges.

Effective Responses

Existing research on response strategies to aggression illustrates that the most often used strategies are passive, indirect and informal such as talking with coworkers, friends or family, avoiding the individual, or ignoring the behavior (Keashly & Neuman, 2013). The findings from the quantitative portion of this study confirmed these results. The strategies respondents selected most often were indirect—staying calm, speaking with family and friends, speaking with coworkers, and avoiding the person. The qualitative responses confirmed these results in that the most mentioned strategies were talking with co-workers, talking with family and friends, and staying calm.

Prior research indicated that the strategies least likely to be used are more active strategies like making a formal complaint, telling a superior, or going to human resources (Keashly & Neuman, 2013). While making a formal complaint and going to human resources were rarely mentioned in the qualitative responses, talking with superiors was fairly well-represented both qualitatively and quantitatively. In the qualitative responses, women described speaking with their superiors to get advice about their situation and by doing so they were making an effort to build an ally.

Regarding the effectiveness of the results, Keashly and Neuman (2013) stated that interventions that are more indirect in nature are more highly correlated with a perception that it made the situation better and interventions that more directly address the problem seemed to make the situation worse. The descriptive statistics from the quantitative portion of this part of the survey confirmed that the responses with the highest percentage of respondents indicating it bettered the situation were the more indirect strategies—staying calm, speaking with family and friends, and speaking with co-workers.

Responses that were more direct (like talking with a supervisor, filing a complaint and contacting human resources), however, unlike the Keashly and Neuman study, were perceived to have “no effect.” The responses that yielded the highest percentage of women who felt it worsened the situation, however, also included some indirect strategies like going along with the behavior and lowering productivity. This finding suggests that while it may seem easier to choose strategies that do not confront the aggressor, some of these indirect strategies may actually cause more harm.

Strategies used by respondents were also correlated to current leader efficacy. Results showed that two indirect strategies were correlated with lower current leader efficacy scores—not taking the behavior seriously and acting extra nice. These results indicate that utilization of these strategies had a long term negative impact on the respondent’s leader efficacy. This is an important hypothesis that should be explored further in future research to explore the experiences of women who employed those strategies in more detail to help identify how they negatively influenced the situation.

Additionally, results showed that requesting a transfer was positively correlated with leader efficacy. This is an interesting finding to explore because only 7.5 percent of respondents selected this option in the quantitative portion of the study and only 3.5 percent of qualitative responses mentioned this strategy. The qualitative analysis suggests that women realized that they could not change the situation and/or lead under those conditions. They indicated that they did not necessarily internalize the aggression but instead realized that they could be effective in a different environment. It is important to recognize that other women who left their dean position were not included in

this study. There is a voice that is recognizably absent. If it were possible to gather data from these individuals, it could confirm whether this finding applies to a larger sample.

When considering the respondents' response strategies in comparison to the types of aggressive behavior most frequently mentioned, there is an interesting alignment between the aggressor's and respondent's behavior that might suggest a perpetuating cycle of aggression. Two of the most frequently experienced aggressive behaviors from the first part of the survey were identified as being the subject of gossip and being ignored. Yet, two of the most frequently named strategies used to cope with aggression from women were speaking with co-workers and avoiding the individual, which appear to essentially be the same behaviors.

The point in this argument is that whether or not discussions with colleagues about another person is considered gossip or avoiding the person is considered ignoring them is dependent upon the view of the person engaging in the behavior (who is likely not to categorize it as aggressive) and the view of the person subject to the behavior (who is likely to consider it aggressive). It is possible that this behavior is both supportive and destructive. This could also cause people to question whether the utilization of these strategies may actually perpetuate a cycle of aggression among women.

Limitations and Delimitations

As is the case with every study, this study has its limitations and delimitations. First and foremost, the study is delimited in its scope. It specifically sought the perspectives of women only, excluding men's perspectives of their experiences of aggression with women. More specifically, it only invited participation by women in dean roles at doctoral granting colleges and universities in the United States. This is a

very specific group of individuals who are among some of the most educated people in the world and who share considerable privileges when compared to average women in the United States. This population was selected, however, because of their leadership roles, the similarities that these women likely shared in career progression, and the unique culture within higher education.

Additionally, this study looked specifically at experiences of aggression from other women, excluding aggressive acts they may have experienced from men. This was done in order to identify the nuances that exist when confronting aggression specifically from women, especially given the fact that women are socially expected to support each other (Eagly, 1987; Eagly & Carli, 2007; Kellerman & Rhode, 2007). When the respondents were asked whether they had experienced aggression more from men or women in their career, 53 percent said they experienced more from women. While experiences from women appears to be highly prevalent, this information is rarely highlighted in research. The intent of this study was to illuminate some of the experiences women face but are less talked about in the leadership literature.

This study had a number of limitations as well. First, while the study yielded a 48 percent response rate which is considered successful for online surveys, it still represents less than half of the population. Selection bias may have been a reason some women chose to participate and others did not. Women who experienced aggression and felt strongly about the effects, for example, may have been more willing to participate than women who had not experienced it or, if they did, the experience was not sufficiently meaningful to motivate them to discuss it.

Another major limitation is that the study relied solely on the respondent's personal recollections and perceptions, thus only offering one perspective surrounding the interactions described. Interpersonal interactions are highly complex and dynamic and this study only gathered the perspective from one party in these interactions. Analysis based on this perspective helped develop hypotheses about what may be driving the aggressor's behavior. While the concepts presented by these respondents provides a valuable perspective, it is important to recognize that the missing perspectives from others involved in the interaction limits a full understanding of the issues involved. Common method bias based on social desirability, for example, suggests that respondents may be likely to provide answers that cast themselves in a positive light, despite their true feelings and understanding of the situation (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Biased responses may "mask the true relationships between two variables" and inhibit researchers from being able to interpret data objectively (Podsakoff, et al., 2003, p. 881). For example, this survey did not attempt to gather information about what role the respondent may have had in contributing to the situation. In particular, if the other parties involved perceived the respondent's behavior as aggressive, this perspective was not present in the data.

This study also primarily included the perspectives of women who persevered in their position despite the aggressive experience. Perspectives are missing from women who were perhaps most impacted by aggressive experiences—those who resigned their positions. Bandura (1997) suggested that people with low self-efficacy will not keep attempting tasks (like leadership) if they do not gain reassurance from confirmatory experiences or verbal persuasion. Results from this study confirmed this sentiment.

When describing the effect that aggression had on leader efficacy at the time of the experience, a number of respondents wrote about how they questioned their willingness to take up leadership. Not having the perspective of individuals who decided not to continue is an important missing piece in trying to understand women's experiences with aggression.

Additionally, there were some limitations in how the survey was conducted. This study aimed to gather a broad variety of information including what behaviors were experienced and what contributed to respondents' behaviors, how aggressive acts impacted leader efficacy at the time and in the current time frame, and what strategies the respondents used to deal with the aggression. To gather this information, respondents were asked to complete three quantitative instruments (with more than 20 items in each instrument) and were also asked eight open-ended questions. All of these questions made the survey especially lengthy for women whose time is already limited because of the demands of their positions. This resulted in some survey fatigue which means some respondents did not complete all parts of the survey. Additionally, the length of the survey likely limited the amount that women were willing to write in response to the open ended questions. In depth interviews would have allowed a more thorough investigation into these women's experiences.

For women who experienced aggression, they were asked to complete the GLE twice—once in reference to how they believe they felt at the time of aggression and once for how they felt currently. They were asked to take the assessment for both time perspectives at the same time (on the same page of the survey) which could have influenced their scores for either (or both) assessments. For example, if a respondent felt

her leader efficacy had improved dramatically since the time of the aggressive behavior, she might respond to questions differently than if she had only been asked about one time frame or the other. If they had completed the instrument at the actual time of the experience, it would surely have provided a more accurate assessment of their feelings. Retrospective data is typically somewhat problematic because memories fade and people may interpret data differently based on their perspective at the time.

The limited length of responses given by the respondents for the open ended questions was a limitation in and of itself. Whereas interviews with respondents would have undoubtedly provided greater context to help understand more of the nuances of these women's experiences, and allowed for deeper probing into their comments, the open ended questions invited respondents to provide more succinct and less contextual responses. Furthermore, when analyzing these responses, there is a potential limitation associated with content analysis procedures. A code, by definition, is a word or phrase that is summative of data (Saldana, 2013) and thus reduces data and the variances in that data. These coding processes inevitably simplified some of the themes presented and was shaped by my own personal understandings and perspectives.

Finally, a significant limitation is the fact that generalizability is limited. This study focuses specifically on women academic deans in doctoral institutions. This type of study is most generalizable to other higher education settings (specifically doctoral institutions), but even in those cases, the academic environment may vary greatly based on demographics in those fields and the unique characteristics of those categories of institutions. Because of the unique organizational dynamics within academia, generalizability outside of higher education would not be appropriate.

Recommendations for Future Research

The results of this study support the need for further in-depth research into the relationship between experiences of aggression and leader efficacy and suggest several areas for research possibilities. First, more research should be done to determine if these results are specific to this population or more generalizable to women in different leadership roles and in fields both within and outside of higher education. Future studies could implement similar methodology to examine the experiences of women faculty (including faculty in different disciplines), department chairs, provosts or presidents. Studies could also be done with women leaders in other administrative roles such as human resources, student affairs, finance, and university relations. Studies could also be conducted in fields outside of higher education such as health care, technology, government, and K-12 education. Extending research to other populations would allow for comparisons that could confirm or disconfirm results and identify differences between fields, exposing the influence of context on these interpersonal dynamics.

While this study focused exclusively on women, a similar study surveying male deans could offer some interesting comparisons. Studies could incorporate both men and women, which would allow for result comparisons to identify how experiences of women and men are different or the same. This would help clarify whether aggression is a gender issue and, if it is, what the distinctive characteristics are between aggression exhibited or experienced by men versus women. If there proved to be significant differences between the two genders, then further exploration of these results would provide other research opportunities.

This study offered some interesting results related to specific populations but the small proportions of some of these populations makes broad conclusions a bit challenging especially around issues of race and sexual orientation. Additional research examining the experiences of women of color in more depth would provide more valuable insights. While there were enough respondents to examine women who identified as Black/African American separately for statistical purposes, American Indian, Asian, and Hispanic women had to be grouped together because there were so few respondents in these race categories. The experiences of women in each of these racial groups should be explored individually. Additionally, more research is needed for Black/African American women, especially around leader efficacy given that the results from this study contradicted earlier research, demonstrating that Black/African American women had generally higher levels of leader efficacy than other women. This should be explored further to determine if these same findings result from studies with larger samples of African American women in varying contexts.

Additional research with women who identify as LGBTQ is needed for the same reason. While the results from this study showed that LGBTQ women experienced more frequent aggressive behaviors but that it had no significant effect on leader efficacy, there were so few women who identified as LGBTQ that further research would help confirm or disconfirm the results from this study.

Furthermore, in order to more fully understand the relationship between aggression and leader efficacy, future research should incorporate different methodologies. In particular, qualitative research studies would allow for more in-depth understanding of women's experiences. Interviews or focus groups would provide

significantly more context than the open ended questions within this survey. This additional contextual data could provide greater understanding and identify other factors that were not taken into consideration for this study. For example, to explore what factors may have contributed to the aggressor's behavior, respondents in this survey provided relatively brief responses. In depth interviews would be able to explore more specific details around the circumstances leading up to the behavior to better understand the context of the situation. If it were possible to get the perspectives of both the respondent and their identified aggressor, this could yield some valuable results on how each individual perceived the relationship and interactions. Additionally, this type of information could potentially be used in a multiphase mixed methods design, for example, to develop new instruments to assess aggression and/or leader efficacy based on information gathered from this study and future studies.

Finally, while this study focused specifically on aggressive behavior from other women, future studies should also include aggressive behavior from men. This would allow researchers to make comparisons of experiences from men and women and determine if aggression is more often experienced from one gender or the other. Additionally, this research could explore whether aggressive behavior from men has a similar effect on leader efficacy.

Significance of the Study

The information gathered from this study was intended to provide an understanding as to how prevalent aggression is among women leaders in higher education, the effect these experiences have on the individual, and how women attempt to successfully navigate through this challenge. This study demonstrated that experiencing

aggression is common for many women deans and that they feel it negatively impacts their leader efficacy at the time of the experience. By better understanding the impact that aggression has on women in leadership roles, along with the prevalence of this problem in organizations, we can better respond to these issues on a variety of levels.

First, by exposing the complexity of aggression against women, individuals can be better equipped to respond in a more intentional manner. Understanding the types of aggressive behaviors that are typical in these situations and the potential factors that contribute to aggression may help women realize that the behavior is less about them and more about their role, the aggressor's own insecurities, or the organizational norms that are being questioned. If women are able to keep from internalizing the behavior and taking it personally, it may help in preventing loss of leader efficacy.

Second, as colleagues and/or managers are better able to recognize this issue, they can use this information to better support women. Results of this study showed that women often went to their supervisors to discuss the situation and get counsel. By better understanding what factors may contribute to this type of behavior, supervisors may be able to provide valuable insight to help the woman put the situation in perspective and not take it personally. Information from this study could potentially be used to develop leadership programs for women to help prepare them for these situations and explore options for responding to aggressive behavior.

Third, if women are more aware of this type of behavior, the factors that motivate aggression, and the consequences of it, perhaps others will be less likely to demonstrate this behavior toward others. Results from this study offered findings around what might cause women to behave aggressively. Increased awareness of these issues will hopefully

help us better identify our own emotions and respond in a more constructive manner toward each other because of this knowledge.

Finally and perhaps most importantly, this type of study has the potential to be perceived as blaming women for behaving in a way that some would say they had to learn in order to be successful in a field that has been traditionally dominated by men. A number of women asked questions throughout the course of this study about whether or not focusing on this issue is a form of victim blaming. A woman within the pilot study and a couple of women who declined to participate made statements about this and explained that they saw this type of study as focusing on the infrequent negative behaviors which had the potential to undermine women's success and the supportive relationships that women have.

In response to this, however, the data demonstrates that these experiences are not uncommon and that they can be quite difficult for women to navigate. One of the reasons that these experiences might be difficult is due to the fact that this is a topic that has been researched very little and is often not discussed. I believe that illuminating the issue in order to understand it has the positive potential to make women more aware so that they can identify it early and recognize that it often is not about them personally but likely related to power and position and the influence of other contextual factors. Additionally, increased awareness around this issue may actually help increase awareness in women when these behaviors manifest. If potentially negative behaviors can be anticipated, we have more of an opportunity to prevent and/or change them. I do not believe that bringing light to this issue causes harm. In fact, denial of research around this topic just

continues to hide the facts around the phenomena, which contributes to the continuation of women being unsure with how to perceive and address it.

Conclusion

This study examined the prevalence of aggression from women experienced by women deans and the impact that these experiences had on the individual's leader efficacy. More specifically, it looked at the forms of aggression most often experienced, the factors that contributed to those experiences, the impact on leader efficacy, and the most common strategies used to navigate the situation. Results indicated that these experiences were common among women in these roles and that many of them felt that it negatively impacted their leader efficacy at the time of the experience. Most women claimed to have responded to this behavior by staying calm and speaking with family, friends, and colleagues. Results also showed that while the majority of women felt there was a long term positive impact on leader efficacy, there was almost no statistically significant difference on leader efficacy between women who experienced aggression and women who did not. Both of these results suggest that aggressive experiences from women did not generally have a long term detrimental effect on leader efficacy. Additionally, the strategies most often used to navigate through these experiences were mostly indirect in nature and sometimes even perhaps mirrored the aggressive behavior described to have been experienced.

Understanding these experiences is important for women leaders who are currently facing these challenges as well as for women who aspire into leadership roles. By better understanding this phenomenon, women can hopefully better prepare themselves and refrain from over-internalizing the experience, thus mitigating the effect

on their leader efficacy. More awareness about what is driving the behavior may actually help women leaders be better prepared to assist aggressors in navigating through the real underlying issues.

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APPENDIX A: EMAIL SOLICITATION

First email:

Dear <insert name from email merge>,

As a woman in a dean's role, I am seeking your participation in a research study exploring how women deans experience aggression as they advance into leadership. A link to an online survey will be sent to you next week but I wanted to give you advance notice so that you would be aware of the study's purpose and have the opportunity to ask questions ahead of time.

This study is gathering data for my dissertation research at the University of San Diego. Existing literature around aggression often focuses on the relationships between men and women. This study, in contrast, focuses specifically on aggressive experiences from women in order to better understand how prevalent these experiences are for women leaders, how it affects their self-efficacy toward leadership tasks, and how they navigate through these experiences. Whether or not you have experienced aggression from women, your opinion is important in order to make valid comparisons.

The survey is anonymous and includes both quantitative and qualitative questions. Every woman dean at doctoral granting institutions in the United States is being invited to participate. Length of time for the survey will vary depending on your specific responses but should take between five and 30 minutes.

I understand that the demands of your role often limit availability in your schedule. Because of your unique role and experiences, however, your opinion is incredibly important and valuable to women currently in these roles and those pursuing these positions in the future. This study received IRB approval from the University of San Diego.

The survey link will be emailed to you next week at this email address. If you have questions about this study, please feel free to contact me or my faculty advisor.

Thank you for your consideration.

Sincerely,

Karen Briggs, Assistant VP and Chief Human Resources Officer
karenbriggs@sandiego.edu
858-354-5189

Faculty Advisor
Lea Hubbard
lhubbard@sandiego.edu
619-260-7818

Second email sent a week later:

Dear <insert name from email merge>,

Last week, I sent an email regarding a study for women in dean roles. As a woman in such a role at a doctoral granting institution, you are invited to participate in a research study exploring how women leaders in higher education experience aggression from other women. Even if you have never experienced aggression from other women, your opinion is still needed in order to compare experiences.

This study is being used for my dissertation research in the University of San Diego's Leadership Studies doctoral program. Existing literature around aggression often focuses on the relationships between men and women. This study, in contrast, focuses specifically on aggressive experiences from women in order to better understand how prevalent these experiences are for women leaders, how it affects their self-efficacy toward leadership tasks, and how they navigate through these experiences.

Participation involves completing an online survey with both quantitative and qualitative questions and could take between five and 30 minutes depending on your experiences. This is an anonymous survey and thus there is no way for me to identify your specific responses unless you choose to provide your contact information.

To begin the survey, go to: <https://www.surveymonkey.com/s/WomenDeanSurvey>

This study received IRB approval from the University of San Diego. If you have questions or would like further information, please contact me or my faculty advisor at the phone numbers or email addresses below:

Karen Briggs
karenbriggs@sandiego.edu
 858-354-5189

Faculty Advisor: Lea Hubbard
lhubbard@sandiego.edu
 619-260-7818

Thank you for your consideration.

Sincerely,

Karen Briggs
 Assistant Vice President and Chief Human Resources Officer
 University of San Diego

APPENDIX B: CONSENT FORM, SURVEY, AND INSTRUMENT SCORING

Research Participant Consent Form

I. Purpose of the research study

Karen Briggs is a student in the School of Leadership and Education Sciences at the University of San Diego. You are invited to participate in a research study she is conducting. The purpose of this research study is to determine to what extent women leaders in higher education experience aggression from other women, how the experience of aggression affects leader efficacy, and how women successfully navigate through these experiences. Your participation is important in order to broaden our understanding of women's experiences. Even if you have never experienced aggression from other women, your opinion is still needed in order to compare experiences.

II. What you will be asked to do

If you decide to be in this study, you will be asked to complete an online questionnaire that will ask:

- personal and professional demographic questions
- questions designed to assess leader efficacy (using the Generalized Leader Efficacy Questionnaire)
- questions about whether or not you have experienced aggression from other women.

If you have experienced aggression from women, you will be asked both quantitative questions and qualitative questions about the type of aggression experienced and what strategies you used to respond to this aggression.

Individuals who piloted this survey typically took between five and 30 minutes to complete the survey, depending on their answers and level of detail provided.

III. Foreseeable risks or discomforts

Sometimes when people are asked to think about their feelings, they feel sad or anxious. If you would like to talk to someone about your feelings at any time, you can call toll-free, 24 hours a day:

San Diego Mental Health Hotline at 1-800-479-3339 or locate a number in your local area at:

<http://www.healthyplace.com/other-info/resources/mental-health-hotline-numbers-and-referral-resources/mental-health-america-state-list/>

IV. Benefits

While there may be no direct benefit to you from participating in this study, the indirect benefit of participating will be knowing that you helped researchers better understand how women experience aggression from other women in a professional setting.

V. Confidentiality

Any information provided and/or identifying records will remain confidential and kept in a locked file and/or password-protected computer file in the researcher's office for a minimum of five years. All data collected from you will be coded with a number or pseudonym (fake name). Your real name will not be used. The results of this research project may be made public and information quoted in professional journals and meetings, but information from this study will only be reported as a group, and not individually.

VI. Compensation

You will receive no compensation for your participation in the study.

VII. Voluntary Nature of this Research

Participation in this study is entirely voluntary. You do not have to do this, and you can refuse to answer any question or quit at any time. Deciding not to participate or not answering any of the questions will have no effect on any benefits you're entitled to, like your health care, or your employment or grades. You can withdraw from this study at any time without penalty.

VIII. IRB Approval

This study was approved by the Institutional Review Board at the University of San Diego on September 26, 2014.

IX. Contact Information

If you have any questions about this research, you may contact either:

1) Karen Briggs

Email: karenkitchenbriggs@gmail.com

Phone: 858-354-5189

2) Lea Hubbard

Email: lhubbard@sandiego.edu

Phone: 619-260-7585

Please read the statements below to give your consent or to choose not to participate in this study.

- ☐ I have read and understand this form, and consent to the research it describes to me. I have received a copy of this consent form for my records.
- ☐ I choose NOT to participate in this study.

What is your gender?

- ☐ Female
- ☐ Male

What year were you born? _____

What race do you identify with most? (Please select all that apply.)

- ☐ American Indian or Alaskan Native
- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latina
- ☐ White/Caucasian
- ☐ Prefer not to answer
- ☐ Other (please specify) _____

Do you identify as LGBTQ?

- ☐ Yes
- ☐ No
- ☐ Prefer not to answer

In what year did you begin your faculty career in a tenurable position? _____

In what year did you begin your role as Dean? _____

In what year did you join your current institution? _____

Which descriptor best describes the academic programs you oversee?

- ☐ Agriculture
- ☐ Architecture
- ☐ Art & Science
- ☐ Business
- ☐ Dentistry
- ☐ Education
- ☐ Engineering
- ☐ Fine Arts
- ☐ Graduate Programs
- ☐ Home Economics
- ☐ Journalism/Communications
- ☐ Law
- ☐ Medicine
- ☐ Music
- ☐ Natural Resources
- ☐ Nursing
- ☐ Pharmacy
- ☐ Physical Education

- ☐ Public Health
- ☐ Social Work
- ☐ Technology
- ☐ Theology
- ☐ Veterinary Medicine
- ☐ Allied Health Services
- ☐ Computer Science
- ☐ Cooperative Education
- ☐ Humanities
- ☐ Government/Public Affairs
- ☐ Mathematics/Science
- ☐ Political Science/International Affairs
- ☐ Social and Behavioral Sciences
- ☐ Women's Studies

What is the highest level of school you completed or the highest degree you received?

- ☐ Bachelors degree
- ☐ Masters degree
- ☐ J.D.
- ☐ Ed.D.
- ☐ Ph.D.
- ☐ M.D.

Aggressive Behavior

Existing literature examining aggressive experiences toward women leaders often focuses on the relationship between men and women. This study, in contrast, focuses on experiences specifically with other women to determine how prevalent this type of experience is for women leaders in higher education, the effects of such experiences on self-efficacy toward leadership tasks (a.k.a. *leader efficacy*), and how women navigate through these experiences. By better understanding how aggression among women impacts leader efficacy and behavior, individuals and organizational leaders may be better prepared to support women in leadership roles.

For the purpose of this survey, aggressive behavior is defined as, "hostile, abusive, or destructive behavior or outlook, especially when caused by frustration" (Merriam Webster.com, 2014). It can include both direct behaviors (yelling, hitting, physically intimidating) and/or indirect behaviors (gossiping, spreading rumors, criticizing someone behind their back, excluding someone from a group, ignoring, putting pressure on someone, dirty looks, judging someone's work in an unjust manner, and/or interrupting when intended to discredit or embarrass someone). It may include behavior in which the perpetrator attempts to inflict pain but done in a manner as though there was no intention to hurt at all.

In your career in academia, have you experienced aggression from other women?

- ☐ Yes
- ☐ No

(If "Yes," continued with next set of questions; if "no" moved to Generalized Leader Efficacy Questionnaire)

Aggressor Demographics

For the rest of the survey, please think of one of the most impactful experiences of female aggression that you have experienced in the workplace. The following questions will ask for specific information about this experience.

How long ago was the experience? (If you cannot pinpoint the exact year, please provide your best estimate.)

- ☐ Within the past year
- ☐ 1 year
- ☐ 2 years
- ☐ 3 years
- ☐ 4 years
- ☐ 5 years
- ☐ 6 years
- ☐ 7 years
- ☐ 8 years
- ☐ 9 years
- ☐ 10 years
- ☐ 11 years
- ☐ 12 years
- ☐ 13 years
- ☐ 14 years
- ☐ 15 years
- ☐ 16 years
- ☐ 17 years
- ☐ 18 years
- ☐ 19 years
- ☐ 20 years
- ☐ More than 20 years

At what stage in your career did you have this experience?

- ☐ Before beginning a tenure-track position
- ☐ While Assistant Professor
- ☐ Before obtaining tenure
- ☐ During the tenure process
- ☐ While Associate Professor
- ☐ During the promotion process for Full Professor
- ☐ While Full Professor
- ☐ During the process when moving into an Administrator role (e.g. Department Chair, Associate Dean)
- ☐ While in an administrator role (e.g. Department Chair, Associate Dean)
- ☐ During the promotion/selection process for Dean
- ☐ While in the Dean role
- ☐ Other (please specify) _____

How did the aggressor's age compare to yours? (If there was more than one person, select the individual you felt was most responsible for the behavior.)

- ☐ Younger
- ☐ Approximately the same age
- ☐ Older

How did the person's years of experience in the field compare to yours?

- ☐ Fewer years of experience
- ☐ Approximately the same years of experience
- ☐ More years of experience

At the time of the behavior, how did the person's position compare to yours?

- ☐ They were in a higher level position
- ☐ They were considered a peer
- ☐ They were a subordinate
- ☐ Other _____

What would you describe as the aggressor's race? (Please select all that apply.)

- ☐ American Indian or Alaskan Native
- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latina
- ☐ White/Caucasian
- ☐ Prefer not to answer
- ☐ Other (please specify) _____

How would you describe the overall gender makeup of the institution at the time of the experience?

- ☐ Male-dominated
- ☐ Female-dominated
- ☐ Gender balanced

Negative Acts Questionnaire

When referring to this experience, how often were you subjected to the following behaviors?

#	Question	Never (0)	Now & Then (1)	Monthly (2)	Weekly (3)	Daily (4)
1	Someone withholding information which affects your performance					
2	Being humiliated or ridiculed in connection with your work					
3	Being ordered to do work below your level of competence					
4	Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks					
5	Spreading of gossip or rumors about you					
6	Being ignored or excluded					
7	Having insults or offensive remarks made about your person, attitudes, or personal life					
8	Being shouted at or the target of spontaneous anger					
9	Intimidating behaviors such as finger-pointing, invasion of personal space, shoving, blocking your way					
10	Hints or signals from others that you should quit your job					
11	Repeated reminders of your mistakes					
12	Being ignored or facing a hostile reaction when approached					
13	Persistent criticism of your errors or mistakes					
14	Having your opinions ignored					
15	Practical jokes carried out by people you don't get along with					
16	Being given tasks with unreasonable deadlines					
17	Having allegations made against you					
18	Excessive monitoring of your work					
19	Pressure not to claim something to which by right you are entitled (e.g. sick leave, holiday entitlement, travel expenses)					
20	Being the subject of excessive teasing or sarcasm					
21	Being exposed to an unmanageable workload					
22	Threats of violence or physical abuse or actual abuse					

These next few questions ask for you to describe your experiences in your own words.

In this experience that you are thinking of, describe what the woman/women did that you thought/felt were examples of aggression (i.e. what behaviors they demonstrated).

(open ended)

What factors do you think came into play that caused the person/people to behave the way they did?

(open ended)

Generalized Leader Efficacy Questionnaire

This part of the survey measures an individual's sense of self-efficacy toward leadership. For each item below, indicate your level of confidence in your ability to accomplish each task or activity as a leader in your organization. Please answer how confident you felt at the time of the aggression experience you referenced in former questions as well as how confident you feel now.

Use the following scale to indicate your level of confidence. A score of 10 indicates 100% confidence, whereas a score of 0 means no confidence at all.

As a leader I can...

#	Description	How you felt at the time*	How you feel now
1	Develop agreements with followers to enhance their participation		
2	Inspire followers to go beyond their self-interests for the greater good		
3	Count on my leaders to support high standards of ethical conduct		
4	Get my followers to meet the requirements we have set for their work		
5	Adapt my thinking to a broad range of unique leadership challenges		
6	Motivate myself to set goals that are achievable		
7	Inspire followers to perform beyond their expectations		
8	Go to my superiors for advice to develop my leadership		
9	Come up with the rewards and punishments that will work best with my followers		
10	Remain steadfast to my core beliefs when I'm challenged		
11	Effectively lead working within the boundaries of my organization's policies		
12	Motivate myself to perform at levels that inspire others to excellence		
13	Get followers to re-examine their basic beliefs and assumptions		
14	Develop detailed plans to accomplish complex missions		
15	Rely on my leaders to come up with ways to stimulate my creativity		
16	Accomplish the targeted goals set by my superiors		
17	Determine the objectives needed to complete our project goals		
18	Distinguish the ethical components of problems/dilemmas		
19	Count on others to give me the guidance I need to complete work assignments		
20	Coach followers to assume greater responsibilities for leadership		
21	Rely on my organization to provide the resources needed to be effective		
22	Rely on my peers to help solve problems		

*Respondents who did not experience aggression from women only answered these questions in reference to how they feel currently. The survey for these respondents then ended.

In what ways, if any, did the experience you described earlier undermine, challenge, or motivate your personal sense of leadership capacity at the time of the experience?
(*open ended*)

In what ways do you think this experience diminished or empowered your current sense of leader efficacy?
(*open ended*)

In what ways do you think the experience impacted your relationships with other women. Be specific.
(*open ended*)

Responses

The third and final section inquires about what responses you utilized during this experience and your perception of the effectiveness of these responses.

Please select which responses you used. For the responses you did use, please also select whether the response improved, worsened, or had no discernible impact on the aggressive behavior.

	Did not use this approach	Used this approach	Made the situation better	Had no discernible effect	Made the situation worse
Talked with coworkers					
Talked with family and friends					
Stayed calm					
Avoided the individual					
Told supervisor/chair/dean					
Acted as if I didn't care					
Asked colleagues for help					
Ignored it or did nothing					
Asked individual to stop					
Behaved extra nice					
Went along with the behavior					
Lowered productivity					
Not take behavior seriously					
Told union					
Told HR					
Had someone speak with the individual					
Made formal complaint					
Asked for transfer					
Threatened to tell others					

In your own words, please describe the top three strategies that helped when you were navigating through this experience.

(open ended)

What advice would you give women who are experiencing a similar type of aggression from other women at work?

(open ended)

Additional Questions

When reflecting on your career, did you experience aggression more often from men or women?

- ☐ Men
- ☐ Women

When reflecting on your career, which experiences of aggression were more challenging for you?

- ☐ Aggressive experiences from women were more challenging
- ☐ Aggressive experiences from men were more challenging
- ☐ Both were equally challenging

Is there anything else you think the researcher should know or would be relevant for this study?

(open ended)

If you are willing to be contacted for follow up questions if necessary, please submit your name and email address here. This is completely optional. Any personal identifying data will be kept private by the researcher and not utilized in any way in the reporting of data results.

(open ended)

Thank you so much for your participation.

If you are interested in receiving information regarding the results of this study, please email karenkitchenbriggs@gmail.com and your name will be added to a list of individuals interested in survey results.

Revised Negative Acts Questionnaire (NAQ-R) Key based on instrument referenced in Einarsen, et al. (2009)

Construct	NAQ-R item number	Item wording
Person-related bullying	2	Being humiliated or ridiculed in connection with your work
	4	Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks
	5	Spreading gossip or rumors about you
	6	Being ignored or excluded
	7	Having insulting or offensive remarks made about your person, attitudes, or your personal life
	10	Hints or signals that you should quit your job
	11	Repeated reminders of your errors or mistakes
	12	Being ignored or facing a hostile reaction when you approach
	13	Persistent criticism of your errors or mistakes
	15	Practical jokes carried out by people you don't get along with
	17	Having allegations made against you
	20	Being the subject of excessive teasing and sarcasm
Work-related bullying	1	Someone withholding information which affects your performance
	3	Being ordered to do work below your level of competence
	14	Having your opinions ignored
	16	Being given tasks with unreasonable deadlines
	18	Excessive monitoring of your work
	19	Pressure not to claim something to which by right you are entitled (e.g. sick leave, holiday entitlement, travel expenses)
	21	Being exposed to an unmanageable workload
Physical intimidation	8	Being shouted at or being the target of spontaneous anger
	9	Intimidating behaviors such as finger-pointing, invasion of personal space, shoving, blocking your way
	22	Threats of violence or physical abuse or actual abuse

Generalized Leader Efficacy (GLE) Questionnaire Scoring Key based on instrument referenced in Banks (2012)

Construct	GLE item number	Item wording
Action	1	Develop agreements with followers to enhance their participation
	2	Inspire followers to go beyond their self-interests for the greater good
	4	Get my followers to meet the requirements we have set for their work
	7	Inspire followers to perform beyond their expectations
	9	Come up with the rewards and punishments that will work best with my followers
	13	Get followers to re-examine their beliefs and assumptions
	20	Coach followers to assume greater responsibility for leadership
Means	3	Count on my leaders to support high standards of ethical conduct
	8	Go to my superiors for advice to develop my leadership
	11	Effectively lead working within the boundaries of my organization's policies
	15	Rely on my leaders to come up with ways to stimulate my creativity
	19	Count on others to give me the guidance I need to complete work assignments
	21	Rely on my organization to provide the resources I need to complete work assignments
	22	Rely on my peers to help solve problems
Self-Motivation	5	Adapt my thinking to a broad range of unique leadership challenges
	6	Motivate myself to perform at levels that inspire others to excellence
	10	Remain steadfast to my core beliefs when I'm challenged
	12	Motivate myself to perform at levels that inspire others to excellence
	14	Develop detailed plans to accomplish complex missions
	16	Accomplish the targeted goals set by my superiors
	17	Determine the objectives needed to complete our project goals
	18	Distinguish the ethical components of problems/dilemmas

APPENDIX C: PAIRED SAMPLE T-TESTS COMPARING FORMER AND CURRENT GLE SCORES

Outcome	Former GLE		Current GLE		N	95% CI for Mean Difference		t	Df	Sig.
	M	SD	M	SD						
Aggregate GLE	143.92	36.769	175.28	24.486	159	25.835, 36.882		11.213	158	.000
GLE: Action	42.69	13.570	55.18	9.186	159	10.495, 14.486		12.363	158	.000
GLE: Means	40.82	14.688	50.45	10.935	159	7.340, 11.931		8.291	158	.000
GLE: Self-Motivation	60.42	13.015	69.65	8.630	159	7.409, 11.056		9.999	158	.000
GLE #1	6.40	2.403	8.46	1.492	159	1.729, 2.397		12.191	158	.000
GLE #2	5.99	2.573	8.09	1.692	158	1.720, 2.483		10.873	157	.000
GLE #3	6.20	3.010	7.93	2.108	159	1.248, 2.211		7.089	158	.000
GLE #4	6.38	2.210	7.90	1.539	159	1.189, 1.843		9.161	158	.000
GLE #5	6.71	2.323	8.57	1.280	159	1.536, 2.187		11.307	158	.000
GLE #6	7.90	1.956	8.75	1.414	159	.558, 1.140		5.757	158	.000
GLE #7	6.48	2.230	7.93	1.673	159	1.109, 1.796		8.356	158	.000
GLE #8	6.04	2.962	7.31	2.526	159	.798, 1.755		5.268	158	.000
GLE #9	5.76	2.270	7.39	1.776	158	1.280, 1.973		9.275	157	.000
GLE #10	8.26	1.920	9.14	1.116	159	.639, 1.122		7.209	158	.000
GLE #11	7.23	2.153	8.56	1.362	159	1.011, 1.643		8.295	158	.000
GLE #12	7.60	2.251	8.71	1.389	159	.771, 1.455		6.426	158	.000
GLE #13	5.54	2.420	7.21	1.978	158	1.328, 2.014		9.617	157	.000
GLE #14	7.03	2.295	8.46	1.610	158	1.096, 1.752		8.585	157	.000
GLE #15	4.65	2.774	5.98	2.754	158	.895, 1.775		5.994	157	.000
GLE #16	7.26	2.514	8.38	1.675	159	.761, 1.478		6.171	158	.000
GLE #17	7.71	2.036	8.74	1.434	159	.724, 1.327		6.713	158	.000
GLE #18	7.99	2.017	8.96	1.257	159	.720, 1.217		7.687	158	.000
GLE #19	5.64	2.793	6.82	2.464	159	.778, 1.587		5.773	158	.000
GLE #20	6.21	2.368	8.34	1.492	159	1.775, 2.489		11.799	158	.000
GLE #21	5.21	2.639	6.28	2.450	159	.640, 1.498		4.924	158	.000
GLE #22	5.91	2.537	7.65	1.962	158	1.333, 2.135		8.549	157	.000

Institutional Review Board Project Action Summary

Action Date: September 28th 2014 *Note: Approval expires one year after this date.*

Type: ☐ New Full Review ☒ New Expedited Review ☐ Continuation Review ☐ Exempt Review
☐ Modification

Action: ☒ Approved ☐ Approved Pending Modification ☐ Not Approved

Project Number: 2014-08-017

Researcher(s): Karen Briggs Doc SOLES
Dr. Les Hubbard Fac SOLES

Project Title: Women Experiencing Aggression From Women: A Mixed Methods Study of How Women Experience Aggression, How It Impacts Leader Efficacy, and How They Navigate Through It

Note: We send IRB correspondence regarding student research to the faculty advisor, who bears the ultimate responsibility for the conduct of the research. We request that the faculty advisor share this correspondence with the student researcher.

Modifications Required or Reasons for Non-Approval

None

The next deadline for submitting project proposals to the Provost's Office for full review is N/A. You may submit a project proposal for expedited review at any time.

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