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Doctor of Physical Therapy Students' Perspectives on Leadership Development in the Context of the Proposed Leadership Competencies Framework for Physical Therapists

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DOCTOR OF PHYSICAL THERAPY STUDENTS' PERSPECTIVES ON LEADERSHIP DEVELOPMENT IN THE CONTEXT OF THE PROPOSED LEADERSHIP COMPETENCIES FRAMEWORK FOR PHYSICAL THERAPISTS

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Approved by
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APPROVAL OF DISSERTATION

We, the faculty supervising the work of **Laura Stephens**, affirm that the dissertation, **Doctor of Physical Therapy Students' Perspectives on Leadership Development in the Context of the Proposed Leadership Competencies Framework for Physical Therapists** meets the high academic standards for original scholarship and creative work established by the EdD Program in **Leadership Studies** and the College of Education and Professional Development. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

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Abstract

Leadership is an emerging field in physical therapy professional research. Research efforts have concentrated on identifying the most desirable leadership skills and behaviors for practicing physical therapists, or on curricular interventions implemented in specific educational programs. This study utilized a qualitative phenomenological design to investigate the perspectives of 21 current and former student leaders from Marshall University School of Physical Therapy, specifically investigating the scope and effectiveness of available opportunities in developing leadership skills and behaviors. Participants were also probed regarding their motivation for pursuing pre-professional leadership development opportunities. Findings from this study suggest the available opportunities are effective to engage an increasing number of students in leadership development. Advanced career preparation is the primary motivating factor for participating in these activities. The study also investigated the extent to which the Leadership Competencies Framework for Physical Therapy provided a framework for integrating leadership development into Doctor of Physical Therapy (DPT) pre-professional educational programs.

Study findings indicated the Self-Leadership and Leading Others tiers of the framework were initially validated for limited use of the framework within DPT education.

Chapter 1: Introduction

Leadership research is an emerging interest of the physical therapy profession. This increased interest in leadership emerged concurrently with the transition from a master's degree to a doctoral degree for entry-level education. This transition was, in part, intended to demonstrate physical therapists' preparedness to assume an increasingly autonomous role as primary health practitioners in the American healthcare system (American Physical Therapy Association, 2000). In keeping with these expectations, professional organizations have developed resources for leadership development for special interest areas such as academia, administration, and private practice. These sources provide an opportunity for interested professionals to pursue leadership training specific to their personal practice and are summarized in Appendix D. While there is some overlap among these sources, there is no profession-wide consensus on the most desirable leadership skills and behaviors for physical therapists to possess (Tschoepe et al., 2021).

In 2016, the Commission on Accreditation in Physical Therapy Education (CAPTE) added an accreditation requirement that Doctor of Physical Therapy (DPT) education programs "Participate in professional and community organizations that provide opportunities for volunteerism, advocacy, and leadership." (Commission on Accreditation in Physical Therapy Education, 2015). This addition heightened the emphasis on leadership development within DPT education. However, no guidance has been provided to programs as to how to meet this expectation. Unfortunately, leadership development resources for practicing physical therapists do not appear to be broadly integrated into DPT education and DPT educational programs have not adopted a standardized method to assess students' leadership skills and behavior acquisitions. Service-learning activities, student-led pro bono clinics, and leadership

focused curricular threads are examples of how programs have endeavored to achieve the intent of this standard (Black et al., 2013; Egisti & Davis, 2018; LoVasco et al., 2019; Stickler, et al., 2013; Wilson & Collins, 2006). This lack of profession wide consensus on leadership standards and their implementation limits DPT educational programs' ability to assess the effectiveness of leadership development interventions.

The increased focus on leadership development within physical therapy necessitates a profession-wide consensus on not only the desired behaviors of currently practicing members, but also a consensus regarding which behaviors should be nurtured among students who are required to have opportunity for "volunteerism, activism, and leadership". Recent efforts by Tschoepe and colleagues (2021) appeal for physical therapists to adopt an over-arching set of leadership competencies to provide a foundation for leadership training and development across physical therapy practice. The proposed Leadership Competency Framework for Physical Therapists (LCF-PT) attempts to provide the necessary structure for leadership across the spectrum of physical therapy beginning in pre-professional education and progressing from new graduate to seasoned clinician. This framework built upon prior work identifying essential leadership behaviors of physical therapy professional practice (Lopopolo et al., 2004; Sebelski et al., 2020).

Despite the aforementioned initiatives, there is a dearth of available research on leadership skill and behavior acquisition of physical therapy students to support the utilization of the LCF-PT, or any other previously published resource, within DPT education. While a few individuals have studied the effects of a leadership-focused curricular thread, leadership development often appears a fortunate collateral result of programmatic elements such as pro bono work and service-learning rather than a measured outcome of a targeted curricular

intervention (LoVasco et al., 2019; Clark, 2016; Wilson & Collins, 2006; Black et al., 2013.) Furthermore, students' leadership behaviors and skills are often tracked only tangentially through evaluation tools such as the *APTA Core Values Self-Assessment* and *Clinical Performance Instrument*, neither of which is designed for monitoring leadership development (Denton et al., 2017; American Physical Therapy Association, 2020; American Physical Therapy Association, 2006).

Problem Statement

There has been no formal assessment of the scope and effectiveness of the actual programmatic leadership opportunities available to students in DPT programs. There has also been limited investigation into student experiences with leadership development during their pre- professional education, particularly regarding their motivation and expectations for leadership participation. These issues are complicated by limited consensus within the physical therapy profession regarding which leadership skills and behaviors are most essential for newly graduated professionals and thus necessary for DPT educational programs to foster.

Without specific inquiry into what students are absorbing from pre-professional leadership education and opportunities, it is difficult for educational programs to ensure graduates are acquiring the desired leadership skills and behaviors recommended for professional practice expectations. The LCF-PT has potential utilization as a guide for leadership skill and behavior acquisition within physical therapy students, but thus far it has not been validated for this purpose. Additionally, investigation into DPT student motivation for leadership is lacking which further limits educational programs' abilities to format meaningful and engaging leadership development opportunities. Therefore, the purpose of this study is to conduct an initial investigation into physical therapy student experiences with

leadership development during their education, identify motivating factors, and examine how these experiences relate to the proposed LCF-PT.

Research Questions

The following specific research questions will guide this investigation:

1. What is the scope and effectiveness of the leadership development experiences available to DPT students?

2. What are the primary factors motivating DPT students to pursue leadership development opportunities within their pre-professional education?

3. What do DPT students expect to gain from their student leadership experiences within their pre-professional education?

4. To what extent to DPT students perceive their pre-professional education experiences as effective to develop leadership skills and behaviors?

5. To what extent does the LCF-PT provide a framework for integrating leadership development into DPT pre-professional educational programs?

Delimitations

The population for this study is limited to current and alumni student leaders from Marshall University School of Physical Therapy. This student group was selected for the convenience of recruiting participants and to examine student perspective of the program's specific leadership opportunities. DPT faculty were excluded to concentrate on actual student perspectives rather than the educator's perception of student knowledge synthesis and professional growth, particularly in the absence of a standard measurement of leadership development.

These factors should be given due consideration prior to any attempted generalization

to other programs, institutions, or settings, as they may affect both the internal and external validity of the findings. Application of any results should be done only with programs or participants with the same or similar characteristics of those included in the study sample (McMillan, 2016).

Significance of the Study

Physical therapy student perspectives on leadership development during pre-professional education are unexplored in physical therapy educational literature. This study will initiate investigation into how students and alumni experience and synthesize leadership development opportunities provided during their pre-professional education. Such perspectives will allow physical therapy educational programs to assess the applicability and effectiveness of the available opportunities. Student motivation to pursue and expectations for participating in leadership activities will be probed.

This study will utilize the recently published Leadership Competencies Framework for Physical Therapists (LCF-PT) to assess the extent to which elements of the framework are present in participants' perspectives of their leadership experience. Applying the framework in this manner provides an opportunity to assess its applicability to DPT education from the student perspective. The findings of this study will provide insight into how leadership development experiences prepare physical therapy students for future professional practice, as well as provide preliminary verification of the LCF-PT's applicability to DPT pre-professional education.

Summary

As the profession of physical therapy has positioned itself as a primary health care provider service, members have endeavored to elevate leadership development as an

essential element of professional practice. However, efforts to promote leadership development within DPT education lack consensus and a standardized measurement tool of leadership development specific to physical therapy simply does not exist. The LCF-PT framework represents a promising blueprint upon which to build a consistent schema of leadership across the profession, but its utility has not yet been assessed. This study represents an initial investigation into the suitability of this framework's utilization within DPT education.

Chapter 2: Literature Review

This chapter provides a review of the literature related to the proposed study. This chapter is organized into four primary sections. The first section examines leadership research and development within physical therapy and other healthcare professions practice and education. The second part of the literature review will review DPT student motivation for leadership, and the third section presents the impetus for development of leadership competency frameworks. The chapter concludes with a review of the Leadership Competencies Framework for Physical Therapy (Tschoepe, et al., 2020) and a chapter summary.

Leadership Research and Development

This section of the literature review provides an overview of leadership research and development within healthcare and the profession of physical therapy. Foundational leadership models within healthcare and physical therapy will be described, followed by a review of leadership development within physical therapy and physical therapy education. A synopsis of leadership development in healthcare is provided at the conclusion of this section.

Leadership Models in Healthcare and Physical Therapy

Transformational leadership and servant leadership arise as the most accepted leadership theories for healthcare (Allen et al., 2016; Trastek et al., 2014; McGowan & Stokes, 2015). The transformational leadership model consists of four fundamental factors: idealized influence, inspirational motivation, intellectual stimulation, and idealized consideration. These factors suggest its worth for healthcare education and practice through a value-driven approach, emphasis on relationships, empirical support, and an intention to enhance the growth of both leaders and followers (Trastek et al., 2014; Gabel, 2013,

Antonakis & Day, 2018). Servant leadership, on the other hand, is characterized by principles of empathy, stewardship/trust, building community, empowerment of those served, and the leader acting as a servant to their followers (Greenleaf et al., 2003).

The physical therapy profession in the United States appears to have initially adopted servant leadership as its preferred model beginning with a position paper in the early 2000's (Gersh, 2006). Framing leadership as service reflects the nature of physical therapy as a caring profession and parallels a similar trend in other healthcare professions focused on improving human health and quality of life with preparing future members for contemporary clinical practice (Trastek et al., 2014; Gersh, 2006). However, there is a discrepancy among the position statement authored by Gersh in 2006, the *APTA Core Values* and *Code of Ethics* documents, and language currently utilized in the American Physical Therapy Associations' updated Vision Statement. The association aims to "Transform society by optimizing movement to improve the human experience" utilizing the guiding principles of identity, quality, collaboration, value, innovation, consumer-centricity, access/equality, and advocacy (American Physical Therapy Association House of Delegates, 2019). Whereas the updated vision statement's focus on the professional organization evokes a sentiment of transformational leadership, the *Core Values and Code of Ethics* documents appear more aligned with principles of servant leadership as initially described by Robert Greenleaf in the 1970s (Gersh, 2006; Greenleaf et al., 2003).

This difference may be a source of confusion for researchers attempting to establish leadership competencies for the profession, especially considering recent work by researchers examining transformational leadership in physical therapy and other healthcare disciplines. Studies conducted in Great Britain found both British and international physical and

occupational therapists and speech-language pathologists demonstrated significantly higher use of transformational leadership principles than other healthcare disciplines (Wylie & Gallagher, 2009, Citaku et al., 2012).

Two additional studies examined servant leadership and transformational leadership within medicine and academic pharmacy. Trastek et al., (2014) asserted servant leadership is the most appropriate leadership model for healthcare due to the inherent focus on patient care whereas Allen et al., (2016) argued the ideal leadership model depends upon circumstances and concluded transformational leadership was more appropriate for organizations while servant leadership was a more appropriate approach for individual practitioners. While determining the eminent leadership theory for healthcare is beyond the scope of this paper, understanding the current leadership theory in the context of healthcare is necessary to guide the ongoing formation of leadership principles and development tools.

Leadership Development in Physical Therapy

Leadership development and research within the physical therapy profession surfaced concurrently with the profession's transition to doctoral level education. Thus far, efforts have concentrated on identifying the most desirable skills and behaviors for practicing physical therapists. In 2004, communication, professional involvement, ethical practice, delegation and supervision, stress management, reimbursement knowledge, time management, and healthcare industry scanning were determined to be the most pertinent Leadership Administration, Management, and Professionalism (LAMP) skills required of physical therapy managers (Lopopolo et al., 2004; LAMP Institute for Leadership, n.d.). The study specifically investigated the importance of these components in the context of management of clinical practice and did not differentiate between management and

leadership. This lack of distinction between management and leadership in this study is potentially problematic. The differentiation between the two is effectively summarized by describing leadership as producing change or movement and management as instilling order and consistency (Northouse, 2022).

By contrast, Canadian researchers utilized the *Clifton Strengths Finder* survey to investigate the self-identified characteristics of academic physical therapy leaders versus clinical physical therapy managers. Study findings indicate while both groups of leaders identified as "learners" and "achievers" as their top two characteristics, the academic leaders were more likely to choose empathy and intellect among their top ten characteristics compared to the managers who listed harmony and connectedness (Chan et al., 2016). Their findings suggest overlapping qualities of leadership within the profession while also highlighting the unique needs of specific roles within that same profession. Consistent with Lopopolo's findings of the LAMP skills required of physical therapy managers, Desveaux also found members of the Canadian Physiotherapy Association valued communication, professionalism, and credibility as extremely important leadership characteristics across all major settings of physical therapy practice (Desveaux et al., 2012; Lopopolo et al., 2004).

More recently, a Delphi approach was utilized to identify essential leadership behaviors based upon physical therapist years of experience (Sebelski et al., 2020). Thirty-seven individual competencies were agreed upon as essential for all physical therapists to possess regardless of time practicing, but the panel of experts could not reach consensus on an additional fifteen competencies. Twenty additional competencies were identified for which consensus was dependent upon physical therapist years of experience. The findings from this study imply leadership behaviors can be learned and acquired throughout an individual's

professional career and individuals need not master all leadership competencies prior to taking leadership roles.

The work of Sebelski et al., (2020) was further expanded by the proposal for a Leadership Competency Framework for Physical Therapists (LCF-PT) in which the 57 leadership competencies identified in Sebelski's work were sorted into eleven clusters across three tiers of leadership (Tschoepe et al., 2021). This framework proposes to provide DPT educational programs guidance for intentional leadership development while also guiding professional development of practicing clinicians. Perhaps the LCF-PT represents a bridge between professional leadership development resources and DPT education leadership development, but as a novel proposal, its utility in DPT education has yet to be tested. Given the importance of DPT education in shaping the profession, it seems imperative the framework be further validated.

Leadership in Doctor of Physical Therapy Education

Leadership research within DPT education has primarily focused on program specific curricular interventions intended to meet the accreditation standard. Eigsti and Davis (2018) and LoVasco et al., (2019) found a leadership-focused didactic course positively influenced student self-perception and awareness of leadership practices and can positively impact student leadership behaviors and practice.

Likewise, student leadership development has been acknowledged as a beneficial outcome following participation in extracurricular activities such as pro-bono clinics and service- learning activities (Black et al., 2013; Clark 2016; Wilson & Collins, 2006). Student testimony indicates working in a pro bono clinic heightened conscious practice of core values such as compassion and caring, altruism, social responsibility, and accountability (Stickler et

al., 2013). Participants also reported pro bono work enhanced their clinical skills, personal growth, and community and professional connections—themes reflecting the LCF-PT tiers of leadership:Self, Others, Community/Organizations. While the results of Stickler and colleagues' study (2013) were limited to a single DPT program and did not specifically address leadership development, it is unique by its inclusion of both student leaders and non-leaders in the study population and suggests pro bono work enhances leadership development in all students regardless of formal leadership practice.

Clark (2016) also reported a tenuous link between new graduate's leadership knowledge and skills and involvement in pro bono clinical work, mounting evidence for the utility of this extracurricular activity beyond opportunity for students to practice clinical skills. However, despite acknowledged benefits of these programmatic interventions, there is no standardized assessment of student leadership skill and behavior acquisition. Clark acknowledged this missing element by noting programs consistently evaluated their graduates' leadership knowledge but lacked consistent measurement of leadership skills application.

There have been some attempts to utilize existing profession-specific assessment tools to measure leadership development in DPT programs. Since leadership development within DPT education is often integrated with the concepts of professionalism and servant leadership, the *APTA Core Values Self-Assessment* would appear reasonable to use to measure student leadership development. The *Core Values Self-Assessment* was designed to allow individuals to track personal professional development across the seven core values of accountability, altruism, compassion and caring, excellence, integrity, professional duty, and social responsibility (American Physical Therapy Association, 2020). However, the reliability of the *Core Values Self-Assessment* has not been established across DPT education cohort

levels (Anderson & Hall, 2018). Additionally, the APTA's *Core Values* were updated in 2019 while the *Core Values Assessment* has not been updated since 2013 (Anderson & Hall, 2018; Denton et al., 2017; American Physical Therapy Association, 2020).

Another assessment tool which would appear to have some utility in measuring student leadership development is the APTA's *Clinical Performance Instrument* (CPI). The purpose of the CPI is to measure student performance during clinical affiliations and determine preparedness to perform the necessary technical skills required of licensed physical therapists. Although professional behaviors are assessed within the CPI, leadership is only specifically identified in the context of "beyond entry level" behavior, which indicates a student has surpassed the expectation for new graduates (American Physical Therapy Association, 2006.). Therefore, it is difficult to use the CPI to measure leadership development in DPT students, as according to this tool, leadership behaviors are not expected of "entry level" graduates. Given the tool's specific purpose, the CPI's validity to measure leadership behavior outside the sphere of clinical education is questionable.

Purposeful inclusion of leadership development opportunities is a logical solution for programs to meet accreditation standards. Experiential extra-curricular activities have also demonstrated some effectiveness at developing leadership skills. At the same time, consistent measurement of leadership behavior acquisition across both pre-professional and professional physical therapist practice remains problematic. Similarly, the lack of professional consensus on what constitutes a competent leader has resulted in erratic implementation of leadership development strategies across DPT education.

Leadership Development in Healthcare

Increased interest and focus on leadership development has not been limited to

the physical therapy profession. Multiple healthcare professions have observed a shortage of competent leaders and recognized leadership as a critical component of facilitating changes necessary for quality improvement (Sadowski et al., 2018; Kumar & Khiljee, 2016; Sfantou et al., 2017; Blumenthal et al., 2012; van Diggele et al., 2016; Hargett, et al., 2017). Traditionally, leadership training initiatives have targeted individuals holding administrative and managerial positions, but recent evidence demonstrates positive organizational outcomes when leadership training is inclusive of individuals representing multiple disciplines and years of experience across organizational levels (Blumenthal, et al., 2012; van Diggele, et al., 2020; Mianda & Voce, 2018; McAlearney, 2008). Inclusive leadership training for both novice and veteran frontline clinicians has demonstrated positive results for organizations including improved workforce caliber, reduced employee turnover, and quality improvement (McAlearney, 2008; Mianda &Voce, 2018; Sfantou, et al., 2017).

Several authors blame the dearth of frontline leaders within the United States healthcare system on a lack of prioritization of leadership development within the healthcare educational system (Blumenthal, et al., 2012; Hargett, et al., 2017, van Diggele, et al., 2020). This gap is likely to persist until more disciplines' accreditation standards incorporate leadership development. Despite a cry for leadership development in healthcare, the expectation for pre- professional leadership development is absent in some professions. Curriculum standards for medical and nursing education programs contain no explicit standard for leadership development (Liaison Committee on Medical Education, 2021; Commission on Collegiate Nursing Education, 2018.) Leadership development during pre-professional education may be a greater priority to disciplines that have recently transitioned to clinical

doctorate degrees such as pharmacy, physical therapy, and occupational therapy as their accreditation standards do explicitly include leadership in some capacity (Accreditation Council for Pharmacy Education, 2016; Commission on Accreditation in Physical Therapy Education, 2015; Accreditation Council for Occupational Therapy Education, 2018).

The specific challenges to implementing leadership development programs are apparent. The lack of consensus on the definition of leadership and what constitutes essential leadership knowledge and skills impair development of appropriate and effective training programs (Sadowski, et al., 2018; Reed et al, 2019; Frich et al., 2015). In a systematic review of leadership training in graduate medical education, Sadowski et al., (2018) found significant gaps in understanding best practice for leadership education and the overall quality of reported leadership curricula within medical education was low.

Healthcare pre-professional education programs utilize a variety of methods to foster leadership development with scarce guidance regarding most appropriate and effective methods (Sadowski et al., 2018; Reed et al., 2019, Feller et al., 2016). Additionally, leadership development opportunities are not necessarily accessible to all students. Leadership-specific courses were the most offered leadership development opportunities in pharmacy education, but less than 30% of those courses were required versus being elective or voluntary (Feller et al., 2016). Additionally, despite general acknowledgement that contemporary healthcare leadership requires a collaborative approach, there is a paucity of intentional interdisciplinary or interprofessional leadership training in healthcare education programs (Sadowski et al., 2018; Frich et al., 2015; Mianda & Voce, 2018). Effective assessment of learner outcomes and programmatic effectiveness also remains problematic (Reed et al., 2019; Feller et al., 2016; Frich et al., 2015).

DPT Student Motivation for Leadership

To date, there has been no investigation into DPT students' motivation to pursue leadership opportunities and their expectations for doing so. In an unpublished pilot study, Stephens, Pfost, and Debala (2020) found a small sample of physical therapy students were motivated to pursue leadership opportunities for personal benefits and by intrinsic attributes they believed qualified them for specific roles and responsibilities. These findings were consistent with those regarding student motivation for leadership in pharmacy education (Moore & Ginsburg, 2017; Phillips et al., 2015). While the pilot study did not provide a clear link between student motivation and expectations, the independent theme "framework"—or student's personal beliefs about leadership—emerged as an important factor in their reasons for pursuing leadership experiences.

Existing evidence from pharmacy education may be most generalizable to student physical therapist motivation for leadership opportunities given the similarities between pre-professional pharmacy and physical therapy education. Both professions have recently transitioned to clinical doctoral degrees and share similar applicant demographic and academic demands (Commission on Accreditation in Physical Therapy Education, 2019; American Association of Colleges of Pharmacy, 2019). The validity of studies investigating student motivation for leadership at the undergraduate level may be questionable in the context of a specific graduate student population such as a DPT students, but recent studies of undergraduate student leaders suggest a relationship between student leadership motivation, leadership capacity, and self-efficacy (Harker & Dugan, 2020). Other studies suggest differences in leadership motivation among sub-groups of leaders (Cho et al., 2015), which emphasizes the need to understand the motivating factors for leadership of student physical

therapists as a unique population.

Leadership Competencies

The next section of this chapter describes the impetus and use of leadership competencies within healthcare. The need for a physical therapy specific leadership competency framework will be identified within the current literature, followed by a description of the development of the Leadership Competency Framework for Physical Therapy (Tschoepe et al., 2021).

Leadership Competencies in Healthcare

The use of competency frameworks arose from business and management sources in the 1970's and 1980's and their use has been widely adopted by healthcare entities (McClelland, 1973; Horton et al., 2002). The use of competency-frameworks allows collaborative responses to challenges faced by modern, global systems versus traditional hierarchical leadership approaches (van Diggele et al., 2020; McClelland, 1973). Leadership competencies shift emphasis from technical requirements of specific job roles to "soft skills" highly valued across organizations and professional boundaries (Bolden & Gosling, 2006). Identification and evaluation of leadership competencies serve professional's individual development needs, provide scaffolding for organizational improvement, and a means to evaluate system performance (Baker, 2003).

Efforts have been made to establish comprehensive leadership competencies within medical education and healthcare administration (Citaku et al., 2012; Stefl 2008; Ladhani et al., 2015). The Healthcare Leadership Alliance has defined competency domains for leadership across healthcare professions with an initiative to guide curricula (Stefl, 2008). However, the generalizability of leadership competencies across healthcare disciplines is in

doubt. Shewchuck and colleagues (2005), advise broad competency frameworks are of little value due to lack of specificity which limits application of the competencies in the work setting or within curricula. Critics also emphasize many competencies are developed with limited thought for how they will be utilized or how their reliability and validity will be proven, therefore presenting high risk the competencies' frameworks will inappropriately influence items such as policy development, standards, and curriculum (Batt et al., 2020; Baker, 2003; Bolden & Gosling, 2006; Batt et al., 2020).

Despite these challenges, Batt, et al., (2020) found leadership competencies were developed in nursing and medicine using a rationale of "improving education" and are increasingly being implemented within curricula. Leadership competencies are rational starting points for professions to guide leadership development, but the lack of assessment tools to measure progress may limit real world application (Reed et al., 2019; Baker, 2003). Similar to the challenges of implanting leadership in educational standards, limited guidance exists regarding best practices to develop, validate, and utilize leadership competencies (Batt et al., 2020; Sadowski et al., 2018; Reed et al., 2019; Frich et al., 2015; Feller et al., 2016).

Leadership Competencies Framework for Physical Therapy

The physical therapy profession in the United States is unique among its contemporaries with the doctoral degree requirement for entry level practice (World Physiotherapy, n.d.). As such, adoption or modification of existing leadership competencies from other healthcare professions or other nations is insufficient in addressing the needs of the physical therapy profession in the United States (Tschoepe et al., 2021). This rationale served as the impetus for researchers to develop leadership competencies specific to the needs of physical therapists in the United States with the goal of providing stepwise guidance for

leadership development within DPT education programs.

Development of the LCF-PT mirrored a three-step process frequently utilized by university programs to develop competency frameworks (Stefl, 2008). The authors first performed deductive analysis of existing leadership competency frameworks to determine potential applicability to the physical therapy profession, after which a Delphi panel of physical therapy experts was consulted to identify competencies essential to physical therapy practice (Sebelski et al., 2020). The panel results were sorted into thematic clusters across three tiers of leadership, resulting in the development of the LCF-PT (Appendix E). The authors of the framework acknowledged validation of the framework is still needed but advocate for its adoption as scaffolding upon which to guide DPT leadership education and development. The three domains of leadership in the LCF-PT are Self, Others, and Organizations/Community. Organization of each tier and clusters within each tier are intended to build upon the prior components, the authors having supposed self or personal leadership development necessary before the responsibility of leadership of others and organizations or communities.

Summary

This section provided a review of existing literature pertaining to leadership development within physical therapy practice and pre-professional education as well as related evidence from other healthcare professions. It has also provided an initial look at DPT student motivation to pursue leadership development opportunities as well as discussed development of the LCF-PT.

Chapter 3: Methods

The purpose of this study was threefold: to initiate investigation into student perceptions on their leadership development experiences during their pre-professional education, explore student motivational factors and expectations for participation in leadership experiences, and to provide an initial validation of the LCF-PT as a framework for leadership development within DPT education programs. This chapter includes the research design, population/sample, data collection methods, an outline of data analysis procedures, and study limitations.

Research Design

This study utilized a phenomenological research design to investigate the lived experience of physical therapy student leaders (Cresswell, 2020; McMillian, 2016). Phenomenology was chosen to examine the student perspective directly rather than extrapolating results of quantitative tools that have not been specifically developed to measure leadership development within the context of physical therapy education. A semi-structured interview process was used in an effort to allow participants the ability to "lead" the investigator to perspectives and topics they may not have been previously considered (Guest et al., 2013).

Population/Sample

Initially, attempts were made to recruit subjects from Doctor of Physical Therapy programs within Marshall University School of Physical Therapy's (SOPT) peer group. The peer group is a group of substantially equivalent physical therapy programs utilized by the SOPT to compare outcomes and establish benchmarks for program assessment. These programs are of similar size, mission, and in the same geographic region as Marshall

University SOPT. Internal Review Board (IRB) approval was obtained, and participant recruitment for the study began in December 2021. However, due to low initial enrollment, the study was amended to a case study approach, allowing for convenient sampling of current and former student leaders at Marshall University SOPT. IRB approval for revisions was obtained in February 2022 and participants were recruited from February through June 2022.

Current and alumni who held traditional class officer positions such as president, vice president, secretary, and treasurer were recruited via email and asked to participate in a phone or video interview. Individuals who participated in "non-traditional" leadership positions such as student pro bono clinic leadership, pre-professional student organizations, or positions on other university committees were also recruited for the study. Individuals who did not hold leadership positions or who had been removed from their leadership position were excluded, but individuals who had voluntarily resigned leadership positions were included.

Twenty-one subjects were recruited from the study, including 11 current students and 10 alumni. Current student participants represented the cohorts of 2022, 2023, and 2024. Alumni participants represented the cohorts of 2015, 2016, 2019, 2020, and 2021. Student leaders from the cohorts of 2017 and 2018 were unable to be recruited. The 21 participants included 14 males (66.7%) and seven females (33.3%). Gender and cohort affiliation of participants are summarized in Figures 4.1 and 4.2.

Protocol Development

The LCF-PT tiers of leadership (Appendix E) were used to guide development of the interview protocol. Utilizing the LCF-PT as a framework for the interview allowed for exploration of the extent to which elements of the framework are currently embedded in various leadership development experiences available to physical therapy students at Marshall

University SOPT. Linking each question to a specific tier of leadership as defined by the LCF-PT allowed identification of which domains were most represented within the student experiences. Other items in the protocol specifically addressed participants' motivation to pursue leadership opportunities and their expectations for doing so. The protocol also explored participants' perceptions of the effectiveness of opportunities available to foster leadership growth and development.

The protocol was piloted on a small sample of student leaders from Marshall University SOPT. Feedback received during the pilot interviews facilitated minor changes to item wording for clarity and flow of conversation. Further amendments were made during the study revision process to ensure interview items were applicable to alumni participants. The final interview protocol is provided in Appendix C.

Data Collection

Participants were recruited for the study between February-June 2022. A recruitment letter was distributed via email to a list of current and former student leaders from Marshall University SOPT (Appendix C). A follow up email was sent to representatives of alumni cohorts to encourage participation and snowball sampling was used when outdated contact information was identified. Current student participants were interviewed during March 2022. Alumni participants were interviewed between April-June 2022.

Once participants enrolled in the study, they were provided another copy of the interview protocol in advance of their interview. Interviews were conducted via phone or video conferencing software and were recorded for transcription purposes. Afterwards, participants received a copy of the transcription for an opportunity to clarify responses as needed. Once participants approved the accuracy of the transcription, the transcript underwent

data analysis.

Data Analysis

Interviews were transcribed with the assistance of a recording transcription software (FirefliesAi®, Pleasanton, CA). Individual responses to interview items were collated and in vivo coding methods were utilized to capture the inherent meaning of the participants' experiences, followed by pattern coding to develop categories from which themes emerged (Saldana, 2013). This procedure was used for Research Questions 1-4.

For Research Question 5, prior annotations were redacted and the data were reassessed using the LCF-PT framework competencies, clusters, and tiers (Appendix E) as predetermined codes, categories, and themes in a deductive thematic analysis approach (Braun and Clarke, 2012). In vivo coding was initially performed to identify terms that matched specific competencies listed in the LCF-PT. A second review of the data utilized holistic coding to identify statements supporting clusters of competencies according to the LCF-PT. Finally, themes identified from the results of Research Questions 1-4 were compared with those identified in results for Research Question 5 to provide internal validity of the identified LCF-PT competencies represented in participants' leadership experiences.

Limitations

A potential limitation of this study is the inclusion of only participants who held formal leadership positions. These individuals represented a convenient sample compared to "informal" leaders within the student body and those who may have an interest but not the opportunity to engage in leadership during their education. Alumni participants occasionally reported difficulty recalling details of their leadership development experiences due to the time lapse since graduation. Additionally, interviews were conducted via a video

conferencing platform, which has the potential to influence participant comfort level engaging with the researcher.

The researcher was highly visible during the study. Due to the case study approach, the researcher had significant prior interactions with many participants. This personal relationship may have positively impacted participant recruitment in some instances but may have also impacted the tenor of participants' responses to interview prompts. The researcher remained conscious of potential bias and reflexivity during data analysis. It was impossible to completely blind the researcher to participant responses, despite efforts to redact identifying information within interview transcripts. While significant effort was made for objective examination of the data, it is possible the results of this study were affected by the above factors.

Chapter 4: Findings

This chapter presents the results of this qualitative research study, reporting the themes and experiences described by DPT student leaders and alumni. Data collection and analysis methods were previously described in Chapter 3. Participant demographic information will be presented prior to presenting the results for the research questions. A summary of findings will conclude the chapter.

Data Collection and Demographics

Twenty-one individuals, representing both current students and alumni cohorts, were recruited to participate in the study. There were 11 current student leaders from the cohorts of 2022, 2023, and 2024. The remaining 10 alumni participants were recruited from the 2015, 2016, 2019, 2020, and 2021 cohorts. The 21 participants included 14 males (66.7%) and seven females (33.3%). Gender and cohort affiliations of participants are summarized in Figure 4.1

Figure 4.1
Participant Gender and Cohort Affiliation
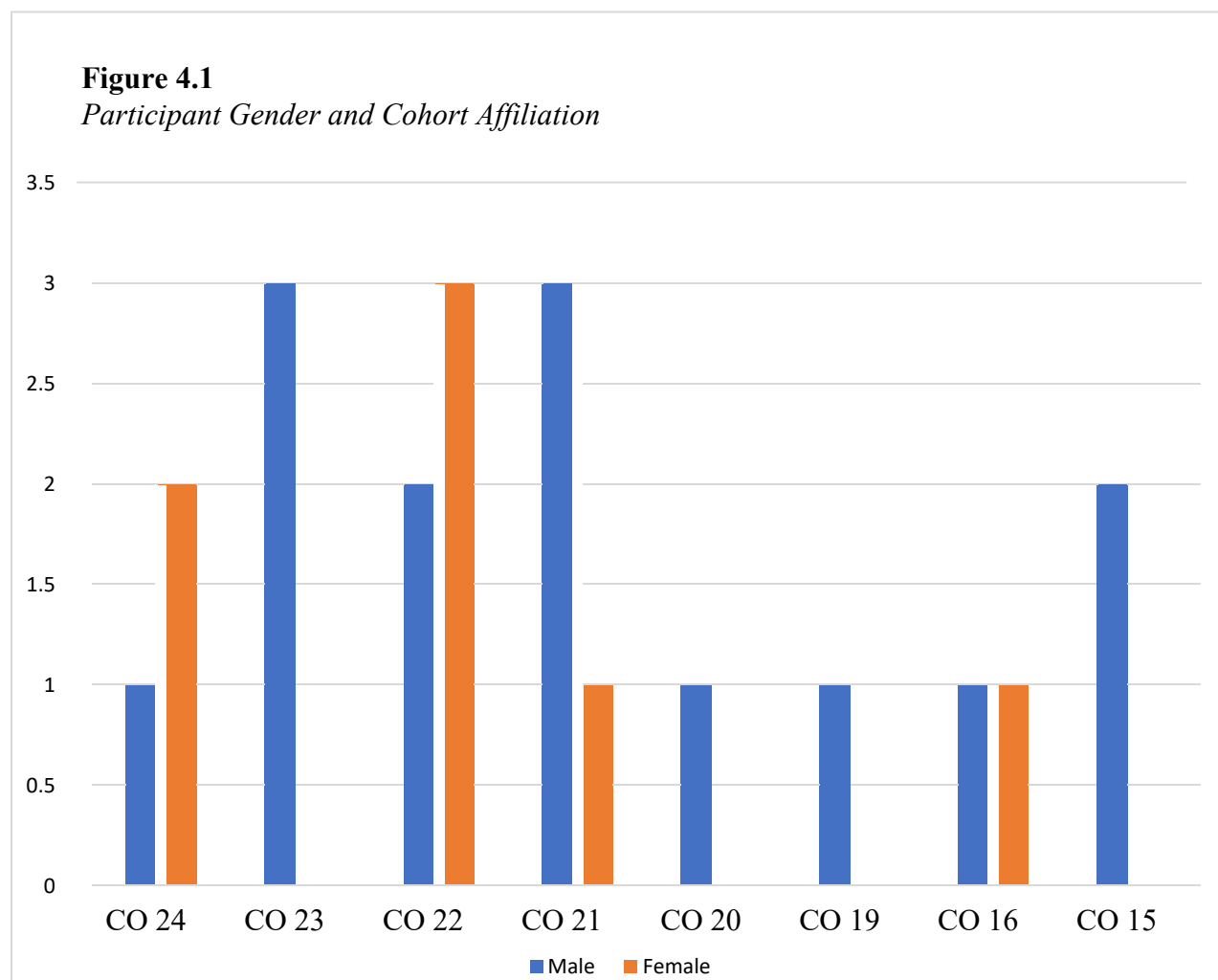
The study sample represents a range of leadership opportunities and positions available to students at Marshall University SOPT (Figure 4.2). Sixteen participants (76.2%) held elected class officer positions. The most frequent class officer position held by participants was Class President (*n*=7), followed by Treasurer (*n*=3) and American Physical Therapy Association liaison (*n*=3). Two subjects held the office of Class Vice President and two served as cohort Social/Service Chair. Six participants held positions on the pro bono clinic student board and three individuals held leadership positions outside of the program. Five individuals, three current students and two alumni, held dual leadership roles.

Figure 4.2.
Participant Leadership Positions
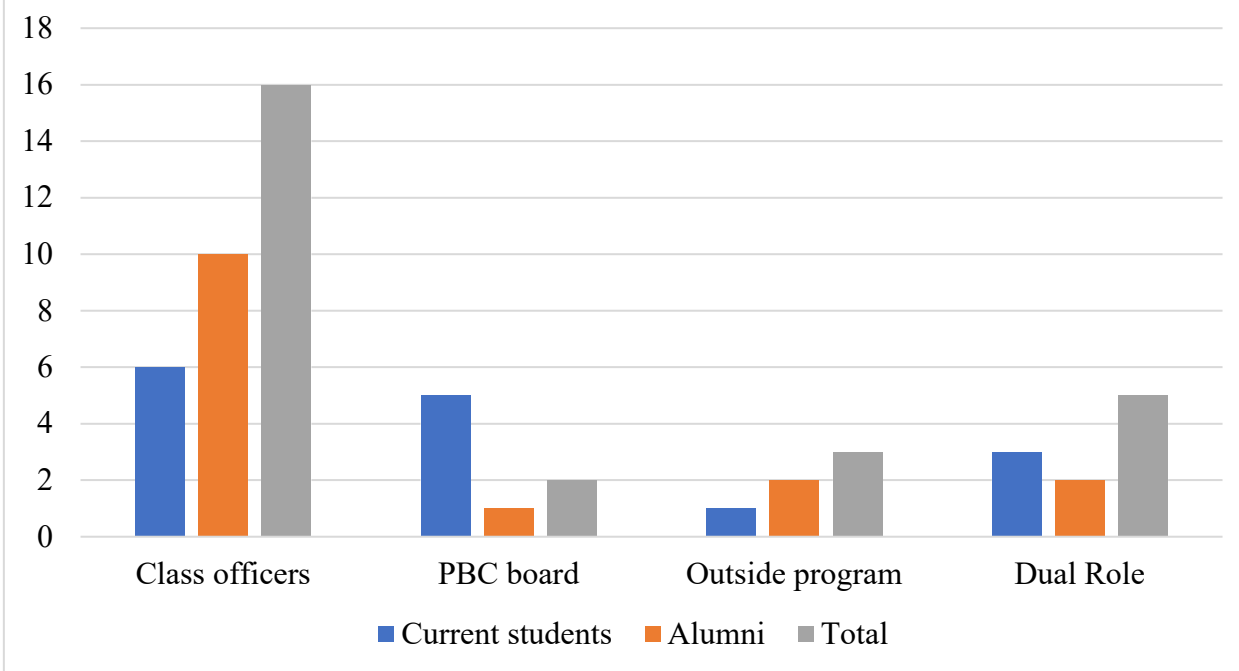
Major Findings

This section of chapter four will detail results gleaned from participant interviews. The findings are organized in accordance with the research questions established in chapter one. Themes obtained from the data are presented and direct quotations from interview transcripts provide supporting evidence.

The scope and effectiveness of the leadership development experiences will be reported, followed by a summary of the factors motivating DPT students to pursue leadership during their pre-professional education. DPT student expectations for their leadership experiences will be presented, followed by the resulting perceptions of the effectiveness of participants' experiences to develop leadership skills and behaviors. The final section of this chapter will assess the extent to which the LCF-PT provides a framework for ongoing

leadership development within DPT education. The chapter closes with a summary of the major findings.

Scope and Effectiveness of Leadership Development Experiences

The first research question addressed the scope and effectiveness of leadership experiences available to Marshall University SOPT students. The intent was to learn what programmatic opportunities were available to participants and what additional experiences had facilitated their leadership development. Results are organized into sections on program opportunities and outside opportunities. Where appropriate, the differences between current student and alumni experiences are highlighted.

All SOPT leadership opportunities are extracurricular in that they are undertaken in addition to an individual's standard student obligations. The scope of leadership development opportunities available to participants included both internal programmatic opportunities and additional opportunities external to the program. Program opportunities incorporate those opportunities available within Marshall University SOPT. Outside opportunities include leadership opportunities available outside the confines of the program.

Participants were also questioned regarding their perspectives on the effectiveness of both program opportunities and outside opportunities in facilitating leadership development. Within the discussion surrounding program opportunities, participants were also asked to reflect on didactic curricular elements that influenced their leadership development. The availability and effectiveness of methods of tracking leadership development or assessment of performance were also probed.

Program Opportunities: Scope and Effectiveness

Leadership experiences within SOPT were primarily class officer positions for both current students and alumni. Class officers obtain their positions via peer election during the second semester of the program. Within the first few graduating cohorts, only two or three class officers were elected, and role delineations were ill defined. A 2016 alum described the situation in the following manner:

> Nothing was really ever formally set in stone, like job descriptions…at the time I believe we only had a class president and a social chair. I don't think we really had any other…I think it was mostly just [class president] and myself.

Since the program's inaugural class in 2012, officer positions have expanded to include Vice President, Treasurer, and APTA Liaison. Alumni class officers from the 2015 and 2016 cohorts described efforts to provide student representation to the faculty, fundraising, organizing social and service events, and attending pre-professional development events. Current students and alumni from the cohorts of 2020 and 2021 described greater diversity of class officer positions reflecting the expanded scope of class officer positions.

The Class President, Vice President, and Treasurer roles were described in traditional student government contexts. The two Vice Presidents interviewed reported their primary role was to support the Class President. As one Vice President described, "My job is really to assist the president with anything and everything…I also like to be that listening ear and kind of the fly on the wall sometimes, just so I know what's going on." The other Vice President reported similarly, "I'll kind of help [the Class President] where I can…if he's out of town, I'm kinda the acting class president, if anything needs to go on during break or anything."

The Treasurers reported their primary duties were to manage the cohort's bank account. Funds deposited into the account were raised through activities organized in collaboration with the social chair and utilized to pay for the cohort's board exam preparatory course and student conference travel. Acquiring sufficient funding to finance the board review prep course was a cited goal, "I really just wanted to help my class fundraise all the money that we needed…my goal was that no one had to pay out of pocket," and, "I felt strongly that we should try to raise enough money to cover our board prep class."

There was strong role identification among the Class Presidents (*n*=7) as being an advocate or a representative for their peers. "We [class presidents] are basically representatives of our class to the faculty," and "I was a voice from the students that were in the first class," reported alumni class presidents. Class Presidents described themselves as the bridge between faculty and the student body. As one alum explained, "It allowed me to become an advocate for the students to the faculty, and for the faculty to the students." Two individuals, one alum and one current student, used the word "liaison" to describe themselves: "We [the class presidents] are actually a liaison between the faculty and the student body. Whatever concerns the study body had that related to like, the curriculum, I'd bring it to the professors," and, "I act as a liaison for the class…mainly their primary communicator between the faculty and staff and then our cohort." This term ultimately resulted in the code "liaison" to describe the role and responsibilities of Class President.

Social/Service chairs and APTA liaisons are class officer positions with specific roles. The Social/Service chairs are responsible for organizing cohort activities which may include fundraising events, service and outreach opportunities, and social get-togethers. One alum who had served as the Social/Service chair for their cohort stated, "I was like a party

planner." Another individual expanded on the role description, "We coordinated events, not only for fundraising for our class, but also just to keep our class more cohesive. I really wanted us to be good representatives to the community. I tried to reach out…and make good connections." The APTA liaison is responsible for connecting classmates with professional development prospects available through both the national and state professional organizations (APTA and WV APTA). In the words of a current APTA liaison, "It's distributing information from the APTA…being able to network and find information and help them [classmates] get that information."

The other major programmatic leadership opportunity available is a position on the pro bono clinic student board. Student board members obtain their position via a formal application process. The application is reviewed, and appointments are made by a faculty panel which provides supervisory oversight of the clinic. This opportunity also reflects the expanded scope of leadership opportunities for students at SOPT as the pro bono clinic was developed and implemented in 2020.

While multiple participants reported they did not feel "leadership" was a major curricular focus, professional practice courses emerged as a major theme in the curricular aspect of leadership education. Professional practice courses were reported as effective in developing professional role identification, or in the words of a current student, "basically knowing your role as a physical therapist." Professional practice courses also facilitated development of a sense that "every PT is a leader". One alumni participant reflected, "This was said by almost every professor…you're not going to make a great therapist if you can't be somewhat of a leader. I mean, you're a type of leader to your patients." Another alum framed the leadership role similarly:

As part of the curriculum, it was brought to our attention that we needed to be leaders in our field of physical therapy in order to progress the profession as a whole…I felt encouraged by our faculty to try to reach out there and get more leadership opportunities…I think that was instilled in us in each of our courses. "I think we learned a lot about advocacy as a form of leadership, standing up for our profession," noted another alumni participant.

Developing and assuming responsibility for professional advocacy was identified by both current students and alumni participants as an important component of leadership as a physical therapist. "They kind of instill in us how important leadership is and more ways to get involved," a current student reflected. An alumni participant also expressed, "If we [physical therapists] are going to be taken as serious clinicians we have to practice and conduct ourselves as leaders…I think that every therapist is a leader." Along similar lines, another alum emphasized,

We are doctors, we hold a doctoral degree, but when most people think of the doctor, they don't think of a physical therapist…I think from a leadership standpoint, it starts with us promoting the fact…we can be that first go-to for specific conditions.

Participant leadership development was not formally tracked by the program. Participants did, however, indicate elements of leadership could be tracked within assessment tools utilized by the program. The Professional Behavior Portfolio, the Clinical Performance Instrument (CPI), and the Core Values Self-Assessment were identified as assessments containing elements of leadership that allowed for some tracking, but participants reported more of a focus on "professional development" than specifically "leadership". Only one interviewee reported utilizing a formal leadership assessment tool which was administered

during participation in the Student Leadership Academy. One current student recalled,

> I think for one of our courses, we did like a Core Values Assessment…it was good,
> especially for where we were at the end of our first year, going into second year…it's
> helpful to see how we've developed in those professional practice courses and
> seeing how we can change our framework before we start to interact with the
> patients.

Another participant stated, "The professional portfolio…I think that has some qualities of leadership in it, but it's not specifically developed for leadership development, but that would be the only thing I can think of necessarily…". A former class president added this statement, "[it was tracked] only in the sense of how we had to perform self-assessments and assessments from our CI's (clinical instructors), but nothing was done in an official capacity as my role as the class president…" No alumni reported utilizing formal measures to track or measure their leadership growth since graduation, though two individuals described formal mentoring and purposeful reflection as physical therapy residents. One individual who had completed his residency explained, "…it [leadership development] was tracked informally, not necessarily graded but yeah, we would formally talk about it." The other alum currently enrolled in a residency program described the process similarly, "You have formal sit-downs and kind of assess where you are month by month…"

When queried about personal methods utilized to track leadership development, few participants reported personally tracking their leadership development. Among those who did monitor their leadership development, self-reflection ($n=7$) was the most frequently reported means of evaluating leadership development. An alum reflected, "…I did assess, it was more

internal …I kept notes during my time as a student." A current student also indicated she utilized reflection, "I try everyday to think about ways that I've set myself up…just assess myself while I'm driving home and think about things I could do better." Of the participants who practiced self-reflection, three current students reported they had practiced self-reflection prior to physical therapy school and one current student reported their self-reflection had been prompted by completion of the APTA Core Values Self-Assessment as a course assignment.

Peer feedback was also identified as a valuable means of identifying areas of strength or areas needing development. One class president described the process, "I try to ask those around me…especially the other student officers, what else can I be doing? Or what should I be doing better?" Another class officer described a similar approach, "I guess just from verbal feedback from my classmates, as well as professors within the program…I personally just track the trust that I perceive from others."

Outside Opportunities: Scope and Effectiveness

Outside opportunities for leadership participation came from both a university sponsored committee and from involvement in professional organizations. Again, some of these opportunities were not available to various participants due to their recent development, or in one case, the discontinuation of an event. One interviewee had participated in the university sponsored interprofessional health majors committee. The participant had been an inaugural member of this group and graduated shortly after its formation.

When discussing opportunities available through professional organizations, several alumni referenced their attendance at the discontinued APTA National Student Conclave as having significant influence on their leadership development. One interviewee described the

experience in the following manner, "[At National Student Conclave], there were a lot of specific small workshops for leadership…I learned quite a bit." National Student Conclave was also recognized as an opportunity to network with students from other physical therapy programs, which was especially valued by a class president from an early SOPT cohort, "…it really openedup some things as far as what the PT world has to offer." Participants expressed regret that the event is no longer an experience available to current and future physical therapist students.

Current students and recent alumni reported participating in leadership development events sponsored by the West Virginia chapter of the APTA (WV APTA) more frequently than did earlier cohorts. One alumni participant who had worked with other members to spearhead efforts to revive the group, stated, "The idea was, we wanted to connect all three schools (DPT programs) …and one big thing was to get a speaker [at the WV APTA annual conference] that would tailor towards students." He reported he felt those efforts to increase networking between the students at DPT programs within the state and to facilitate student engagement in WV APTA had been successful during his tenure as the Student SIG President. "We wanted it [the state conference] more tailored to the students and that's kind of what we accomplished."

The WV APTA Student Leadership Academy (SLA) is an annual two-day workshop focusing on leadership development. A recent alum described this event as a high value leadership development experience, "I'd say the Student Leadership Academy was the best learning experience for PT students that they can get," and from another alum, "I did the Student Leadership Academy, which I learned a wealth of knowledge there, especially about how small government works…how to run through legislation and things like that."

Current students were divided about the event. One of the students had participated in SLA virtually due to COVID protocols and did not feel the event reached its full potential, "My experience with SLA was very different than it typically is. When I did it, it was online and that ultimately deterred everyone's experience." Another student reflected more positively on their experience, "I read a lot about my weaknesses and my strengths and what I need to work on…" while another individual was anticipating the event, "I think it's just a good way, something good to have on your resume and kind of stand out and also networking in a way."

The outside opportunities for leadership practice were reported as effective in reinforcing advocacy as a form of professional leadership. Participants reported faculty members exemplified the importance of professional advocacy through service. "I know a lot of you serve positions…I feel through our classes and our professors we've had good examples." Another current student who had recently participated in the SLA described the experience in the following manner, "I think the biggest take away was it's important to not just pursue positions…they kept saying, 'if you don't do it, someone else will…someone else who might not care as much or be as well suited will do it."

Factors Motivating Pursuit of Leadership

Research question two addressed the factors motivating DPT students to pursue leadership development opportunities within their pre-professional education. Three major themes emerged from the analysis of findings: career preparation, personal challenge, and supporting their cohort. The experiences of a unique sub-set of participants who did not initially desire leadership roles will also be detailed.

Career Preparation

Career preparation (*n*=15) was the motivating factor reported most frequently by participants for pursuing extra-curricular leadership opportunities during their pre-professional education. Student leaders indicated a desire for responsibilities and opportunities that would directly enhance their abilities to work as a licensed practitioner. One current student referenced her experience,

> I learned a lot about real world clinic scheduling and documenting, and just how a clinic runs, which is hard to get when you're in school…hopefully I will have a better idea of the way things run and why they run that way.

Another current student stated, "Being involved outside of school, I think I want to continue that into the workplace once I start my career and I think having these special things…I can take what I've learned into the future."

Alumni who reported a desire to enhance their career prep had anticipated their future as licensed DPTs to oversee physical therapy assistants and technicians. "I wanted to be sure I got some experience in delegation and compromises…where I could manage people beneath me and above me." A current student also expressed a desire to prepare for the future, "I think just getting some experience for future leadership positions, whether that'd be like director of a clinic or something like that…just kind of growing and shaping that side of my character." This individual also expressed motivation emerging from a desire to maximize his potential, "I hope it allows me to be the best PT I can for my patients. That was my primary goal in this."

Current students often related their motivation for leadership experience directly to specific career ambitions. Five current students who held leadership positions within the

program were especially interested in the direct correlation to their future goals. As one third year student explained,

> The big thing that got me to do it is that at some point in my career, I want to open my own clinic…this was a chance for me to see that process and do it…I was mainly looking at it as an experience that would help me down the road with things that I plan to do.

Another current student shared a similar sentiment:

> My goal has always been to get into management or pursue a residency or get an upper-level position in rehab somewhere…I think that was one reason I wanted to get into the [pro bono clinic] board, just to get my feet wet running a clinic.

The extra responsibility was a source of encouragement and motivation to another individual, "I needed a refresher and a reminder of why I was in physical therapy school." She also perceived this experience as having augmented her education by providing practical experience to reinforce didactic material. "I think this was a good outlet to still be doing physical therapy and learning things, but in a more real-life scenario." Authentic experiences that reinforced didactic material and early exposure to patient care was valued by another current student:

> The chance to be involved with patient care is like, one of the number one factors, I just really wanted to be with patients…the fact that we're able to provide care as a student throughout our curriculum and apply that didactic learning to an actual, real case situation, I thought it was an amazing opportunity.

> While several participants acknowledged hope involvement in leadership activity

would be looked upon favorably by employers, they were more driven by the potential for personal and professional development through authentic experiences. An alum stated, "It looks great… 'oh, you weren't just a student, you actually took interest in things outside the curriculum.'" But as a current student added, "I didn't want to join an organization and then not do anything, because that doesn't help you in any way. I wanted to join an organization that was actually active."

Personal Challenge

The second most frequent motivating factor identified by participants was a desire to challenge themselves. "I wanted to see, 'how can I handle it?'," stated one current student. "I think as a PT, we are all leaders in some way, shape, or form. You might as well get practice while you're in school before the real world."

This desire for a productive outlet that simultaneously enhanced their education stimulated interest in both programmatic and outside leadership opportunities which were perceived as adding value to their education. As one 2016 graduate recalled, "I was feeling very ambitious …I wanted to maximize my opportunities…maximize my chances to get a good rotation and to you know, work at some higher level [locations]." Another alum participant from the same cohort concurred, "I wanted to push myself in PT school…I really wanted to test the limits and really apply myself." A current student echoed this sentiment, "I'm pretty passionate about trying to be active…because I feel that's how you get the most out of your education…"

Participants often described themselves as "action oriented" and were accustomed to being involved in extracurricular activities. "I was used to being so involved in undergrad, so I wanted to keep that up," stated one current student. Four alumni made similar statements, "It

is just something I have always done," while another alum indicated she "just likes to be busy. If I don't have something extra to do, I go and find something." A current student expressed his motivation for leadership involvement in these terms, "I want to learn as much about physical therapy as possible, and that means not just being a spectator."

Supporting the Cohort

Participants also expressed a desire to serve their peers as motivation for pursuing leadership activities and opportunities. These individuals often demonstrated service in the context of acting as a liaison or advocate for their peers. One alum recalled his desire to be supportive and an advocate, "Hey, I want to be the person that can stand up for you." Specific leadership position held did not seem to influence this impulse for service, as illustrated by a current student's statement, "Something that is really important to me is just helping where I need to be…helping the class is my main priority."

Participants also expressed a desire to facilitate positive connections among their peer group, believing collegial relationships would boost class morale during the rigors of the program. "I always just enjoy bringing people together," one former social chair stated. A current class president indicated he felt partially responsible for class morale, "I just try to keep everyone positive when a lot of people are complaining or, like, are negative. I think that's, like, one big thing I do." Another current student, although not a class president, also emphasized the importance of class morale:

> I think leadership positions are really important for trying to help push our cohort
> forward… that first year, it's kinda rough, everybody started to lose motivation, so just
> trying to keep pushing and encouraging and just put your best foot forward, people
> generally follow it.

Both alumni and current students believed building connections fostered inclusivity and allowed for everyone's voice to be heard. "I feel that I can help connect people that might not know each other as well as helping others to feel heard when they aren't able to voice their own thoughts."

Incidental Leaders: A Population Subset

Interview findings also suggested there was a sub-set of the population who indicated they were not initially motivated to pursue leadership positions during physical therapy school. These individuals were nominated by peers or encouraged by a mentor to pursue leadership positions based upon identification of their enhanced communication skills, maturity, charisma, or inclusivity. "A few of them [classmates] thought I was a little more mature," recalled one alum, while another credited their communication skills: "They [classmates] thought I'd be good at mediating or intervening or representing them to the faculty." One current student felt it was his lack of a specific social clique that led to his nomination, "They also thought I wasn't very biased in who I associated with…I wasn't like preferential towards many people…I treated everyone equally and respectfully.'

These individuals reported feeling honored by their peers' trust and felt obligated to serve their classmates. As one current student reported, "I had no desire to be a class officer. I was nominated [for the role], so I was honored to be nominated…I wanted to take it on and do my best at it." This individual's situation was similar to a previous class president who recalled, "My whole thing going into PT school was, I was going to make a few friends, get my stuff done and get out of there. My classmates really challenged that idea and brought me into a leadership role, which I am grateful for because it exceeded my expectations." Both individuals used the nomination as an opportunity to challenge themselves.

Expectations for Leadership Experiences

The third research question investigated student leaders' expectations for their leadership experiences. Two major themes emerged from the data: professional skill development and scope of physical therapy in the American healthcare landscape. Further explanation of supporting factors and experiences by participants is provided in this section.

Professional Skill Development

Participants expected their leadership experiences to enhance skills that would immediately translate into heightened clinical practice, regardless of whether they end up in a formal leadership position in their career. The specific skills perceived to be enhanced through leadership experiences were communication skills, conflict resolution, inclusivity, and confidence.

Improved communication abilities were cited most frequently as the expected benefit of engaging in leadership practice as a student. Two alumni participants identified strengthened communication skills as "the biggest thing" they benefited from by participating in leadership roles during their student experience. One recent graduate credited her improved communication skills as having an early positive impact on her career, "I feel like they definitely helped with my interview process, for sure…I'm serving on other committees now, so communicating with people, working with peers…all because I've had that past experience."

Alumni, in particular, referenced the impact of improved communication skills on their interactions with other members of the healthcare team. "Probably one of the greatest things it did was improve my speaking ability…because now I can go, and I can talk to

physicians, or I can talk to nurses…people I normally wouldn't be comfortable talking to…in professional communication it has really helped."

Current students expected similar benefits regarding communication with future colleagues, "I feel like it will help me be able to communicate more effectively with my future colleagues…" and, as another individual reported, "I think I've learned how to best approach and communicate with different types of people."

Improved conflict management ability was a second leadership outcome emerging from the data. One current student directly related conflict resolution to future clinical practice in this manner:

> From my experience, in dealing with conflicting parties, problem solving, or, like, conflict resolution…in our profession specifically, you'll be working in a team-based setting more often than not. Learning how to work alongside and lead people is easily appliable to other real-world professional settings. In the future, when I'm in the workplace if I'm dealing with conflict resolution and delegating, evening if I'm not in a leadership role…I think that my experience now and understanding how to interact with people will apply to that.

Another current student supported the importance of conflict resolution skills in professional practice, "One of the things that I've learned through this is that you're not going to be able to please everyone. I think that's important because I've seen that in the clinic as well." Alumni supported the importance of this skill, as one individual expressed, "Conflict resolution [is important]…understanding how to solve problems more effectively instead of looking at it in a

very narrow sense of one person." Another alum concurred, "that has helped me, just dealing with conflict and being a voice for my coworkers…"

Participants reported practicing communication and conflict resolution skills as they interacted with a wide variety of individual opinions and situations as students. Class presidents, frequently tasked with communicating to professors on behalf of their cohort, gained an appreciation for the need for inclusivity—being able to consider a variety of opinions before acting. A current class president stated, "[Being a leader]…it's given me more perspective and maybe better perspective for myself that not everyone is gonna be on the same page as you…you don't always have to make everyone happy, but you have to be willing to work with everyone." Another current class president concurred, "I think communication and the ability to listen to others and see their point of view…being open to other things than just what you think is best. Alumni also appreciated the need for inclusive leaders. One individual explained:

> By the time I graduated, it was 36 people from 36 different places with 36 perspectives. I think that had an impact on me more than anything, just cause I was the point person for a lot of stuff doesn't mean my opinion or my thoughts on something was always right. Understanding different people's perspectives, different people's backgrounds…you kind of take that [with you]…and all of a sudden that gets useful for motivating patients, interacting with coworkers, things like that.

Participants reported increased confidence in themselves and their abilities by participating in leadership as students. A current student reflected on how he had changed as a leader since starting the position, "I've been more confident in the decisions I make and the reasons I make them…I've learned to take [followers'] opinions into consideration

but stay strong and do what I believe is best." Another student described increased

confidence related to conflict management and assertiveness,

> I've been more comfortable with confrontation…not necessarily bad confrontation,
> but being willing to be like, 'Hey, I need to clarify this…' before I was a lot more
> timid and didn't want to make anybody mad, but I think I realize…you don't always
> have to be a people pleaser. Like, sometimes, you just have to get the job done and do
> the hard things and it'll be all right.

Alumni shared this sense of increased confidence in their abilities and expectations to

positively impact their careers. One recent graduate reflected on his first year of clinical

practice:

> I think it [leadership experience] really improved my confidence…even when I don't
> really know the answer, I still see the patient trusting me…not only that, but my
> confidence with my coworkers…I think my leadership experience has been key to
> those two things for sure.

Another current student related improved confidence to the increased responsibility

physical therapists have assumed within the American healthcare environment: "As part of

the primary care team, we [physical therapists] have a lot of responsibility on us and I think

that being confident in your ability and your learning…I think those are the most important

things to consider." A recent graduate expressed, "I think I'm capable of being a leader in

the profession…I'm not really sure what that looks like, but it does give me confidence to

kind of step out there if needed."

Current student leaders did not expect to obtain leadership positions immediately

after graduation but were confident they were being prepared to positively influence their workplace. As one current student put it, "When looking for jobs and such, it may not affect my ability to receive an entry-level position, but I view it as affecting my ability to be a leader in the facility… every facility needs an individual that possesses leadership characteristics."

Alumni from the 2020 and 2021 cohorts confirmed these expectations were reasonable by relating how they were acting as informal leaders as young professionals. One individual described older colleagues looking to her as a resource for updated research and findings concerning patient care. "I feel like I'm teaching PTs that have not been in school for a while, so that's kind of interesting…kind of updating them on stuff they haven't seen for a while."

Meanwhile, alumni from earlier cohorts (cohorts of 2015, 2016, and 2019) reported advancing within their career and engaging in more formal leadership and managerial positions. "At my previous job, I oversaw therapists for like six counties at [my former employer]….I was a point man for improving quality of care with the therapy staff…" Another individual reported ambitions to take on additional responsibilities, "I'm looking to become a residency mentor down the line."

Participants referenced their experiences as a student leader as having prepared them to handle a variety of situations encountered within their roles. "I'm very adaptable. I get al...ong with pretty much anybody," one current student stated. Being flexible and having the ability to work with a wide variety of people was perceived as an important skill developed through their experiences as students, as another alum described: "If I hadn't had that experience in PT school and moving on, I definitely think it would have been a lot harder to work with a lot of the staff we have now." Yet another alum reflected on their experience as a

student and how it related to clinical practice:

> Understanding different people's perspectives, different people's backgrounds, and
> what makes people tick…I learned a lot about that at Marshall, probably didn't realize
> it at the time, but when I left to go into the workforce…I do have the skills and all of a
> sudden that gets useful for motivating patients, interacting with coworkers, things like
> that.

Scope of Physical Therapy

Participants also described expectations of developing a better understanding of the
physical therapy profession as a whole and as part of the larger American healthcare landscape
from their leadership experiences. Opportunities to engage in multidisciplinary learning events
increased current students' understanding of physical therapists as leaders in healthcare. A
current student recounted a recent instance where they and their classmates were able to
practice leadership:

> In our IPE (Intra-Professional Education) the other day, we felt like leaders compared
> to a lot of the other healthcare professions…the students in my class were happy with
> their ability to coordinate, communicate, and understand what the other roles and
> responsibilities of the entire unit as a healthcare system…I think a lot of people in our
> class realized they knew more than they thought they did and were more confident in
> delegating and understanding and empathizing with other in a team-based setting,
> too.

An alum described an instance where she had represented physical therapy as a leader within a
multidisciplinary team, translating interprofessional educational experiences into the workplace:

I helped establish an ECMO protocol…which thankfully was created before COVID…It's been a challenge, but also fun at the same time, just getting to know these physicians and residents and the nurse practitioners and getting everybody on board with allowing PT to have this early mobilization [program] in our hospital… and from a leadership perspective, being able to work with all the different disciplines to get done what needs to be done.

Current students reported their experiences provided motivation to stay involved in leadership in the future. "It definitely inspired me to pursue further roles …definitely helped me realize that I have more to give back…it encouraged me to do more in whatever setting I find myself for whatever positions I find myself in the future," one current student remarked. Participants recognized how the physical therapy profession could fill voids in the American healthcare system. One current student explained,

I think a lot of the American healthcare system, for most people, it's just you kind of get passed around until somebody figures out what's wrong with you. I think because we [physical therapists] have a lot more increased time with patients than in the traditional healthcare… that's going to be really important…I think that's going to be a much needed change and benefit to the system as a whole.

Participants did, however, recognize and acknowledge barriers to this role expansion. A current student reported, "I think that's an area we have done pretty poorly in that we are not appreciated by the healthcare system as a whole…there's a value in physical therapy that we haven't communicated very well in a lot of situations." As one alum stated, "Owning our space is the basic thing. We [physical therapists] don't do a good job of that at all…we need to do better." Another alum expanded on this sentiment:

I think physical therapists need to learn that we can be leaders in the

healthcare professions. I think a lot of times we rely on the physicians, or

other healthcare professions to tell us how to operate. I think we need to

learn, we offer a good service to the community, it's a valid service, and it

needs to be shown respect. I'd love to see a physical therapist get on the

same playing field as the optometrists and the podiatrists…I don't think

we're there yet as physical therapists…we deserve a place at the table, too.

Some participants expressed feeling overwhelmed by the concept of leadership within the context of the American healthcare system. A current student preparing to graduate expressed his concern:

I feel very under prepared to tackle that…I don't think there's a lecture that we

could have had in school that would have made me feel more prepared, because it

is just so daunting…we just have so many issues with healthcare as a whole, and

we're just one part of it.

Another alum summarized the situation, "There's a lot of mess…lot of people with more money that get more things accomplished at the legislature…physical therapy has struggled with that…you need to understand at least on a small level what your impact does across the board."

Perceived Effectiveness of Education Experiences

The fourth research question addressed current student and alumni perceptions of the effectiveness of their pre-professional education experiences in developing leadership skills and behaviors. However, participants' responses focused on how their pre-professional

experiences had shaped their perceptions of an effective leader, rather than how effective their experiences were in developing their leadership skills and behaviors. Through their experiences, participants identified qualities they aspired to exhibit as leaders and identified elements of effective leader- follower relationships and interactions. This section will report participants' perceptions of effective leadership skills and behaviors, followed by an account of ideal leader-follower interactions. Effective communication was identified as a theme linking effective leaders to their followers and will be discussed in the summary of the perceived effectiveness of participant experiences.

Perceptions of Effective Leaders

Participants most frequently described a leader as an individual who is action oriented. An alum stated, "Good leaders are productive, and they get things done…action and leading the charge." Another alum repeated this statement almost verbatim, "I think good leaders are productive and they get things done…kind of leading the charge." Current students described effective leadership similarly: "Being active and pushing people forward by example is the best way to be a leader because people are going to be motivated by seeing you do something rather than you just telling them to do something", and "Anytime you take the initiative to lead…you are a leader in that instance, you don't even have to have a certain title to be a leader." One individual tied action orientation to leadership authenticity, "I really feel like when someone actually gets up and is able to walk the walk…they're more valid, I guess."

A few participants identified action orientation behaviors within themselves, making statements such as, "I have a strong initiative and I'm always working very hard," and, "I like to set goals and get goals accomplished," or, "I know how to get stuff done." They used these examples to describe why they were appropriate for leadership roles and what made them

effective within their individual roles.

Multiple alumni described a leader as someone who identified and created opportunities for their followers' personal growth or performance. "I think an ideal leader is somebody that can set people up for the right opportunities…" and, "I'm very empowering… I want to set you up with the tools to be successful." Another stated, "An ideal leader is somebody that can set people up for the right opportunities to do what they want to do." This led to the code potentiator to describe leaders who set themselves and others up for success.

Humility was a greatly desired and admired quality in a leader, particularly among alumni. One individual stated, "…humility is the thing I've learned the biggest about, like, I don't have all the answers…" Humility was also described as embodying the concept of leading by example and a willingness to take on less desirable tasks. One alum directly related humility to clinical practice, "I think it's important as a leader to show that you're willing to get your hands dirty and take tough patients…I think you should step up in those kinds of roles in order to make your staff feel valuable and get the best out of them." Another individual shared an experience where she felt her boss had exemplified this aspect of humility:

> For example, last week we were short staffed…our director came in and picked up an evaluation in the [emergency department] because there was no one…it was late, but it needed to be done. That right there shows their character and the fact that the director of our department who doesn't really do patient care at all, actually came in and saw the patient just to help us out.

Leader-Follower Interactions

Mutual respect was the defining theme of effective leader-follower relationships. Both alum and current students believed developing and demonstrating reciprocal recognition and respect between leaders and their followers were essential actions of ideal leaders. "A follower has to respect the leader, but I also think that respect goes both ways. I think a leader needs to show that they respect their followers as well," stated an alum. A current student agreed, "I think a lot of it is mutual respect…showing respect to each other…I think trust has a lot to do with it." The concept of mutual respect was also referenced by another participant, "All people, in both types of positions need to be able recognize which position they are in and how that fits for them."

Current students provided illustrations of mutual respect through examples of collaboration and inclusivity which facilitated follower engagement in the task. Engaged followers were described as essential for an effective leader-follower relationship. As one current student described, "I would say the ideal relationship would be followers don't feel like they're following. They feel included. They feel heard. They feel like they have control of what they can do for themselves as well as others around them." Another current student described an ideal leader as, "…someone who listens to others, brings everyone together…" This view was reiterated by a current class president who stated, "working alongside your peers, not just telling them what to do is like the most important, it gets you the biggest buy-in from those that you're leading." Another individual described a team approach:

> I feel like I am all about teamwork. I don't want to be a leader that is dictating…I think I approach it in more of a teamwork manner and trying to see what a certain person's strengths are and then maybe give them a job that will help them use those strengths, or maybe help them develop other qualities.

Participants shared how their experiences had fostered a more collaborate approach. One current student recalled efforts to engage their cohort in activities:

> I've learned not everyone is going to want to fundraise and not everyone is going to be as motivated as others…being able to get everyone on board has been difficult but it's also taught me a lot how I can better lead and serve others.

Several participants related how they had realized the need for collaboration. As a recent alum reminisced, "Initially I tried to do a lot on my own. I felt like I needed to do that…as time went on, I had [friend] give me insight, he told me, 'There's people that can help you, it doesn't have to be always you.'" Another alum reported similarly,

> I changed quite a bit the first month…I wanted to solve every crisis that came up…I learned I had to have a lot of really good people around me…I learned to delegate and just trust them to do their job, and it let me do mine. That probably was for me, the biggest learning curve…

One APTA liaison gave an example of how they practiced inclusivity through their position, "…not everyone wants to do pediatrics or neuro, I try to let my cohort know of everything [available] with the APTA because everybody has different interests."

Communication

Communication arose as a unifying theme connecting perceptions of effective leaders and leader-follower interactions. Leaders were described as individuals who had strong communication skills which they utilized effectively with their followers. A current student stated, "Having a leader that continually seeks ways to improve and can effectively

communicate with others is essential in the healthcare field." Another added, "You have to be willing to be a good communicator and talk to others and be able to include everyone." An alum echoed the importance of communication by relating it directly to clinical practice, "…I'm actually communicating with every [healthcare] discipline almost every day. You have to have those communication skills and have that confidence that I feel like a leadership role develops you into."

Effective communication was described as dual-directional with streams of information flowing both to and from the leader and followers. A current student stated,

I think the biggest thing [I've learned] is probably the importance of communicating effectively. When you're trying to communicate a new idea to people that you are working with and the people you are trying to lead…it's very important that you think that through.

An alum also highlighted the importance of dual-directional communication, relating the exchange of information to trust and growth:

Ideally, I think it should be a two-way communication between leaders and followers. I mean, you want the people following you to trust you…at the same time, you want to be learning and trusting your followers as well…it's just kind of a two-way street here…

Another alum described effective communication as active listening and related it to effective patient care, "I think one of the biggest things I've learned is communication…listening…if I'm not listening to the complaints, I'm not going to help [the patient] move better…"

Participants related how their leadership responsibilities had been effective in developing improved communication skills. A current student admitted, "I maybe gloss over things that probably should be communicated better. I think being in that position has forced me to take the time to communicate as well as I could." Another current student reflected, "I would definitely say the way I communicate has changed…" One individual noted personal growth in this area despite being relatively new to their leadership role, "I think with [the pro bono clinic], I'm still just starting, but I think even now, I've learned so much…how to communicate with the professors and the students, which is really important." Another member of the pro bono clinic student board had similar reflection, "…effectively communicating with professors and advocating for [the pro bono clinic] has helped me develop my communication skills."

Ineffective Leadership

While describing their perceptions of ideal leadership and how their experiences influenced their development, participants also referenced instances when they had observed ineffective leadership which influenced their perception of effective leadership. Inaction or the lack of initiative was highlighted by several participants as undesirable, "The worst kind of leader is one that just talks, I hate platitudes," emphasized an alum participant. Another alum pointed out, "leaders who are lazy don't get very far." Another participant identified the lack of humility as being extremely undesirable in a leader, "I think the worst quality in a leader is somebody who has an arrogance about them." One current student referenced a recent clinical rotation experience where ineffective communication was observed to negatively impact patient outcomes and team dynamics. The participant reviewed field notes and confirmed this experience reinforced how essential effective communication is in physical therapy practice.

Another participant remarked on the importance of communication, "Leaders don't function well without listening to their followers and vice versa."

LCF-PT as a Leadership Framework

The final section of this chapter will address the extent to which elements of the LCF-PT are present in current student and alumni descriptions of their leadership experiences. The findings are organized around the LCF-PT tiers of leadership: self, others, and community/organizations following which the most prevalent clusters and competencies for each tier will be identified. Where applicable, a comparison of current student and alumni results will be provided.

All three tiers of leadership described in the LCF-PT were present in the data though Self-Leadership and Leadership of Others were more frequently represented than Leadership in Communities or Organizations. Frequency count for Self-Leadership and Leadership of Others were very similar, with 115 accounts of Self-Leadership described and Leadership of Others identified 113 times. The tier of Leadership in Communities or Organizations was identified less than half (n=41) as frequently as the other two tiers.

When examining the tiers by participant groups, current students reported elements of Self-Leadership (n=61) more frequently than alumni (n=54). However, alumni (n=65) reported more Leadership of Others experiences than did current students (n=45). The two groups were similar in reporting Leadership in Communities or Organizations. These data are summarized in Figure 4.3.

Figure 4.3

LCF-PT Tiers of Leadership Frequency Count
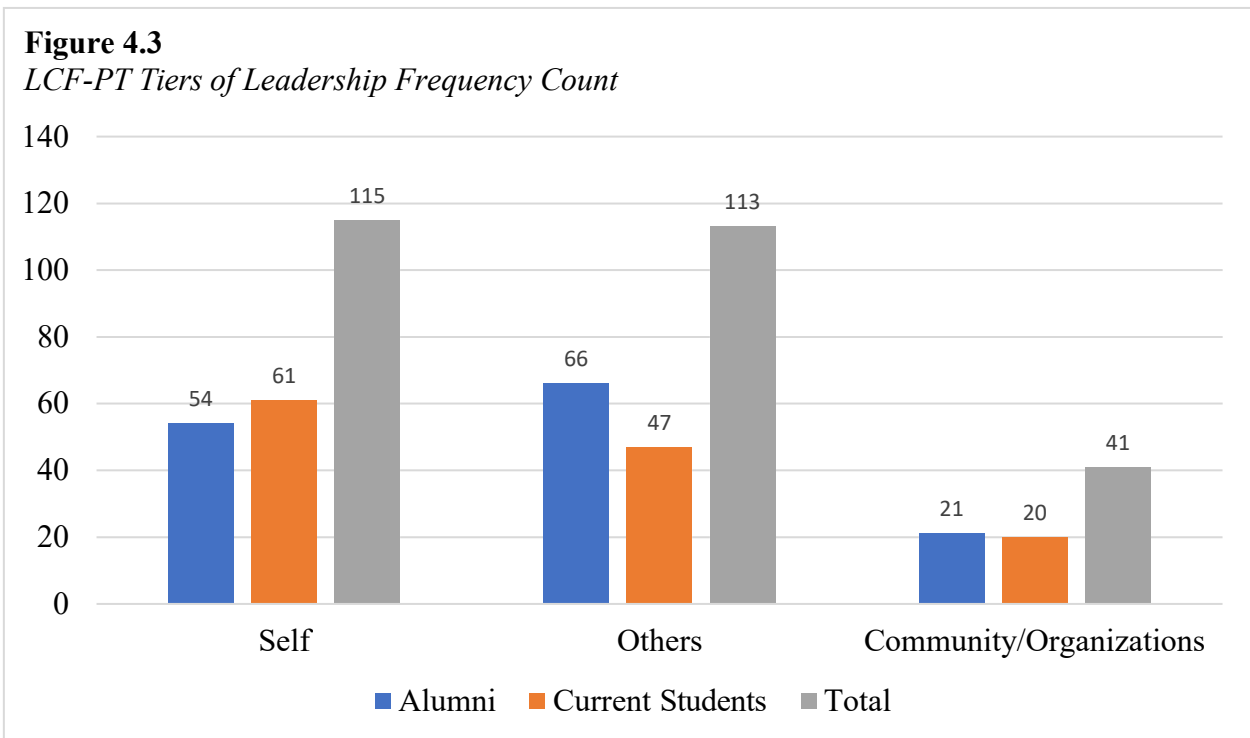
Self-Leadership

As previously described, there were 115 frequency counts across both current students and alumni for the Self-Leadership Tier. Participants described the competency clusters of Self-Perception (*n*=30) and Autonomy (*n*=28) most frequently, followed by Inquisitiveness (*n*=21), Character (*n*=19), and Expertise (*n*=17). The frequency count of individual competencies and clusters of Self-Leadership are presented in Figure 4.4. Differences in Current Student and Alumni perceptions are provided in Figure 4.5.

Figure 4.4

Self Leadership Competencies Frequency Count

Bar chart of Self Leadership Competencies Frequency Count, grouped by category:

Self Perception:
- self-confidence: 7
- self-aware: 3
- self-management: 2
- self-initiative: 13
- self-actualizes: 1
- General: 4

Character:
- accountable: 5
- authentic: 1
- Ethical: 2
- integrity: 2
- trustworthy: 0
- adaptable: 4
- General Character: 5

Expertise:
- problem solving: 0
- evidence-informed practice: 0
- goal orientation: 5
- implements: 1
- plans: 2
- analyzes: 0
- synthesizes: 0
- evaluates: 0
- General expertise: 9

Inquisitiveness:
- reflects: 7
- lifelong learning: 4
- seeks information: 2
- excellence: 3
- orientation: 0
- General Inquisitiveness: 5

Autonomy:
- independent: 2
- innovating thinking skills: 2
- role identity: 14
- interdependence: 5
- General autonomy: 5

Legend: ■ Comptency Totals

Figure 4.5

Self Leadership Competencies: Alumni vs. Current Students Comparison
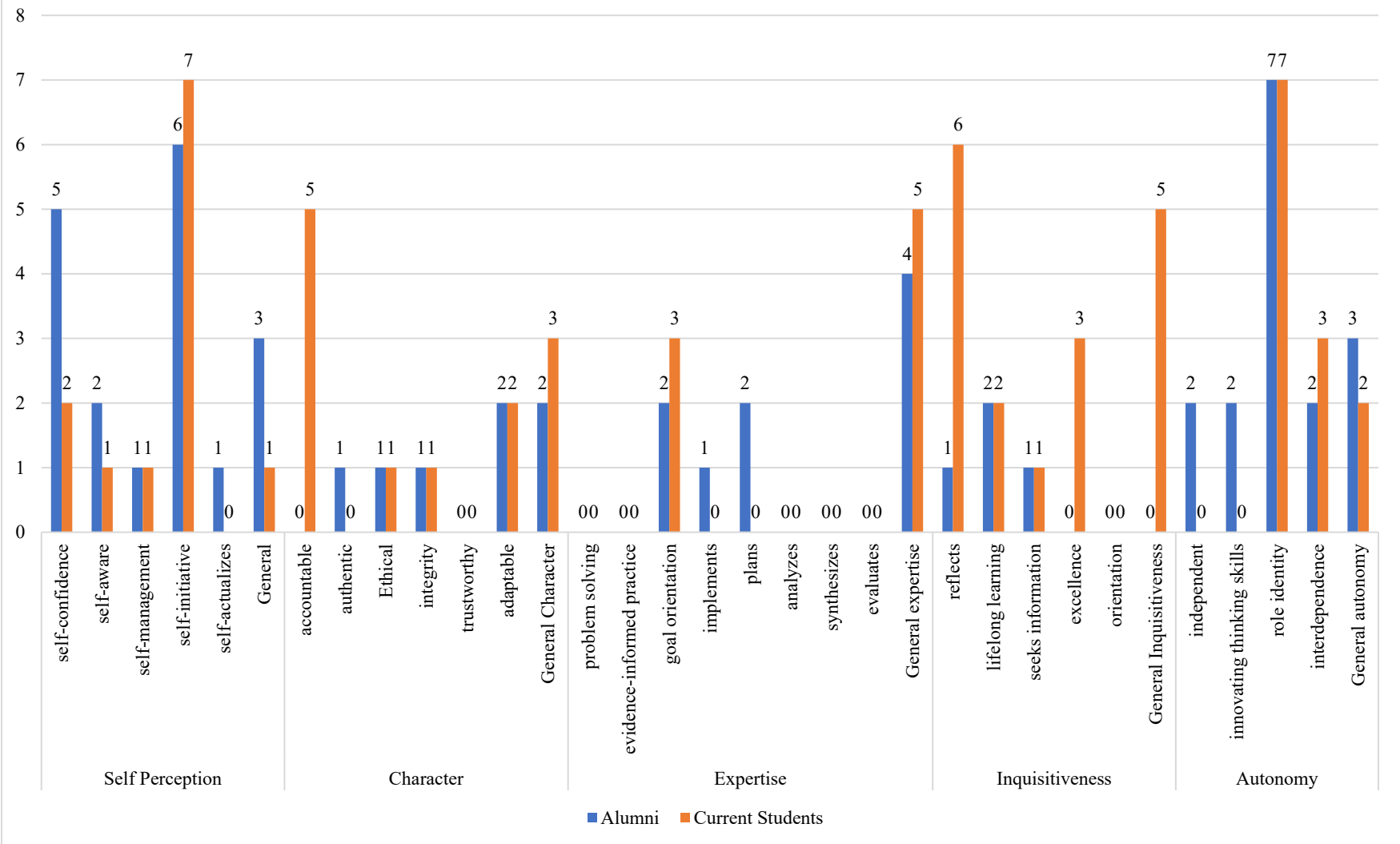
Self-Perception. Self-perception was identified by participants' insight and reflection about how their experiences had facilitated development of self-perception as a leadership behavior. Statements such as this current student's reflection, "I think it [leadership] has positively impacted me and it's given me kind of more perspective for myself," and an alum's perception they had, "learned a lot of things I really wanted to work on…" suggest a change in participants' view of themselves and their leadership behaviors. All five competencies supporting Self-Perception were identified to some extent in the data, but Self-Initiative and Self-Confidence emerged as the most prevalent competencies within the cluster.

Self-Initiative (n=13) was the most frequently identified competency, similar to the previously reported findings describing leaders as action oriented. One alum explained, "I wanted to get involved, I kind of had a drive to…" Current students added statements such as, "I have a strong initiative and I am always working very hard. Being able to have that initiative going into these different roles, I think that's important," and, "…anytime you take the initiative to lead, I believe that makes you a leader." One individual explained, "My ideal leader leads by example, which is what I try to do…I just feel a lot of people who have those characteristics have the respect of others to do things well and take initiative."

Self-Confidence was more frequently reported by alumni (n=5) than by current students (n=2). One individual stated, "I think [my student leadership experience] really improved my confidence. Not that I know everything…but I think I portray confidence towards my patients a lot better because of that." A recent alum described increased self-confidence in this manner, "I think I'm capable of being a leader in the profession…I'm not really sure what that looks like, but it does give me confidence to kind of step out there if needed." Other alums reflected similarly, "I also became more confident in the decisions I made…" and, "…I

felt myself grow in confidence…"

Autonomy. When examining autonomy, Role Identity (n=14) was clearly the most emphasized competency by both current students and alumni. Participants emphasized the responsibility of physical therapists to act as leaders through increasing responsibility as a doctoring profession, through interactions with patient, and within the immediate clinic environment.

One current student suggested, "PT has become more and more a leadership role…part of the primary care team. We have a lot more responsibility on us." Alumni added to the sense of increasing autonomy as primary health providers by adding, "Owning our space is the base thing…we are the movement specialists and that is going to turn into a form of leadership," and, "We hold a doctoral degree, but most people when they think of the doctor, they don't think of a physical therapist…I think from a leadership point, it starts with us promoting the fact that we are doctors…we can be that first go-to for specific conditions." Another alum stated, "I think physical therapists need to learn that we can be leaders [among] healthcare professions."

The patient/client management relationship was referenced repeatedly as a form of autonomous leadership. A current student stated, "…you may just graduate PT school, go practice in a small clinic in the middle of nowhere, you're still gonna be seen as a leader to someone who truly needs your help…like we're more than a physical therapist at that point." Another current student concurred, "…not every PT is going to end up as a clinic director, leadership kind of role, but everyone is going to see patients. Everyone is going to lead someone." Alumni agreed, "Therapists need to know that they are acting in a leadership role with their patient care." One alum reflected how his residency training had reinforced this

concept, "…you learn so much about that side of things, like owning that relationship with that patient and being like, I'm the specialist here…your patient-therapist interaction is a form of leadership because you're guiding them, they're following you, they're trusting you on certain things…"

One current student anticipated their future leadership responsibility, "Within the workforce you, as a PT, you're going to be a leader in some way. It may not be a management position, but even from a supervision aspect…you're going to hold some leadership." Another current student also referenced the clinic setting, "I feel like all physical therapists in a sense are leaders, whether you're working with your PTAs (physical therapist assistants) or rehab techs or things like that. I also think you can be a leader for different causes with physical therapy…"

Interdependence (n=6) was also discussed within the autonomy cluster by three current students and three alumni. Responses typically referred to a realization by current or former student leaders that they could not "do it all themselves" and needed to rely on support from their peers. An alum recalled, "I think I wanted to solve every crisis that came up…I learned I had to have a lot of really good people around me…I would learn to delegate and just trust them to do their job." Another recent graduate concurred, "I feel like when I was in PT school, I was like, 'oh, this is my responsibility. Like I signed up for this' and I felt almost guilty if I asked for help…Now I'm way more willing to ask for help…"

A current student had experienced similar situations, "I have a tendency to just want to do things and get them done on my own. I think in this position, there was no way that was possible…I've learned you just have to have faith in who you are working with." This individual's experience was reinforced by another current student who held a similar leadership role, "…it's definitely been eye opening, the work that goes into running a clinic…but also just

how to delegate and how to work with everyone on the team to get the job done."

Inquisitiveness. References to Inquisitiveness were also found primarily in the responses Reflects (n=7) and Lifelong Learning (n=4) competencies. Current students mentioned using reflection to a greater degree than did alumni with six of the seven responses coming from that participant group. Current students described reflection as a way to assess leadership performance and personal development. "I personally just track the trust I perceive from others," and, "I like to almost like, I guess every day think about ways that I've set myself up…while I'm driving home I think about things I could do better…" Current student participants also reported practicing reflection prior to physical therapy school and the practice continued to be useful to them. One current student explained that even before completing an in class self-assessment activity,

> …I started writing down my approach to educating patients, and then I
> also coach basketball…seeing the difference in how I am helping them
> was a good indicator for, like, a practical example of seeing how I've
> improved in educating people that look up to me…

The importance of Life-Long Learning was noted by both participant groups. A current student explained, "I just wanted to learn as much about physical therapy as possible… I just wanted to learn more about PT, academically, clinically, legislatively [referencing the profession's state and national organizations]." Another current student added, "I think it's also important to seek opportunities to do better…because if you're not always growing, you're just staying on the same level and then you're not helping your patient." A similar sentiment was expressed by an alum, "…I'm always trying to find new things to expand my practice. That's like what they say, you're learning for life. You can't become stagnant."

Mentorship was specifically mentioned by both current students and alumni as a way of increasing knowledge and fostering professional development. Observations such as, "I tried to get all the mentoring I could…anybody that was willing to give me any advice in the program," and, "I feel like with [faculty name redacted] I'm always asking her about other ways that I can like advance myself…I feel comfortable that I can ask her questions…" and, "I've been in pretty close contact with [faculty name redacted] since graduating. He's given me a lot of wisdom…" indicate a quest for continued knowledge and development opportunities. However, mentorship is not specifically included within the LCF-PT, therefore statements regarding mentorship were sorted as general evidence supporting inquisitiveness.

Character and Expertise. The remaining clusters within the tier of Self-Leadership were Character (n=19) and Expertise (n=17). Character was supported by six generalized statements such as, "Someone that definitely is humble. I'm not afraid to do the small stuff." Being accountable and adaptable were character competencies also referenced. Statements such as, "I'm dependable. I stick to my deadline…people are able to depend on me…"and "being consistent with the people that I work with in providing the same 'me' every day…so I think consistency…I know that's not really a category of leadership, but it's what I try very hard to do when I'm in a position that I'm expected to lead," demonstrate current student's concepts of accountability.

Both current students and alumni made similar statements regarding adaptability, "you have to be able to adapt to each thing…", "I'm very adaptable…you just learn to be flexible and adaptive..." and, "I would say there's a resilience that I have…being able to adapt…" Integrity and Ethics were mentioned minimally in the data set and Trustworthiness was not addressed by respondents as a competency within the Character cluster.

Expertise was the least represented cluster of leadership competencies mentioned by the interviewees. There were five competencies pertaining to expertise that were not detected during data analysis (See Table 4.5). While expertise was noted 17 times in the data, most of these comments were embedded in statements implying expertise in clinical practice. A current student simply expressed, "I hope that allows me to be the best PT I can be for my patients." An alum expanded upon this concept,

> …you've got to learn your craft. I think you've got to really do your studying, do your due diligence and what it is to be a physical therapist…I think you've got to do the little things right as a therapist, as a student, and as a working clinician in order to empower the patient, in order to improve quality of life and meet [the profession's] vision statement.

Goal Orientation and Planning competencies were also noted among both current students and alumni. Current students offered statements such as, "I was mainly looking at it as the experience that would help me down the road with things that I plan to do," and, "I thought it was a great opportunity to be able to network in the future." One alum reflected on his leadership participation as being primarily goal driven, "I wanted to maximize my chances to get a good rotation and you know, maybe work at some higher level [locations]."

Leading Others

The tier representing Leading Others ($n=113$) had higher representation among alumni than current student participants. When examining clusters of leadership competencies, Relatedness ($n=47$) was the most frequently perceived cluster of leadership followed by Impactfulness ($n=41$), and Engagement ($n=21$). Individual competency frequencies and differences between current students and alumni responses are provided in Tables 4.6 and 4.7

Figure 4. 6
Leading Others Competencies Frequency Count
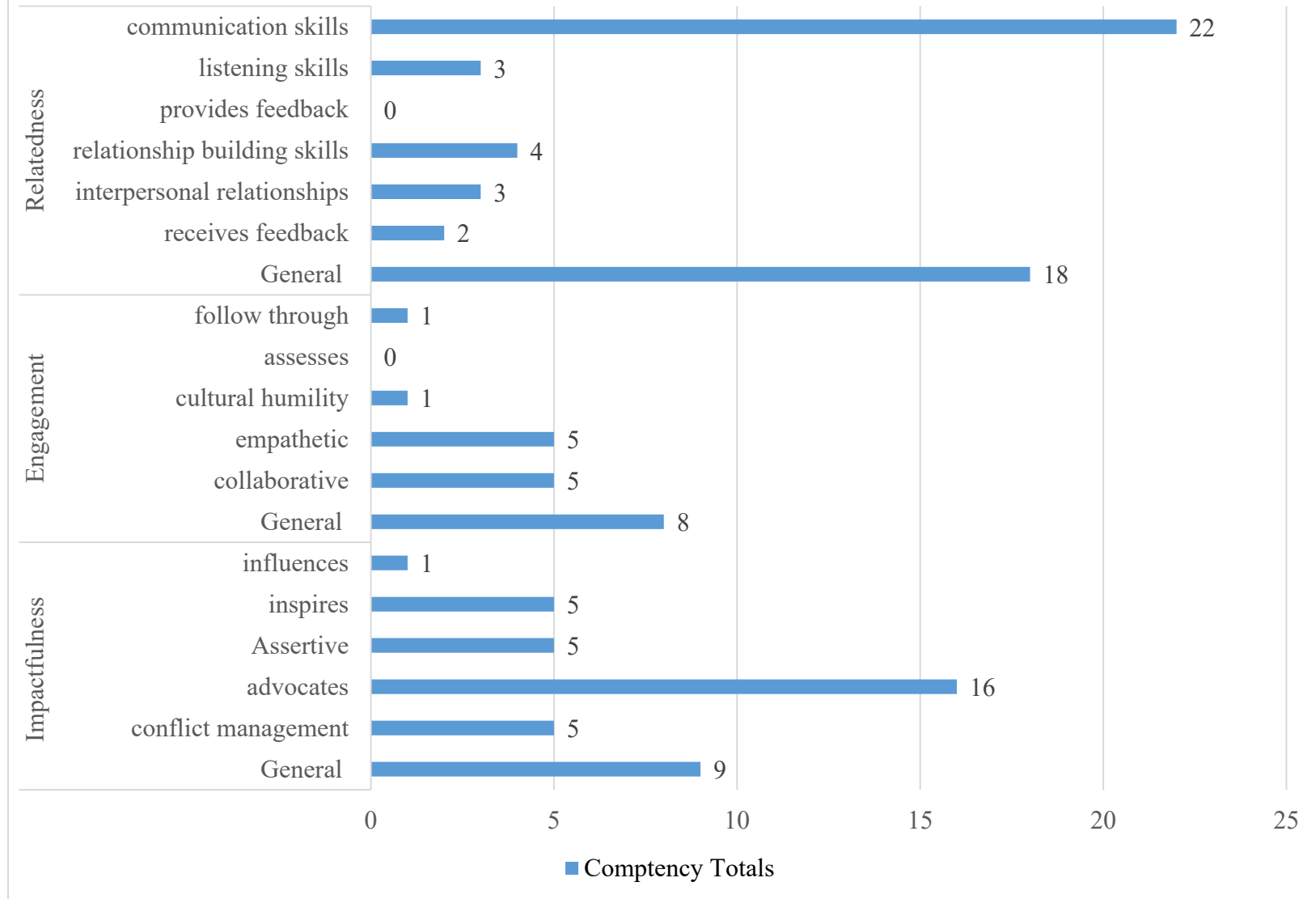
Figure 4.7
Leading Others: Alumni vs. Current Students Comparison
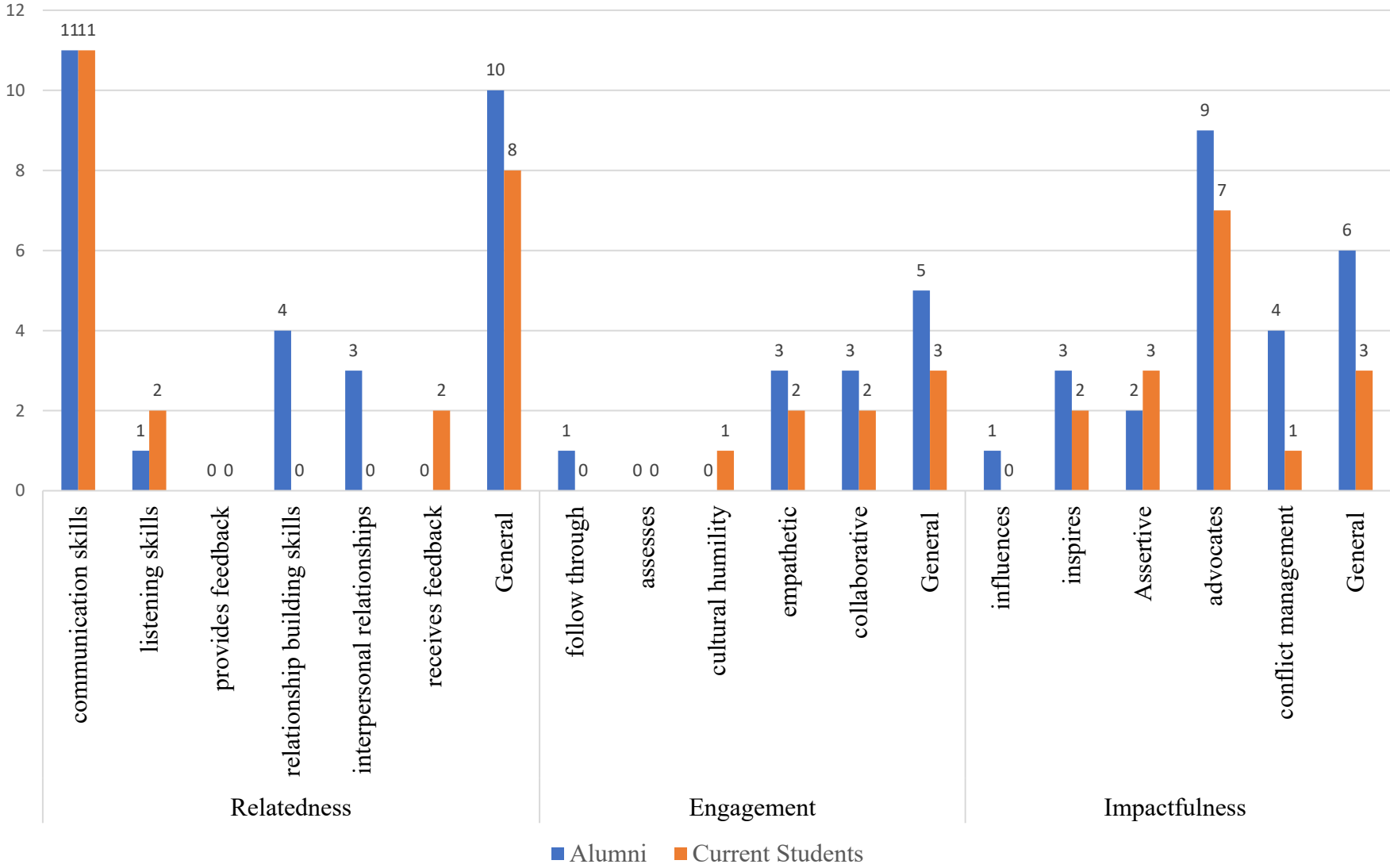
Relatedness. Communication Skill (n=22) was noted eleven times by both participant groups to become the most prevalent competency noted the within Relatedness cluster. An alum linked communication to leadership in this manner, "I think a very big part of being a leader is communication, so being able to recognize when someone needs instructions and being able to recognize when someone is not open to instruction and navigating through that." Another alum reinforced this point, "I think I've learned how to best approach and communicate with different types of people." The role of effective communication when providing instruction was recognized by a current student, "…when you're trying to communicate a new idea to people that you are working with and people that you are trying to lead, both directions of communication, it's really important that you think that through."

Current students viewed communication as an important skill for their future careers. As one individual explained, "Challenging myself has allowed me to build on leadership qualities I know will be beneficial to me in the future…effectively communicating with professors and advocating for [the pro bono clinic] has helped me develop my communication skills." Another current student felt their leadership experience, "…will help me be able to communicate more effectively with my future colleagues."

In some instances, communication was implied to be an exchange of information between two or more parties, "I'm open to communicate with others and hearing their point of view…", "you have to be very communicative and open…", and "two-way communication between leaders and followers." In these instances, the statement was coded as Communication rather than separately coded as "Listening Skills".

Relationship Building Skills and Interpersonal Relationships. There were 19 general statements referencing the importance of a leader's ability to relate to their followers, many of

which appear to encompass both Interpersonal Relationships and Relationship Building Skills competencies. This was often described as a leader being approachable. As one current student stated, "I think it's important for followers to understand that the leader is approachable and is open to hearing what they have to say and is understanding and compassionate…" Another student seemed to wrestle with the concept, "how can I present myself as a leader without coming on too strong or not strong enough..." in order to build strong working relationships between leaders and followers.

Alumni illustrated the importance of a leader's relationship building skills and interpersonal skills through statements such as, "Knowing how to work with people, even though you might have differing opinions…our department is full of many personalities, so coming in you gotta know how to play ball with everybody," and how a leader needed to, "at the very least be willing to sit and work with the followers." A current student alluded to a similar approach, believing, "…working alongside your peers, not telling them what to do is, like, most important and also gets you the biggest buy-in from those that you're leading." Being approachable in the leader-follower relationship was summarized by an alum,

> You should never be afraid to go talk to someone in a superior position
> to yourself…the best relationship is one of respect, but definitely not
> someone that you're fearful of, someone that you can have an open and
> honest conversation with…

Impactfulness. Advocates (16) emerged as the most frequently mentioned competency within the Impactfulness cluster. One current student stated, "…advocating for our profession and our patients, I think is really important." There were also several statements in which participants described practicing advocacy within their leadership role by acting as a liaison or

representative for their cohort in some manner. For example, "I was a voice from the students," "…advocate for the students to the faculty and for the faculty to the students," and "…liaison between the faculty and the student body."

Current students also embraced the necessity of professional advocacy, "…a lot of people don't understand PT, don't know about it…we need to advocate because it's needed for so many things," and, "I think a lot of it is educating and advocating for physical therapy. A lot of people don't really know what physical therapy is or what physical therapy does." One individual perceived, "…continual battle within the PT profession is the constant effort of legitimizing our doctoral status…we must possess the characteristics of an effective leader in order to further prove our profession as credible." An alum also acknowledged, "advocacy as a form of leadership…standing up for our profession…" to be important.

Advocating for patients was also perceived as a leadership skill, as exemplified in this observation from a current student, "…leadership in the sense of advocacy for our patients…being able an advocate for patient rights and healthcare rights…" An alum emphasized this commitment in the following manner, "I try my best at all times, just be a patient advocate and justify, justify, justify."

Conflict Management, Assertive, and Inspires competencies were noted five times each. Alumni had more references than current students to Conflict Management (n=4) and Inspires (n=3) competencies. Current students, on the other hand, perceived becoming more assertive as an element of personal growth and described improved decisiveness and standing by their decisions as leaders as important competencies. One current student offered the following, "I think I've become, like, I don't want to say cold hearted, but I think I've learned to take those that I'm delegating and leading opinions' into consideration, but stay strong in what I believe is

best for people…"

Engagement. Engagement competencies were the least represented components of the

Leading Others tier of the LCF-PT. Being Empathetic (n=5) and Collaboration (n=5) were the

most frequently noted specific leadership skills. Empathy was expressed by participants in

terms of caring for others. As a current student explained,

> I think caring about people that are under you is super important because if you don't
>
> care about people that you're leading, you're not going to be active and trying to help
>
> them be the best that they can be.

An alum added context to empathy when describing patient care, "Whoever I'm talking

to…I want to be where they're at and I want to understand where they are coming from. A lot

of empathy I try to build, I try to be very caring and kind…" Other alumni had similar

statements about the empathy, "I've always tried to be empathetic…I've always tried to humble

myself down to be one-on-one with people and hear their disparities and what they want to

change, " or, "I try to be caring…I think the correct term is sympathetic or empathetic."

Concepts of collaboration were expressed in terms of working with others and taking

other opinions and ideas into consideration. One current student described collaboration in the

following manner, "I think I learned as a leader, not everybody thinks the way you do, but it's

important to think about what others feel to take into consideration." An alum also noted,

"…the ability to listen and take other people's opinion and regard, even if that person maybe

doesn't actually have a good opinion, but still, go through that process." Another current

student added, "I would say the ideal relationship would be followers, not feel like they are

following. They feel included…they feel like they have control of what they can do for

themselves as well as others around them." Another current student connected current didactic course work to collaboration, "I'm just thinking this semester we have all these group projects; I really feel like it teaches us how to be more collaborative and open to other people's thoughts." Several interviewees also specifically mentioned teamwork, which necessitates collaboration, but since Team Orientation is listed as a competency supporting Leading Communities and/or Organizations, these statements were coded accordingly.

Leading Communities and/or Organizations

Leadership of Communities and/or Organizations was the least frequently referenced tier of leadership among participants (*n*=41) with an almost even split between current students (*n*=20) and alumni (*n*=21) responses. Interconnectedness (n=17) was the most frequently mentioned cluster with Team Orientation (*n*=5) and Scope of Competence (*n*=4) emerging as most often noted competencies. There were also four generalized statements implying interconnectedness. The frequency count and comparison of alumni and current student responses for Leading Communities and/or Organizations is summarized in Figure 4.8.

Figure 4.8

Leading Organizations/Communities Frequency Count and Alumni vs. Current Students
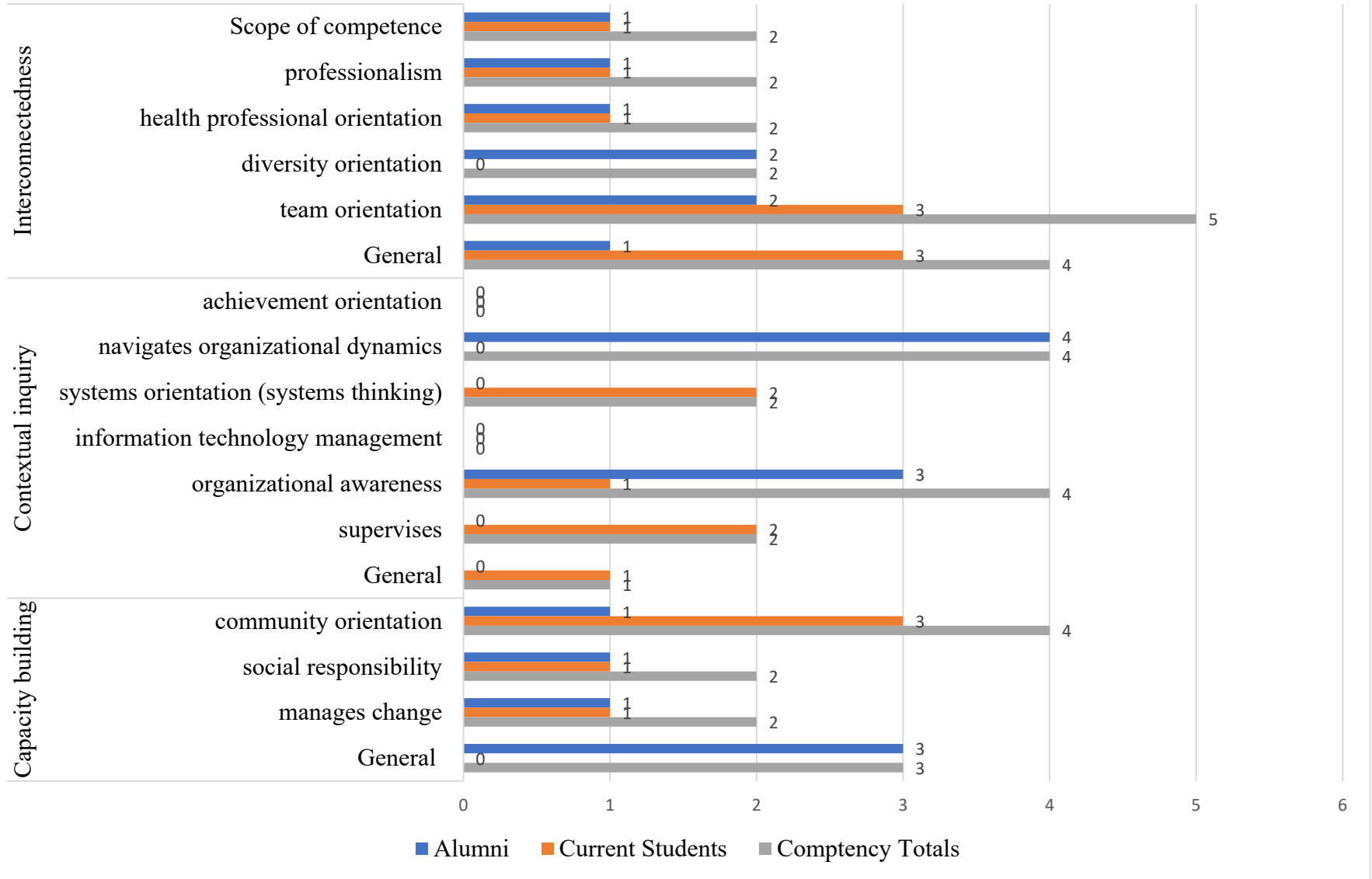
Interconnectedness. Team Orientation was illustrated by participant quotes implying working with others to accomplish organizational or group goals. An alum described the concept in this manner, "…in the setting that I work in, it's a team and you need everyone kind of working together in order to help that clinic run efficiently." A current student described the endeavor to develop the program's pro-bono clinic, "…it was really a team effort working to get it started and everything." Another current student concurred,

> I feel like I'm all about teamwork…I like to think that I approach [tasks] in more
> of a teamwork manner and trying to see what a certain person's strengths are and
> then maybe give them a job that will help them use those strengths, or maybe
> also help them develop other qualities.

When describing teamwork, there were also statements that appeared to incorporate Healthcare Professional Orientation, a separate competency within the scope of Interconnectedness. "We need to work together with other disciplines in order to provide our patients the best care," and, "there's a pyramid to healthcare…I think our role is helping the patients understand what's going on with their health," describe multidisciplinary care systems in which physical therapists practice. Given the specificity of references to other healthcare disciplines, these responses were coded in the Healthcare Professional Orientation category.

The Scope of Competence competency was illustrated by one individual who shared how he had grown in clinical practice by recognizing when it was best to refer patients to another provider:

> I think the thing I've learned, I don't have all the answers…knowing when to

look at a patient that is paid to come see you and just say, 'I'm not the person you

need to see.'…it's like hey, there are gonna be situations where I'm the best

person for this, but this isn't it.

Scope of Competence was also illustrated by individuals' recognition and security in

their own knowledge and abilities. A current student alluded to situations in which

leaders, "need to be secure in their own decision making and being able to follow

through and be okay with not being a hundred percent correct."

While the total frequency count for Contextual Inquiry was similar between

current students (n=6) and alumni (n=7), there were differences between the two groups

in the competencies referenced. Alumni referenced organizational awareness (n=3) and

navigates organizational dynamics (n=4) most frequently, whereas current students

referenced supervises and systems orientation twice each and organizational awareness

once (Figure 4.8).

Capacity Building was mentioned 14 times within the data, yet six of those

statements were generalized references that could not be aligned with a specific

competency. Community Orientation (n=4) was most frequently recognized

competency within this cluster. Current students emphasized community orientation in

the context of service, "doing what I'm doing is to help others and serve my community

in anyway I can." Another current student had a similar statement, "I also love working

with the community and I thought it would be a great opportunity to be involved in the

community and kind of give back…"

Alumni referenced community in the context of a broader scope of

professionals. One individual described how leadership had given him opportunities, "…you get to meet people across the spectrum, right? If you just do ortho every day, that's just ortho. When you get involved in these organizations, you get to meet everyone…"

Social Responsibility (*n*=2) and Manages Change (*n*=2) were evenly recognized by current students and alumni. Social Responsibility was indicated in the context of service to the community and those the individual was leading. One alum described how their leadership experience had improved their abilities to facilitate change, "It's hard to implement protocols and changes in a hospital setting. If I hadn't had that experience in PT school and moving on, I definitely think it would have been a lot harder to work with a lot of the staff that we have now."

Summary of Major Findings

The scope of leadership experiences and opportunities available to students at Marshall University SOPT has expanded since the DPT program's launch in 2012. Initially, only a few class officer positions were available for students interested in exploring leadership opportunities. In addition to class officer positions there are now several other avenues for leadership development including internal programmatic and several outside opportunities. Expanded program opportunities include additional class officer positions and positions in the administration and management of the program-affiliated pro bono clinic. Outside opportunities have facilitated student engagement in pre-professional development and engagement with the state professional organization. Taken concurrently with professional practice courses, these opportunities are effective in fostering formation of professional role identity and a responsibility for advocacy

within student leaders, despite minimal formal tracking of leadership growth and development.

Current students and alumni expressed a desire to pursue leadership opportunities in addition to their required curricula for reasons of career preparation, pursuit of personal challenges, and to support their peers. They valued leadership opportunities that enhanced or reinforced curricular material related to individual interests and career goals. Seeking increased leadership responsibility was perceived as enriching their educational experience before beginning clinical practice. A subset of the study population emerged who initially did not pursue leadership roles, but who were motivated by the recommendation of their peers.

Current students had expectations that their leadership experience would result in advanced professional skill development, especially regarding communication across multiple domains. Current students also expressed increased confidence in themselves as potential leaders based upon their experiences. Alumni participants provided evidence for these expectations as coming to fruition by relating their prior experiences to early career advancements. Both current students and alumni expressed a deeper understanding of physical therapist's potential to be leaders in healthcare but also identified barriers to fulfilling that potential.

Participants described effective leaders based upon their experiences but did not describe how their leadership experiences had been effective or ineffective to develop such behaviors in themselves. Effective leaders were identified as action oriented and humble individuals and many participants stated they sought to emulate such traits. Mutual respect was identified as an essential trait for effective leader-follower

relationships, anchored by effective, bi-directional communication. Examples of ineffective leadership and undesirable traits reinforced thematic formation of ideal leadership behaviors.

The findings from this study provide evidence of the partial integration of the LCF-PT within DPT education. Competencies supporting tiers of Self-Leadership and Leading Others from the LCF-PT were widely evident in the data, providing initial supporting evidence for the proposed framework's application to DPT education and new graduate continued leadership development. The Leading Communities and/or Organizations tier was less well represented within the study findings. Specific competency representation within this tier varied considerably between current students and alumni participants.

Chapter 5: Conclusions and Recommendations

This study investigated DPT student experiences with leadership development during their pre-professional education and how these experiences have shaped their perceptions of leadership within the physical therapy profession. This chapter presents the purpose, problem statement, and research questions that guided the study, followed by a summary of the methods and major findings. Conclusions and a discussion of the study implications will be followed by recommendations for future research.

Purpose and Problem Statement

There has been no formal assessment of the scope and effectiveness of the actual programmatic leadership opportunities available to students in DPT programs. There has also been limited investigation into student experiences with leadership development during their pre- professional education, particularly regarding their motivation and expectations for leadership participation. These issues are complicated by limited consensus within the physical therapy profession regarding which leadership skills and behaviors are most essential for newly graduated professionals and thus necessary for DPT educational programs to foster within students.

Without specific inquiry into what students are absorbing from pre-professional leadership education and opportunities, it is difficult for educational programs to ensure graduates are acquiring the desired leadership skills and behaviors recommended for professional practice expectations. The LCF-PT has potential utilization to guide leadership skill and behavior acquisition within physical therapy students, but thus far it has not been validated for this purpose. Additionally, investigation into DPT student motivation for leadership is lacking which further limits educational programs' abilities

to format meaningful and engaging leadership development opportunities. Therefore, the purpose of this study was to conduct an initial investigation into physical therapy student experiences with leadership development during their education, identify motivating factors, and examine how these experiences relate to the proposed LCF-PT.

Research Questions

The specific research questions utilized to guide this study were:

1. What is the scope and effectiveness of the leadership development experiences available to DPT students?

2. What are the primary factors motivating DPT students to pursue leadership development opportunities within their pre-professional education?

3. What do DPT students expect to gain from their student leadership experiences within their pre-professional education?

4. To what extent to DPT students perceive their pre-professional education experiences as effective to develop leadership skills and behaviors?

5. To what extent does the LCF-PT provide a framework for integrating leadership development into DPT pre-professional educational programs?

Summary of Methods

This phenomenological qualitative research study investigated the perceptions of physical therapy student leaders formed through their lived experiences. Twenty-one participants, representing current and alumni student leaders from Marshall University School of Physical Therapy were interviewed January-May 2022. The semi-structured interviews were transcribed

and identifying information redacted. Collated responses were analyzed utilizing in vivo and pattern coding methods for Research Questions 1-4.

Deductive thematic analysis was performed utilizing the LCF-PT framework clusters and tiers of leadership (Appendix E) as predefined themes by which to sort the codes according to a deductive thematic analysis strategy (Braun & Clarke, 2012).

Summary of Findings

The scope of leadership experiences available to students at Marshall University SOPT has expanded to include both programmatic and outside opportunities. Professional practice courses provide foundational didactic information that facilitates professional identity formation and fosters a sense of responsibility for advocacy within students. There is minimal tracking of leadership development within the program, however, components of leadership were identified within various assessment tools utilized in professional practice courses and clinical education.

Participants were motivated to pursue leadership opportunities to enhance their career readiness. They expressed a desire for additional personal challenges with the view that doing so would enrich their educational experience. Some participants also referenced a desire to provide service to their peers or engage in service activities as motivating factors to pursue leadership positions.

Expectations for leadership experiences included professional skill development and opportunities to develop a better understanding of the scope of the profession. Current student leaders expected to acquire enhanced communication and conflict management skills that would translate to valuable qualities in the workplace. They also expressed increased confidence in themselves to take on leadership roles. Alumni

verified these findings through examples of skill transference from student leadership experience to the job setting. Both groups identified they developed a deeper understanding of the scope of physical therapy within the American healthcare system and increased their awareness of potential and actual professional barriers.

Participants expect effective leaders to be action oriented and humble individuals. They also believe mutual respect and collaboration foster effective leader-follower relationships. Effective communication was identified as a key component of effective leadership and leader- follower relationships.

Elements of the LCF-PT tiers of Self-Leadership and Leading Others were consistently present in the participants' perceptions of their leadership experiences Leading Communities and/or Organizations was mentioned less frequently. Several LCF-PT competencies were also evident in findings across research questions.

Conclusions

Findings from this study are sufficient to support the following conclusions:

What is the scope and effectiveness of the leadership development experiences available to DPT students?

The scope of leadership development experiences available to physical therapy students at Marshall University are sufficient to allow students to pursue leadership opportunities in individual interest areas. Professional practice courses are foundational for shaping student perceptions of leadership within the profession. It is within these courses that the initial professional identity and initial understanding of the importance of professional advocacy are established. Given the minimal availability of a formal and objective measurement of leadership development, student leaders often utilize peer

feedback and self-reflection to evaluate their leadership performance and growth.

What are the primary factors motivating DPT students to pursue leadership development opportunities within their pre-professional education?

Participants were motivated to pursue leadership opportunities that were perceived to enhance the value of their education and career preparation. The program's pro bono clinic student board was viewed as an opportunity for authentic experiences in leadership that reinforced didactic content and were immediately transferable to future clinical practice. Participation in student-oriented activities through the state and national level professional organizations cultivated interest in continued professional leadership beyond graduation. Leadership experiences also provided individuals with service opportunities through giving of their time and energy to support their peers and by giving back to the community.

What do DPT students expect to gain from their student leadership experiences within their pre-professional education?

The leadership experiences available to participants enhanced their communication and conflict management skills. These advanced skills increased participants' confidence to act as leaders in the workplace regardless of whether they held formal leadership or managerial titles. Participants also gained a deeper understanding of the scope of physical therapy within the healthcare system.

To what extent to DPT students perceive their pre-professional education experiences as effective to develop leadership skills and behaviors?

Pre-professional education experiences were effective in developing participants' perceptions of effective leaders as being individuals who are action

oriented and humble. They also formed an understanding of the value of effective communication and mutual respect between leaders and followers. These experiences led participants to seek to emulate these behaviors to improve their leadership performance.

To what extent does the LCF-PT provide a framework for integrating leadership development into DPT pre-professional educational programs?

Elements of the LCF-PT are sufficiently present within the findings to support the use of the Self-Leadership and Leading Others tiers as a partial framework for integrating leadership development into DPT pre-professional programs. Elements of the Leading Communities and/or Organizations tier were reported much less frequently, and this tier of leadership may not be sufficiently represented within student leadership experiences to support this aspect of the framework in educational programs.

Discussion and Implications

Scope of Leadership Experiences

CAPTE requirements for DPT educational programs include "exposure to leadership" (Standards and required elements, 2015). However, mere exposure to leadership may be insufficient to prepare physical therapy students for their increased responsibility as primary healthcare providers. Therefore, DPT students must have opportunities to practice leadership to develop the necessary skills and behaviors to operate as leaders during patient/client interactions, supervising support staff, and among peers.

The expanded scope of leadership development opportunities for students at

Marshall University SOPT allows more students to engage in leadership during their pre-professional education. The growth in opportunities allows students to pursue leadership according to their individual interests, but professional practice courses may be the only opportunity for students not engaged in formal leadership positions to receive leadership exposure. There may be students who have an interest in leadership development but lack the opportunity to engage in long term extra-curricular experiences such as those available at Marshall University SOPT. It may be beneficial to explore the inclusion of additional short-term or discrete leadership development events such as the SLA to increase the accessibility of leadership development opportunities for such individuals.

Tracking Leadership Development

Study findings support prior findings regarding limitations of tools utilized to track leadership development in physical therapy students (Denton, et al., 2017; Anderson and Hall, Core Values, 2020; American Physical Therapy Association, 2006.). While previously discussed tools were recognized as having leadership elements embedded, study participants did not agree, citing lack of formal and objective measurement of leadership development or growth during their experience as student leaders. This absence of assessment tools may negatively impact the development of effective leadership skills and behaviors since student leaders must rely upon peer feedback and self-reflection for insight into their leadership performance. While peer feedback and self-reflection provide valuable insights, the lack of objective measurement creates barriers for student leaders to identify growth areas.

One proposed use of the LCF-PT framework is development of a standardized tool to guide leadership training within DPT educational programs (Tscheope, et al.,

2021). As initially developed, the LCF-PT framework is intended to provide a stepwise scaffold for leadership development as novice leaders first develop Self-Leadership skills before undertaking Leading Others and even later, Leading Communities and/or Organizations. The findings of this study suggest the intended stepwise progression of leadership behavior and skill acquisition based upon a comparison of the frequency with which current students and alumni participants referenced Self-Leadership and Leading Others, providing preliminary validation of the framework as a guide for ongoing leadership growth (Tscheope et al., 2021). With further refinement, the framework could be adapted to measure progressive advancement of growth in leadership competence. In addition to objective assessment of current leadership performance, the LCF-PT could also provide opportunities for individuals to set specific leadership goals and track subsequent progress. Such a tool would have the potential for individual and programmatic use to quantify leadership exposure and experience.

Motivation

Participants in this study were motivated to pursue leadership primarily to enhance career preparedness. These findings were consistent with the findings of a previous unpublished pilot study (Stephens, et al., 2020). Since the study population consisted only of individuals who held formal leadership positions, the findings regarding motivation may not be generalizable to other students in the DPT educational program. However, extracurricular responsibilities were viewed as valuable learning experiences, therefore, concrete examples of how leadership skills transfer to the clinic environment may expand general interest in leadership development. Discrete leadership

development "events" such as the SLA provide occasions for other students to experience leadership beyond mere exposure. This is another example of how discrete or short- term leadership opportunities may be beneficial to DPT educational programs.

Expectations and Perceived Effectiveness

The majority of study participants could not state what their expectations for leadership had been or how their expectations had changed since they acquired their leadership position. Instead, participants reported how they perceived how their leadership experience had produced personal growth. Defining students' expectations for leadership preemptively could help guide future expansion of leadership development opportunities within the program as a newly elected Class President may have significantly different expectations for the outcomes of their leadership experience than a more experienced class officer. This information could also be useful to guide student-oriented opportunities within professional organizations such as future SLA or Student SIG events.

Participant insight into the perceived effectiveness of their leadership opportunities was also reflective. It appears their experiences refined their perception of an effective leader, but not necessarily their perception of themselves as effective leaders. Several participants stated they sought to emulate admirable leadership skills and behaviors but had no frame of reference as to the success of their efforts. This is another area where purposeful measurement of leadership development could be useful. If the change in student leaders' skills and behaviors were tracked, it would provide insight into which opportunities are facilitating development of specific behaviors and could guide delivery of leadership related content within available opportunities.

Extent of the LCF-PT as a Framework for Leadership Development

Findings from this study provide initial validation for use of the LCF-PT within DPT educational programs as data suggest the intended stepwise progression of leadership development according to the tiered LCF-PT design (Tscheope et al., 2021). Current students reported competencies supporting development of Self-Leadership to a greater extent than did alumni, whereas alumni reported more Leading Others competency development than did current students. By comparison, the third tier of leadership described in the LCF-PT, Leading Communities and/or Organizations, was less represented in the data across both participant groups. The LCF-PT could conceivably be tailored to track leadership development or growth over time with the addition of a Likert-type or ordinal scale to indicate competency acquisition and practice over time. With greater dissemination, the framework could be incorporated within DPT education and early career professional development opportunities.

Study findings do suggest some potential limitations of the LCF-PT as a measurement tool. Multiple competencies in the LCF-PT document lack publicly available operational definitions. In the Delphi study published in 2020, developers of the LCF-PT provided a list of definitions for 37 competencies for which consensus was reached as being very important for all physical therapists, regardless of time since licensure (Sebelski et al., 2020). A list of an additional 20 competencies deemed as being very important for experienced clinicians was also provided. No operational definitions were provided for these 20 competencies.

Nine of these undefined competencies are included within the tier of Leading

Communities and/or Organizations and constitute the entire Contextual Inquiry and Capacity Building clusters. Private communications between the researcher and developers of the LCF-PT yielded a full list of the competency definitions utilized within the Delphi study (C. Sebelski, personal communication, August 25, 2022). These definitions were used for triangulation purposes for the results for Research Question 5. However, as this list is not broadly available in current literature, valid interpretation and use of the LCF-PT may be compromised if interested parties are unable to confirm definitions with the framework's developers. Implementation of the LCF-PT into DPT educational programs should be done with caution until there is greater validation of its use within the profession.

Communication skills, advocacy, and inclusivity/collaboration were identified within the findings for multiple research questions. Communication skills (n=22) was the most prevalent LCF-PT competency identified and also emerged as a major theme among the findings of participants expectations and perceived effectiveness of their leadership experiences. Frequency counts between current students and alumni were equally dispersed and communication skills were identified as a desirable outcome of leadership experience and perceived as contributing to a leaders' effectiveness. These findings support both the results of the Delphi study and the proposed LCF-PT which identified communication skills as an essential competency for physical therapists both less than and greater than 1 year post licensure. Communication skills were also identified in earlier studies suggesting essential leadership skills for physical therapists (Desveaux, et al., 2012; Lopopolo et al., 2004).

The next most prevalent overlapping competency was advocacy (n=16). The

results of this study showed an almost equal distribution of this competency across alumni (*n*=9) and current students (*n*=7). Developers of the LCF-PT identified advocacy as an expected competency for individuals with more than one year of practice, but not for individuals with less than one year of practice. This discrepancy between the study findings and those of the Delphi study could indicate the program has effectively developed advocacy behaviors beyond expectations for entry level physical therapists. On the other hand, advocacy could be a reasonably expected leadership behavior among all physical therapists regardless of years' experience versus an expectation for more experienced practitioners as currently delineated within the LCF-PT. Other DPT educational programs may find similar incongruity between competencies demonstrated within their current and alumni populations. Further validation of which competencies are essential for new DPT graduates versus experienced clinicians is required to allow generalized application of the LCF-PT across the profession.

Collaboration (*n*=5), also described as inclusivity, was the only other theme to emerge across more than one research question. The low frequency count indicates collaboration was not a major component of the LCF-PT. However, since collaboration did not emerge from the data, providing opportunities to practice collaboration may warrant increased attention when attempting to apply the LCF-PT within DPT educational programs.

Several other themes identified for Research Questions 1-4 overlapped LCF-PT competencies and are depicted in Table 5.1. These additional overlapping themes and competencies provide further evidence supporting the use of the LCF-PT within DPT educational programs.

Table 5.1

Overlapping Themes and Competencies

	Identified Themes	Matching LCF-PT competency/cluster/tier
RQ1	Advocacy (RQ1, 3, 4)	Advocates/Impactfulness/Others
	Professional Identity	Role ID/Autonomy/Self
RQ2	Career Preparation	Excellence/Inquisitiveness/Self
	Personal Challenge	Excellence/Inquisitiveness/Self
RQ3	Communication (RQ 3, 4)	Communication Skills/Relatedness/Others
	Confidence	Self-Confidence/Self-Perception/Self
	Conflict Management	Conflict Management/Impactfulness/Others
	Inclusivity/Collaboration (RQ 3, 4)	Collaborative/Engagement/Others
RQ4	Action Oriented	Self-Initiative/Self-Perception/Self

Three competencies were identified as specific leadership behaviors that were unable to be categorized according to the LCF-PT framework. In some instances, this was due to the absence of a logical corresponding category within the framework, in others, there is an apparent overlap of the competency across clusters of leadership. Mentoring, networking, and service behaviors were identified as components of participants' leadership development experiences that could not be specifically categorized as components of the LCF-PT.

Participants in this study described seeking mentoring and networking opportunities from faculty and more experienced clinicians, but neither behavior is specifically listed within the LCF-PT. Seeking mentorship opportunities could be viewed as the pursuit of lifelong learning or as seeking information, therefore these instances were coded as general statements supporting Inquisitiveness within Self-Leadership. Networking, on the other hand, may indicate a desire to build relationships and collaborate with others, or it may indicate efforts to navigate organizational dynamics and community orientation. Further investigation into the role of mentoring and networking in physical therapy leadership development may be warranted to clarify these behaviors in the context of the LCF-PT.

The lack of a specific service competency within the LCF-PT is strange considering how well-established servant leadership and service behaviors are as components of physical therapy leadership (Trastek et al., 2014; Gersh, 2006). Social Responsibility may be the most appropriate competency by which to qualify community service, but not all instances of service are conducted in the community.

While service does not automatically equate to leadership, service activities do

provide opportunities for individuals to practice and develop leadership competence. These opportunities may be especially valuable to engage individuals not in a formal leadership position. DPT educational programs have found leadership development to be an outcome of service-learning activities (Black et al., 2013; Clark 2016; Wilson & Collins, 2006), therefore, the lack of service competencies within the LCF-PT is an apparent inconsistency between the newly developed framework and findings from prior research. DPT educational programs may find it difficult to incorporate the LCF-PT if current leadership development activities are framed through the lens of service.

Recommendations for Further Research

There are several research opportunities that emerge from the study findings.

1. Further inquiry into physical therapy students' experiences with leadership development would better inform DPT educational programs on effective strategies to address students' goals and expectations for participation in leadership development as well as how best to address desired programmatic outcomes.

2. Exploration of the utility of a leadership assessment tool within this program is recommended due to the absence of purposeful measurement of leadership skill and behavior development during student leaders' tenure.

3. Although one reported use of the LCF-PT framework is a benchmarking tool for leadership development, further validation of the framework is needed before it can be integrated into DPT educational programs.

4. The role of mentorship in physical therapy leadership development should also be investigated to determine its effects on the acquisition and application of

leadership skills and behaviors.

These suggested topics should be investigated across a broader population of DPT educational programs in order to expand the generalizability of the results beyond the specific case study described in this study.

Summary

In summary, this study has shown the scope of leadership experiences available to physical therapy students at Marshall University allows students to pursue opportunities for leadership unique to their individual interests and are effective in developing specific leadership skills and behaviors beneficial their future careers. Participants in this study described their perceptions of an effective leader based upon their experiences, but the lack of formal evaluation of their performance may have affected their assessment of the effectiveness of those opportunities. Specific competencies from the LCF-PT were identified within the data, providing initial validation of the framework for use within DPT educational programs.

The results, conclusions, and potential implications of this study provide insight to guide programmatic efforts to enhance leadership development within physical therapy students. Results of this study may not be generalizable to the experiences and perceptions of student leaders at other DPT educational programs or to student leaders within other disciplines of study. However, this study revealed several avenues for future investigation that could expand the generalizability of these preliminary findings. This study contributes to the growing body of knowledge of leadership within the physical therapy profession by describing student physical therapists' experiences and perceptions of leadership formed during their pre-professional education and may

inform program efforts to develop effective leaders within the profession.

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Appendix A

Initial IRB Approval

MARSHALL UNIVERSITY®

October 20, 2021

Ronald Childress
Leadership Studies

RE: IRBNet ID# 1813180-1
At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Childress:

Protocol Title:	[1813180-1] Doctor of Physical Therapy Students' Perspectives on Leadership Development in the Context of the Proposed Leadership Competency Framework for Physical Therapists
Site Location:	MUGC
Submission Type:	New Project APPROVED
Review Type:	Exempt Review

In accordance with 45CFR46.104(d)(2), the above study was granted Exempted approval today by the

Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study **unless** there is an amendment to the study. All amendments must be submitted and approved by the IRB Chair/Designee.

This study is for student Laura Stephens.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/ Behavioral) Coordinator Anna Robinson at (304) 696-2477 or robinsonn1@marshall.edu. Please include your study title and reference number in all correspondence with this office.

Sincerely,

Bruce F. Day, ThD, CIP

Director, Office of Research Integrity

Amended IRB Approval

Office of Research Integrity
Institutional Review Board
One John Marshall Drive
Huntington, WV 25755

FWA
00002704

February 17, 2022

IRB1
#00002205
IRB2
#00003206

Ronald Childress, EdD Leadership
Studies

RE: IRBNet ID# 1813180-2
At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Childress:

Protocol Title:	[1813180-2] Doctor of Physical Therapy Students' Perspectives on Leadership Development in the Context of the Proposed Leadership Competency Framework for Physical Therapists

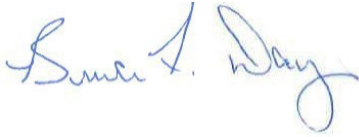| **Site Location:**	MUGC	
Submission Type:	Amendment/Modification	APPROVED
Review Type:	Exempt Review	

The amendment to the above listed study was approved today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. This amendment is to change the population/sample to current class officers and student leaders and MU School of Physical Therapy and MU graduates (last 5 years) who held leadership positions while in physical therapy school.

This study is for student Lauren Stephens.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/ Behavioral) Coordinator Lindsey Taylor at (304) 696-6322 or l.taylor@marshall.edu. Please include your study title and reference number in all correspondence with this office.

Sincerely,

Bruce F. Day, ThD, CIP
Director, Office of Research Integrity   - 1 -

Appendix B

Informed Consent Documents

Informed Consent to Participate in a Research Study

Doctor of Physical Therapy Students' Perspectives on Leadership Development in the context of the Proposed Leadership Competencies Framework for Physical Therapists

Ronald Childress, EdD, Primary

Investigator Laura Stephens, PT,

DPT, Co-Investigator

Dear (Participant),

My name is Laura Stephens, and I am a doctoral student in the Leadership Studies EdD Program at Marshall University in Huntington, WV. I am currently working on my dissertation and am contacting you to request your participation in a research study to explore the perspectives of DPT students on leadership development. **A study abstract is attached**.

Leadership development has been of increasing interest to the physical therapy profession in recent years. The Commission on Accreditation in Physical Therapy Education added "opportunities to practice volunteerism, advocacy, and leadership" to the technical standards required for program accreditation in 2016. Thus far, there has been limited investigation into DPT students' perspectives on leadership development opportunities. You were selected for inclusion in this study based on your current role as a student leader in your DPT education program. Specifically, I am requesting your participation in a semi-structured interview focusing on your experiences as a student leader. **A copy of the interview protocol is attached**.

 This study has been approved by the Marshall University Institutional Review Board.

There are no known risks involved in participating in this study. **Your consent and that you are at least 21 years of age are implied by your willingness to be interviewed.** Participation is completely voluntary and there are no penalties or loss of benefits if you choose not to participate. You may also choose not to answer any question included in the interview protocol. Data collection will occur virtually through one-on-one interviews using Microsoft Teams and will be recorded and further stored on a secure device. Participants will have the right to refuse recording if so desired. Field notes will also be taken during the interview. The information you supply is confidential, and no individual or institution will be identified by name or other identifying information. **If you agree to participate in this study, please respond to this email and indicate your intent.** You will be contacted by the Co-Investigator within a week of your response to schedule a date and time for your interview.

For questions about this study, you may contact Ronald Childress, EdD (PI) at 304-545-0245 or rchildress@marshall.edu. Alternatively, you may contact Laura Stephens (Co-investigator) at 304-656-5616 or stephensl@marshall.edu. If you have any questions regarding your rights as a research participant, you may contact the Marshall University Office of Research Integrity at 304-696-4303.

Thank you for your willingness to consider participating in this study. Study findings will be shared with all participants.

Laura Stephens, PT, DPT, Co-

Investigator 304-656-

5616,stephensl@marshall.edu

Approved on:	2/17/22
Study number:	1813180

Amended Informed Consent Document

Informed Consent to Participate in a Research Study

Doctor of Physical Therapy Students' and Alumni Perspectives on Leadership Development in the context of the Proposed Leadership Competencies Framework for Physical Therapists

Ronald Childress, EdD, Primary

Investigator Laura Stephens, PT,

DPT, Co-Investigator

Dear DPT student leaders,

My name is Laura Stephens, and I am a faculty member at Marshall University School of Physical Therapy and a doctoral candidate in the Leadership Studies EdD Program. I am contacting you to request your participation in my dissertation research study to explore the perspectives of DPT students and recent graduates on leadership development.

Leadership development has been of increasing interest to the physical therapy profession in recent years. The Commission on Accreditation in Physical Therapy Education added "opportunities to practice volunteerism, advocacy, and leadership" to the technical standards required for program accreditation in 2016. Thus far, there has been limited investigation into DPT students' perspectives on leadership development opportunities. You were selected for inclusion in this study based on your current or former role as a student leader during your DPT education program. Specifically, I am requesting your participation in a semi-structured interview focusing on your experiences as a student leader. **A copy of the study abstract and the interview protocol is attached**.

This study has been approved by the Marshall University Institutional Review Board. (IRBNET study #: 1813180)

There are no known risks involved in participating in this study. **Your consent and that you are at least 21 years of age are implied by your willingness to be interviewed.** Participation is completely voluntary and there are no penalties or loss of benefits if you choose not to participate. You may also choose not to answer any question included in the interview protocol. Data collection will occur virtually through one-on-one interviews using Microsoft Teams and will be recorded and further stored on a secure device. Participants will have the right to refuse recording if so desired. Field notes will also be taken during the interview.

The information you supply is confidential, and no individual or institution will be identified by name or other identifying information. **If you agree to participate in this study, please respond via email to stephensl@marshall.edu.** You will be contacted by the Co-Investigator within a week of your response to schedule a date and time for your interview.

For questions about this study, you may contact Ronald Childress, EdD (PI) at 304-545-0245 or rchildress@marshall.edu. Alternatively, you may contact Laura Stephens (Co-investigator) at 304-656- 5616 or stephensl@marshall.edu. If you have any questions regarding your rights as a research participant, you may contact the Marshall University Office of Research Integrity at 304-696-4303.

Thank you for your willingness to consider participating in this study. Study findings will be shared with all participants.

Laura Stephens, PT, DPT, Co-Investigator

ABPTS Board Certified Neurological Clinical Specialist

Assistant Professor, Marshall University School of Physical

Therapy 304-656-5616, stephensl@marshall.edu

Appendix C

Interview protocol

Pre-Interview Script:

Thank you for agreeing to participate in my study. As a reminder, this research is being conducted through the Marshall University College of Education and Professional Development to explore physical therapy student leader's perceptions of the effectiveness of their leadership development experiences and to initiate investigation as to the utility of the Leadership Competencies Framework for Physical Therapy in Doctor of Physical Therapy education.

I anticipate the interview will take approximately 45 minutes. As a reminder, the interview will be recorded and transcribed. After the transcription has been transcribed verbatim, I may contact you for verification of remarks if necessary. Once accuracy of the transcription is confirmed, the interview recording will be erased form the voice recording app utilized. Your participation is voluntary, and you can elect to stop at any time. Your responses will be integrated with those of other participants, and you will not be identified in any way. Confidentiality will be always maintained.

Interview Questions:

1. What is expected graduation date?

2. Alumni-When did you graduate?

3. Did you participate in personal leadership development activities to prepare for admission to PT school?

4. Were you involved in leadership activities prior to PT school? If yes, please describe.

5. What do you recall that you learned/have learned thus far regarding leadership as part of the curriculum?

6. Have you/did you participate in any additional leadership development opportunities in PT school? (i.e. leadership workshops, mentoring, sponsoring…)

7. Did you/have you done to assess the effectiveness of those opportunities?

8. How was your leadership development/growth tracked/measured during PT school? (If necessary provide examples such as Core Values Self-Assessment.)

9. Do you personally track/measure your leadership development/growth?

10. Please describe the purpose/responsibilities of the role/position you hold/held.

11. Why were you interested in this specific role [as opposed to other opportunities/roles]?

12. What did you feel made you appropriate/qualified to fill this role?

13. What is/was your personal goal for being in this leadership position?

14. How do you think your experience (in this role) will impact your future career?

    a. For alumni-how did your experience in that position impact your career?

15. How would you describe yourself as a leader?

16. How have you changed as a leader since starting this position?

    a. For alumni-how did you change as a leader when you held your position?

17. What do you think contributed to this change?

18. Have you sought any additional resources/mentoring to help you develop

(grow?) as a leader while in this position?

    a. For an alumni-Have you sought any additional resources/mentoring to help you develop (grow?) as a leadership since graduation?

19. Are you satisfied with your decision to pursue this leadership role?

    a. Alumni-if you went back, would you make the same decision to pursue that leadership role?

20. Can you describe your view of an ideal leader?

21. How do you think you compare to that standard?

22. How would you describe the ideal relationship between leaders and followers?

23. From your perspective, what are the most essential actions for a leader?

24. What do you think PT students need to know about leadership before starting their careers?

    a. Alumni-What do you wish you had known about leadership before starting your career?

25. How do you feel your leadership experiences have impacted your ability to work with others?

26. What do PTs need to know about leadership as part of the larger American healthcare system?

27. How do you think your experiences have influenced your abilities to be a leader in the American healthcare system?

28. What are your perspectives on leadership within the physical therapy profession?

    a. For alumni: How have your perspectives on leadership changed since graduating and beginning to practice.

29. How do you think PTs can fulfill the profession's vision to "transform

society by optimizing movement to improve the human experience?"

30. Additional comments-Please share any additional comments you feel are warranted.

Appendix D

Summary of Physical Therapy Leadership Development Resources

Resource	Sponsor/Developing Entity	Description	Target
Core Values Self-Assessment	American Physical Therapy Association	Self-assessment to measure and track an individual's awareness of and frequency of demonstrate of the profession's core values	Physical therapy students and professionals
Leadership, Administration, Management, and Professionalism Institute for Leadership (LAMP)	Health Policy and Administration Section of the American Physical Therapy Association	Program focuses on leadership and management skills for personal and professional growth	Healthcare professionals
Fellowship in Education Leadership	American Board of Physical Therapy Residency and Fellowship Education	Addresses breadth and depth of knowledge, skills, and behaviors required to function as director within physical therapy education and leaders in higher education.	Physical therapy educators
Leadership Academy	American Council of Academic Physical Therapy (ACAPT)	Designed to support PT educators' leadership development by identifying and cultivating excellence in academic physical therapy.	Physical therapy educators
Leadership Compass	American Council of Academic Physical Therapy (ACAPT)	Guidance/assessment of personal growth across 12 leadership categories within three spheres of influence.	Physical therapy administrators, academic and clinical faculty, students
Leadership Competencies Framework-Physical Therapy (LCF-PT)	Published 2021 in Journal of Physical Therapy Education by the APTA Academy of Education	Proposed framework of leadership competencies across the physical therapy profession.	Physical therapy educational programs

(Core Values, 2020; LAMP Institute for Leadership, n.d.; Fellowship for Education

Leadership, n.d.; Leadership Academy, n.d.; Tschoepe, et al., 2021.)

Appendix E

Leadership Competencies Framework for Physical Therapists

Tiers of Leadership (3)	Self	Others	Organizations/Communities
Clusters of Leadership (11)	Self-Perception, Character, Expertise, Inquisitiveness, Autonomy	Relatedness, Engagement, Impactfulness,	Interconnectedness, Contextual inquiry, Capacity building
Competencies (57)	Self-confidence, self-aware, self-management, self-initiatve, self actualizes, accountable, authentic, ethical, integrity, trustworthy, adaptable, problem solving, evidence informed practice, goal orientation, implements, plans, analyzes, synthesizes, evaluates, reflects, lifelong learning, seeks information, excellence, orientation, independent, innovative thinking skills, role identity, interdependence	Communication skills, listening skills, provides feedback, relationship building skills, interpersonal relationships, receives feedback, follow through, assesses, cultural humility, empathetic, collaborative, influence, inspires, assertive advocates, conflict management	Scope of confidence, professionalism, health professional orientation, diversity orientation, team orientation, achievement orientation, navigates organizational dynamics, systems orientation, information technology management, organizational awareness, supervises, community orientation, social responsibility, manages change

*adapted from Tscheope, et al., 2020, Leadership Competencies Framework for

Physical Therapists

Appendix F

Curriculum Vitae

Laura Stephens, PT, DPT, NCS, CBIS

Assistant Professor, School of Physical

Therapy Marshall University

<u>Education</u>

Marshall University, Huntington, WV

> Doctor of Education, Leadership Studies—*admitted to candidacy October 2021*

West Virginia University, Morgantown,

> WV Doctor of Physical Therapy,

> May 13, 2012

Liberty University, Lynchburg, VA

> Bachelor of Science, Kinesiology, May 2009

<u>Licensure</u>

West Virginia Board of Physical Therapy, License number 003060. 2012-2014,
> inactive 2014- 2018, 2018-current

Kentucky State Board of Physical Therapy, License number 006079. 2012-current

<u>Certifications</u>

American Board of Physical Therapy Specialties certified Neurological Clinical Specialist.
> Initial certification July 1, 2017.

American Brain Injury Association. Certified Brain Injury Specialist. 2015-current

<u>Employment</u>

Marshall University School of Physical Therapy, Huntington, WV (July 2018-Current).
> Assistant Professor. Primary teaching responsibilities in neurological and
> integumentary content areas.

Advanced Physical Therapy, Charleston, WV (August 2018-Current)—PRN staff.

Encompass Health Rehabilitation Hospital, Huntington, WV (August 2018-Current)-

PRN staff. *Encompass Health Cardinal Hill Rehabilitation Hospital*, Lexington, KY

(August 2012-July
> 2018)

<u>Peer Reviewed Publications:</u>

Hoang, Thuha PT, PhD; Watkins, Molly PT, DPT, NCS; Bayliss, Jamie PT, MPT, DHSc; Schack-Dugre, Judi PT, DPT, MBA, EdD; Mitchell, Katy PT, PhD; Mariano, Mira PT,

PhD; Greco, Jamie PT, DPT, EdD; Colgrove, Yvonne PT, PhD; Wheeler, Emma PT, DPT, MS; Kiyota, Hiroshi DPT, OCS; Pientok, Colette DPT, OCS; **Stephens, Laura PT, DPT, NCS**; McCarthy, Casey PT, DPT, MS; Canham, Lara PT, DPT, OCS; McBride, Gavin PT, DPT, MS, CSCS; Gleeson, Peggy PT, PhD Impact of Pre-admission Observation Hours on Key Physical Therapist Clinical Education Stakeholders: Qualitative Analysis, *Journal of Physical Therapy Education*: June 2022 - Volume 36 - Issue 2 - p 107-114. doi: 10.1097/JTE.0000000000000219

Bayliss, Jamie PT, MPT, DHSc; Schack-Dugre, Judi PT, DPT, MBA, EdD; Hoang, Thuha PT, PhD; Watkins, Molly PT, DPT; Mitchell, Katy PT, PhD; Mariano, Mira PT, PhD; Greco, Jamie PT, DPT, EdD; Colgrove, Yvonne PT, PhD; Wheeler, Emma PT, DPT, MS; Kiyota, Hiroshi DPT, OCS; Pientok, Colette DPT, OCS; **Stephens, Laura PT, DPT, NCS**; McCarthy, Casey PT, DPT; McBride, Gavin PT, DPT; Gleeson, Peggy PT, PhD. Impact of Preadmission Observation Hours on Key Physical Therapist Clinical Education Stakeholders: Quantitative Analysis. *Journal of Physical Therapy Education*: November 8, 2022 - Volume - Issue - 10.1097/JTE.0000000000000253

Peer Reviewed Scientific and Professional Presentations:

Stephens L, Lambert M. *Skill and behavior development within pro bono service: a qualitative report.* Poster accepted for presentation at ACAPT Educational Leadership Conference: October 28-30, 2022; Milwaukee, WI.

Stephens L, Brown M, Portillo G, Wolfe J, Thompson K, McConnauhey H, Thomas, M. *Functional Gains in a Student-Led Pro Bono Clinic: A Case Study of Chronic CVA.* Poster presented at West Virginia Physical Therapy Association state chapter meeting: September 25, 2022.

Stephens L, Pfost G. *Student motivation for leadership opportunities: a pilot study.* Poster presented at West Virginia Physical Therapy Association state chapter meeting: April 25, 2021 and at APTA Combined Sections Meeting: February 2-5, 2022; San Antonio, TX.

Mehta SP, **Stephens L**, Forren FB, Friedman L, Baker, R. *Short Physical Performance Battery Accurately Identified Fallers While Screening Fall-Risk in Community Dwelling Older Adults.* Poster presented at Combined Sections Meeting of the American Physical Therapy Association; February 2-5, 2022; San Antonio, TX.

Stephens L, Mehta S, Whitwer C, Khaled M, Walls A. *A systematic review of the measurement properties of the Community Balance and Mobility Scale.* Poster presented at West Virginia Physical Therapy Associate state chapter meeting: April 25, 2021.

Pfost G, **Stephens L**. *A pilot phenomenological investigation of Doctoral Student Physical Therapists' perceptions of leadership.* Poster presented at West Virginia Physical Therapy Associate state chapter meeting: April 25, 2021.

Stephens L, Mehta S, Haer B, Broussard B, Narum J. *Fall risk screening in community dwelling older adults*. Poster submitted to West Virginia Physical Therapy Association state chapter meeting. Virtual presentation (secondary COVID-19 pandemic) June 8, 2020, for West Virginia Physical Therapy Association poster session.