

Building Psychological Capital through Leadership Development

By

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Abstract

Using the lens of psychological capital (PsyCap), this research study explored the relationship between college women's involvement in various types of leadership activities and the constructs of hope, resilience, and leadership-efficacy. Data from the Multi-Institutional Study of Leadership, conducted at Washburn University in spring of 2018, were analyzed to determine how co-curricular, immersive, and academic leadership involvement for college women relate to PsyCap development. This study also explored the demographic characteristics of college women who participate in leadership activities and analyzed students' pre-college perceptions of their own psychological capital.

Results reveal higher levels of hope, resilience, and leadership efficacy for students reporting involvement in leadership activities compared to students who reported no involvement. Furthermore, the study suggests correlations between participation in activities categorized as Co-Curricular and Immersive Leadership Involvement and higher levels of PsyCap. Results also indicate that participation in more than one leadership activity is generally associated with higher levels of hope, resilience, and leadership-efficacy, and that class-level is an important predictor of a students' psychological capital. Co-curricular leadership involvement is particularly relevant to the development of PsyCap, as this involvement was found to be a predictor for both leadership efficacy and resilience. More immersive leadership experiences were found to be predictors of leadership efficacy as well. Implications of this study include consideration of how leadership development programs in higher education institutions can promote learning outcomes beyond those typically associated with leadership education to include enhancing psychological tools that can help students overcome challenges they will undoubtedly face after college.

Acknowledgements

Three years ago, when this journey began, I had no idea what to expect or how I would find success as a doctoral student. But I promised my family, colleagues, and friends that three years is all it would take, and I feel so grateful to everyone who has helped to make this dream a reality.

Over the past few years, I have become reasonably good at juggling; every important element of my life is a ball at risk of tumbling to the ground – my career, my family, my friends, self-care, etc. I started this process with the intention of keeping every ball in the air all the time, a practice that I soon learned was impossible. Instead, I learned that it's okay to put one down from time to time, as long as no one ball lays abandoned for too long. Perfection isn't possible, and that was a humbling and important lesson that I learned through this process. The sacrifices made by people who love me so that I could finish this program on time were significant, and I am forever grateful to the village who showed me support, who offered wisdom, and who gave me grace when I needed it most.

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CHAPTER ONE: Introduction

Since the early 1990s, increasing attention has been given to college student leadership development, including a focus on the development of leadership outcomes in students (Dugan & Komives, 2007; Komives & Wagner, 2017). Building leadership capacity in students has been characterized as a critical responsibility of higher education (Astin, 1993; Boatman, 1999; Shim, 2013; Zimmerman-Oster & Burkhardt, 1999). However, many researchers have questioned whether higher education has the empirical data to determine whether leadership development programs in college are truly effective for the students participating in them (Ayman et al., 2001; Shim, 2013; Zimmerman-Oster & Burkhardt, 1999). This becomes even more challenging when considering the potential differences in leadership development across genders. Conflicting findings have emerged as researchers have explored the differences in leadership outcomes across genders using a variety of assessments (Shim, 2013).

Using the lens of psychological capital (Luthans, Youssef, & Avolio, 2007), an opportunity exists to explore how women college students who participate in a variety of leadership activities score on scales for three key constructs of psychological capital, which include hope, resilience, and self-efficacy. Existing literature indicates a positive relationship exists between higher levels of psychological capital and positive leadership behaviors (Avolio & Luthans, 2006, Gooty et al., 2009, Luthans & Avolio, 2003, Luthans et al., 2006, Luthans et al., 2007, Roche et al, 2014). This study seeks to understand the impact various types of leadership involvement can have on college women as they develop in the areas of self-efficacy, hope, and resilience while also exploring the pre-college and demographic characteristics of students who choose to intentionally expand their leadership capacity.

Purpose of Study

This research study utilized quantitative data from the 2018 Multi-Institutional Study of Leadership (MSL) conducted at Washburn University to explore the relationship between female student involvement in leadership activities and student scores for the psychological capital constructs of self-efficacy, hope, and resilience. Luthans et al. (2007) define psychological capital, or PsyCap, as follows:

PsyCap is an individual's positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. (p. 3)

The MSL utilizes several scales and sub-scales to explore student outcomes in many areas, including scales specifically focused on the PsyCap constructs of leadership efficacy, hope (agency – ability to strive for goals, and pathways – belief in one's ability to envision multiple routes to achieve goals), and resilience. Because there is not a scale specific to optimism in the MSL survey instrument, the focus of this study only explored student scores for the three PsyCap constructs of self-efficacy, hope, and resilience.

To complete the MSL, students self-report demographics such as gender (with options to identify as genderqueer/gender non-binary, man, questioning/unsure, woman, preferred response not listed), race/ethnicity, class level, sexual orientation, age, GPA estimate, and others. In addition, students respond to prompts related to their pre-college experiences, college

participation in a variety of activities and environments, and perceptions of their own behaviors and abilities. While the MSL provides a robust data set, this study specifically looked at the relationship between female student involvement in various leadership activities and student scores on the included scales for hope, resilience, and self-efficacy. The MSL asks students to self-report participation in a variety of leadership activities, including attending or participating in a leadership conference, retreat, lecture or workshop series, positional leader training, living-learning leadership program, or pursuing academic experiences such as taking a leadership course, participating in a leadership certificate program, leadership capstone experience, or leadership minor. Students are also asked about involvement in other activities, such as short-term service immersion experiences or emerging leader programs, but these programs are either categorized as another form of activity, such as community service, or are not offered at Washburn University and are therefore not included in the analysis for this study.

This study compared PsyCap scores for college women involved in leadership activities to scores for college women not reporting participation in leadership activities, but it also explored how type of involvement in leadership activities also relates to PsyCap scores. Demographic data, including student's self-reported class level, race, and GPA provided insight regarding the type of students interested in pursuing leadership development in college. Additionally, information regarding respondents' pre-college experiences, such as students' scores on pre-tests related to hope, resilience, and leadership efficacy, was analyzed to determine whether pre-college perceptions of PsyCap are predictors for PsyCap scores for students in college or the types of leadership activities students choose to participate in.

Institutional Overview

This study took place at Washburn University, a municipal university in Topeka, Kansas, serving approximately 7,000 students in academic programs ranging from certificates, associate, bachelor, and master's degrees as well as doctor of nursing practice and juris doctorate degrees (Kansas Board of Regents, 2019). Established in 1865, Washburn University was founded as Lincoln College, a private Congregational school that enrolled African American students and women from the beginning (Washburn's History, n.d.). Lincoln College was later named Washburn University after Ichabod Washburn, a wire manufacturer from Worcester, Massachusetts, pledged \$25,000 to the school. The institution changed its name a month later, though Ichabod Washburn never set foot on his namesake campus during his lifetime. Today, Washburn is publicly funded, independently governed, and state coordinated institution that receives financial support from city and county taxes as well as the State of Kansas (About Washburn, n.d.). Washburn's vision is to be "a premier, public Midwest regional teaching institution recognized as a community leader in providing a superior student-centered, teaching-focused learning experience, preparing graduates for success in their chosen profession and stimulating economic vitality" (Washburn University Mission, Vision, and Core Values, n.d.). The University is committed to living out its core values of integrity, excellence, inclusion, accountability, respect, collaboration, and innovation. Washburn provides broadly-based liberal arts and professional instruction and embraces diverse educational experiences offered on campus and through community partnerships. The institution is accredited through the Higher Learning Commission (Kansas Board of Regents, 2019).

At the time of the MSL research study (2018), 6,691 students were enrolled at Washburn University, with 4,023 or 60.1 percent women and 2,668 or 39.9 percent men (Washburn

University Strategic Analysis & Reporting, 2018). The race and ethnicity breakdown consisted of 59.1 percent White, 8.7 percent Hispanic, 5 percent Black or African American, 1.5 percent American Indian or Alaskan Native, 4.3 percent non-resident alien, 3.6 percent reporting two or more races/ethnicities, and 17.2 percent unknown. The majority of undergraduate students were between the ages of 20-24 (45.4 percent), with 25 to 44 being the second-largest age range (23.4 percent). Approximately 21 percent of undergraduates were between 18 and 19, and 6 percent were under 18. Only 3.7 percent were between 45 and 62, and 0.2 percent were 65 and older. More students attended Washburn part-time, with 4,023 enrolling part-time compared to the 3,679 enrolled full-time. The majority of Washburn students at this time were Kansas residents, with only 886 students reported as non-residents (Kansas Board of Regents, 2018). Students enrolled in over 200 areas of study from five academic units, the College of Arts and Science, School of Applied Studies, School of Business, School of Nursing, School of Law. The institution is also affiliated with a local technical college, Washburn Tech.

In addition to a variety of majors and degree programs, Washburn students can pursue a Leadership Studies minor or certificate through the Leadership Institute. The Leadership Institute (LI) is an interdisciplinary program that offers extensive academic and co-curricular leadership development experiences for undergraduate students (Washburn University Leadership Institute, n.d.). According to the Leadership Institute's website, the mission of the LI is:

to further develop students into ethical and intentional leaders who value diversity and are prepared to immediately exercise effective leadership in today's changing society by cultivating the study of leadership and facilitating transformational learning experiences designed to challenge, motivate, and inspire. (para. 3)

Through participation in the LI, students can take leadership courses or participate in co-curricular leadership development. Students can choose to participate in a variety of out-of-class experiences and programs designed to challenge their perceptions of leadership and provide a space where students can practice leadership in a real-world context. I have served as the Associate Director of the LI since 2014 and was currently appointed Director. In this role, I oversee all curricular and co-curricular initiatives and am very familiar with the students the LI serves as well as the leadership-related learning outcomes they achieve through participation. This study presented an opportunity to further explore student learning outcomes which may not typically be associated with traditional leadership development, such as hope and resilience.

The majority of students who take courses through the Leadership Institute are pursuing a Leadership Studies Minor or Certificate, but they may also take the 100 or 200-level courses to fulfill general education requirements. Additionally, Washburn students can take a leadership course in order to earn the Washburn Transformational Experience (WTE) in Leadership, an additional credential applied to the students' academic transcript indicating the completion of a leadership change project and reflection of how leadership can create positive change. Outside the classroom, students can participate in a variety of co-curricular and immersive leadership experiences, such as attending leadership conferences, participating in a student organization called the Student Leadership Council, hold a formal leadership position, attend various trainings or retreats, participate in a residential learning community, or simply attend meetings and social events.

The majority of leadership activities relevant to this research study are offered by the Leadership Institute. However, students participating in the study may have also participated in leadership development experiences, such as serving as a leader or officer in an on or off-campus

organization, outside of the Leadership Institute. This study explored how many leadership activities, not just those offered by the Leadership Institute, related to students' development of psychological capital.

The Leadership Institute originally partnered with the Vice President for Academic Affairs office to conduct the MSL research study at Washburn in the spring of 2018 with goals of gathering data related to the impact of the leadership development activities on Washburn students and to assist the University in assessing the University student learning outcome of global citizenship, ethics, and diversity.

Research Questions

This study used 2018 MSL data to explore how college women's involvement in various types of leadership development activities relates to students' psychological capital (PsyCap) scores for the constructs of self-efficacy, hope, and resilience. The research questions this study addressed include:

1. What are the characteristics of students who completed the 2018 Multi-Institutional Study of Leadership at Washburn University, and what leadership activities or programs do they participate in?
2. Is there a difference in psychological capital (hope, resilience, and self-efficacy) for those college women who report involvement in leadership activities and those who do not report involvement in leadership activities?
3. Is there a relationship between type of leadership involvement (co-curricular, immersive, and academic) and number of activities participated in for each type and psychological capital?

4. Controlling for student demographics of race, class level, GPA, and pre-test scores for self-efficacy, resilience, and hope, how does type and amount of leadership involvement predict psychological capital?

Theoretical Framework

This study was informed by a conceptual framework and two additional theoretical frameworks. Astin's I-E-O model served as the conceptual framework informing the MSL assessment and provided helpful context in positioning the goals of the MSL assessment used for the quantitative data collection. Astin's (1999) student involvement theory provided helpful context in understanding how student participation in various leadership experiences contributed to the development of specific learning outcomes; for this study, this relates to how participation in various types of leadership activities promotes psychological capital in college women. Finally, the psychological capital framework helped to focus the study's research questions on a specific subset of data related to scales measuring psychological capital constructs.

Since this study analyzed data from the MSL, it is important to understand the conceptual framework that informs the assessment. An adapted version of Astin's (1993) I-E-O model served as the conceptual model for the MSL, which collects data related to students' knowledge and experiences before and during college (Multi-Institutional Study of Leadership, n.d.). These data can then be examined to determine the influences that various experiences have on different learning outcomes. Astin (1993) created the I-E-O model as a guide for studying college student development. The purpose of the model is to assess the impact of different environmental experiences by determining whether students grow or change as a result of these environments (Astin, 1993). In the model, inputs refer to student characteristics at the time a student enters college. Environments refer to the different programs, policies, peers, and educational

experiences a student has during the college experience. Outcomes refer to a student's characteristics after exposure to the environment (Astin, 1993).

The environmental measures included in Astin's original model included institutional characteristics, student peer groups, faculty characteristics, measures of curriculum, financial aid, student involvement, and other on-campus college experiences. However, for the purposes of the MSL, the environmental measures are expanded to also include variables representing student experiences outside the college context, such as off-campus employment. Additionally, the MSL "collects data at a single point with pre-college data collected through retrospective questions" (Multi-Institutional Study of Leadership, n.d., para. 4). This requires students to reflect on pre-college experiences and self-report on these data points. For this study, I analyzed the outcomes for students exposed to specific leadership environments, such as taking a formal leadership course, participating in a leadership minor or certificate program, involvement in a formal leadership program, holding formal leadership positions, attending leadership trainings, and other similar environments measured by the MSL (MSL Code Book, 2018) compared to the outcomes for students who did not report exposure to these environments. For the purposes of this study, I categorized leadership activities into three types--co-curricular, immersive, and academic--and explored the PsyCap outcomes for students involved in these three types of leadership activities. I also explored the demographic and pre-college experience data, including information on race, GPA, class level, and student pre-test scores for scales related to self-efficacy, hope, and resilience in order to better understand the population of students interested in participating in leadership programs.

Since this research study explored how involvement in various leadership experiences relates to students' performance on three scales related to psychological capital, Astin's (1999)

student involvement theory helps explain the ways in which learning emerges through the investment of time and energy, thus students involved at greater levels may achieve higher levels of learning. This supports the idea that students involved at a deeper level, or who are involved in more long-term leadership activities such as academic leadership programs, would demonstrate higher levels of self-efficacy, hope, and resilience compared to students participating in shorter-term or one-time experiences, such as through co-curricular leadership activities, or those not reporting no leadership participation at all, if the leadership activities are designed to promote those learning outcomes.

The final theoretical framework that informed this study is psychological capital. Emerging from the field of positive psychology, psychological capital, or PsyCap, is a higher-order construct consisting of the four constructs of self-efficacy, hope, optimism, and resilience (Luthans et al., 2007). Unlike most constructs related to positive psychology or organizational behavior, PsyCap is open to development and change; it emphasizes where leaders already are developmentally and also considers who leaders seek to become (Luthans et al., 2007). The theory compiles four individual constructs informed by research from various scholars and builds on them to create an over-arching positive psychological state. The resulting impact of investing in PsyCap on both performance and attitudinal outcomes goes beyond the individual elements of which it is composed; one's overall PsyCap may be greater and more impactful than the individual parts (self-efficacy, hope, optimism, and resiliency). Enhanced PsyCap can contribute to a variety of positive leadership behaviors which can create pathways to success. This relationship will be further illustrated in Chapter Two.

Significance of Study

Schwartz, Axtman, and Freeman (1998) of the Center for Creative Leadership argue that leadership is a growing interdisciplinary field in American higher education. These programs “teach students about skills needed in order to lead in the global economy and complex social and political contexts that citizens of the 21st century face” (Schwartz et al., 1998, p. 69). The workplace is a complicated and ever-changing environment, and many organizations find themselves at a crossroads; the best places to work are characterized as those with opportunities for growth and development, but this investment in development presents challenges as organizations fight for talent within a global economy with ever-changing political, economic, technological and social climates (Luthans et al., 2007). This presents a need for a new perspective when it comes to managing human resources, and PsyCap offers a new approach to thinking about how to help humans realize their full potential, regardless of context or environment. When PsyCap is emphasized in a positive organizational context, leaders can further enhance their own self-awareness, self-regulation, and personal development.

Various definitions and perspectives of leadership have evolved from a more industrial-era paradigm to what scholars now refer to as a postindustrial perspective, shifting from notions of hierarchy and bureaucracy associated with 20th century leadership to a flatter, more inclusive approach to leadership in the workplaces of the 21st century (Komives & Wagner, 2017; Rost, 1991). While these changes in approaches and expectations of leadership are well-documented in scholarship, it is only recently that scholars are acknowledging that for many groups, such as women and people of color, the common approach to leadership has always been more relational, inclusive, and focused on values in addition to outcomes (Komives & Wagner, 2017). The emergence of these new perspectives broadened the conversation beyond “those who had

social privilege to hold leadership positions, mostly White and male up through the middle of the 20th century,” reaffirming the way many individuals who were previously excluded all along have always thought about leadership (Komives & Wagner, 2017, p. 8).

This study contributes further to the conversation about women and leadership, specifically offering insight about which women are participating in leadership activities, which types of activities, and how these activities might impact outcomes that relate to leadership, but which also contribute to an individual’s overall positive psychological outlook. Exploring the relationship between psychological capital and leadership can inform how leadership programs, such as the Leadership Institute at Washburn University, can contribute to the development of positive constructs like hope, confidence, and resilience in addition to enhancing leadership development capacity in college students, something any workplace and society will likely benefit from. This study informs practice by helping program administrators to direct resource to programs and initiatives that positively impact students by developing their self-confidence and awareness, enhancing students’ beliefs in their ability to achieve success, and by ensuring they are equipped to overcome obstacles and challenges they face as they work to achieve goals. In a time where higher education institutions are competing for a shrinking pool of students and bolstering efforts to retain current students, the ability to articulate how institutional programs can enhance skills necessary for success in life beyond college, such as the constructs related to PsyCap, offers institutions a compelling advantage.

CHAPTER TWO: Framing the Study

This chapter provides an overview of the theoretical frameworks that guide this study and provides necessary context for understanding psychological capital. The theoretical frameworks discussed in this chapter either inform the assessment tool used in this study or help explain how the outcomes measured by the tool are affected by students' involvement in leadership activities on a college campus. The chapter also includes literature linking psychological capital to leadership development, providing critical context for the present study. Additionally, the following sections review existing literature related to the evolution of leadership programs in higher education as well as discuss research findings related to how college students, specifically women college students, develop leadership skills. The chapter explores the history of leadership development programs in higher education in order to position this study in the context of the Leadership Institute, an academic and co-curricular leadership development program at Washburn University. Finally, the chapter explores how women develop leadership and highlight key demographics of college students who tend to gravitate towards leadership activities or experiences as a means of personal development.

Theoretical Frameworks

This study utilized data from the Multi-Institutional Study of Leadership (MSL) assessment, administered in 2018 at Washburn University, as well as several other colleges and universities across the country. The purpose of the MSL is “to examine influences of higher education on college student leadership development” (MSL Executive Summary, 2018, p. 2). Data collected from the 2018 survey underwent secondary data analysis for the present study in order to explore the relationship between student involvement in various leadership activities in college and their development of specific constructs related to psychological capital, which

include hope, resilience, and self-efficacy. Before discussing student leadership development or psychological capital, it is first important to understand the theoretical underpinnings of the study and the survey instrument, which is informed by Astin's (1993) Inputs-Environments-Output model. Since this study also explored how student involvement in various leadership activities might impact the development of psychological capital, an understanding of Astin's involvement theory is also critical in framing the study. Finally, this study was informed by the theoretical framework of psychological capital, which provides a foundation for understanding and conceptualizing three constructs, hope, resilience, and self-efficacy, and how each construct is measured by the MSL. For the present research study, hope, resilience, and self-efficacy make up the dependent variables, while involvement in leadership activities in college represents the independent variable. The following section will define each theoretical framework and explain each theory's relevance to the present study.

Astin's I-E-O Model

Astin's (1993) Input-Environments-Output (I-E-O) model is a conceptual guide for studying college student development. In this model, inputs refer to the characteristics a student possesses upon entering a higher education institution. Environments refer to the various programs, experiences, or interactions students have during their college experience. Outputs refer to a student's characteristics after exposure or participation in a particular environment (Astin, 1993).

The MSL utilizes an adapted version of the I-E-O model as the conceptual framework for the assessment, requiring students to self-report information about their perceptions and experiences prior to starting college as well as their experiences during college (MSL Conceptual Model, n.d.). These data are then examined to explore the influences of different environments

and experiences students have while in college on a variety of different educational outcomes. Astin's model is adapted for the MSL in two ways (MSL Executive Summary, 2018). First, the environments measured by the MSL also include experiences that may occur outside of the college context, such as students receiving mentorship from employers and participation in off-campus organizations. This differs from the original model, which looks exclusively at participation or experiences that occur specifically on a college campus (Astin, 1993). Additionally, the MSL asks students to provide pre-college data by using retrospective questions, as they think back to before they started college (MSL Executive Summary, 2018). This approach is supported by prior research and is designed to reduce response-shift bias while providing accurate indications of student gains (Howard, 1980; Rohs, 2002; Rohs & Langone, 1997). Regardless of the adaptations made for the purposes of the MSL, Astin's (1993) model explores the inputs or characteristics a student brings with them to college, the environments students experience while in college, such as various leadership activities and programs, and outcomes or learning that emerges from exposure and participation in these environments, like students' development of psychological capital. This makes the framework relevant to this research study.

Involvement Theory

While Astin's I-E-O Model serves as the conceptual framework informing the MSL, Astin's (1999) student involvement theory informs this research study by explaining how student investment of time and energy into various educational experiences can directly impact the learning that occurs. Student involvement theory focuses primarily on the behavioral mechanisms or processes that facilitate student development (Astin, 1999). The theory suggests that greater involvement in college results in greater student learning and personal development

for students. This involvement requires the investment of time and energy on behalf of the student as well as an understanding that the effectiveness of any educational policy or program is directly related to the capacity of that program to increase student involvement. Specifically, “the extent to which students can achieve particular developmental goals is a direct function of the time and effort they devote to activities designed to produce these gains” (Astin, 1999, p. 522). This is relevant to the present research study when considering how various levels of student involvement in leadership activities might impact students’ development of the PsyCap constructs of hope, resilience, and self-efficacy.

Psychological Capital

The third theoretical framework informing this research study is psychological capital. Psychological capital, or PsyCap, is a positive psychological state of development, characterized by one’s levels of self-efficacy, resilience, hope, and optimism (Luthans et al., 2007). The MSL utilizes a proprietary mix of scales created specifically for the MSL as well as scales for which permission has been granted for use (MSL Overview Handout, 2018). This includes specific scales designed to measure three of the four elements of psychological capital, including a scale for leadership efficacy, two scales for hope measuring both pathways and agency, and a scale for resilience. It is important to note that the MSL explores each of these constructs individually and that no collective psychological capital score is calculated, thus this study will also explore student scores on each of these scales and not focus on PsyCap development as a whole.

Prior to 2004, very little empirical research focused on leadership as it relates to PsyCap constructs like positive affect or self-perception aside from some work on self-esteem (Chemers, Watson & May, 2000). However, extensive literature in social psychology suggested that positive affective dispositions are associated with numerous behaviors associated with effective

leadership (Chemers et al., 2000). Psychological capital is merely one product of the still-emerging positive psychology movement, which has “broadened the perspective beyond what is wrong with people toward optimal functioning, flourishing, and reaching human potential” (Luthans et al., 2007, p. vii). Foundationally, PsyCap is derived from Positive Organizational Behavior (POB), which refers to positively orientated human resource strengths and capacities that can be nurtured, developed, and managed in order to improve performance in the workplace (Luthans et al., 2007).

Since the initial introduction of psychological capital by Luthans et al. in 2004, numerous research studies have emerged exploring the relationship between leadership and psychological capital, such as Avolio and Luthans’ (2006) research on PsyCap as a critical component of authentic leadership and Gooty, Gavin, Johnson, Frazier, and Snow’s (2009) study exploring PsyCap’s influence on the development of transformational leadership behaviors. PsyCap focuses on personal development, but is set apart from other popular perspectives or books oriented toward positive personal development by its foundation in research and theory (Luthans et al., 2007). As mentioned previously, PsyCap is a higher order construct that consists of self-efficacy/confidence, hope, optimism, and resiliency (Luthans et al., 2007). The resulting impact of investing in PsyCap on both performance and attitudinal outcomes goes beyond the individual elements of which it is composed; one’s overall PsyCap may be greater and more impactful than the individual parts (self-efficacy, hope, optimism, and resiliency) (Luthans et al., 2007). PsyCap is concerned with “who you are” in addition to “who you are becoming” (Avolio & Luthans, 2006; Luthans, Luthans, et al., 2004; Luthans & Youssef, 2004) and focuses on development from actual self to possible self (Luthans et al., 2007). This is relevant to the process of leadership development as students choose to participate in a variety of leadership experiences

and activities, often in an effort to learn something new, develop enhanced self-awareness, or gain experience that will benefit them in the future. The following sections will break down each element of PsyCap relevant to this study.

Self-Efficacy. The first of the four PsyCap constructs relevant to this study and measured by the MSL assessment is self-efficacy, or confidence. This construct stems from Bandura's (1986, 1997) research on efficacy and social cognitive theory and refers to one's confidence about his or her abilities to gather the motivation and resources necessary to take action (Luthans et al., 2007). People reporting high self-efficacy set high goals for themselves and choose to pursue difficult tasks, thrive on challenge, are highly self-motivated, invest necessary effort to achieve goals, and persevere in the face of challenge. They continuously challenge themselves with higher goals and willingly choose to engage in difficult tasks. However, it is important to note that self-efficacy is domain specific and will not easily transfer from one context to the next (Luthans et al., 2007). Research does support a positive relationship between individuals with high self-efficacy and positive performance (Hen & Goroshit, 2012, Koontz, 2016, Peterson & Byron, 2008, Robbins, et al., 2004, Stajkovic & Luthans, 1998). Hen and Goroshit (2012) suggested that higher self-efficacy in academics leads to higher GPAs and lower levels of procrastination in students. Robbins, et al. (2004) also reported a moderate relationship between self-efficacy and grade point average. Other research studies link higher self-efficacy to stronger work-related performance (Peterson & Byron, 2008; Stajkovic & Luthans, 1998).

Variables such as gender and race have been identified as important predictors for self-efficacy in college students (D'Lima, Winsler, & Kitsantas, 2014; Lopez, 2014; Mednick & Thomas, 1993; Steinberg, Dornbusch, & Brown, 1992). A study exploring how gender factors into self-efficacy levels for first-year Latino undergraduate students revealed that males reported

higher levels of self-efficacy at the beginning of the academic year compared to females (Lopez, 2014). Toward the end of that year, females reported an upward trend and males reported lower levels of self-efficacy, resulting in similar levels at the conclusion of the academic year. This supports prior research from Mednick and Thomas (1993) indicating that male college students tend to overestimate their self-efficacy in the context of academics, while females tend to underestimate their abilities. Since the present research study will only include female college students, this literature is helpful in understanding the perceptions female students have of their own abilities as they self-report their own self-efficacy.

In terms of race, D'Lima, Winsler, and Kitsantas (2014) reported higher levels of academic self-efficacy for students identifying as Caucasian and African American. Research on self-efficacy for African American students is contradictory, with some studies reporting lower levels of self-efficacy for African Americans than other ethnic groups (Steinberg, Dornbusch, & Brown, 1992). D'Lima et al.'s (2014) study reported the lowest levels of self-efficacy for Asian American students. Possible explanations for this disparity in self-efficacy among different racial groups include the heightened stress and increase of negative experiences on predominately White college campuses as well as increased difficulty with academic and social integration (Lopez, 2014). Washburn University, as a predominately White campus, does not provide a racially diverse sample, therefore a limitation of this study is that there is minimal racial and ethnic diversity, preventing analysis across racial groups for reported levels of self-efficacy as well as the other PsyCap constructs measured.

While self-efficacy is restricted to a given context or domain, numerous studies indicate that higher self-efficacy is linked to positive leadership behaviors and associated confidence in leadership roles (Bandura & Wood, 1998, Chemers, et al., 2000). It is reasonable to believe,

based on the literature related to developing self-efficacy in students, that students assuming higher leadership positions or engaging with confidence in leadership activities by pursuing competitive leadership experiences will result in higher scores for leadership efficacy compared to peers who do not gravitate towards experiences which allow them to demonstrate these positive leadership behaviors. This is part of what the present study sought to ascertain by exploring the impact of leadership participation on the development of self-efficacy, as well as on the other two constructs of hope and resilience.

Hope. Hope is another construct contributing to psychological capital, and is defined as a motivational state based on the interactions between one's goals, agency, and pathways (Luthans & Youssef, 2004). Snyder (2002) posits that "Hopeful thinking necessitates both pathways and agency thought" (p. 251), with each being iterative as well as additive over an individual's pursuit of a specific goal. Individuals reporting high levels of hope are able to identify goals and clearly articulate multiple pathways which would allow them to achieve those goals. This construct is informed by Snyder's (2000) guidelines for developing the capacity to hope, which include obtaining goal acceptance; determining goals; clarifying goals; developing alternate pathways to achieve those goals; develop the ability to adapt or modify existing goals; and anticipating or preparing for upcoming challenges. Goals play an important role in hope, as unachievable goals or unrealistic expectations for goal achievement can ultimately weaken motivation. Research supports that hope, as a PsyCap dimension, can be developed through training and interventions (Demerouti, van Eeuwijk, Snelder, & Wild, 2011). This research study looked at how college women who participate in leadership activities score on hope scales for both pathways and agency in an effort to understand if there were any differences in hope between students who participated in leadership activities compared to students who did not, and

if there were differences in hope among students who participated in different types of leadership activities.

Resilience. Resilience, another PsyCap construct, is another key contributor to one's positive psychological state. Resiliency is defined as the ability to overcome adversity and other challenging life events (Luthans et al., 2007). Resilience is developed by focusing on three specific strategies that emphasize a particular focus: asset-focused, risk-focused, and process-focused. Asset-focused strategies are designed to enhance resources in order to increase the likelihood that favorable outcomes will emerge despite risks. Risk-focused strategies require one to reduce the stressors that enhance the likelihood that undesired outcomes will emerge, and process-focused strategies require one to take inventory of their personal assets in order to manage emerging risks (Luthans & Youssef, 2004).

Both environmental and contextual factors play an important role in shaping resilience (Roberts & Masten, 2004). In terms of demographics, research has yielded mixed results about whether males or females are more resilient (Lee et al., 2012). In a study by Lee et al., (2012), demographic variables were reported to have the lowest effect on resilience compared to protective factors, such as life satisfaction, optimism, and self-efficacy, and risk factors, such as anxiety, depression, or perceived stress. This study actually identified self-efficacy as the strongest positively related variable to resilience, a result supported by prior research studies (Tusaie & Dyer, 2004; Lee et al., 2012). As will be discussed in Chapter Four, this research study explored both self-efficacy and resilience as constructs of psychological capital among female students who participated in various leadership experiences while in college.

Psychological Capital and Leadership

Enhanced PsyCap is related to a variety of positive leadership behaviors, which can create pathways to success (Luthans et al., 2007). For example, Luthans et al. (2007) explained how people who are hopeful and who possess both agency and pathways to achieve their goals are likely more motivated to overcome challenges and be resilient. Confident people can transfer their hope and optimism to various components of their lives, and people who are resilient can adapt and remain flexible, which allows them to maintain optimism (Luthans et al., 2007). Based on this research, I hypothesized that these positive leadership behaviors would likely be most associated with students who participate in leadership activities at a deeper level, such as through academic course work, pursuing a leadership minor or certificate, or participating on more than one form of leadership experience. The actual results of the study are discussed in Chapter Four.

Existing literature has outlined other connections between leadership and psychological capital as well. Luthans and Avolio (2003) assert that a leader's PsyCap is theorized to be an antecedent of authentic leadership development, meaning that leaders have to develop a sense of resilience and self-understanding, along with a positive outlook in order to truly lead others in an authentic way. The development of PsyCap in followers is an important outcome of authentic leadership (Luthans et al., 2007). Specifically, the influence of a leader's self-efficacy on followers can result in more authentic leadership, which serves to further develop both leader and follower (Avolio & Luthans, 2006). PsyCap is also critical in the development of a leaders' self-awareness which can influence how a greater organization or group performs (Luthans, Norman, and Hughes, 2006).

Gooty et al. (2009) connected transformational leadership to psychological capital by finding that followers' perceptions of leadership behaviors considered to be transformational

were related positively to PsyCap, affirming the idea that leadership and PsyCap can be positively developed. According to Burns (1978), transformational leadership is a process where both the leaders and followers constantly raise each other to higher levels of morality and motivation. The constructs of hope, optimism, resilience, and self-efficacy can play an important role in a transformational leaders' ability to increase these motivation and morale levels in followers (Gooty et al., 2009). Roche, Haar, and Luthans (2014) explored the relationship between leaders' mindfulness and various dysfunctional behaviors by investigating how PsyCap may serve as a "mediator mechanism through which the mindfulness of leaders affects their dysfunctional outcomes" (p. 479). The study revealed that leaders' positive psychological capital helped to promote mindfulness and minimize outcomes such as anxiety, depression, cynicism, and emotional exhaustion (Roche et al., 2014).

The positive relationships supported in the literature between higher levels of self-efficacy, hope, and resilience and leadership behaviors (Avolio & Luthans, 2006, Gooty et al., 2009, Luthans & Avolio, 2003, Luthans et al., 2006, Luthans et al., 2007, Roche et al, 2014) warrant additional attention in order to enhance understanding of how various forms of leadership development can impact these constructs. This first requires an understanding of leadership education in the higher education context and how it has evolved over time to become critical in institutions' educational missions to prepare graduates to be successful post-graduation.

Developing Leadership in Higher Education

One of the key independent variables for the present research study is female student participation in leadership development programs or activities in college; therefore, it is important to understand how leadership development emerged and has since evolved in higher

education. The 1990s saw an expansion of leadership programs across college campuses, including the establishment of the first leadership major at the Jepson School of Leadership Studies at the University of Richmond (Dugan & Komives, 2007). Numerous leadership certificate programs and minors were also established at other institutions around the same time, with many programs adding co-curricular leadership experiences as well. The increasing number and types of leadership programs across higher education institutions illustrates the important role that leadership education plays in today's college experience (Guthrie & Jenkins, 2018; Komives et al., 2011). In 2011, Komives identified over 1,000 curricular leadership programs in existence across colleges and universities and acknowledged that the growth of these programs over two decades demonstrates the need for additional scholarship in the field of leadership education.

A study by Guthrie, Teig, and Hu (2018) offered a descriptive analysis of currently existing academic leadership development programs listed in the International Leadership Association (ILA) Program Directory, which includes over 1,550 academic leadership programs from the United States alone. These programs span across associate, certificate, bachelor, master and doctoral degree types and are housed in a variety of different academic disciplines at both public and private institutions. Even the field of leadership education has expanded focus significantly over the last 100 years, moving beyond perceptions of leadership from an individual leader perspective to including engagement and interactions with followers, peers, supervisors, context, and cultures (Avolio, Walumbwa, & Weber, 2009). This shift moved leadership from what was once considered to be an individual characteristic to a reciprocal and complex relational process. More importantly, this expansion of leadership programs on college campuses supports the idea that leadership can be taught (Guthrie & Jenkins, 2018).

Institutions of higher education play an important role in preparing and developing student leaders who are prepared to navigate complex and often dysfunctional contexts in an effort to create positive change. Brungardt (1997) asserted that leadership education programs can provide students with a pathway to help organizations optimize individuals' performance, which has likely resulted in the proliferation of leadership education programs across higher education. These leadership development programs may allow students to develop critical self-regulation capacities, including self-efficacy, self-management, coping skills, and resilience (Murphy & Johnson, 2011).

A research study by Zimmerman-Oster and Burkhardt (1999) examining the impacts of various leadership development programs on students revealed that different types of leadership activities or experiences can have positive impacts on the students these programs serve. A comprehensive review of 22 leadership programs funded by the W.K. Kellogg Foundation at various colleges and universities found that most collegiate leadership programs use multiple methods to engage students in leadership development, including seminars and workshops, mentorship programs, guest speakers, and community service or engagement (Zimmerman-Oster & Burkhardt, 1999). Approximately 93 percent of programs reported that student participants increased their social, civic, and political awareness. Over half of the participating programs reported that students developed a higher commitment to service and volunteerism, enhanced communication skills, greater personal and social responsibility, improved self-esteem and problem-solving skills, an interest in creating change, and improved focus and conflict resolution skills, to name a few (Zimmerman-Oster & Burkhardt, 1999). Institutions also benefited from having leadership programs on campus, with findings suggesting that these programs promote increased institutional collaboration and networking, greater external support for the institution,

improved communication, curriculum enhancement, positive perceptions of institutions in the community, and increased multi-disciplinary activity as well as campus activities (Zimmerman-Oster & Burkhardt, 1999). These findings support the value that leadership education programs provide to college and university students, furthering these institutions' abilities to meet their missions. The Leadership Institute program at Washburn University is no exception; this study can inform the benefits the Leadership Institute provides to students as it relates to students' self-confidence in their abilities to be successful, their belief that they can find paths to success, and their abilities to overcome obstacles and persist despite any challenges they might face.

A study by Zimmerman-Oster and Burkhardt (1999) also identified 30 key hallmarks of successful leadership programs. Two of these hallmarks include having a comprehensive and coordinated educational strategy that includes opportunities for experiential learning, and focusing not only on individual skill development, but on enhancing the leadership capacity for the institution and greater community. Additionally, the study identified both short and long-term outcomes for leadership participants. In the short term, students developed an enhanced ability to create organizational visions and demonstrate stronger transformational leadership behaviors. In the long-term, student participants of leadership programs were more likely to report significant changes in their own self-awareness, abilities to set and achieve goals, understanding of ethics, risk-taking, civic responsibility, multicultural awareness, and other leadership outcomes. Students who experienced engagement in academic leadership programs had an enhanced grasp of leadership theoretical frameworks and a greater interest in developing leadership in others (Zimmerman-Oster & Burkhardt, 1999). The present study will explore student participation in different types of leadership activities, such as attending a leadership workshop (co-curricular leadership involvement) or pursuing a leadership minor or certificate (academic leadership

involvement) in order to identify any differences in students' reported scores for self-efficacy, hope, and resilience based on their depth of engagement.

Dugan and Komives (2007) conducted a national study of co-curricular, academic, and blended leadership development programs from 52 college and universities and found that overall, long-term leadership programs had a greater impact than moderate or short-term programs on various leadership outcomes related to socially responsible leadership. However, all leadership programs included in the study had a significant impact on students' leadership efficacy, with long-term programs having the greatest effect. Leadership efficacy (or self-efficacy) is only one construct of psychological capital and was evaluated alongside hope and resilience in the present study.

Beyond the impacts of short and long-term participation in leadership experiences, Goertzen and Whitaker (2015) looked specifically at how academic-based leadership programs impact all four of the PsyCap constructs, including self-efficacy, hope, optimism, and resilience, by surveying student participants at the beginning, mid-point, and end of their engagement in the academic program. The study yielded mixed results, with significant changes in scores or constructs occurring between the beginning and mid-point, but no significant differences found between the beginning and end of program participation. However, the study did reinforce the idea that PsyCap is malleable and can be enhanced or changed through training and development experiences. This supports the idea that students can experience a change in PsyCap scores based on various participation and interventions. The present study seeks to explore which types of leadership participation may have the greatest impact.

This literature identifies the hallmarks of effective leadership development programs while also discussing the extensive outcomes students can achieve through participation in these

programs. While the benefits of leadership education in college are extensive, literature supports that the constructs associated with PsyCap are particularly compelling when linked with leadership development programs; these programs have the ability to offer interventions and experiences which will allow students to increase their efficacy in constructs that are valuable beyond the context of leadership, but in the workplace and in an overall ability to cope with life situations in the future.

Leadership Development in Women

Because 72 percent of respondents for the 2018 MSL at Washburn University identified as female, and because the Leadership Institute at Washburn serves a largely female student population, this research study focused exclusively on how female college students, who participate in various types of leadership activities, score on scales for self-efficacy, hope, and resilience. Despite a significant body of research exploring how leadership is developed across genders, findings are contradictory and unclear regarding differences in leadership development for men and women. However, it is important context for the present research study to understand the ways that women college students both develop and demonstrate leadership.

Leadership development programs on college campuses have been linked to a variety of positive developmental outcomes such as civic responsibility, skill development, and personal, societal, and multicultural awareness (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001; Dugan, 2006; Posner, 2004). These findings reiterate the importance of leadership development to the goals of higher education, but also situate these programs as powerful tools to promote student learning (Dugan, 2006). However, contradictory findings have emerged from research studying leadership development across genders. A research study by Dugan (2006) explored the “mean differences between male and female college students across the eight constructs of the

social change model of leadership development” (p. 220). The Socially Responsible Leadership Scale (SRLS) is an instrument designed to measure leadership across eight core values, including consciousness of self, congruence, commitment, collaboration, common purpose, controversy with civility, citizenship, and change (HERI, 1996). Dugan’s (2006) study found that both men and women scored lower on the same three constructs: controversy with civility, citizenship, and change. Women, however, reflected statistically significant mean scores that were higher than men across all eight of the leadership constructs (Dugan, 2006). Dugan and Komives (2007) also found that women scored higher in areas related to socially responsible leadership with the exception of the community value of change, or the belief in the importance of creating a better world and society for self and others. Men in this study reported higher self-confidence in their leadership abilities than women. While the present research study did not compare student scores for PsyCap constructs across genders, it does provide insight about the types of leadership activities that college women choose to participate in and explore how this participation may influence their own confidence (self-efficacy), belief in their abilities to set and achieve goals (hope), and perceptions of how they overcome challenges (resilience).

Haber-Curran and Sulpizio (2017) argue that a focus on women’s leadership development is critical, with leadership identity challenges and development needs facing women and girls in all facets of society. While a study from the Pew Research Center (2015) found that the general public views women as more skilled than men at key leadership behaviors such as honesty, integrity, and collaboration, research also supports that women typically demonstrate lower levels of self-confidence and self-efficacy related to leadership than men (Calizo, Cilente, & Komives, 2007; Haber-Curran & Sulpizio, 2017; Hoyt, 2005; McCormack, Tanguma, & Lopez-Forment, 2002). The effects of low leadership-efficacy for women can be

far-reaching, influencing one's interest or motivation for continuing to engage in leadership activities or develop leadership skills (Haber-Curran & Sulpizio, 2017). These beliefs in women's abilities to lead can even affect broader campus involvement and achievement, beliefs about what and how much they can learn, and their psychological well-being (Denzine, 1999). Leadership efficacy is an important predictor of a woman's leadership performance (Hoyt, 2005), and thus more research related to how college women who participate in leadership development experiences score on items related to self-efficacy is warranted.

Generally, research on women and leadership reveal that women's leadership styles are more relational and democratic in nature than men's (Haber-Curran & Sulpizio, 2017). Past research studies using Multi-Institutional Study of Leadership (MSL) data indicate that women more strongly emphasize socially responsible leadership behaviors compared to men (Dugan, Komives & Segar, 2008; Haber-Curran & Sulpizio, 2017; Shim, 2013). Research examining women's definitions of leadership suggests that women often view leadership as a collaborative process which seeks to create positive change and requires admirable personal characteristics and traits (Haber, 2012, Haber-Curran & Sulpizio, 2017). These definitions challenge the more traditional, positional and hierarchical conceptualizations of leadership (Haber-Curran & Sulpizio, 2017). The present quantitative research study provides the opportunity to explore different leadership outcomes than those traditionally emphasized in student leadership development programs by focusing instead on how student involvement and participation in various leadership behaviors, as reported in the MSL assessment, may affect students' psychological capital in relation to hope, resilience, and self-efficacy.

It is important to note that this research study includes data for students who self-report their gender identity as female. Gender is a complex and fluid concept (Jourian, 2015), so this

study utilized the sample of students who reported a gender identification as female rather than relying on the sample demographics provided by Washburn University to MSL program administrators based on students' reported biological sex.

Student Demographics

Beyond just exploring how college women score on PsyCap constructs of self-efficacy, hope, and resilience, based on varying levels of participation in leadership activities, this research study is also concerned with which college women are choosing to participate in these activities in the first place and based on their input characteristics of race, self-reported GPA, class level, and pre-college perceptions of their psychological capital. Specifically, this study explored the demographics for those who participate in leadership activities, as reported by the MSL, and those students who do not. The fourth research question of this study explored the relationship between student demographics of race/ethnicity, class level, and self-reported GPA. The study also compared respondent's MSL pre-test scores for self-efficacy, hope, and resilience, with post-test scores for PsyCap, which required students to reflect back prior to starting college and consider their perceived levels of self-efficacy, hope, and resilience before they were asked to report their current perceptions of these constructs now that they are in college. Findings suggest these pre-test scores were extremely high predictors of post-test scores, ultimately masking the impact that participation in leadership activities had on students' development of each PsyCap construct. Therefore, pre-test scores were not included in final analyses, as discussed in Chapter Four.

As mentioned in the literature review above, students' race/ethnicity can be an important predictor of self-efficacy (D'Lima et al., 2014). Since self-efficacy is an important predictor of resilience, race also becomes important in determining students' abilities to overcome various

challenges and persist to goal achievement. Understanding the racial make-up of student participants in leadership activities compared to those who do not participate can provide further clarification on how these activities may contribute to students' development of PsyCap. Numerous research studies also support a positive correlation between self-efficacy and GPA (Hen & Goroshit, 2012; Robbins et al., 2004). Since students reporting higher levels of self-efficacy may also report a higher GPA regardless of leadership participation, it was important for this study to look at GPA for the student population participating in leadership activities compared to the students who do not in order to determine if GPA was a key predictor of PsyCap. Analyzing participants' academic performance, as reported by GPA, also provides useful information about the type of student who typically pursues involvement in leadership development experiences.

While there is not significant research on age or class level and the development of psychological capital in college students, it is important for this study to look at the class level of students who participate in leadership experiences and who demonstrate higher scores for the PsyCap constructs. Seniors will likely have higher resilience regardless of leadership participation simply due to their ability to persist in college, while freshmen students may not have faced as many challenges or had the opportunity to demonstrate resilience yet. Findings related to class level and PsyCap are discussed in Chapter Four.

Finally, in order to fully understand the student population reporting participation in leadership development experiences, it was important to review these respondents' pre-test scores for the three scales of self-efficacy, hope, and resilience. This provides important information about who chooses to pursue these types of developmental experiences in college and provide a benchmark for how student scores changed from their pre-college perceptions to

current perceptions of self-efficacy, hope, and resilience. The MSL gauges student perceptions before enrolling in college by asking a series of pre-test questions related to each of the outcomes measured by the MSL assessment. For example, for leadership efficacy (which will be used in place of self-efficacy for the purposes of this study), students are asked to look back to before starting college and identify how confident they were that they would be successful in college at 1) leading others; 2) organizing a group's task to accomplish a goal; 3) taking initiative to improve something; and 4) working with a team on a group project (MSL Codebook, 2018). Similar questions are asked of students as it relates to their perceptions of hope and resilience. This information can provide important information related to the types of college students who pursue leadership experiences, which may or may not pre-dispose them to perform higher on the self-efficacy, hope, and resilience scales.

Studies Utilizing the MSL

The MSL is frequently used by researchers for a variety of educational and assessment purposes. Program administrators cite the continual enhancement of leadership practice as an important outcome of the research program, which is supported by the compilation of national studies and research publications available for review on the program's website (Multi-Institutional Study of Leadership Publications, n.d.). The Campus Spotlight series published by the MSL highlights the various ways participating institutions are utilizing or applying findings from the study. National reports are produced regularly by the MSL research team, along with many research articles, theses, and dissertations which are made available to the public. As the data provided by the MSL program is quite robust, research articles utilizing the data range from an exploration of the socially responsible leadership, mentoring relationships, self-efficacy, race and leadership development, perceptions of leadership, student involvement, and more (Multi-

Institutional Study of Leadership, n.d.). The present study contributes to this existing literature by examining the relationship between student participation in a variety of leadership experiences and student scores on scales for the specific components of the assessment related to psychological capital.

Summary

A review of previous literature provides useful context in understanding psychological capital and how the Multi-Institutional Study of Leadership assessment measures these constructs. Theoretical frameworks like Astin's I-E-O model and student involvement theory connect the ideas of psychological capital and leadership development together, as students develop these constructs through academic and co-curricular involvement. Additionally, an understanding of leadership education and how it has evolved in higher education, as well as how women college students learn and develop leadership further grounds this study and identifies the ways in which this research study can contribute to existing literature by exploring how women college students develop psychological capital through leadership participation.

CHAPTER THREE: Methodology

Overview

This chapter describes the dataset used for this research study and also provides a description of the study's variables, methodology, and limitations. The purpose of this research study is to explore the relationship between college women's involvement in different types of leadership activities and their scores on the psychological capital constructs of self-efficacy, hope, and resilience at municipal institution in the Midwest. Prior to conducting any analysis for this study, the researcher submitted a previously collected data protocol to the Human Research Protection Program at the University of Kansas in order to determine if this research study constitutes as human subjects research, thus needing Institutional Review Board (IRB) oversight. The research study was assigned a determination of Not Human Research, thus no additional IRB approval was needed. It is important to note that IRB approval was granted to the original researchers at Washburn University prior to the administration of the MSL at Washburn in 2018.

This study used a secondary analysis of data from the 2018 Multi-Institutional Study of Leadership (MSL) administered at Washburn University in February 2018 to explore the impact that involvement in various types of leadership activities while in college has on the development of constructs related to students' positive psychological state. The MSL assessment is designed to explore how various environments within higher education impact college student's leadership development and leadership-related outcomes (MSL Executive Summary, 2018). The survey was first given in 2006 and has been administered at various higher education institutions in 2009, 2011, 2012, 2015, and 2018. To date, over 350 institutions and 500,000 college students have participated in the study.

A total of 78 higher education institutions participated in the MSL in 2018 (MSL Executive Summary, 2018). This study utilized data from the 2018 data collected at Washburn University, a mid-sized, public, municipal university in Topeka, Kansas. The MSL questionnaire was developed with core measures from the Socially Responsible Leadership Scale (SRLS; Tyree, 1998) which measures the core components of the social change model (HERI, 1996) and has been evaluated using rigorous methods in order to establish content validity (Study Design and Methodology, 2018). Construct validity was further explored for the SRLS in early studies of the MSL as well as for the research program distributed in 2006, 2009, and 2012 which “demonstrated appropriate and consistent relationships amongst outcomes variables and other theoretically supported measures” (Study Design and Methodology, 2018, p. 1-13). Reliability across all eight scales from the original iteration of the MSL through additional iterations, including the 2018 study, demonstrate consistent performance (Study Design and Methodology, 2018).

Overall, the MSL assessment is comprised of over 400 variables, scales, and composite measures exploring student demographics, pre-college experiences, experiences students had while in college, and key outcome measures (MSL Executive Summary, 2018). Other leadership-related outcomes measured by the MSL include leadership efficacy, social change behaviors, complex cognitive skills, social perspectives, spiritual development, resiliency, racial identity, and agency.

Research Questions

As mentioned in Chapter One, the research questions for this study include:

1. What are the characteristics of students who completed the 2018 Multi-Institutional Study of Leadership at Washburn University, and what leadership activities or programs do they participate in?
2. Is there a difference in psychological capital (hope, resilience, and self-efficacy) for those college women who report involvement in leadership activities and those who do not report involvement in leadership activities?
3. Is there a relationship between type of leadership involvement (co-curricular, immersive, and academic) and number of activities participated in for each type and psychological capital?
4. Controlling for student demographics of race, class level, GPA, and pre-test scores for self-efficacy, resilience, and hope, how does type and amount of leadership involvement predict psychological capital?

Dataset

In November of 2017, Washburn University provided a total undergraduate sample of 4,731 students (the entire undergraduate student population) to SoundRocket, the organization coordinating the MSL research program. SoundRocket sent email invitations to these students to complete the survey instrument. Each student received a pre-notification email on February 1, 2018 explaining the MSL and encouraging them to take the assessment. Up to three reminder emails were distributed throughout the month of February to students who were invited to take the assessment but who had not yet completed it. Before taking the assessment, students were asked to provide consent for participation in the study. The total response rate for Washburn University was 33 percent, with 1,562 students completing some or all of the assessment.

Table 3.1 compares student demographics for MSL participants compared to Washburn University as a whole in the same academic year the MSL was administered. Additional demographic information for the female sample relevant to this study is provided in Chapter Four.

Table 3.1. Student Demographic Comparison

Variable	MSL Data ¹	Washburn University Data ²
Gender		
Male	385 (24.6%)	2,668 (39.9%)
Female	861 (55.1%)	4,023 (60.1%)
Transgender/Other	8 (5.1%)	NA
Gender not listed	11 (7.0%)	NA
Missing Data	297	NA
TOTAL	1,562	6,691
Race		
White/Caucasian	1,044 (66.8%)	3,954 (59.1%)
African American/Black	84 (5.4%)	334 (5%)
Latino/Hispanic	114 (7.3%)	582 (8.7%)
Middle Eastern/Northern African	9 (0.6%)	NA
American Indian/Alaskan Native	35 (2.2%)	33 (0.5%)
Asian American	20 (1.3%)	100 (1.5%)
Native Hawaiian/Asian Pacific Islander	6 (0.4%)	7 (0.1%)
Multiracial	43 (2.8%)	241 (3.6%)
Race not listed	44 (2.8%)	1150 (17.2%)
Missing Data	303	NA
TOTAL	1,562	6,691

¹MSL Data includes self-reported student demographics collected from the 2018 MSL assessment.

²Washburn University data was retrieved from Strategic Analysis & Reporting Enrollment Report for Fall 2017, the same academic year the MSL assessment was conducted.

Of the survey respondents, 861 students (or 55.1 percent) identified as women (compared to 59.9 percent of women at Washburn University at the time of survey distribution), and 385 (or 24.6 percent) identified as men. Only 8 respondents reported responses related to gender identification other than male or female, and 11 respondents indicated their preferred response was not listed; these data were not included due to small sample size. Additionally, 297 respondents did not answer the demographic question related to gender. For race, 66.8 percent of respondents identified as White/Caucasian, 5.4 percent identified as African American/Black, 7.3 percent identified as Latino/Hispanic, 2.8 percent identified as Multiracial, and 2.8 percent

identified as race not listed. Responses for students identifying as Middle Eastern/Northern African, American Indian/Alaskan Native, Asian American, or Native Hawaiian/Asian Pacific Islander were less than 2.5 percent due to small sample sizes.

Missing Data

The MSL does not require student respondents to answer all questions as they progress through the survey, therefore missing data is common throughout the data set. While 1,562 students completed some or all of the MSL instrument, not all of these students completed each question or finished the assessment. The total number of students responding to each item in the survey is denoted in each analysis described in Chapter Four.

Variables

For this study, the dependent variables include mean student scores for each PsyCap construct, which includes scales for leadership efficacy (equivalent to the self-efficacy construct, but in a leadership context), resilience, and hope, which consists of two sub-scales for agency (the belief in one's ability to initiate and sustain goal-directed efforts) and pathways (the belief in one's ability to envision multiple routes to achieve goals). The independent variable in this study is leadership involvement, with composite variables representing the different types of leadership involvement, including No Leadership Involvement, Co-Curricular Leadership Involvement, Immersive Leadership Involvement, and Academic Leadership Involvement.

Dependent Variables

The MSL instrument does not measure an overall composite score for psychological capital. However, it does include three separate scales, each measuring a PsyCap construct. Cronbach's Alpha (α) was used to determine the level to which the included variables were

consistent with each other for each of the three constructs. A mean value was calculated across each scale to create the different variables of Leadership Efficacy, Hope: Agency, Hope: Pathways, and Resilience. Respondents who did not answer all questions related to each PsyCap construct were excluded from the data set. The following sections will explain how each individual construct was assessed.

Leadership Efficacy. The first PsyCap construct measured by the MSL is Leadership Efficacy. To measure Leadership Efficacy, the MSL assessment uses a four-point Likert Scale ranging from 1= Not At All Confident, 2=Somewhat Confident, 3=Confident, and 4=Very Confident. The assessment asks respondents “How confident are you that you can be successful at the following?” Students then reply to the following prompts:

1. Leading others
2. Organizing a group’s tasks to accomplish a goal
3. Taking initiative to improve something
4. Working with a team on a group project

Hope. The construct of hope refers to “one’s capacity to generate, initiate action toward, and sustain motivation for goals” (MSL Overview, 2018, p. 1). This construct consists of two sub-scales, Agency and Pathways, therefore the analysis for this construct will involve mean scores for both. Agency refers to the “belief in one’s ability to initiate and sustain goal-directed efforts,” while pathways refers to the “belief in one’s ability to envision multiple routes to achieve goals” (MSL Overview, 2018, p. 1). To measure hope, respondents were asked to read several items and select the response option for each item that best reflects them. The question employed an eight-point Likert scale which included 1=Definitely False, 2=Mostly False,

3=Somewhat False, 4=Slightly False, 5=Slightly True, 6=Somewhat True, 7= Mostly True, 8=Definitely True. For Agency, students respond to the following items:

1. I energetically pursue my goals
2. My past experiences have prepared me well for my future
3. I've been pretty successful in life
4. I meet the goals that I set for myself

For the Pathways sub-scale, students respond to the following:

1. I can think of many ways to get out of a jam
2. There are lots of ways around any problem
3. I can think of many ways to get the things in life that are important to me
4. Even when others get discouraged, I know I can find a way to solve a problem

Resilience. To measure Resilience, the MSL asks respondents to reflect over the past month and consider how the following statements have applied to them over that time period. If a particular situation has not recently occurred, respondents are asked to answer the way they think they would have felt if the situation had occurred. Respondents were asked to address each prompt using a 5-point Likert Scale, with 1=Not at All True, 2=Rarely True, 3=Sometimes True, 4=Often True, and 5=True Nearly All the Time. The prompts were as follows:

1. I am able to adapt when changes occur
2. I can deal with whatever comes my way
3. I try to see the humorous side of things when I am faced with problems
4. Having to cope with stress can make me stronger
5. I tend to bounce back after illness, injury, or other hardships

6. I believe I can achieve my goals, even if there are obstacles
7. Under pressure, I stay focused and think clearly
8. I am not easily discouraged by failure
9. I think of myself as a strong person when dealing with life's challenges and difficulties
10. I am able to handle unpleasant or painful feelings like sadness, fear, and anger

Independent Variables

As discussed in Chapter Two, psychological capital can be an important antecedent to leadership and can contribute to a variety of positive leadership behaviors and styles, such as transformational and authentic leadership (Avolio & Luthans, 2006; Gooty et al., 2009; Luthans & Avolio, 2003; Luthans et al., 2007). Since the literature suggests a strong relationship between PsyCap and leadership, this study explored the relationship between varying levels of leadership involvement and the PsyCap constructs of self-efficacy (or leadership efficacy as measured by the MSL), hope, and resilience.

In order to distinguish students who reported involvement in leadership activities from those who did not, composite variables were created by collecting responses from the 14 variables included in the MSL which indicated participation in one or more activities classified as Co-Curricular Leadership Involvement, Immersive Leadership Involvement, or Academic Leadership Involvement. The only items included in the composite variables were items specifically included in the MSL instrument that are also offered at Washburn University. The following questions were used to compile the composite variable for Leadership Involvement:

1. Which of the following have you engaged in during your college experience? (*1=Yes, 0=No*)
 - a. Living-Learning Program
2. Since starting college, how often have you: (*0=Never 1=Once 2=Sometimes 3=Many Times 4=Much Of The Time*)
 - a. Held a leadership position in a college organization(s)? (e.g., officer in a club or organization, captain of athletic team, first chair in musical group, section editor of newspaper, chairperson of committee)?
 - b. Held a leadership position in an off-campus community or work-based organization(s) unaffiliated with your campus? (e.g., officer in a club or organization, officer in a professional association, chairperson of committee)?
3. Since starting college, have you ever participated in a leadership training or leadership education experience of any kind (e.g.: leadership conference, alternative spring break, leadership course, club president's retreat)? (*1=Yes, 0=No*)
4. Since starting college, to what degree have you been involved in the following types of leadership training or education? (*0=Never 1=Once 2=Sometimes 3=Often*)
 - a. Leadership Conference
 - b. Leadership Retreat
 - c. Leadership Lecture/Workshop Series
 - d. Positional Leader Training (e.g.: Treasurer's training, Resident Assistant training, Student Government training)
 - e. Leadership Course
 - f. Living-Learning Leadership Program

g. Peer Leadership Educator Team

5. Since starting college, have you been involved in the following types of leadership training or education? (1=Yes 0=No)

a. Leadership Certificate Program

b. Leadership Capstone Experience

c. Leadership Minor

Only students who reported participation in at least one of the leadership activities mentioned above were categorized as involved in leadership by indicating 1 or higher for frequency of participation. This group of involved students was compared with non-involved students, which are the students who indicated their frequency of participation was 0.

In addition to the composite variable for Leadership Involvement, an additional series of composite variables were created in order to compare students involved in different types of leadership programs and activities, ranging from short-term involvement or participation to more long-term engagement. Students indicating involvement in short-term, co-curricular experiences, such as participation in a leadership conference, leadership lecture or workshop series were classified under Co-Curricular Leadership Involvement (coded as 0 = no, 1, 2, 3 = yes depending on the number of activities participated in). Students reporting participation in a leadership retreat, formal positional training, or on a peer leadership educator team were classified as having Immersive Leadership Involvement (coded as 0 = no, 1, 2, 3, 4, or 5 = yes). Students who indicated they took a leadership course or were involved in a leadership certificate program, leadership capstone experience, or leadership minor were labeled as having Academic Leadership Involvement (coded as 0 = no, 1, 2, 3, 4 = yes). Table 3.2 below describes which

leadership activities are associated with each type of leadership involvement. It is possible for students to have participate in all three forms of leadership involvement.

Table 3.2. Type of Leadership Involvement Composite Variables

Variable	Leadership Activity/Participation
Co-Curricular Leadership Involvement	Leadership conference Leadership lecture/Workshop series Formal positional training
Immersive Leadership Involvement	Leadership role in an on-campus organization Leadership role in an off-campus organization Living-learning leadership program Leadership retreat Peer leadership educator team
Academic Leadership Involvement	Leadership course Leadership certificate program Leadership capstone experience Leadership minor

Demographic Variables

The fourth research question for this study investigates the relationship between 1) key student demographics, including race, class level, and GPA; 2) student pre-test scores for hope, resilience, and leadership efficacy; and 3) type of leadership involvement; and 4) students' psychological capital (related to hope, self-efficacy, and resilience). This question explores the demographic make-up of the students who choose to pursue participation in leadership activities while in college. Looking at how students score on various pre-tests related to their chosen level of participation and their outcomes on scales for hope, resilience, and leadership efficacy can provide insight about whether the students gravitating towards involvement in various leadership activities were predisposed to score higher on various PsyCap scales, if their involvement in the leadership programs contributed to their development of PsyCap, or both. The following demographic variables are of particular importance to this study.

Race. Survey respondents answered the following question to provide information about their race:

1. Please indicate your broad racial group membership (Mark all that apply).

Race was measured using the following responses: “White/Caucasian,” “Middle Eastern/Northern African,” “African American/Black,” “American Indian/Alaskan Native,” “Asian American,” “Native Hawaiian/Pacific Islander,” “Latinx/Hispanic,” “Multiracial,” and “Race Not Listed.” Due to small sample sizes, only the categories for White/Caucasian, African American/Black, Latino/Hispanic, Multiracial, and Race Not Listed will be analyzed for this study.

Class level. To measure class level, or year in school, students responded to the following:

1. What is your current class level? (Choose One)

Class level was measured using the following responses: “Freshman/First-year,” “Sophomore,” “Junior,” “Senior (4th year and beyond).” Since this research study is concerned with undergraduate students, students reporting responses for “Graduate Student” or “Unclassified” will be excluded from the data set.

GPA. Students were asked to self-report their GPA based on their experience in college thus far. They responded to the following question:

1. What is your best estimate of your grades so far in college? [Assume 4.00=A] (Choose one)

Students reported their GPAs using the following ranges: “3.50-4.00,” “3.00-3.49,” “2.50-2.99,” “2.00-2.49,” “1.99 or Less,” or “No College GPA.” These variables will be treated as ordinal for analysis, with the exception of “No College GPA” which will be treated as missing.

MSL pre-test scores. While not technically demographic variables, student scores on the pre-test scales for leadership efficacy, hope, and resilience are important to include in this study, as these scores do have the potential to affect study results. Students were assigned mean scores for each pre-test (leadership efficacy, hope, and resilience) designed to measure their competence for each construct prior to starting college, which were compared to students’ mean scores for each construct using the scales designed to measure competence as a result of students’ experiences in college. While these pre-test scores were originally included in the analyses to address the fourth research question, they were excluded from final analyses as discussed in Chapter Four. Still, the pre-test results were interesting and should be discussed.

For leadership efficacy, students were asked to answer the following:

1. Looking back to before you started college, how confident were you that you would be successful in college at the following: (Select one response for each)
 - a. Leading others
 - b. Organizing a group’s tasks to accomplish a goal
 - c. Taking initiative to improve something
 - d. Working with a team on a group project

Students had the following response options for each statement: “Not At All Confident,” “Somewhat Confident,” “Confident,” or “Very Confident.”

Similarly, for the hope pre-test, answered the following:

1. Read each item carefully and select the response option that best reflects how you were prior to the start of college.
 - a. I knew I could find ways to solve complex problems even when others gave up
 - b. I generally met the goals I set
 - c. I pursued my goals with great energy

Students responded to these statements using an eight-item scale, ranging from “Definitely False,” “Mostly False,” “Somewhat False,” “Slightly False,” “Slightly True,” “Somewhat True,” “Mostly True,” and “Definitely True.”

Finally, students responded to a pre-test measuring resiliency, where they were asked:

1. Looking back to before you started college, please indicate your level of agreement with the following items:
 - a. I thought of myself as a strong person
 - b. I was not easily discouraged when I experienced failure
 - c. I was able to effectively manage negative emotions like sadness, fear, or anger

Responses were provided using a four-point frequency scale, which included “Never,” “Sometimes,” “Often,” or “Very Often.”

Method of Analysis

This research study explored relationships and determined correlations for female Washburn University students’ involvement in leadership activities and their reported scores for the psychological capital constructs of self-efficacy, hope, and resilience. Before any analysis could occur, the independent composite variables were created, including a variable for No

Leadership Involvement as well as classification of student involvement level ranging from Co-curricular Leadership Involvement, Immersive Leadership Involvement, and Academic Leadership Involvement. Since each of these independent variables is additive and assigned students a score based on the number of activities participated in for each category of involvement, Cronbach's alpha was not calculated for these variables. However, Cronbach's alpha was calculated for the dependent variables in order to measure internal consistency of items within each PsyCap construct. Alpha reliability scores were calculated for both pre and post-test measures for each scale. Once alpha were identified, the following statistical analyses were performed to address each research question:

Research Question 1: *What are the characteristics of the students who completed the 2018 Multi-Institutional Study of Leadership at Washburn University, and what leadership activities or programs do they participate in?*

This research question was answered by running basic demographics to describe the sample as well as using a variety of descriptive analyses using both the independent and dependent variables mentioned above. First, descriptive statistics were run for the control variables of race, class level, and GPA. Additionally, descriptive statistics were run for both the pre-test scales for each PsyCap construct and for each post-test measure for the psychological capital constructs of Leadership Efficacy, Hope (both agency and pathways scales), and Resilience, which include actual response totals (n), minimum, maximum, mean, and standard deviation. Descriptive statistics were also run for the independent composite variables related to type of leadership involvement, including No Leadership Involvement, Co-Curricular Leadership Involvement, Immersive Leadership Involvement, and Academic Leadership Involvement.

Research Question 2: *Is there a difference in psychological capital (hope, resilience, and self-efficacy) for those college women who report involvement in leadership activities and those who do not report involvement in leadership activities?*

To answer the second research question, four independent-sample t-tests were run in order to compare the mean scores for Leadership Efficacy, Hope: Agency, Hope: Pathways, and Resilience for female students reporting involvement in one or more leadership activities in any category of leadership involvement with female students reporting no involvement. This analysis allowed the researcher to identify any statistically significant differences in mean scores for each of the PsyCap constructs relevant to this study for the two groups.

Research Question 3: *Is there a relationship between type of leadership involvement (co-curricular, immersive, and academic) and psychological capital?*

The third research question expands on question two, moving past identifying differences between students involved in leadership experiences and to explore the relationship between leadership involvement and scores on scales for leadership efficacy, hope, or resilience and whether PsyCap scores differ based on the type of leadership involvement (Co-Curricular, Immersive, and Academic). This research question was addressed by running bi-variate correlations. Pearson Product-moment Correlations were run to explore the relationship between each construct of Leadership Efficacy, Hope, and Resilience and each type of Leadership Involvement. Additionally, Spearman Rank Order Correlation (ρ) was run for the additive variables for each type of leadership involvement and each PsyCap construct in order to explore the relationship between the number of activities students participated in for each involvement type and their psychological capital.

Research Question 4: *Controlling for student demographics of race, class level, and GPA and pre-test scores for self-efficacy, resilience, and hope, how does type of leadership involvement predict psychological capital?*

To address the final research question, three separate multiple regressions were run. First, hierarchical regression was used to determine how the different types of leadership involvement predict levels of Hope (both pathways and agency combined) after controlling for race, class level, and GPA. Hierarchical regressions were also run to determine how leadership involvement type also predicted levels of Leadership Efficacy and Resilience after controlling for demographics. As is discussed in Chapter Four, pre-test scores were originally run as part of these regressions, but were later excluded from regression analyses in order to better illustrate the impact of involvement type on each PsyCap construct.

Limitations

A possible limitation of this study is that it does not shed light on the relationship between student involvement in leadership activities and PsyCap for all college students, as this study focuses exclusively on women. However, this was appropriate for this study since the majority of the population that the Leadership Institute at Washburn University serves identify as female. This study utilizes data from students who self-identify as female, which differs slightly from the demographics for the respondent population provided by the University. This indicates that some students identify differently than how they are formally identified or labeled in Washburn University's information system, supporting the perspective that gender is a fluid concept (Jourian, 2015). While literature supports that more research on women and leadership is necessary, significant gaps exist in the literature for populations of students who identify outside of the gender binary.

An additional limitation of this study is the lack of racial diversity among participants. The racial demographics of this study's sample were even less diverse than the overall Washburn University student body, the study only includes one institution, and the study sheds light primarily on the student experiences for White or Caucasian students. Much can be learned from exploring the development of psychological capital through leadership participation for students from different racial and ethnic backgrounds, so additional research utilizing a more diverse sample is needed in order to better understand this development. Furthermore, this research study is based on the results from a single institution with a specific institutional profile and thus the results, while contributing to the literature on leadership and psychological capital, specifically for college women, may not be generalizable to institutions with significantly different profiles.

Finally, an important limitation to discuss is the MSL instrument used for this research study. While one element of this study involves reviewing how students score on pre-test scales for PsyCap constructs, these pre-tests are not true pre-tests, as they are integrated into the same MSL survey as all of the other scales. The MSL "employs a cross-sectional research design in which students were asked to reflect retrospectively on past knowledge and experiences as a means to capture input data" (Study Design and Methodology, 2018, p. 1-15). Because the pre-test is conducted in this way, pre-test and post-test scores are not likely to differ significantly.

Summary

This chapter provided an overview of the study's methodology by describing the MSL survey instrument and the sample used for this study. This chapter discussed the independent and dependent variables relevant to the study and provided an outline of the statistical analyses necessary to answer the research questions posed, as well as anticipated limitations of the study. The following chapter discusses the results of these analyses.

CHAPTER FOUR: Results

This study explores the relationship between female student involvement in various types of leadership activities and psychological capital, specifically related to the constructs of hope, resilience, and self-efficacy. Data from the 2018 Multi-Institutional Study of Leadership (MSL) conducted at Washburn University provide the data source for this study. A total of 1,562 Washburn University undergraduate students completed some or all of the assessment, with 861 students identifying as women. Since the scope of this research is to explore the relationship between leadership involvement and psychological capital for female students, only the data for the female students who completed the MSL survey were analyzed.

Composite Variables and Analysis

Before analyses could be run addressing the specific research questions for this study, several composite variables were created. The independent variables for this study were composite variables created based on students' reported participation in various types of leadership activities, classified as Co-Curricular Leadership Involvement, Immersive Leadership Involvement, and Academic Leadership Involvement. Dependent variables for this study include Hope (agency), Hope (Pathways), Leadership Efficacy, and Resilience.

The dependent variables were evaluated using Cronbach's Alpha (α) to measure the internal consistency of items within each scale. Alpha scores were calculated for both the pre and post-test measures for each construct as outlined in Table 4.1. While the study is primarily concerned with the post-test results, the pre-test scores for each PsyCap construct provide descriptive information about the sample population so were also included in descriptive analyses. The pre-test measures for Hope and Resilience had good internal consistency, with

Cronbach alpha coefficients for Hope at .80 and Leadership Efficacy at .87. The internal consistency reliability for Resilience was acceptable at .71. All post-test measures had good internal consistency, with Cronbach alpha coefficients for Hope: Pathways reporting an alpha score of .85, Hope: Agency with a .84, Resilience with .92 and Leadership Efficacy with .92.

Table 4.1 Alpha Reliability Among Scale Items

Variable	<i>Number of Items on Scale</i>	<i>α</i>
Pre-test Hope	3	.80
Pre-test Leadership Efficacy	4	.87
Pre-test Resilience	3	.71
Hope: Agency	4	.84
Hope: Pathways	4	.85
Leadership Efficacy	4	.92
Resilience	10	.92

Cronbach’s alpha was not calculated for the independent variables of Co-Curricular, Immersive, and Academic Leadership Involvement since each variable was additive and assigned students’ scores based on the number of activities they participated in for each category.

Research Question 1: *What are the characteristics of the students who completed the 2018 Multi-Institutional Study of Leadership at Washburn University, and what leadership activities or programs do they participate in?*

To better understand the characteristics of the sample used for this research study, descriptive statistics were calculated for participants’ race, class level, and self-reported GPA as illustrated in Table 4.2. Gender information was collected through three possible responses: “man,” “woman,” or “transgender.” Only the 861 participants who identified as “women” were included in this study’s analyses. For race, respondents classified their racial group membership by marking all that apply in the following categories: White/Caucasian, Middle Eastern/Northern African, African American/Black, American Indian/Alaska Native, Asian American, Native Hawaiian/Pacific Islander, Latino/Hispanic, Multiracial, and Race Not Listed. White students

represented 84.3 percent of the sample and the second largest racial/ethnic group were African American at 5.6 percent. This sample was less diverse than the racial demographics for undergraduate students at the institution at the time the assessment was administered, which reported 59.1 percent of students as White/Caucasian, with the second largest racial group being Latino/Hispanic (8.7%) followed by African American/Black (5%). While a breakdown of racial group membership is provided below for informational purposes, responses for categories other than White/Caucasian were numerically too small to analyze as separate groups in further analyses. As a result, individuals were grouped into white and people of color/ non-white respondents ($n = 171$, 20.5%). This binary grouping was used for additional analyses.

Students were also asked to report their class level. Since this study focuses specifically on undergraduate students, only participants reporting a class level of “Freshman” ($n = 153$, 17.8%), “Sophomore” ($n = 181$, 21%), “Junior” ($n = 248$, 28.8%), or “Senior+” ($n = 262$, 30.4%) were included (total $n = 844$). Any participants who identified as graduate students or who did not respond were labeled “missing” and were not included in analyses. The sample was fairly representative of the overall Washburn University undergraduate population, which reported a class level breakdown of Freshman (23.35%), Sophomores (20.41%), Juniors (26.84%) and Seniors (29.4%) (Strategic Analysis & Reporting, 2018).

Finally, students were also asked to report their overall academic performance in college using a standard 4.0 scale. Approximately half of the sample reported an estimated GPA of “3.50-4.00” ($n = 429$, 49.8%), while the remaining students reported “3.00-3.49” ($n = 288$, 33.4%), “2.50-2.99” ($n = 99$, 11.5%), “2.00-2.49” ($n = 29$, 3.4%), and “1.99 or less” ($n = 7$, .8%). Students reporting “No college GPA” ($n = 2$) were labeled as missing in later analyses. The GPAs reported by MSL respondents was significantly higher than the cumulative GPAs reported

by Washburn University’s Strategic Analysis and Reporting office in spring of 2018, which reported an average GPA for the entire undergraduate population at 3.09. Broken down by class level, Freshmen reported an average GPA of 2.99, Sophomores at 3.01, Juniors at 3.14, and Seniors at 3.19. Since the MSL asks students to self-report their GPA, it is possible that survey respondents inflated their GPAs when responding to the question about overall academic performance or that the individuals who chose to participate in the MSL study were higher academic performers.

Table 4.2 Background and Demographic Characteristics of Study Sample

Variable	<i>n</i>	Valid %
Gender		
Female ¹	861	100.0%
Racial Group ²		
White/Caucasian	722	84.3%
African American/Black	48	5.6%
American Indian/Alaska Native	18	2.1%
Asian American	15	1.8%
Native Hawaiian/Pacific Islander	2	.2%
Latino/Hispanic	79	9.2%
Multiracial	26	3.0%
Race Not Listed	25	2.9%
Missing	5	
Binary Grouping for Race		
White	665	79.5%
People of Color/ Non-white	171	20.5%
Class Level		
Freshman	153	18.1%
Sophomore	181	21.4%
Junior	248	29.4%
Senior+	262	31.0%
Missing	17	
Self-Reported College Performance (4.0 scale)		
3.50-4.00	429	50.2%
3.00-3.49	288	33.7%
2.50-2.99	99	11.6%
2.00-2.49	29	3.4%
1.99 or less	7	.8%
No College GPA	2	.2%
Missing	7	

¹Only demographic information for female student participants were included in this table, as this is the sample population used for this study.

²For racial group, participants were asked to mark all that apply.

As mentioned in the previous chapter, the MSL measures a variety of leadership-related outcomes using numerous items and scales. The assessment includes scales for three constructs tied to psychological capital, including two scales for hope (agency and pathways), resilience, and leadership efficacy. Beyond the demographic characteristics of the sample for this study, descriptive statistics were run for the pre-test scales for hope, resilience, and leadership efficacy in order to provide insight about how students reported their perceived levels of hope, resilience, and leadership efficacy prior to starting college. Descriptive statistics included the total response counts (*n*), minimum, maximum, mean, and standard deviation for each variable.

Pre-test scores for PsyCap. Student participants were asked to think back to their pre-college experiences when responding to statements related to each construct. As indicated in Table 4.3, students reported a mean score of 6.29 on an eight-point scale when reflecting on how hopeful they felt prior to starting their college career, with 1 being Definitely False in response to questions like “I knew I could find ways to solve complex problems” and 8 being Definitely True. Respondents reported a mean score of 2.67 on a four-point scale when reflecting on how confident they were before starting college that they would be successful in things like “Leading others” or “Taking initiative to improve something,” with answers ranging from 1 (Not At All Confident) to 4 (Very Confident). Finally, students reported a mean score of 3.4 on a five-point scale for the Resilience pre-test, indicating that students generally agreed to items such as “I think of myself as a strong person,” with 1 being Strongly Disagree and 5 being Strongly Agree. These scores were entered as control variables along with race, gender, and self-reported GPA in the later analyses but are provided below for informational purposes.

Table 4.3 PsyCap Pre-Test Scores

Variable	<i>n</i>	Min	Max	Mean	Std. Dev.
Pre-Test for Hope (mean score)	860	1.0	8.00	6.29	1.13
Pre-Test for Leadership Efficacy (mean score)	849	1.0	4.00	2.67	.75
Pre-Test for Resilience (mean score)	854	1.0	5.00	3.40	.84

Post-test scores for PsyCap. In addition to the pre-test scores for each PsyCap construct, descriptive statistics are included below for the post-test measures for Hope: Agency, Hope: Pathways, Leadership Efficacy, and Resilience. To measure hope, respondents were asked to read a list of statements and then select the response that best reflects them on an eight-point scale, ranging from 1 (Definitely False) to 8 (Definitely True). Statements such as “I can think of many ways to get out of a jam” and “There are lots of ways around my problem” make up the Hope: Pathways scale, while statements such as “I energetically pursue my goals” and “I’ve been pretty successful in life” make up the Hope: Agency scale. As outlined on Table 4.4, the mean score for Hope: Agency was 6.67, indicating that students felt the statements were Somewhat to Mostly True. The variance in responses ranged from 1.5 (Definitely/Mostly False) to 8 (Definitely True). Hope: Pathways reported a similar mean score of 6.55 (between Somewhat and Mostly True), but the responses had less variance, with the lowest response being 3 (Somewhat False) and the highest being 8 (Definitely True).

For Leadership Efficacy, students were asked how confident they were that they were at “Leading others” or “Taking initiative to improve something.” They responded on a four-point scale, ranging from 1 (Not At All Confident) to 4 (Very Confident). The mean score for Leadership Efficacy was 3.02, indicating students were confident in their ability to be successful at leading others, working in groups, and taking initiative. Responses ranged from 1 (Not At All Confident) to 4 (Very Confident).

To measure resilience, participants indicated how much they agreed with statements when considering how certain situations applied over the past month. If respondents had not experienced a situation outlined in the statement, they were asked to consider how they think they would have felt. For example, the resilience scale included statements like “I am able to adapt when changes occur” or “Having to cope with stress can make me stronger” while agreeing using statements on a five-point scale ranging from 1 (Not at All True) to 5 (True Nearly All The Time). Students reported a mean score of 3.88, indicating students felt they were sometimes or often able to deal or adapt to various challenges. Individual responses did range from 1 (Not At All True) to 5 (True Nearly All The Time).

Table 4.4 Mean Scores for Hope, Leadership Efficacy, and Resilience Scales

Variable	<i>n</i>	Min	Max	Mean	Std. Dev.
Hope Scale: Agency (mean score)	855	1.50	8.00	6.67	.99
Hope Scale: Pathways (mean score)	855	3.00	8.00	6.55	.95
Leadership Efficacy (mean score)	850	1.00	4.00	3.02	.67
Resilience (mean score)	851	1.00	5.00	3.88	.67

Leadership involvement types. While understanding the sample’s pre and post-test scores for the constructs of Hope, Leadership Efficacy and Resilience is critical to this study, it is also important to know which types of leadership involvement students reported participating in before analyzing how each type of involvement relates to or predicts PsyCap. Therefore, descriptive statistics were run for the independent composite variables created in order to determine participants’ involvement in various types of leadership activities ranging from co-curricular leadership involvement, immersive leadership involvement, and academic leadership involvement. The categories of leadership involvement are not mutually exclusive, as students could report participation in multiple categories. Table 4.5 highlights the number of students who

reported involvement in each category and also indicates how many activities within each category that students reported participating in.

Table 4.5 Leadership Involvement by Type

Variable	Score	<i>N</i>	<i>Valid %</i>
No Involvement	0	402	46.3%
Co-Curricular Involvement	0	693	80.7%
	1	53	6.2%
	2	55	6.4%
	3	58	6.8%
	Immersive Involvement	0	435
Immersive Involvement	1	234	27.5%
	2	105	12.4%
	3	45	2.3%
	4	22	2.6%
	5	9	1.1%
Academic Involvement	0	692	80.4%
	1	72	8.4%
	2	59	6.9%
	3	24	2.8%
	4	14	1.6%

Students who reported no involvement in any of the variables related to leadership involvement, as outlined in Chapter Three, were labeled as Not Involved ($n = 402$). Students who indicated they had participated in one or more co-curricular leadership activities were coded as having Co-Curricular Leadership Involvement ($n = 166$). The number of co-curricular leadership activities that each student participated in were added together to assign a total co-curricular involvement score for each student, ranging from 1 to 3. For example, of the 861 female respondents, 693 students reported that they did not participate in any leadership activity classified as Co-Curricular Involvement, which included attending a leadership conference, attending a leadership lecture/workshop series, or receiving any formal positional leadership training. Only 53 students indicated they had participated in one of these experiences, and 55

students reported attending two of the activities. Fifty-eight students reported participation in all three activities categorized as Co-Curricular.

Students were similarly scored based on participation in one or more immersive leadership activities ($n = 415$), with scores ranging from 1 to 5 based on the number of activities in which students participated. As Table 4.5 indicates, 234 students reported involvement in one immersive activity, while 105 reported participation in two activities, 45 reporting participation in three, and 22 in four. Only nine students reported participation in all five activities labeled as Immersive Leadership Involvement.

Students reporting involvement in academic leadership activities ($n = 169$) were assigned scores ranging from 1 to 4. Seventy-two of the survey respondents reported participation in at least one academic experience, while 59 students reported involvement in two, 24 in three, and 14 students reported participation in all four activities associated with Academic Leadership Involvement.

The greatest participation in leadership activities was for activities labeled as Immersive Involvement, which included experience such as holding a leadership role in an on-campus or off-campus organization, participating in a living-learning leadership program, attending a leadership retreat, or being a member of a peer leadership educator team. This category had the greatest number of activities included (five compared to three or four in the other two categories), which could explain the greater number of reported participants.

The descriptive statistics described above revealed much about the students who completed the 2018 MSL at Washburn University. The sample consisted largely of White, female, junior and senior students who reported relatively high GPAs (83.9% of respondents

reported a GPA at or above 3.00). Approximately half of survey respondents reported no participation in any type of leadership involvement, while 19.3 percent of respondents ($n = 166$) reported Co-Curricular Leadership Involvement, 48.8 percent ($n = 415$) reported Immersive Leadership Involvement, and 19.6 percent ($n = 169$) of respondents Academic Leadership Involvement. Students were able to report participation in more than one type of leadership involvement. Student scores for each PsyCap construct were similar for both the pre and post-tests, with students reporting a 6.29 out of 8 for Hope, 2.67 out of 4 for Leadership Efficacy, and 3.4 out of 5 for Resilience on the pre-test. Post-test scores were slightly higher for each construct, with students reporting 6.67 out of 8 for Hope: Agency, 6.55 out of 5 for Hope: Pathways, 3.02 out of 4 for Leadership Efficacy, and 3.88 out of 5 for Resilience.

Research Question 2: *Is there a difference in psychological capital (hope, resilience, and self-efficacy) for those college women who report involvement in leadership activities and those who do not report involvement in leadership activities?*

Additional analyses were run to explore the relationship between leadership involvement and students' scores for hope, resilience, and leadership efficacy. In order to address the second research question, independent sample t-tests were run to compare mean scores for Hope: Agency, Hope: Pathways, Leadership Efficacy, and Resilience for students who reported participation in one or more activities in any category of leadership involvement (Co-Curricular, Immersive, or Academic Involvement) against students who reported no involvement in any category. Independent t-test results are displayed in Table 4.6.

Table 4.6 Differences in PsyCap Scores for Involved and Non-Involved Students (Independent Samples T-Tests)

Variable	Mean (Not-Involved)	Mean (Involved)	<i>t</i>	df	<i>p</i>
Hope: Pathways	6.40	6.68	-4.24	842	.000**
Hope: Agency	6.49	6.82	-4.94	842	.000**
Leadership Efficacy	2.82	3.19	-8.39	836	.000**
Resilience	3.82	3.94	-2.69	838	.01*

* $p < .01$

** $p < .001$

The independent t-test for Hope: Pathways yielded statistically significant differences in mean scores for involved students ($M = 6.68$, $SD = .93$) compared to non-involved students ($M = 6.40$, $SD = .95$, $t(842) = -4.24$, $p = .000$, two-tailed). The difference in means (mean difference = $.27$, $95\% CI: -.40$ to $-.15$) was small (Cohen's $d = .29$). As one might expect, these results show that students reporting involvement in any type of leadership activity scored higher than their non-involved peers on the 8-point scale for Hope: Pathways, which measured “the belief in one’s ability to envision multiple routes to achieve goals”. While both involved and non-involved students believed this statement was “Somewhat True” and the difference in mean scores was small, involved students as a group scored statistically significantly higher.

The t-test results for Hope: Agency were similar, revealing statistically significant differences in mean scores for involved students ($M = 6.82$, $SD = .93$) compared to non-involved students ($M = 6.49$, $SD = 1.03$, $t(842) = -4.93$, $p = .000$, two-tailed). The difference in means (mean difference = $.33$, $95\% CI: -.47$ to $-.20$) was small (Cohen's $d = .33$). The scale for Hope: Agency referred to the “belief in one’s ability to initiate and sustain goal-directed efforts.” While the difference in mean scores between involved and non-involved students was small, involved students as a group leaned more towards believing this statement to be Mostly True (score of 7) rather than Somewhat True (score of 6).

The t-test for Leadership Efficacy for involved and non-involved students also revealed a statistically significant difference in mean scores for involved students ($M=3.19$, $SD=.63$) as compared to non-involved students ($M=2.81$, $SD=.67$; $t(836) = -8.39$, $p = .000$ two-tailed). The difference in means (mean difference = $-.38$, 95% *CI*: $-.46$ to $-.29$) has a slightly medium effect (Cohen's $d = 0.58$). Leadership Efficacy measures the confidence at which student's believe they can be successful at behaviors such as leading others, organizing and working a group, and taking initiative to improve something. Involved students reported a score of Confident (3 on a 5-point scale), while non-involved students reported feeling Somewhat Confident (2 on a 5-point scale) in their ability to be successful at these behaviors.

The last t-test comparing students involved in leadership activities to students who reported no participation in leadership activities was for Resilience. This test also yielded a statistically significant difference in mean scores for involved students ($M=3.94$, $SD=.67$) when compared to non-involved students ($M=3.82$, $SD=.66$; $t(838) = -2.69$, $p = .007$ two-tailed). The difference in means (mean difference = $.12$, 95% *CI*: $-.21$ to $-.03$) was small (Cohen's $d = 0.19$). The scale for Resilience explored how often students felt they were able to deal with or adapt to various challenges or problems. While the difference in mean scores for involved and non-involved groups was very small, it was statistically significantly higher for students reporting leadership involvement, with students reporting feeling that statements like "I am able to adapt when changes occur" were Often True (4 on a 5-point scale).

Collectively, students reporting involvement in one or more leadership activity across all categories of involvement had statistically significant higher mean scores than non-involved students for the psychological capital constructs of Hope, Leadership Efficacy, and Resilience.

Research Question 3: *Is there a relationship between type of leadership involvement (co-curricular, immersive, and academic) and number of activities participated in for each type and psychological capital?*

While the analysis for the second research question identified whether or not there was a difference in scores for Hope, Resilience, and Leadership Efficacy for students involved in leadership compared to students reporting no leadership involvement, the relationship between the different types of leadership involvement and PsyCap constructs was explored by running correlations. First, bi-variate correlations were run for all variables (see Appendix A) to check for collinearity among all variables. Pearson product-moment correlation coefficient revealed relatively strong relationships between all the dependent variables of Hope: Pathways, Hope: Agency, Leadership Efficacy, and Resilience. However, the strength of the relationship between Hope: Pathways and Hope: Agency was very strong ($r = .709, n = 852, p = .000$). Because of the strength of this relationship, these variables were combined for future analyses into one Hope variable.

The correlations also revealed strong relationships between the variables of Academic and Co-Curricular Leadership Involvement ($r = .698, n = 859, p = .000$) as well as between No Involvement and Immersive Leadership Involvement ($r = .93, n = 849, p = .000$). Despite these strong relationships, these types of leadership involvement were all kept separate for analyses, as the activities included in each category are different enough experiences to merit separate analysis (co-curricular participation versus course enrollment or pursuing an academic program, no-involvement versus some immersive involvement).

Results from the Pearson correlation analysis revealed a small, positive correlation between Hope (Pathways and Agency combined) and all three types of leadership involvement,

as demonstrated in Table 4.7. Leadership efficacy and each type of leadership involvement also reveal a small, positive correlation. Resilience, however, only indicated a small positive correlation between student participation in Co-Curricular and Immersive Leadership Involvement, but not Academic Leadership Involvement.

Table 4.7 Pearson Product-moment Correlations for PsyCap and Leadership Involvement

Variable	<i>r</i>	<i>p</i>	<i>n</i>
Hope			
Co-Curricular Leadership Involvement	.14*	.000	850
Immersive Leadership Involvement	.16*	.000	842
Academic Leadership Involvement	.13*	.000	852
Leadership Efficacy			
Co-Curricular Leadership Involvement	.24*	.000	848
Immersive Leadership Involvement	.27*	.000	839
Academic Leadership Involvement	.20*	.000	850
Resilience			
Co-curricular Leadership Involvement	.09*	.007	849
Immersive Leadership Involvement	.10*	.004	841
Academic Leadership Involvement	.04	.290	851

*Correlation is significant at the 0.01 level (2-tailed)

While the relationship between each PsyCap construct and the different types of leadership involvement is small, it is statistically significant in most cases.

Correlations were also run to explore the relationship between the number of activities participated in for each involvement type and students' PsyCap. Spearman Rank Order Correlation (ρ) was run for the additive variables for Co-Curricular, Immersive, and Academic Leadership Involvement and Hope (Pathways and Agency combined), Leadership Efficacy, and Resilience.

Table 4.8 Spearman rho Correlations for PsyCap and Additive Leadership Involvement

Variable	<i>rho</i>	<i>p</i>	<i>n</i>
Hope			
Co-Curricular Additive (1-3)	.15*	.000	850
Immersive Additive (1-5)	.17*	.000	842
Academic Additive (1-4)	.13*	.000	852
Leadership Efficacy			
Co-Curricular Additive (1-3)	.25*	.000	848
Immersive Additive (1-5)	.28*	.000	839
Academic Additive (1-4)	.20*	.000	850
Resilience			
Co-Curricular Additive (1-3)	.11*	.002	849
Immersive Additive (1-5)	.12*	.001	841
Academic Additive (1-4)	.05	.164	851

*Correlation is significant at the 0.01 level (2-tailed)

As Table 4.8 indicates, a small, positive relationship exists between student participation in various co-curricular leadership activities and Hope. This suggests that participation in multiple co-curricular leadership activities contributes to slightly higher levels of Hope for undergraduate women. The relationship between leadership involvement and Leadership Efficacy was the strongest, indicating that the more students participate in multiple activities, especially those categorized as Immersive Leadership Involvement, the higher their Leadership Efficacy. The relationship between Resilience and leadership involvement was the weakest, indicating virtually no correlation between a student’s Resilience and participation in Academic Leadership Involvement.

Research Question 4: *Controlling for student demographics of race, class level, GPA, and pre-test scores for self-efficacy, resilience, and hope, how does type and amount of leadership involvement predict psychological capital?*

To address the final research question focused on identifying the variables that predict higher scores for each construct of psychological capital, three separate multiple regressions

were run. First, hierarchical multiple regression was used to assess the ability of leadership involvement (Co-curricular, Immersive, and Academic Involvement) to predict levels of Hope (both pathways and agency), after controlling for the influence of race, class level, and GPA. Originally, pre-test scores for each PsyCap construct were also included as a control variable, but results revealed that these scores accounted for the majority of the variance for each model, masking the impact of the variables most relevant to this study. Therefore, the pre-test scores were excluded from the final regression analysis in order to better explore how each type of leadership involvement predicted student scores for Hope, Resilience, and Leadership Efficacy.

Demographic variables of race (coded dichotomously), class level, and GPA were entered at step one, explaining two percent of the variance for Hope. After entry of the additive variables for Co-Curricular Involvement, Immersive Involvement, and Academic Involvement, at step two, the total variance explained by the model was 4.3 percent, $F(6, 813) = 4.75, p < .001$. The type of leadership involvement only explained an additional 3.6 percent of the variance in Hope after controlling for race, class level, and GPA, R squared change = .04, F change (3, 813) = 6.93, $p < .001$. As indicated in Table 4.9 the final model shows that the control measure of class level was statistically significant, recording a beta value of .09, $p < .05$. These results suggest that class level is a significant predictor of Hope while the other variables in the equation are not significant predictors.

Table 4.9 Multiple Regression (Hope)

Variable	β	p
Race Collapsed (Control)	.02	.54
Class Level (Control)	.09**	.01
GPA (Control)	-.07	.06
Co-Curricular Leadership Involvement	.08	.13
Immersive Leadership Involvement	.06	.16
Academic Leadership Involvement	.04	.35

* $p < .05$

** $p < .01$

The second hierarchical multiple regression was run to assess how various leadership involvement predicted Leadership Efficacy after controlling for race, class level, and GPA. The demographic variables predicted 2.4 percent of the variance for Leadership Efficacy. After leadership involvement categories were added in step two, the total variance explained by the model was 9.7 percent, $F(6, 813) = 14.59, p < .001$. Leadership involvement explained an additional nine percent of the variance in Leadership Efficacy after controlling for demographics, $R^2 \text{ change} = .09, F \text{ change}(3, 813) = 21.90, p < .001$. Table 4.10 demonstrates that in the final model, class level, co-curricular, and immersive leadership involvement were all statistically significant predictors of Leadership Efficacy, with Immersive Leadership Involvement recording the highest beta value ($\beta = .14, p < .01$) followed by class level ($\beta = .12, p < .01$) and Co-Curricular Leadership Involvement ($\beta = .11, p < .05$). These results suggest that participation in immersive and co-curricular leadership experiences positively predict students' levels of Leadership Efficacy, or their confidence in their ability to demonstrate leadership in a group or to motivate in order to achieve goals. Class level is also a predictor of Leadership Efficacy.

Table 4.10 Multiple Regression (Leadership Efficacy)

Variable	β	p
Race Collapsed (Control)	.01	.78
Class Level (Control)	.12**	.00
GPA (Control)	-.02	.67
Co-Curricular Leadership Involvement	.11*	.03
Immersive Leadership Involvement	.14**	.00
Academic Leadership Involvement	.07	.12

* $p < .05$

** $p < .01$

The last hierarchical regression explored how leadership involvement predicted Resilience after controlling for demographic variables. Variables for race, class level, and GPA, predicted 1.4 percent of the variance for Resilience. After the additive leadership involvement

variables w added in step two, the total variance explained was 3.3 percent, $F(6, 813) = 2.01, p < .001$. Leadership involvement only explained an additional 1.5 percent of the variance for Resilience after controlling for race, class level, and GPA, R squared change = .02, F change (3, 813) = 4.29, $p > .01$. The final model revealed that class level and Co-Curricular Involvement were both statistically significant. As outlined in Table 4.11, beta scores for Co-Curricular Leadership Involvement were the highest ($beta = .13, p < .05$), followed by class level ($beta = .11, p < .01$).

Table 4.11 Multiple Regression (Resilience)

Variable	β	p
Race Collapsed (Control)	-.001	.97
Class Level (Control)	.11**	.001
GPA (Control)	-.04	.29
Co-Curricular Leadership Involvement	.13*	.02
Immersive Leadership Involvement	.04	.39
Academic Leadership Involvement	-.07	.11

* $p < .05$

** $p < .01$

These results identify both class level and Co-Curricular Leadership Involvement as predictors of Resilience, with student participation in leadership activities classified as co-curricular making the strongest contribution to explaining students' Resilience, followed by class level.

Summary

This chapter discussed the results of the quantitative analyses conducted for this research study, providing descriptive statistics regarding the sample population used for the study as well as discussing the results of independent t-tests, correlations, and multiple regressions in order to determine if statistically significant differences existed in PsyCap scores for students reporting involvement in various leadership activities compared to students who reported no involvement in these activities. Results indicate significantly higher scores for involved students across all

three constructs, including Hope, Leadership Efficacy, and Resilience compared to non-involved students. Correlations suggest positive relationships between all three types of leadership involvement and the constructs of Hope and Leadership Efficacy. However, Resilience is only positively correlated with student involvement in Co-Curricular and Immersive Leadership Involvement, not Academic Leadership Involvement. When looking at the additive leadership involvement variables, results indicate that the participation in more than one activity within any of the three leadership involvement categories is associated with higher levels of PsyCap, with the exception of participation in Academic Leadership Involvement and Resilience. Finally, hierarchical regressions identified the control variable of class level as an important predictor of Hope, Leadership Efficacy, and Resilience. Co-Curricular Leadership Involvement was a predictor for both Leadership Efficacy and Resilience, while Immersive Leadership Involvement was only a significant predictors of Leadership Efficacy. The following chapter will discuss the research findings in greater depth.

CHAPTER FIVE: Discussion and Conclusions

This research study was designed to explore relationships between the psychological capital constructs of Hope, Resilience, and Leadership Efficacy (dependent variables) and women student's participation in various forms of leadership involvement (independent variables) at a mid-sized midwestern institution. Using Luthans et al.'s (2007) theory on psychological capital as the primary theoretical framework, this study provided a secondary analysis of data collected from undergraduate students at Washburn University through the 2018 Multi-Institutional Study of Leadership (MSL). This chapter discusses the results of the study, provides practical implications, reviews limitations, and offers suggestions for future research.

Discussion of Findings

This study found statistically significant differences in scores for all three constructs of PsyCap, including Hope, Resilience, and Leadership Efficacy, for students reporting participation in activities classified as leadership involvement compared to students reporting no leadership involvement. In addition, the study suggests positive relationships exist between student involvement in Co-Curricular, Immersive, and Academic Leadership Involvement and the PsyCap constructs of Hope and Leadership Efficacy. Results support prior research which links higher levels of self-efficacy, hope, and resilience to leadership development, specifically in regards to co-curricular leadership experiences. The results also contribute to an existing gap in the literature related to how class standing and age relate to PsyCap, suggesting that class level is a predictor of higher PsyCap regardless of leadership involvement. Each of these findings will be discussed in detail.

Demographic/Control Variable Findings

Descriptive statistical analyses revealed that the majority of participants in this study were white women, therefore the results are not generalizable across multiple racial groups. While race has been identified as important predictors of PsyCap constructs such as self-efficacy in prior literature (D’Lima, Winsler, & Kitsanas, 2014; Mednick & Thomas, 1993; Lopez, 2014; Steinberg, Dornbusch, & Brown, 1992) these findings were not supported in this study, likely due to the small sample of students who were classified as People of Color/Non-white. Additionally, the reported GPAs for participants on the MSL instrument were overall higher than what Washburn University reported in the same semester, with approximately half of the respondents reporting a college GPA of between 3.50 and 4.00. This result could indicate that the sample of respondents consisted primarily of the highest academic performers, or that respondents inflated their GPAs when asked to report out on their overall academic performance. Prior research supports a positive correlation between self-efficacy and GPA (Hen & Goroshit, 2012; Robbins et al., 2004), but results from this study did not reveal a significant correlation between GPA and Leadership Efficacy. However, the results of this study did yield a mean score of 3.02 on a 4-point scale for Leadership Efficacy for all female survey respondents, which may be higher than what would have been reported if the sample had lower GPAs or GPAs that were more representative of Washburn University.

Since the study found no correlation between self-reported GPA or race and Hope, Resilience, or Leadership Efficacy, it is not surprising that these control variables were not predictors of higher levels of PsyCap in undergraduate students. Class level, however, was found to be an important predictor of all three constructs of Hope, Resilience, and Leadership Efficacy, contributing to an existing gap in the literature regarding the impact of age or class level on the

development of psychological capital in college students. These results support the logical assumption that seniors likely possess higher levels of psychological capital simply due to their ability to persist in college and overcome challenges that younger students may not have faced yet.

Descriptive statistics also yielded interesting findings related to the number of students reporting participation in the different types of leadership activities. Approximately 44 percent of respondents reported no involvement in leadership activities at all. While the Leadership Institute reports involvement of about 300 students at any given time, its interdisciplinary focus provides opportunity for any student who is interested in participating to be involved. This significant number of non-participants should be of interest to the LI, as the program should consider ways in which it might reach out to those students not currently taking advantage of opportunities available to all students and to develop understanding around why some students are deliberately choosing not to participate.

Independent Variable Findings

This study revealed several interesting findings related to the independent variables for Leadership Involvement. First, mean comparisons revealed statistically significant differences in mean scores for students who reported participation in any type of Leadership Involvement compared to students who reported no involvement in leadership activities. These results support prior research studies highlighting how both short and long-term leadership programs can have a significant impact on the development of students' PsyCap and other positive leadership outcomes (Dugan & Komives, 2007; Goertzen & Whitaker, 2015; Murphy & Johnson, 2011; Zimmerman-Oster & Burkhardt, 1999). +

This study also revealed positive correlations between student participation in all three types of Leadership Involvement (Co-Curricular, Immersive, and Academic) and the PsyCap constructs of Hope and Leadership Efficacy. Co-Curricular and Immersive leadership involvement both reported positive correlations with Resilience, but Academic Leadership Involvement did not reveal a statistically significant relationship. These results are consistent with the mixed results reported by Goertzen and Whitaker (2015) when looking at how academic leadership programs impact psychological capital, revealing that academic leadership programs can have some impact on PsyCap constructs, but that it is important to remember that PsyCap is malleable and can be enhanced or changed through a variety of training or development experiences both in and outside the classroom.

When controlling for race, class level, and self-reported GPA, both the independent variables of Co-Curricular and Immersive Leadership Involvement showed statistically significant relationships with one or more dependent variable. While only 166 student participants indicated they had participated in at least one or more co-curricular leadership experiences, Co-Curricular Leadership Involvement was an important predictor of both Leadership Efficacy and Resilience. Approximately half of this study's participants reported participation in at least one leadership experience categories as Immersive Leadership Involvement. This type of Leadership Involvement was also determined to be a predictor of Leadership Efficacy. Results revealed that the more leadership-related activities they participated in, whether they were classified as co-curricular, immersive, or academic, the higher the students' PsyCap, with the exception of Academic Leadership Involvement and Resilience.

While the literature suggests that different types of leadership experiences can impact various leadership outcomes for college students, the results of this research study are surprising

in that Co-Curricular Leadership Involvement, which consists of mostly short-term leadership experiences such as attending a leadership conference, lecture, or workshop series, or receiving formal positional leadership training, seems to have the greatest impact on students' PsyCap than more long-term experiences, such as enrolling in a leadership class or pursuing a Leadership Minor, which are classified as Academic Leadership Involvement. These results do not support prior research, like that of Zimmerman-Oster & Burkhardt (1999), which indicate that more significant leadership outcomes emerge as a result of engagement in leadership long-term. However, this finding is positive for leadership programs on college campuses, as shorter term, co-curricular leadership experiences are often less expensive and can reach a broader audience than more long-term experiences, which require significantly more resources to offer and sustain. This finding presents a significant opportunity for future research that further explores how co-curricular leadership involvement can enhance leadership outcomes in college students, including outcomes which are not always associated with leadership development.

It is important to note that while the above findings were significant, the correlations were relatively weak and much of the variance was unaccounted for. The weaker correlations could, in part, be attributed to the fact that student respondents reported relatively high PsyCap scores across the board, even those students who did not participate in any leadership activities. With higher scores, there is less room for improvement, even with successful interventions. Future studies may consider screening participants by PsyCap scores with the goal of focusing specifically on students reporting lower scores for hope, resilience, and leadership efficacy in order to better understand how leadership participation may impact these constructs. In addition, controlling for other demographic variables which might relate to students' scores for constructs such as resilience, specifically, may help to identify important predictors. These variables could

include first-generation status, whether students live on or off campus, if students work and if so, how much, and whether students are Pell eligible.

Implications for Practice

As mentioned in Chapter One, building leadership capacity in college students is now assumed to be a critical expectation of higher education institutions (Astin, 1993; Boatman, 1999; Shim, 2013; Zimmerman-Oster & Burkhardt, 1999). Exploring how leadership development programs can equip students to be successful in life beyond college by promoting outcomes such as enhanced hope, resilience, or leadership efficacy, can assist higher education leadership programs in promoting their value to both the institution and the overall college experience. The results of the present study have important implications for practice for the Leadership Institute at Washburn University.

First, the results of this study support that students who report involvement in leadership activities report higher levels of leadership efficacy, hope, and resilience than students who do not pursue these leadership experiences. At the most basic level, this finding supports that programs such as the Leadership Institute at Washburn University attract students who have a higher belief in themselves and their ability to lead others, as well as in their ability to overcome difficult challenges. With increased concern over graduation and retention rates in higher education institutions, institutions should leverage programs like the Leadership Institute to recruit students who are likely to be successful in college. As this research study also supports that leadership involvement, particularly involvement in co-curricular leadership experiences, is an important predictor of higher psychological capital in college students, programs like the Leadership Institute should proudly promote these learning outcomes to prospective students and their families, speaking to a return on investment students can receive through program

participation that surpasses a notation on a college transcript or an item on a resume, but instead referring to a set of psychological tools that can help students overcome challenges they will undoubtedly face throughout their entire lives.

This study brought to the forefront some important considerations that I, in my current role as the Director of the Leadership Institute, need to consider as the LI works to fulfill its mission. Since approximately half of the study's respondents reported no participation in leadership activities, I need to work with my team to consider ways to enhance our outreach to a broader audience of students as well as gain understanding about why students are or are not choosing to participate in LI programming. This can help the LI to ensure we are enhancing the diversity of our student population while providing critical developmental experiences to students who do not currently have access or interest in pursuing leadership development.

Since results reveal the significant impact that engagement in co-curricular leadership experiences can have on the development of psychological capital in college students, the Leadership Institute at Washburn should also assess how frequently these types of leadership experiences are already being offered and, if needed, increase the number of activities offered in a given semester as well as expand the reach of how many students are invited to participate. Through cross-campus collaborations, bolstering offerings of leadership lectures, workshops, or positional trainings for various leadership roles across campus would be feasible without an increased burden on human or financial resources. However, it is important to consider that offering increased programming will likely require additional human and financial resources. Program and student learning outcomes assessment will also be critical in ensuring that the enhanced or additional programming is indeed having the desired outcome on students' leadership and psychological development.

In addition, further research should be conducted to better explore the leadership outcomes students are developing through participation in the academic leadership program, such as the Leadership Studies Minor at Washburn University, as the academic program requires the greatest number of resources out of all the different categories or types of leadership activities. It is critical, in a time of reduced budgets and enhanced attention on program outcomes, that the Leadership Institute understands the learning outcomes being achieved through the academic program and ensures the program is developing the skills and leadership capacity in students that it is designed to teach. Since prior research supports that long-term engagement in leadership development programs have significant impacts on student learning, it is important for program administrators to understand which learning outcomes the academic program is currently addressing and to consider how the academic experience can be bolstered to further develop outcomes such as enhanced positive psychology.

Overall, this research study offers evidence to suggest a positive relationship between leadership development programs, such as the Leadership Institute at Washburn University, and the development of positive psychological constructs such as hope, resilience, and leadership efficacy, which is encouraging as higher education administrators consider all the ways students are being prepared to be successful citizens post-graduation.

Study Limitations and Future Research

Several limitations exist for the present research study, many of which offer exciting opportunities for future research. As mentioned previously, one of the most significant limitations of this study was the sample's lack of racial diversity. Future research studies yielding a more racially diverse sample could better explore race as a predictor of PsyCap in college women, building on existing research about how demographics such as race influence

students' perceptions of their leadership abilities and even their involvement in various types of leadership development experiences. A future study that included or focused specifically on men could also provide insight about the learning outcomes students develop through participation in leadership activities.

Another important limitation of this study is the survey instrument itself. The MSL is a comprehensive survey instrument comprised of over 400 different variables, scales, and composite measures. It measures a significant number of leadership-related outcomes; the scales included in the assessment measuring the PsyCap constructs of Hope, Resilience, and Leadership Efficacy make up only a small fraction of the overall survey. As a result, few research studies have actually used the MSL instrument to look at PsyCap; it is much more common to find research studies that utilize the MSL to measure leadership outcomes such as social change behaviors. Instead, many research studies interested in exploring psychological capital use assessments like the Psychological Capital Questionnaire (PCQ) developed by Luthans, Avolio, Avey, and Norman (2007). This questionnaire features four scales representing each construct, including a scale for hope (Snyder et al., 1996), resilience (Wagnild & Young, 1993); optimism (Scheier & Carver, 1985), and self-efficacy (Parker, 1998). Because the present research study was focused on college students and did not take place inside a professional work context, the MSL was an acceptable way to measure psychological capital in college students, as it included similar scales (with the exception of optimism) for each construct, but revised these scales in order to fit the higher education context. Future studies looking at PsyCap constructs that are domain specific may offer more accurate connections between each construct and leadership, as research supports that the constructs of self-efficacy and hope are not necessarily transferable across domains. However, for the purposes of this study, the 2018 MSL data from Washburn

University was easily available for analysis and provided a way to explore the relationship between PsyCap and leadership development, making it a logical data source for this research.

Another limitation with the MSL survey instrument relates to its use of pre and post-tests within the same assessment. While the present research study was interested in comparing PsyCap scores for college women by looking at pre and post-test results, the pre-test included in the MSL was not a true pre-test, as it was administered at the same time as the rest of the survey instrument and required students to reflect back on their pre-college perceptions and experiences. Analyses revealed that the pre-test scores for each PsyCap construct accounted for a significant percentage of the variance for each regression, masking the impact that the independent variables for this study actually had on the dependent variables. Once this was revealed, the decision was made to exclude the pre-test variables in the regression analyses in order to further explore the impact of Leadership Involvement on each construct. However, the pre-test data is interesting, as it reveals that student respondents were pretty consistent in their evaluations of their own PsyCap levels when reflecting on pre-college experiences. This indicates that generally, these students had a fairly accurate perception of their own levels of hope, resilience, and leadership efficacy.

Finally, an important limitation of this study that warrants future research is the classification of different types of leadership involvement, and how these types of involvement impact students' PsyCap. This research study was particularly interested in how different types of leadership involvement affected students' hope, resilience, and leadership efficacy, largely because the leadership program at Washburn University offers a variety of leadership development experiences that range from short-term, co-curricular experiences to more long-term, academic programs. The researcher chose to organize the leadership activities into the categories of Co-Curricular, Immersive, and Academic based on program offerings at the

respective institution and by looking at the amount of time required from students at each level. Co-curricular experiences represent the shortest experiences and can include attendance at a singular event, such as a lecture or workshop, or receiving one-time training for a leadership position while immersive experiences require a multi-day commitment and a deeper level of engagement, such as holding a leadership role in an organization for a semester or longer or serving in a peer educator role (also a semester to year-long commitment). The academic leadership involvement is probably the easiest to classify, as it requires enrollment in at least one academic course specifically related to leadership, but may also result in student engagement in a series of courses to earn a leadership minor or certificate. Further research is necessary in order to better understand how different types of leadership experiences may influence PsyCap in college students, as it is possible that results may change based on how leadership experiences are classified.

Conclusion

This research study explored the relationship between leadership participation in various forms of leadership involvement and students' psychological capital as it relates to the constructs of hope, resilience, and self-efficacy. Using data from the 2018 Multi-Institutional Study of Leadership, results reveal that students reporting involvement in various leadership activities boast higher levels of hope, resilience, and leadership efficacy than their peers who report no involvement in leadership activities. Furthermore, the study revealed that participation in activities categorized as Co-Curricular and Immersive Leadership Involvement are positively correlated with higher levels of PsyCap. Co-Curricular Leadership Involvement is especially important in the development of PsyCap for college women, making a case for a robust offering of co-curricular leadership experiences on college campuses. Future research should explore the

relationship between various types of leadership experiences and PsyCap further in order to assist leadership development programs on college campuses in enhancing lifelong outcomes like hope, resilience, and self-efficacy in more graduates.

Appendix

Pearson Product-moment Correlations for All Variables

Variable	Race	Class	GPA	Hope (P)	Hope (A)	Lead. Eff.	Resil.	No Involv.	Co-Curric.	Immers.	Acad.
Demographics											
Race	-	-.05	.12**	-.01	.01	-.003	-.01	-.03	-.06	-.03	-.03
Class Level	-.05	-	.01	.09**	.10**	.15**	.13**	.15**	.06	.15**	.04
GPA	.12**	.12	-	-.005	-.15**	-.05	-.05	-.18**	-.13**	-.17**	-.13**
PsyCap											
Hope (P)	.01	.10**	-.005	-	.71**	.48**	.62**	.17**	.16**	.16**	.16**
Hope (A)	.01	.10**	-.15	.71**	-	.52**	.63**	.17**	.16**	.16**	.16**
Lead. Eff.	-.003	.15**	-.05	.48**	.52**	-	.49**	.28**	.24**	.27**	.20**
Resil.	-.01	.13**	-.05	.62**	.63**	.49**	-	.09**	.09**	.10**	0.4
Involvement											
No Involv.	-.03	.15**	-.18**	.15**	.17**	.28**	.09**	-	.46**	.93**	.46**
Co-Curric.	-.06	.06	-.13**	.10**	.16**	.24**	.09**	.46**	-	.42**	.70**
Immers.	-.03	.15**	-.17**	.14**	.16**	.27**	.10**	.93**	.42**	-	.31**
Acad.	-.03	.04	-.13**	.08*	.16**	.20**	.04	.46**	.70**	.31**	-

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