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# Leadership Styles of Clinical Coordinators and Clinical Instructors in Physical Therapy Clinical Education

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“LEADERSHIP STYLES OF CLINICAL COORDINATORS  
AND CLINICAL INSTRUCTORS  
IN PHYSICAL THERAPY CLINICAL EDUCATION”

BY

Allison Kellish

Dissertation Committee

Dr. Genevieve Pinto-Zipp, Chair

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Submitted in partial fulfillment of the  
Requirements for the degree of Doctor of Philosophy in Health Sciences

Seton Hall University

2014

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SETON HALL UNIVERSITY  
School of Health and Medical Sciences  
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APPROVAL FOR SUCCESSFUL DEFENSE

Doctoral Candidate, Allison Kellish, has successfully defended and made the required modifications to the text of the doctoral dissertation for the **PhD.** during this **Fall Semester, 2014.**

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## DEDICATION

This dissertation is dedicated to my husband Scott, your love and understanding has sustained me through this journey. You are “The half that makes me whole”- thank you for your strength, commitment to us and your support of me in achieving this goal. To my three children Shannon, Patrick and Alec thank you all for your love and support. I also dedicate this dissertation to the memory of my parents Helen and James Flood for their love and their encouragement to strive for the best in whatever I do.

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## ABSTRACT

### “Leadership Styles of Clinical Coordinators and Clinical Instructors in Physical Therapy Clinical Education”

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The APTA has identified the roles of the CCCE and CI as leaders in physical therapy clinical education. In the literature there appears to be an absence of studies examining the CCCE and CI leadership style and its impact on the preparation for clinical instruction, extra effort, job satisfaction and effectiveness of quality clinical education. The purpose of this study was to examine the leadership styles of CIs and CCCEs and to discern if there was a correlation between CI's and CCCE's perceptions of leadership style and perceptions of leadership effectiveness based upon three leadership outcomes. The second purpose of this study was to assess the influence of background demographic factors and leadership behaviors.

The sample consisted of 58 CCCEs and 19 CIs. Subjects completed the Multifactor Leadership Questionnaire Form-5X created by Bass and Avolio, which measured Transformational, Transactional and Laissez –faire leadership behaviors and leadership outcomes of effectiveness, extra effort and satisfaction. Additionally, the subjects completed the Clinical Educator Profile, which measured personal attributes and clinical education program information. Descriptive statistics, Regression analysis, and Pearson correlation were used to

analyze the data. The results suggest a positive correlation that CCCEs and CIs perceive themselves as implementing Transformational leadership behaviors and to a lesser extent Transactional leadership behaviors and leadership outcomes. CCCE results revealed that a significant positive relationship ( $p < .01$ ) existed between the three leadership outcomes of extra effort, effectiveness, and satisfaction and Transformational leadership style. CI results revealed that a positive relationship ( $p < .01$ ) existed between the three leadership outcomes of extra effort, effectiveness, and satisfaction and Transformational leadership style. The CI results also support that a positive relationship ( $p < .01$  and  $p < .05$ ) exists between the three leadership outcomes of extra effort, effectiveness, and satisfaction and Transactional leadership style. A significant positive relationship ( $p < .01$ ) between CCCE demographic factors and Transformational leadership behaviors was also noted. Lastly, a significant positive relationship ( $p < .01$  and  $p < .05$ ) was found for CI demographic factors and several Transformational and Transactional behaviors.

The findings of the study support and extend data from previously published studies in healthcare that have examined Transformational leadership.

## CHAPTER I

### Introduction to the Problem

To meet the needs of today's demanding healthcare environment, physical therapy programs create evidence-based curriculums which seek to provide evidenced based learning outcomes. These learning experiences seek to develop student's content knowledge and skill set using the foundational frameworks for physical therapy programs, such as *A Normative Model of Physical Therapist or Physical Therapist Assistant Education*. Furthermore, the guidelines established by the Commission on Accreditation in Physical Therapy Education (CAPTE) (Dunfee, 2008) explicitly state the relationship between the didactic training and the clinical fieldwork as a means to guide curriculums. CAPTE requires programs to have at least one third of the curriculum dedicated to clinical education experiences that provide varying sequential clinical opportunities. This requirement is based upon the notion that clinical experiences provide the avenue for students to advance decision-making abilities and patient management skills necessary for entry level practice. Due to the large amount of time students are in the clinical education portion, there has been heightened attention on assessment and evaluation of clinical faculty to ensure students are receiving quality learning experiences that will prepare them for clinical practice (Wetherbee, Peatman, Kenney, Cusson, & Applebaum, 2010).

In the arena of physical therapy clinical education there are three key faculty roles specific to clinical education, each with a shared goal of preparing the student with the skill set to enter professional practice as a safe competent novice required to practice physical therapy in diverse environments. The three key faculty mentorship roles are: academic coordinator of clinical education (ACCE), the clinical instructors (CIs), and the clinical coordinator of clinical

education (CCCE). Each faculty member offers a different and important role in the development of a student (Appendix A).

The ACCE is at the academic institution and establishes the relationship with clinical sites. The key clinical faculty members who guides student learning at the clinic are the CIs and the CCCE. The CIs are professionals who directly play a leadership role supervising student's daily activities during clinical experiences and are referred to as clinical instructors (The *Evaluation Criteria Handbook for Physical Therapy Programs* and the *Normative Model of Physical Therapist Professional Education* 2004). Physical therapy programs rely heavily on CIs to assess and facilitate the development of physical therapy students into novice professionals. The CI is pivotal in guiding the student through the process of integrating didactic information into the art and skill of physical therapy practice. The American Physical Therapy Association (APTA) established guidelines and voluntary advanced credentialing for transitioning clinicians into CIs is supported in the literature as having a positive impact on their ability to effectively fulfill their new role (Morren, Gordon, & Sawyer, 2008; Vendrely, & Carter, 2004). Additionally, the APTA has provided evaluation tools to assess the effectiveness of both the ACCE and the CIs as clinical educators. However, while there are established guidelines for the CI there is no leadership training.

The third key faculty member in clinical education is the CCCE. The CCCE plays a key leadership role at the clinical site for determining when a clinician in physical therapy is ready to serve as a CI for students. Additionally, this person oversees CIs in the delivery of clinical education experiences, communicates with the academic program regarding student performance, and provides essential information about the clinical education program to educational programs. As a leader, the CCCE is responsible for setting and defining the clinical



education mission and setting clear goals which are effectively communicated to CIs and students to facilitate a positive learning experience that will facilitate the student's competent entry level clinician development (The *Evaluation Criteria Handbook for Physical Therapy Programs* and the *Normative Model of Physical Therapist Professional Education* 2004). While the APTA has set guidelines for the role of the CCCE however; there is no advanced credentialing or training for this faculty member. Additionally, there is no literature that supports the diverse CCCEs' training models used to meet these guidelines or literature that supports CI's or CCCE's effectiveness in fulfilling their leadership. These gaps in the literature signal the need to explore the importance of leadership styles and its influence on clinical education outcomes.

## Background Information

The phenomena of leadership and organizational performance are potentially a driving force in the success or failure of an organization. Leadership correlates with effectiveness and enhanced performance in a wide range of organizations and cultures (Bass & Avolio, 1997). Responsiveness to organizational change, individual's perceptions and acceptance of innovation are all influenced by organizational leadership (Aarons, 2006). Leadership theories have evolved with changing knowledge, culture and environments. Leadership has been defined in various ways depending on the theoretical lens used to view the subject.

Burns (1978) described Transformational leadership as a "process in which leaders and followers raise one another to higher levels of morality and motivation" (p.20). Bass (1985; Bass & Avolio, 1998) has operationalized a model of Transactional and Transformational leadership based on Burns' (1978) earlier conceptualization. Transformational leadership is important since it provides a theory to explain how higher level of work satisfaction and productivity as well as a sense of meaning can be achieved. In line with the transformation leadership theory, Bass and Avolio (2004) developed a Multifactor Leadership Questionnaire that measures the leadership styles and outcomes. Bass (1985) claimed that in times of rapid change and distress transformational leadership is most effective. Much discussion in the health care and educational literature in recent years has focused on theories of charismatic or transformational leadership, often suggesting that charisma or similar quality distinguishes outstanding from other leadership styles.

In many healthcare organizations, promotion to the position of frontline supervisor often occurs based on an individual's competence in technical or clinical skills (Garman, Butler, & Brinkmeyer, 2006). Many healthcare organizations do not provide frontline supervisors with the opportunity to develop leadership or management skills through educational or mentoring programs (Smedly & Race, 2010; Timmreck, 2001). Additionally, leaders in healthcare must respond to a healthcare system whose structures and processes are being radically changed by new technology, increase specialization, cost containment and varied health care practices (Pew Health Profession Commission 1995). CIs and CCCEs must not only be able to negotiate the demand of a healthcare system undergoing fundamental transformation but also the needs and goals of clinical education in physical therapy. In a rapidly changing world, where developing the potential of a student into a clinician and a clinician into a clinical instructor, the leaders of clinical education will need to be critical thinkers, insightful, and technically competent and be prepared to transform the healthcare clinician and students.

Review of the literature reveals that leadership outcomes such as extra effort, effectiveness and satisfaction are impacted by leadership styles (Avolio & Bass, 2004; Gellis, 2001; Kelloway & Barling, 2000). Based on these findings there is a need for effective leadership. In spite of the decades of empirical research on leadership, a gap remains between leadership research and practice (Fairholm, 1998; Kouzes & Posner, 1995; Sarros & Santora, 2001; Tjosvold & Wong, 2000). This void needs to be addressed so individuals can be effective in their roles as leaders and gain the trust and commitment of their followers (Manion, 2004).

In recent literature, researchers have begun to examine leadership styles and the impact on healthcare organizations. Much of the empirical research in healthcare leadership has been conducted at the healthcare business executive level and from the nursing profession specifically

with regard to the executive and frontline manager level leadership skills. Particular attention has been directed toward the impact of transformational leadership on healthcare organizations.

Rapid changes in the health care delivery systems and clinical education have led to changes in the CI's and the CCCE's role including the skill set (leadership behaviors) necessary to provide effective leadership for students and clinical educators. Currently, there are limited studies in the literature that have examined how clinicians are led and prepared to fulfill their role as educators. Specific deficiencies exist in the literature regarding the leadership styles implemented in the clinical practice setting for physical therapists. Moreover, there is a void in the literature examining leadership styles utilized in the practice setting by CIs' and CCCEs' for physical therapy clinical education and clinical instruction. Thus, it is not known if physical therapy clinicians, who are CIs', and CCCEs' leadership styles correlate with their perceptions of leadership outcomes of extra effort, effectiveness, satisfaction and in achieving clinical education outcomes of preparing students to enter clinical practice. Ultimately, understanding this relationship will provide an enhanced awareness on its potential influence in clinical education today.

Bass and Avolio (1997) developed the Multifactor Leadership questionnaire as a tool to standardize the measuring approach of leadership style. The first step to comprehend leadership influences on clinical education is to identify an approach using a standardized and consistent measurement tool. The questionnaire can be used to rate one's own leadership style or by raters above, below, or on the same level as the leader. This tool has an alpha coefficient ranging from .74 to .96 (Avolio & Bass, 2000) and has been analyzed and critiqued by numerous researchers (Avolio, 1999; Avolio, Bass, & Jung 1999; Bass, 1985; Bass & Avolio, 1994; 2004; Bessai, 1996; Vandenberghe, 2002). Besides its validity, this 45- item questionnaire takes 15 minutes

to complete. The Multifactor Leadership Questionnaire has been tested in multiple settings including health care (Avolio & Bass, 2000).

### Need for the Study

Many allied health professions rely on clinicians in the clinical setting to be a clinical educator and share their clinical expertise with students. Much of the research informing clinical educators has been conducted in the nursing profession and the findings suggest there is a lack of preparation and guidance for clinicians to assume the role of clinical educators for students. Nurse clinicians reported they would enjoy the opportunity to teach students clinical skills, but reported little or no preparation to take on the role (Cangelosi, 2009). Many nurse preceptors (Appendix A) receive little training, or recognition for their work with students and even lack knowledge, confidence in the preceptor role, and the skill set to promote student learning (Smedley & Race, 2010). Managing patients and providing patient care is one skill set, teaching individuals how to perform these tasks is clearly a different skill set. Specifically, in physical therapy clinical education there is an inconsistency in the approach to clinical education due to the inadequate preparation of clinicians for the important and complex role of clinical educator. Expertise in physical therapy clinical practice does not imply expertise in providing clinical education. The lack of formal education leaves clinicians to learn their role as a clinical educator primarily by trial and error (Walker & Openshaw, 1994). Thus supporting the notion that specific preparation for becoming a clinical educator is necessary (Strohschein, Hagler, & May, 2002).

The assumption that everyone who is a practitioner, regardless of their professional background, can be a clinical educator is not necessarily a fair assumption (Wojciehowski,

2007). As clinical education is important to physical therapist educational curriculum so it is in nursing education. Given the importance of nursing curricular format it is an inappropriate assumption that an expert nurse clinician can transition into the role of an effective educator without informal or formal training (Girard, 2003). This inappropriate assumption is not limited to nursing but also other healthcare professions. Knowledge of CI's and CCCE's perceptions of their leadership styles, and its correlation with their perception of leadership outcomes and perceived preparedness of clinicians could provide insight into what gaps exist currently in CI and CCCE leadership and expose the formal educational and training need as they transition into these new roles as educators for preparing physical therapy students for the profession.

While there are published studies in physical therapy clinical education that focus on the clinical instructor- student relationship and the quality of clinical instruction from a student's perception, there appears to be a lack of studies that examine the CCCE and the CI perception of leadership and its relationship that could impact the preparation for clinical instruction, extra effort, job satisfaction and effectiveness for the quality of clinical education. Little is known about the type of leadership styles CIs' and CCCEs' are implementing when assuming their clinical education leadership roles that could assist with their decision making and other responsibilities outlined in the APTA guidelines. Little is known about the leadership style utilized by CIs and CCCEs in facilitating the growth and developments of students into clinicians and clinician's transition into the role of CI or CCCE. What degree of agreement/ fit in the leadership style, between the CCCE and CI fosters a culture that is supportive verses one that hinders the clinician's development of professional behavior, communication skills and the necessary teaching skill set required by CIs' to successful prepare competent entry level clinicians. To date, there is an absence of published literature that investigates the tenets of

leadership styles and outcomes of CI's and CCCE's in clinical education to direct our knowledge base. There is no data that has examined the tenets of leadership styles utilized by CI's or CCCE's to bridge the gap for the educator role. Lastly, there are no published studies that have examined the CI's or the CCCE's perspective regarding individual attention, intellectual stimulation, reward, support and satisfaction as an educator. Due to the paucity of studies on leadership specifically in physical therapy clinical education, the authors suggest that correlating CI's and CCCE's leadership styles and extra effort, effectiveness and satisfaction outcomes is meaningful and warranted.

A study investigating leadership styles could provide information of the current leadership style practiced by CIs and CCCEs, and its outcomes in clinical education that directs the professional organization, academic programs and clinics. This information may identify gaps in practice that exist and what the needs are for preparing clinicians for assuming the leadership role of CI and CCCE. This information may also identify current leadership styles and their ability to meet certain outcomes necessary for clinical educators involved in physical therapy clinical education. Gaining an understanding of the leadership style used by physical therapy educators, is the first step in enabling the PT community the ability to enhance the clinical experience for all involved by addressing leadership concerns. This information could ultimately assist in the achievement of contemporary clinicians entering into the physical therapy profession in part because of their clinical experiences.

### Statement of the Problem

It is currently unknown what type of leadership style is used by CCCEs and CIs (individuals in leadership positions) in physical therapy clinical education. It is unknown if there is a correlation between leadership styles of CCCEs and CIs and leadership outcomes. It is unknown if the CCCEs' and CIs' leadership styles are effective in supporting the goals of clinical education which is to prepare students with the skill set for entry level practice. Do the individuals in leadership positions in physical therapy clinical education have the leadership style necessary to achieve the organizational goal of supporting clinical education by developing clinicians who are effective, contribute extra effort and are satisfied clinical educators to prepare students with the skill set for entry level practice? Lack of achieving these outcomes may impact the professional organization, academic programs and clinics.

### Purpose of the Study

The primary purpose of this study was to examine the leadership styles of CIs and CCCEs and to discern if there is a correlate between CI's and CCCE's perceptions of leadership style and perceptions of leadership effectiveness base on the three outcomes as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short.

The second purpose of this study was to gather and assess the influence of background demographic factors and leadership style as measured by the MLQ Form 5X-Short. The demographic information of interest in this study include personal characteristics, such as gender, age, highest level of education, years of experience in the profession, in clinical education, previous education and training for the leadership position, number of students and level of students clinical experience.



Lastly, this study will serve as a catalyst for further exploration and research to fill the void in physical therapy literature concerning CCCE leadership in clinical education. By performing this study the knowledge base of published research in allied health professions, specifically physical therapy will be expanded.

## Research Questions

For this study, the primary research questions were:

- What are the predominant leadership styles utilized by CCCE's and CI's in physical therapy education?
- Is there a relationship between the CI and CCCE leadership style and each of the three outcome scores and their impact on leadership outcomes as measured by the Multifactor Leadership Questionnaire Form 5X-Short?
- Is there a relationship between CCCE's and CI's leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics?

## Research Hypotheses

Based on the research questions four hypotheses and three null hypotheses were identified for this research.

- Hypothesis One: CCCE's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction.
- Null Hypothesis One: There is no positive relation of CCCE's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation related to outcomes of extra effort, effectiveness and satisfaction.
- Hypothesis Two: CI's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction.

- Null Hypothesis Two: There is no positive relation of CI's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation related to outcomes of extra effort, effectiveness and satisfaction.
- Hypothesis Three: There is a relationship between CCCEs' leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.
- Null Hypothesis Three: There is no relationship between CCCEs' leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.
- Hypothesis Four: There is a relationship between CIs' leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.
- Null Hypothesis Four: There is no relationship between CIs' leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.

## CHAPTER II

### Literature Review

When one individual attempts to affect the behavior of others in a group without using the coercive form of power, we describe the effort as leadership (Gibson, Ivancevich, & Donnelly, 1991). Yukl (2002, 2010) suggests that most definitions of leadership reflect the assumption that to achieve the goals of the organization an individual will exert their influence over the group/follower guiding through structure, activities and relationships. According to Northouse (2007) to realize a common goal influence over individuals and the group must occur and this process is known as leadership. Bass (1985) indicates that leadership occurs when one group member modifies the motivation or competencies of others in the group. Bass & Avolio (1994) reinforce the concept of leadership as a process of motivating, influencing and inspiring followers to achieve positive outcomes for organizations and individuals. A common theme in leadership literature is the process of influencing followers (Chemmers, 2002; Northouse, 2007; Yukl, 2002, 2010). Responsiveness to organizational change, individual's perceptions and acceptance of innovation are all influenced by organizational leadership (Aarons, 2006). Kallasvuo, Jackson, Humer et al., (2007) findings suggest the perceived qualities as vital for successful leaderships include: humility, energy, vision, perspective, passion, conviction and willingness to learn.

Hill (2007) believes that an effective leader has to facilitate the shaping of team culture permitting the harnessing of the collective power of the group and therefore improve individual performance and commitment. Hill also believes a leader must accept responsibility for

initiating changes that will improve group performance. How a leader proceeds in harnessing the power and initiating change will depend on their leadership style. Snodgrass, Douthitt, Ellis, Wade, & Plemons (2008) finding suggest that developing an understanding of the framework of each leadership theory and the theory's models will allow an individual to identify the style of leadership most effective for their organization based on the culture and individual's needs.

### Leadership Theories

Leadership theories have evolved with changing technologies, culture and environments. The literature of leadership has developed along several different courses, with shifts in attention from the behavioral styles and traits of leader to focus on the situation and interactions. Other parameters that have been examined in leadership theories include organization's governance structure, political, leadership style such as democratic, laissez-faire, or functions of leadership, describing what leaders do, type of people and relationships between tasks and people. Early theorists described leadership in terms of either the individual or the environment making no connection between the two. The focus was on theory development rather than relationship of influence. It was not until later that the behavioral scientists explored what abilities, traits, sources of power, and situations determined leadership abilities and how groups were influenced to accomplish goals and objectives (Marriner-Tomey, 1993). The following is a discussion of some of the major theories of leadership that have been widely studies.

### Trait and Behavioral Theories

In the middle of the twentieth century, discussion and research focused on Trait leadership theory which focused on identifying the traits of effective leaders and not the followers (Northouse, 1997). This theory was based off the assumption that a finite number of

individual traits, such as intellectual, emotional, physical and other personal traits of an effective leader could be identified. Intelligence which includes knowledge, judgment and decisiveness, a creative, adaptable and emotionally balanced personality and lastly cooperative abilities were identified as traits most associated with effective leadership (Stogdill, 1974; Argyris, 1955).

Leadership success measured by traits alone left unanswered questions which lead to research examining the behaviors of leaders and their influence on performance and satisfaction of followers. This research developed the Contingency theory of matching the leadership style to the situational needs (Yukl, 2002, 2010). Under the Contingency theory framework came the development of the personal- behavior theories of employee (relationship)-centered and job (task) - centered styles by Likert (1961) and his colleagues at the University of Michigan.

Employee centered leadership goal is to create a supportive environment for followers, include followers in decision making and is concerned with the personal advancement, growth and achievement of the follower. In job centered leadership the leader engages in close supervision and the follower performs a task using specific guidelines (Likert, 1961; Yukl, 2010).

Interestingly, though the results from the University of Michigan studies did not identify which of these leadership styles was always most effective. Leading us to question if effective leadership is not just influenced by the individual leader and their style but the context in which one leads in.

### Contextual Theories

Inconclusive and contradictory results from research on traits and behaviors of leaders have led to the consideration of the influence of the context in which leadership is provided and its impact on effective leadership. Under Contextual leadership there are several theories which

include: Path-Goal theory, Participative theory, Dyadic theory, Situational theory, Transactional theory, and Transformational theory (Northouse, 1997, 2007).

### Path Goal Theory

Path Goal leadership attempts to predict leadership effectiveness in different situations. The Path Goal leadership theory focuses on how the leader influences followers' perceptions of work goals, self-development goals, and paths to attainment (Northouse, 1997, 2007). Based on the motivation principles different types of leadership style are utilized which are: directive, supportive, participative and achievement oriented. The followers' characteristics are also considered which are: strength of the need for affiliation, their desire for control and the self-perception of ability. The leader based on the knowledge about his followers will implement one of leadership styles to motivate his followers and provide a clear path of how to achieve the set goals (Northouse, 1997, 2007). Under path goal theory one approach to leadership behavior includes the Participative approach where the leader encourages followers to provide input on the decisions of how the organization will move forward (Northouse, 1997, 2007). Yukl (2010) expands on Participative leadership by describing the levels of participation which are: autocratic, consultation, joint decision and delegation. Yuki (2010) defines using the Dyadic theory leadership approach where the focus is on the leader-follower relationship. Usually with this type of approach the followers are not in competition with each other and are usually performing the same task. Although these theories advance the thought processes associated with the trait and behavior theories, the predictive power of the approaches remains unclear.



### Situational Theory

In concert with previous authors, Northouse and Yukl, the authors Arvidsson, Johansson, Ek & Akseleson (2007) examined the Situation theory (Hersey, Blanchard & Johnson, 2006; Blanchard & Johnson, 2000; Hersey & Blanchard, 1996). In this model task behavior and relationship behavior are used to describe the concepts similar to initiating structure with consideration of the Ohio studies conducted by Fleishman (1953) and his colleagues. Initiating structure refers to the approach of the leader organizes and defines the relationships which usually are well defined patterns with clear directions of how to achieve the goal. Consideration from the Ohio studies is defined by who the leader supports concern for the following. Situational theory builds off the Ohio studies by focusing on task and relationship behavior with consideration given to the follower's maturity. The framework is divided into four quadrants from S1-S4. In each quadrant the focus is on the task and relationship behavior. Task specific readiness is based on the follower's ability and motivation. The leadership style employed is based on the task behavior and the relationship behavior (Arvidsson et al., 2007).

### Transactional Theory

Many of the leadership theories discussed implies that leadership is a relationship between the leader and the follower with some type of exchange process occurring when accomplishing agreed- upon objectives. With Transactional theory the leadership focus is on the exchange principle with no focus on the follower's needs. Exchange of value occurs between the leader and the follower with the goal of moving both their agendas forward (Spinelli, 2006). Through the exchange relationship leaders provide followers with a chance to satisfy their lower order material and psychic need (Aldoory & Toth, 2004).

The transactional leader utilizes contingent rewards and will not intervene with followers unless objectives are not achieved. The leader is concerned with the day to day operations and maintaining the status quo (Hughes, Ginnett & Curphy, 1996). Greater importance is placed on maintaining status quo as opposed to change and risk taking behaviors as demonstrated by Transformational leaders (Hartog, VanMuijen & Koopman, 1997). This type of leader is likely to be effective in stable, predictable environments in which monitoring productivity against performance is the most successful strategy (Aldoogry & Toth, 2004).

Bass (1985) operationalized the concept of Transactional leadership in three behavioral constructs: Behaviors associated with Transactional leadership include contingent reward, management by exception-active, and management by exception-passive. This leadership style is characterized by behaviors of risk avoidance, operating within existing systems; close attention paid to efficiency and time constraints and maintains control through processes (Bass, 1997). Utilizing Transactional leadership style alone is not as effective for increasing followers' job satisfaction or performance versus in combination with other leadership styles, such as Transformational leadership (Aldoogry & Toth, 2004).

Transactional leadership motivates followers by appealing to their self-interest. Transactional leadership is less dependent upon the leader's personality and passion (Kezar & Eckel, 2008). Opposite Transactional theory which focuses on external payoff is Transformational theory of leadership. Transformational leadership is broad in scope and integrates leader traits, power, behavior, and situational variables (Yuki, 2002, 2010). This leadership theory began with Burns and was further expanded by Bass (Gellis, 2001). Bass' work is typically considered the most definitive and thus, is the guiding theoretical framework for this study.

## Transformational Theory

Transformational theory focuses on leaders being a role model for the followers. The leader is concerned for the follower's performance and also in developing the followers into their full potential by empowering them. The leader guides the followers to instill the goal/vision of the organization as their own (Gellis, 2001). It is the development of this relationship that accounts for accomplishments and performances that surpass expectations (Bass, 1998). Bass and Avolio (1994, 2000) identify the Transformational leader as one who motivates followers to work for transcendental goals and for higher level self-actualization instead of working through Transactional theory only. Self-reinforcement becomes the primary motivator of the follower's behavior with a Transformational leader, as opposed to external pay off (Bass, Avolio, & Goodheim, 1987). Transformational leaders persuade followers to work hard to achieve goals by expressing a vision. Transformational leaders adjust goals, direction and mission in order to achieve the vision (Bass & Avolio, 1994), while transactional leaders adjust goals, direction and mission for practical reasons.

Transformational leaders create a climate for learning by encouragement, cooperation, and identifying follower's talent. Transformational leaders can influence the change of the philosophy, systems, and culture of an organization (Bass & Avolio, 1994). Transformational leadership is a process in which "leaders and followers raise one another to higher levels of morality and motivation" (Hughes, Gimmet & Curphy, 1996, p.20). Moving beyond satisfying follower needs through simple exchange with contingent rewards (Graen & Scandura, 1997), Transformational leaders seek to cultivate followers so they are able to assume leadership roles (Bass, 1985; Bass & Avolio, 1994).

The Transformational leadership theory as posited by Bass (1985) and Avolio & Bass (2000) consists of three second order domains that include Transformational, Transactional and Laissez-faire. This is referred to as the full range of individual leadership styles under the Transformational leadership theory (Bass, 1990). Transformational and Transactional leadership styles are seen as positive with effective leaders displaying both behavioral types (Avolio & Bass 2000). The third style is Laissez-faire leadership style which is viewed as a passive approach to leading that is ineffective (Avolio & Bass, 2000). This leadership style provides little or no direction given to followers (Bass, 1985).

Bass and Avolio (1993, 1994, 2000) theorized that Transformational leadership consists of four dimensions including idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation. Bass and Avolio (1993, 1997) define idealized influence as the leader displaying charismatic behavior to elicit follower perceptions of trust and confidence. Idealized influence is typically associated with measures such as serving as a role model, having high moral standards, respect and vision (Kezar & Eckel, 2008). This leader inspires those around them by providing meaning and challenge to follower's work (Bass & Avolio, 1994). Followers respect and emulate this type of leader (Bass & Avolio, 1990).

With individualized consideration the leader considers the individual needs and provides professional coaching within a supportive environment, while empowering and listening to help the followers achieve self-actualization. Whereas with inspirational motivation the leader articulates shared visions, symbols, emotional appeals, and displays enthusiasm with high expectations to all followers (Bass & Avolio, 1994, 1997, Kezar & Eckel, 2008). The last dimension, intellectual stimulation, encourages followers to question old or current assumptions and adopt new approaches stimulating creativity and innovation. The leader raises the follower's

level of awareness regarding the importance of certain outcomes (Bass & Avolio, 1994). It is these dimensions or behaviors that foster the leader follower relationship among Transformational leaders and their followers (Bass & Avolio, 1997).

Bass (1985) also identified two dimensions of Transactional style in his Transformational leadership theory. These two dimensions are: contingency reward and management by exception. As mentioned earlier under Transitional leadership theory contingency reward is when the leader contracts exchange or rewards for effort. The leader and the follower agree on what both need to accomplish and what reward the follower will receive upon goal completion. The follower determines the best approach for accomplishing the goal and when complete it is openly recognized by the leader. Contingency reward is considered both a transformational and a transactional behavior and an effective leader motivate followers (Bass, Jung, Avolio & Berson, 2003; Goodwin, 2006). Goodwin (2006) suggests that contingent reward in the context of Transformational leadership, may result in the follower perceiving the interaction as establishing a shared vision among the leader, organization and followers. Bass and Avolio (1990, 1993, 2004) define management by exception which is passive or active as a corrective method for managing, not motivating followers. Management by exception passive, the leader permits the follower to work on the task and does not intervene unless goals are not be achieving as anticipated. Management by exception active, the leader assigns a task to followers and actively monitors progress toward the goal. The leader monitors for deviations from the expected behavior or performance level and intervenes prior to the follower making an error. Management by exception leadership methods have shown to be less effective than transformational or contingent reward in the literature (Bass & Avolio, 1990, 1993, 2004).

One of the fundamental propositions under Bass's Transformational leadership model is what Bass (1985) referred to as the "augmentation effect". The augmentation effect predicts that by measuring Transformational leadership behaviors one can achieve a higher level of precision in predicting higher levels of effort and other relevant criteria versus relying on Transactional leadership alone (Bass & Avolio, 1993). There is an expectation that leaders exhibit each style to some degree under Bass's full range Transformational leadership model.

Under Bass's theory an optimal profile of leadership is represented by a higher frequency of behaviors and actions associated with Transformational leadership and active Transactional leadership. In other words, Laissez-faire leadership is minimally implemented and more often an individual will implement contingent reward the transactional styles of management by exception-passive, management by exception active (Bass & Avolio, 1993). The optimal leader displays Transformational leadership dimensions most frequently. This display is important given the correlations between Transformational leadership and perceived effectiveness of the leader, subordinate extra effort, satisfaction with the leader, and performance are higher than the correlations between the same outcomes and Transactional leadership (Harter & Bass, 1998).

The original conceptualization of the Transactional and Transformational leadership styles theory led to the development of an instrument of measure called the Multifactor Leadership Questionnaire (MLQ) (Bass, 1985). This version of the MLQ included six leadership factors and one factor representing absence of leadership or abdication of responsibility. The transformational factors are:

1. *Idealized Influence*: The leader has a vision and a sense of mission; gains respect, trust, and confidence; and acquires strong individual identification from followers. This factor is broken down into idealized influence attributed and idealized influence behavioral.
2. *Inspiration*: The leader gives pep talks, increases optimism and enthusiasm, and communicates the vision with fluency and confidence.
3. *Intellectual Stimulation*: The leader actively encourages a new look at an old method; fosters creativity and emphasizes the use of intelligence; and provokes rethinking and reexamination of assumptions and contexts on which previous assessments of possibilities, capabilities, strategies, and goals were based.
4. *Individualized Consideration*: The leader gives personal attention to all members, making each individual feel valued and each person's contribution important; and coaches, advises, and provides feedback in ways easiest for group members to accept, understand, and use for personal development.

The transactional factors measured by the MLQ are:

1. *Contingent Reward*: The leader contracts exchanges of rewards for effort and agreed upon levels of performance, and gives individuals a clear understanding of what is expected of them.
2. *Management by Exception*: The leader intervenes only if standards are not met or something goes wrong.

The non-leadership factor on the MLQ is referred to as Laissez-Faire-a person who is indecisive, uninvolved, withdraws when needed, is reluctant to take a responsible stand, and believes that the best leadership is the least leadership.

The original version of the MLQ has undergone several revisions which have led to the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short. The MLQ Form 5X –Short is also

referred to in the literature as MLQ Form 5-X. Several factors were uncovered through subsequent research using revised versions of the MLQ (Bass & Avolio, 1993, 1994, 2004). One of these factors provides for attributions regarding the leader's transformational style, and is based on distinguishing between charismatic behaviors and attributions. Management-by-Exception has been divided into Management by Exception-Active (MEA) and Management by Exception-Passive (MEP). The nine factor scores obtained from 45 questions in the MLQ Form 5X –Short represent a "full range" of leadership styles and behaviors, and include the following: Idealized Influence-Attributed (IIA), Idealized Influence-Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), Individual Consideration (IC), Contingent Reward (CR), Management by Exception- Active (MEA), Management by Exception-Passive (MEP), and Laissez-Faire Leadership (LF) (Avolio, Bass &Jung, 1998; Bass & Avolio, 2004).

The 45 item questionnaire quantifies leadership with the focus on leaders and raters measuring Transformational, Transactional and Laissez-faire leadership styles (Bass & Avolio, 1997). Twenty questions are Transformational leadership, twelve Transactional leadership, and four Laissez faire leadership, and nine questions are for outcomes. The MLQ Form 5X-Short is designed to measure the independent variables including Transformational leadership factors, Transactional leadership factors, Laissez-faire leadership factors and the dependent variable of leadership effectiveness, satisfaction and willingness to exert extra effort (Bernardin &Cooke, 1994).

Bass initially identified five factors-the first three apply to Transformational leadership and the last two apply to Transactional leadership. They are:



1. *Charisma*: The leader is expected to instill a sense of value, respect, and pride and to articulate a vision.
2. *Individual Attention*: The leader pays attention to followers' needs and assigns meaningful projects so that followers grow personally.
3. *Intellectual Stimulation*: The leader helps promote followers' intelligence, rationality, and creative problem solving.
4. *Contingent Reward*: The leader contracts exchange of rewards for effort, promises rewards for good performance, and recognizes accomplishments.
5. *Management by Exception*: The leader permits followers to work on the task and does not intervene unless goals are not being accomplished in a reasonable time and at a reasonable cost.

The MLQ Form 5X –Short also includes items that measure perceived leadership effectiveness.

These are:

1. *Extra Effort*: Individuals have a heightened motivation to succeed. They attempt to surpass their own and the group's performance expectations.
2. *Effectiveness*: The unit composed of the leader and the leader's group, meets, and in many cases, surpasses its goals.
3. *Satisfaction*: Individuals are content with the leader and the leader's methods and feel increased pride in individual contributions to group accomplishment. They feel their work-related needs are well represented and satisfactorily met.

The Multifactor Leadership Questionnaire (MLQ Form 5X-Short) is the primary survey instrument that had been used for more than ten years to measure Transformational, Transactional and non-transactional Laissez-faire leadership but it has been criticized by several

authors for its lack of discriminant validity among factors comprising the survey, for including behavioral and impact items in the same survey scales and because the factor structure initially proposed by Bass (1985) had not always been replicated in subsequent empirical research (Hunt, 1991; Smith & Peterson, 1988; Yukl, 1994). However, there are numerous studies that support the validity and reliability of the MLQ Form 5X –Short instrument for measuring leadership styles and outcomes.

Barge and Schlueter, (1991) and Bessai, (1996), report the MLQ Form 5X-Short is a well prepared and carefully constructed instrument and informative manual. The manual provides detailed information on the development of the scales and their psychometric properties. The theoretical basis of the scales is clearly explained and ample evidence of construct validity including the factor structure is provided in the manual. Alpha reliability coefficients for the self-rating form range from .60 to .92. The alpha reliability coefficients ranged from .77 to .95 when using the rater form with subordinates or coworkers, (Barge & Schlueter, 1991). Bass and Avolio (1985) are careful to point out that self-ratings tend to be higher and also more consistent than ratings by others and recommend that the former be used for research purposes. Although the reliability of self-ratings is lower than ratings by subordinates and coworkers, they are higher in the MLQ than in other measures of leadership such as the Leader Behavior Analysis II which reports reliability for self in arrange of .43 to .60. (McNeely, 1994).

Test-retest reliabilities over a six month period for the factor scales range from .44 to .74 for the self-rating form and from .52 to .85 on the rater form. However, between the times that the two measures were taken, the leaders participated in team development and individual training. The lack of consistency over time may be reflective of a true developmental change and not a large error margin in the instrument. Because of its good construct validity, adequate

reliability, and strong research base, the test is strongly recommended for research uses (Bassai, 1996). The MLQ Form 5X-Short stands apart from other measures of leadership in its sound psychometric properties (Kirnan & Snyder, 1996) and as an instrument that shows the relationship between leadership behaviors and outcomes (Barge & Schlueter, 1991).

Further refinements to the MLQ Form 5X-Short were made and the construct validity of the revised version was re-examined in a study with over 3,786 respondents in fourteen samples ranging in size from 45 to 549. The divergent and convergent validity of five transformational, four transactional and one non-leadership factor were examined with generally positive results (Avolio, Bass, & Jung 1999; Bass & Avolio, 2004).

Descriptive statistics and reliabilities for MLQ Form 5X-Short are presented in the MLQ Technical Report (Bass & Avolio, 1995, 2004) distributed by Mind Garden, Palo Alto, California. Reliabilities for the total items and for each leadership factor scale ranged from .74 to .94. All of the scales' reliabilities were generally high, exceeding standard cut-offs for internal consistency recommended in the literature.

This version of the MLQ Form 5X-Short has been used in nearly 200 research programs, doctoral dissertations and masters' theses around the globe between 1991 and 1995, and has been translated into Spanish, French, German, Hebrew, Arabic, Chinese, and Korean for use in various research projects (Bass & Avolio, 1997). The instrument includes 45 descriptive statements. In the Leader Form the respondent is asked to "judge how frequently each statement fits you" using a 5-point rating scale (0=not at all, 1=once in a while, 2=sometimes, 3=fairly often, and 4=frequently, if not always. In this study the leaders completing the form were the CCCE and CI.

In the Rater Form respondents are asked to “judge how frequently each statement fits the person you are describing” using the same 5-point rating scale described above. In some studies raters are expected to indicate their relationship to the leader by checking one of four choices: higher level than person rating, same level as person rating, lower level than person rating, or do not wish level to be known. The literature review on Transformational leadership strongly legitimizes the use of the MLQ Form 5X-Short as a valid and reliable research instrument for measuring transformational and transactional traits and their relationship with organizational effectiveness. While there are numerous studies that have utilized the MLQ Form 5X –Short in business and some in healthcare studies, no studies exist using this instrument in physical therapy.

#### Leadership Theories in Healthcare Organizations

In recent literature researchers have examined leadership styles and the impact on healthcare organizations. The concept of Transformational leadership has been widely discussed in business, and education. Most recently particular attention has been directed toward the impact of Transformational leadership on healthcare organizations including some health care professions. According to Bass and Avolio (1994) Transformational leadership encompasses inspirational motivation by the leader displaying enthusiasm and articulating the vision of the organization. Since the 1980s Transformational leadership has been embraced as the most favorable and appropriate leadership theory for clinical nursing (Thyer, 2003). Thus, Transformational leadership has been frequently commended in healthcare literature particularly in nursing. Surprisingly, in the physical therapy literature a strong scholarly discourse on leadership styles and impact specific to physical therapy clinical education is absent.

Spinelli (2006) examined the relationship of leadership behaviors and leadership outcomes using the Transformational leadership theory of Bass. The Multifactor Leadership Questionnaire was completed by 101 subordinates who rated their health administrator's leadership behaviors and outcomes (Spinelli, 2006). The results support the application of blending Transformational and Transactional contingent reward leadership for increasing followers' trust level of the CEO, increasing followers' desire to exert extra effort, and increasing job satisfaction. The relationship between Transformational leadership style and leadership outcomes was positive and stronger than Transactional or Laissez-faire leadership styles (Spinelli, 2006). The results also revealed that Transactional leadership style showed a stronger positive relationship with leadership outcomes than the Laissez-faire leadership style (Spinelli, 2006). Spinelli (2006) research supports the full range leadership model discussed earlier as it demonstrates that subordinates who perceived their leaders as practicing Transformational and Transactional leadership behaviors were positively correlated to leadership outcomes of extra effort, effectiveness and satisfaction.

Casida and Pinto-Zipp (2008) empirically evaluated the Transformational leadership model using the MLQ Form 5X-Short of nurse managers in an acute care hospital recognized for excellence based on positive patient satisfaction feedback. This study involved 37 nurse managers and 278 staff nurses from four acute care hospitals that are part of a large health care system (Casida & Pinto-Zipp, 2008). The results suggest a combination of Transformational and Transactional contingent reward leadership styles used by nurse managers create a culture of effectiveness, characterized by a balance of stability and flexibility within the nursing unit that fosters involvement, consistency, mission and adaptability (Casida & Pinto-Zipp, 2008). Furthermore, the results suggest a negative relationship with Laissez-faire leadership style and

organizational performance (Casida & Pinto-Zipp, 2008). From these finding, further support is added to the positive leadership outcomes of leaders practicing Transformational leadership behaviors.

McQuire and Kennerly, (2006) conducted a research study, using a descriptive correlation design involving 63 nurse mangers and 500 register nurses at 21 nonprofit hospitals with greater than 150 beds located in the Midwest region of the United states. According to McGuire and Kennerly, (2006), the frontline nurse manager' leadership role has gained attention in relation to their contribution to staff attitudes and relationships. The findings revealed the strongest positive correlation between Transformational leadership style and organizational commitment. Additionally, the findings revealed nurse managers rated themselves higher in Transformational leadership then did their staff nurses (Mcguire & Kennerly, 2006). In regards to organizational commitment findings showed Transactional leadership style utilizing contingent reward had a positive correlation with lower nurse turnover rates (McQuire & Kennerly, 2006). Since Transformational leadership characteristics can be taught and learned (Bass, 1998) organizations have an opportunity to develop mangers who can positively interact with followers.

The positive impacts of practicing the skills set associated with Bass Transformational leadership theory of "full range leadership" was also reported by Firth-Cozen and Mowbray (2001). Firth-Cozens and Mowbray (2001) reported implementation of Transformational and Transactional leadership had positive correlations with healthcare job satisfaction and quality of patient care. The study also noted that higher job satisfaction yielded higher quality patient care and higher patient satisfaction. Firth-Cozens and Mowbay, (2001) also noted that in order to understand the complexity of successful leadership for CEO's of healthcare institutions, several

aspects need to be taken into consideration including: the context in which leadership occurs, the individuals being led and the personality/behavior of the leader. Lastly, Firth-Cozens and Mowday (2001) reported that one important characteristic identified of an effective leader is the ability to consistently delivering the message which is essential for building trust of their followers.

While a majority of Transformational leadership styles studies have been conducted in the nursing profession there have also been studies conducted in other allied health professions. Snodgrass, et al., (2008) examined occupational therapy practitioners' perceptions of rehabilitation manager's leadership styles and the outcomes of their leadership style. The MLQ Form 5X –Short was completed by 73 occupational therapists from a random sample chosen from the Tennessee Occupational therapy Association. The findings suggest a positive association with Transformational leadership style and all three leadership outcomes of extra effort, effectiveness and job satisfaction and with Transactional leadership style for contingent reward (Snodgrass, et al., 2008). Not surprising a negative association of Laissez-faire and management by exception Transactional style was found with all three leadership outcomes (Snodgrass, et al., 2008). These results are similar to the results of Gellis (2001) who evaluated the Transformational leadership model using the MLQ Form 5X-Short with 187 clinical social workers in a hospital setting. Gellis (2001) findings revealed that Transformational leadership positively impacted the perceived effectiveness and satisfaction with the leader as rated by the social worker.

Bass theory of Transformational leadership is a well-studied leadership style which has been assessed by the MLQ Form 5X-Short. The research on Transformational leadership style has shown a positively correlated with outcomes of extra effort, effectiveness and follower

satisfaction in a wide variety of settings. Part of Transformational leadership is followers' openness to innovations and change (Bass, 2004; Northouse, 2007). Thus, one could allude that openness to innovation and change is linked to a follower's ability to implement evidence base practice. Aaron (2006) examined the correlation between Transformational leadership style and attitudes for evidence based practice in the delivery of mental health care. The MLQ Form 5X-Short instrument was completed by 303 mental health service providers who served 49 publicly funded mental health programs in one west coast county (Aaron, 2006). The findings support that the implementation of Transformational and Transactional leadership positively correlates with healthcare providers' adoption of evidence base practice for mental health patient care (Aaron, 2006).

Additionally, the exploratory study conducted by Wylies and Gallagher (2009) on Transformational leadership behavior in allied health professionals finding support that professionals with prior leadership training, who are at higher staff levels, scored higher consistently for Transformational leadership behaviors. One step that has been taken to encourage this type of training for the implementation of leadership in healthcare is the National Center for Healthcare Leadership.

To confront the many challenges facing healthcare today the National Center for Healthcare Leadership (NCHL) has created the Institute for Transformational Healthcare Leadership. Part of the mission of this institute is to comprehensively reach across all sectors that impact the delivery of healthcare. One of the NCHL projects is the Graduate Health Management Education Demonstration Project. Ten educational programs are currently working with NCHL to integrate the Health Leadership Competency Model into their curricula. The goal



of this integration is to prepare future healthcare professionals who are highly competent, forward thinking and insightful competent leaders (Modern Health, 2007).

Physical therapy educational programs currently do not participate in this collaboration but would most benefit by participating in the NCHL project as supported by the survey conducted by Schafer (2002). Schafer (2002) surveyed three different types of physical therapy settings to determine the perceived administrative and managerial skills needed by physical therapists. Although these individuals have the title of manager they are the leader for the clinic. The survey results indicated that all three settings listed leader in their five most important categories for skills needed. The results further support the importance of leadership within the physical therapy profession and the need for training. As mentioned earlier, the CI and the CCCE are consider leaders at a healthcare center. The CCCE is considered the leader at healthcare facilities for overseeing the physical therapy clinical education and developing clinicians into clinical educators, while the CI is the leader over the day to day activities of the student. Thus leading us to raise the question, “do CIs and CCCEs implement Transformational leadership and are they effective leaders for physical therapy clinical education? “

#### Physical Therapy Leadership and Clinical Education Research

The importance of leadership in physical therapy is in the early stages of development based on the current limited resources and studies conducted in this area. Educational curriculum is now being offered within physical therapy educational programs and post professional educational opportunities are emerging in the area of leadership. There are several resources available for someone in the CI or CCCE role to develop and strengthen their leadership role. One resource developed through the APTA section for Health Policy and

Administration in an effort to provide leadership education to physical therapy professionals is the establishment of the Institution for Leadership in Physical Therapy. The institution has established the LAMP program. The APTA guidelines for the CI and CCCE are in alignment with the LAMP acronym components of: leadership, administration, management and professionalism. The APTA Health Policy and Administration identified LAMP as the knowledge and skills needed by a physical therapist entering into leadership roles (Lopopolo, Schafer & Noose, 2004; Wilson, 2008). The APTA guidelines for the CI and CCCE are listed in Table II-1.

Table II-1: Guidelines for Clinical Instructors and Center Coordinators of Clinical Education

<b>GUIDELINES: CENTER COORDINATORS OF CLINICAL EDUCATION HOD G06-93-29-52</b>	
<b>1.0</b>	The center coordinator of clinical education (CCCE) has specific qualifications and is responsible for coordinating the assignments and activities of students at the clinical education site.
<b>2.0</b>	Demonstrates effective communication and interpersonal skills.
<b>3.0</b>	Demonstrates effective instructional skills.
<b>4.0</b>	Demonstrates effective supervisory skills.
<b>5.0</b>	Demonstrates effective performance evaluation skills
<b>6.0</b>	Demonstrates effective administrative and managerial skills.
<b>GUIDELINES: CLINICAL INSTRUCTORS BOD G03-06-21-55</b>	
<b>1.0</b>	The Clinical Instructor demonstrates clinical competence and legal and ethical behavior that meets or exceeds the expectations of member of the profession.
<b>2.0</b>	Demonstrates effective communication skills.
<b>3.0</b>	Demonstrates effective behavior, conduct, and skill in interpersonal relationships.
<b>4.0</b>	Demonstrates effective instructional skills.
<b>5.0</b>	Demonstrates effective supervisory skills.
<b>6.0</b>	Demonstrates performance evaluation skills.

Table reference:

[http://www.apta.org/uploadedFiles/APTAorg/About\\_Us/Policies/Education/CenterCoordinatorsClinicalEducationHOD.pdf#search=%22CENTER COORDINATORS OF CLINICAL EDUCATION HOD G06-93-29-52%22](http://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/Education/CenterCoordinatorsClinicalEducationHOD.pdf#search=%22CENTER%20COORDINATORS%20OF%20CLINICAL%20EDUCATION%20HOD%20G06-93-29-52%22), [http://www.apta.org/search.aspx?q=GUIDELINES: CLINICAL INSTRUCTORS BOD G03-06-21-55](http://www.apta.org/search.aspx?q=GUIDELINES:CLINICAL%20INSTRUCTORS%20BOD%20G03-06-21-55)).

Another resource is the APTA Education Section sponsors the Educational Leadership Conference yearly in October (Hayhurst, 2010). However, most individuals who attend this conference are program directors and ACCEs with minimal attendance of CIs and CCCEs. An additional resource is the APTA Educational Section is the Educational Leadership Institute (ELI) which was developed in 2010 as a one year program to facilitate the development of leadership skills. This program is directed towards PT and PTA program directors and coordinators (Hayhurst, 2010) offering leadership training opportunities. Leadership training is especially important today as individuals currently in these positions are Baby Boomers and with their nearing retirement leadership will change (Hayhurst, 2010). While the profession recognizes the need to develop the leadership abilities within the profession to achieve the APTA's 2020 vision statement (Hayhurst, 2010), it does appear that the focus remains on the academic side for program directors.

Given the limited leadership educational opportunities specifically available for the CIs and CCCEs in clinical education and the limited number of studies available in the literature focusing on the relationship of leadership and physical therapy a clear concern has emerged. Compounding the issue further is the fact that a gap exist in disseminating the available resources to CIs' and CCCEs' as well as, specifically offering programs for the development needs of CIs' and CCCEs' leadership skills to drive the change in the clinical education setting as part of the fulfillment of the APTA 2020 vision. Lastly, there is an absence in the literature examining the CCCE and CI roles in leadership. Knowledge of the relationship of leadership style of healthcare providers in their role as clinical educators can lead to an appreciation of what leadership styles are currently being implemented and its outcomes of extra effort, effectiveness and healthcare providers' satisfaction when assuming the additional role.

While there is an absence in the literature examining leadership in the CCCE and CI roles several studies have been conducted examining other facets of the CI role. These studies are in part due to the heightened attention required by CAPTE for physical therapy programs to assess the competency of clinical instructors (Wetherbee, Nordrum, & Giles, 2008). Professionals who directly supervise student's daily activities during clinical experiences are referred to as clinical instructors (The Evaluation Criteria Handbook for Physical Therapy Programs and the Normative Model of Physical Therapist Professional Education 2004). Physical therapy programs rely heavily on CIs to assess and facilitate the development of physical therapy students into professionals. The role of the CI is pivotal in guiding the student through the process of integrating didactic information into the art and skill of physical therapy practice. CIs strongly influence the social and professional development of physical therapy student's inter-professional collaborative relationships (Kelly, 2007). The acknowledgment of this important close relationship is noted in the various studies that have been conducted to analyze different clinical instructors' variables to determine their influence on the quality of clinical education and student satisfaction. Several studies have investigated student's perceptions of credentialed versus non credentialed clinical instructors and effective teaching (Housel, Gandy, Edmondson, 2010; Housel & Gandy, 2008; Wetherbee, Nordrum, et al., 2008). Other studies have examined the relationship between characteristics and behaviors of clinical instructors and perceptions of teaching effectiveness (Hartland & Londoner, 1997; Kelly, 2007; Lauber, Toth, Leary, et al., 2003; Weidner & Laurent, 2001; Morren, et al., 2008; Tang, Chou, & Chiang, 2005). Stith, Butterfield, Strobe, Deusinger and Gillespie (1998) examined the influence of personal, interpersonal and organizational variables on student's perceived satisfaction with clinical education. Dunfee (2008) contends that a clinical instructor should have the required skill sets

of: ability to teach and be effective, offer evidence based practice, have an interest in student learning, time to dedicate for student learning and promote the value of learning as crucial in support of student's success especially when a difference exists between academic skills and clinical practice. While studies have examined variables contributing toward quality clinical education and student satisfaction from a student's perception other studies have examined clinical instructor's perspectives on professional development activities designed to increase their effectiveness as educators. Strong academic educators recognize that effective clinical instructors are critical in assisting students' to meet the established educational goals for clinical experiences and in aiding physical therapy education programs meet their goal of preparing entry level professionals (Buccieri, Schultze, Dungey, Kolodziej, et al., 2006; Hughes, et al., 2010; and Plack, 2008) and yet Strohschein, Hagler, & May, (2002) reportedly many clinicians continue to express the need for formal preparation and training to more adequately fill their role as a clinical educator. Strohschein, Hagler, & May, (2002) also reported the need for a process of quality assurance in clinical education to assess and, if necessary, enhance the consistency and effectiveness of the clinical education process.

To assist in effective clinical instruction the APTA Guidelines and Self Assessments for Clinical Education has established guidelines for the role of CIs. CIs' should demonstrate clinical competence, and legal and ethical behavior that meets or exceeds the expectations of members of the profession of physical therapy. CI's should have the ability to demonstrate effective communication skills to promote effective behavior and effective interpersonal relationships. Other important skills include the ability to demonstrate supervisory, instructional skills and performance evaluation skills (APTA Guidelines and Self Assessments for Clinical Education 2004).

## Leadership Theories in Education

In the educational literature several leadership style theories have been examined for effectiveness in providing positive learning settings. The research studies conducted by Hallinger, (2003); Leithwood & Levin, (2010); and Leithwood, (1992) have similar results that suggest the five different styles of leadership models most often utilized in education are: Instructional, Transformational, Moral, Participative, Managerial and Strategic. Instructional leadership focal point is instructional practices and the influence of the organizational culture on learning. Similar to other organizations Transformational leadership focus is on the individual's commitment and capabilities to offer extra effort for the good of the organization to be innovative and build on the capacity to support change, which in education is the deliverance of teaching and learning. Moral leadership focus is the ethics and values of the individual in the role of the leader (Leithwood & Levin, 2010). Moral leadership is similar to the traits and behavioral theories for organizational leadership discussed earlier.

Participative leadership in education parallels the business organization model with the focal point on group decision making. Managerial and strategic leadership styles center on the coordination, planning, monitoring and distribution of resources within an organization.

Contingent leadership style is used in both educational and non-educational organizations. Contingent leadership spotlights the leader's responsiveness to the distinctive needs of the organization (Leithwood & Levin, 2010; Hallinger, 2003). The literature supports the use of contingency leadership theory as an effective approach in a variety of organizations including education. Situational leadership is a form of contingency theory leadership. Several important concepts in relationship to student learning, teaching and precepting can be impacted

by the utilization of situational leadership. Rayermann (2003) examined the situational leadership and nursing student's clinical education. The study examined situational leadership by matching the preceptor nurse leadership style to the skill set of the nursing students. Rayermann (2003) findings suggests that for a positive clinical experience students who require structure and direct supervision, be placed with a nurse preceptor who has a directive or supportive leadership style. The results also suggest that when student's skill sets do not match the preceptor's leadership style the potential exists for a negative clinical experience for both individuals. Rayermann (2003) reported that being aware of leadership styles of preceptors and matching students with complimentary skill sets allows for both the preceptor to teach and the student to learn in a positive environment while encouraging students to enter the field and practice. Lastly, Rayermann (2003) finding suggest that utilization of situational leadership when matching the educator and student has the effect of preventing nurse preceptors from becoming frustrated and unwilling to take students. Currently, there are no published studies that have examined the utilization of situational leadership by CCCEs' when assigning clinical educators to students. Knowledge of this could assist with CCCEs' matching styles of the student and the educator to facilitate a culture for positive learning for both the CI and the student and contribute to physical therapy education program's goal of preparing students to be a competent entry level clinician.

Other predominate approaches reported in the literature as effective styles for educational leadership is instructional and Transformational leadership styles (Hallinger, 2003; Leithwood & Levin, 2010). Both of these leadership styles have the same focus which is to create change among individuals within an organization; however the manner in which the followers are motivated to achieve change is different.

A wide range of elements that effect student learning are influenced by the direct effects of leadership. Leithwood and Levin, (2010) identifies four broad variable categories that have a positive influence on learning. These variables include organizational condition, classroom condition, educator characteristics and professional community. For clinical education, these variables are represented as the organizational culture, number of students the clinical educator is managing, the depth of pedagogical knowledge and involvement in professional organizations. The CCCE could apply these variables through understanding the clinic site's culture and the leadership style. The CCCE should consider the work load of the clinician that allows for the fulfillment of clinical educator responsibilities effectively while allowing CIs to be satisfied. The CCCE, as a leader should consider the depth of knowledge for teaching the clinician has to determine training needs to be. Lastly, the leader should review the clinician's commitment to the professional organization, since, as an educator they will serve as a professional role model.

Many allied health professions rely on clinicians in the clinical setting to be an educator and share their clinical expertise with students. Several studies have examined possible characteristics that the clinicians have that contribute to their effectiveness as educators. However, there are limited studies in the literature that have examined how these clinicians are led and the outcomes of the leadership to prepared clinicians to fulfill the role of as an educator. Much of the research that has been conducted comes from the nursing profession and the findings suggest there is a lack of preparation and guidance for nurse clinicians to assume the role as clinical educators for students. Nurse clinicians reported they would enjoy the opportunity to teach students clinical skills, but reported little or no preparation to take on the role (Cangelosi, 2009). Many nurse preceptors receive little training, or recognition for their work with students and even lack knowledge, confidence in the preceptor role, and the skill set to



promote student learning (Smedley & Race, 2010). It is an inappropriate assumption that an expert nurse clinician can transition into the role of an effective educator without informal or formal training (Girard, 2003).

### Research Summary

Much of the research on leadership originates from the business sector and in recent years from healthcare organizations and related fields of nursing, athletic training and nutrition. Additional research has been conducted in education on an organizational level. The literature supports the importance of leadership across business, healthcare, and education organizations. The literature suggests that Transformational, Transactional and Situational leadership styles are effective approaches in both the healthcare and educational organizations. Yet, across many disciplines length of employment and willingness to serve often leads to individuals being placed in leadership roles without preparation for the new role (Luedtke-Hoffmann, Petterborg, Cross, Rappleye, Stafford & Weiser, 2010). Limited research exists on establishing a link between leadership and clinical education. A link does exist between effective educational leadership and positive student learning (Leithwood & Levin, 2010). An effective leader should implement a leadership style that influences a healthcare provider's positive experience as a clinical instructor/educator and ensure that the crucial elements for effective student learning are in place. Consistent with Bass's theory of Transformational leadership, Strohsehein, Hagler, & May, (2002) reported a "consistent and effective approach to clinical education requires a guiding philosophy that is clearly communicated, understood, and embraced by all the groups and individuals involved in the clinical education process".

The physical therapy profession has faced extraordinary changes in recent years, due to major developments in clinical practice and the transition to a doctoral level degree with increase time spent in the clinic education portion. Consequently, change can have a devastating effect on people, exposing them to feeling of loss, doubt, stress and impulsiveness, as well as feeling of comfort, where they experience a sense of achievement, pride or belonging ( Marquis & Huston, 2006). During these times of change it is vital for leaders to be an effective change agent through the process. In clinical education the CI and the CCCE within the clinical setting are the change agents.

CIs and CCCEs are usually experienced clinicians in physical therapy who have expressed an interest in teaching students and are placed in the position to lead. This raises the question “Do these individuals understanding their own leadership style and the different types of leadership theories that are available?” The leadership style/styles utilized by the CIs and CCCEs will have a cascading effect on satisfaction in the role as a clinical instructor/educator, their effectiveness and their desire to contribute extra effort necessary to carry out the mission of providing high quality and effective clinical learning experiences to ensure physical therapy education programs’ achieve their graduation outcome of preparing new generations of physical therapist with a solid foundation to practice the craft of physical therapy. Effective clinical experiences additional goals are reinforce the attitudes and skills to include the desire to engage in lifelong learning, professional growth, and an ability to identify and critically evaluate their own practice and the underlying theories and perceptions that inform the practice of physical therapy. Although studies have been conducted examining several factors influencing clinical instructors, there is a gap in the literature which limits our understanding of their leadership styles and how these styles might impact their roles as clinical educators.

## CHAPTER III

### Methodology

#### Design

Bass and Avolio's (1997) full range of individual leadership model was used as the theoretical framework for this research to answer questions regarding relationships between leadership styles and leadership outcomes as perceived by physical therapy CIs and CCCEs. This study was also designed to gather background demographic characteristics of the individual and the organization. The study used a quantitative descriptive correlational design that used an inquiry approach to gather data for analysis purposes. This research design was used to describe trends and explain the correlation between variables, tendency for variation on one or more variables, and the relationship to variations among other variables.

According to Creswell (2003), quantitative research is based on an inquiry approach for describing trends and explaining the relationship among variables. Quantitative research includes a non-experimental design in which researchers collect the data needed without manipulation of the variables (Mertens, 2005; Portney & Watkins, 2009). Quantitative studies often use surveys in descriptive research (Neuman, 2003). Surveys are distributed to participants, who are asked to respond honestly to the questions asked (Neuman, 2003). This design provides the opportunity to explore relationships between different variables obtained from the same individuals at approximately the same time (Mertens, 2005; Portney & Watkins, 2009). Also, with a correlational design using inferential statistics several variables can be included in one study for investigation (Munro 2001, Portney & Watkins, 2009).

The data collection instruments for this study were pilot tested and refined prior to implantation.

### Variables and Instrumentation

#### Variable 1: Leadership style

For this study the independent variable leadership style was measured utilizing the Multifactor Leadership Questionnaire (MLQ Form- 5X Short as the primary research instrument. The range of leadership styles of Transformational, Transactional and Laissez-faire leadership can be measured utilizing the MLQ Form-5X (Avolio & Bass, 2004; Northouse, 2007). The predictor variables were the leadership styles, while the outcome/dependent variables were the leadership outcomes of satisfaction, extra effort and effectiveness (Bernardin & Cooke, 1994). The MLQ Form 5X was selected for this study because of its acceptance in the scholarly literature (Avolio et al., 1999; Avolio & Bass, 2004; Bass, 1985; Bass & Avolio, 1994, 1990; Hartog et al., 1997) as well as its simplicity to use ( Avolio & Bass, 2000; Gellis, 2001).

#### Instrumentation

The Multifactor Leadership Questionnaire Form 5X- Short is a foundational survey instrument for assessing leadership behaviors. Mind Garden who is the publisher of the instrument provided permission to use the instrument. Appendix B. A copy of sample items from this instrument is attached as (Appendix C). This version of the MLQ Form 5X-Short has been used in over 300 research studies, doctoral dissertations and masters' theses, and has been translated in 13 languages (Avolio & Bass, 2000). The instrument consist of 45 items and uses a 5 point 0-4 Likert scale that measures a range of leadership styles characteristics. In the Leader Form the respondent is asked to "judge how frequently each statement fits you" using a 5-point

rating scale (0=not at all, 1=once in a while, 2=sometimes, 3=fairly often, and 4=frequently, if not always). In this study the leaders completing the form would be the CI and the CCCE. In the Rater Form respondents are asked to “judge how frequently each statement fits the person you are describing” using the same 5-point rating scale described above. In some studies raters are expected to indicate their relationship to the leader by checking one of four choices: higher level than person rating, same level as person rating, lower level than person rating, or do not wish level to be known. In this study only the leader form was utilized.

The MLQ Form 5X-Short is comprised of 12 main leadership behavioral factors- nine of which focus on Transformational, Transactional and Laissez-faire leadership styles and three factors which focus on leadership outcomes including extra effort, effectiveness, and satisfaction. Five of these factors are defined as Transformational leadership behaviors including idealized influence-attributed, idealized influence- behavior, inspirational motivation, intellectual stimulation and individualized consideration (Avolio & Bass, 2004; Avolio & Bass, 1999; Bass, 1985). Three factors on the MLQ Form 5X-Short that are related to Transactional leadership behaviors include contingent rewards, management by exception-active and management by exception-passive. One factor focuses on Laissez-fare behavioral leadership style. There are a total of 36 questions associated with the three leadership styles randomly scattered on the form. Four questions are presented for each of the nine leadership behaviors. The remaining nine questions focus on the leadership outcomes of extra effort, effectiveness and satisfaction. Of the nine questions, three are associated with extra effort, four are associated with effectiveness and two are associated with satisfaction. Table III-1 identifies the association between variables and questionnaire items on the MLQ Form 5X-Short.

Table III-1: Variables linked to Multifactor Leadership Questionnaire 5X Form -Short

Variable	MLQ Questions Linked to Variable
<b>Transformational Leadership Style</b> (Predictor Variable)	
Idealized Influence- Attributed	10,18,21,25
Idealized Influence- Behavioral	6,14,23,34
Individualized Consideration	15,19,29,31
Individualized Motivation	9,13,26,36
Intellectual stimulation	2,8,30,32
<b>Transactional Leadership Style</b> (Predictor Variable)	
Contingent Reward	1,11,16,35
Management by Exception-Active	4,22,24,27
Management by Exception-Passive	3,12,17,20
<b>Laissez-Faire Leadership Style</b> (Predictor Variable)	
Laissez-Faire	5,7,28,33
Extra Effort	39,42,44
Effectiveness	37,40,43,45
Satisfaction	38,41

Leadership styles were measured using the MLQ Form 5X-Short, a validated leadership assessment instrument. Avolio and Bass (2004) reexamined the MLQ Form 5X-Short and made revisions according to the attributes of the different leadership styles. The scores from the MLQ Form 5X-Short for the factors that are indicative of the leadership styles were calculated

according to the MLQ Form 5X scoring Key (Avolio & Bass, 2004). A score for a factor is an average of the scores for the items on that factor scale. Therefore, a score may be derived for a factor even if all the items on that factor scale have not been completed by dividing for the number of items answered (Avolio & Bass, 2004).

The MLQ Form 5X-Short was selected to help identify the existence or absence of a dominant leadership style used by CIs and CCCEs in physical therapy clinical education. Statistical analyses, such as variance and correlational analyses were used to test the research hypotheses to determine whether CIs and CCCEs use a dominant leadership style in physical therapy clinical education and to determine the relationship between the leadership style and the leadership outcome factors.

#### *Validity and Reliability of the MLQ Form 5X -Short*

The Multifactor Leadership Questionnaire - 5X Form-Short, the primary research instrument, has been used for more than ten years to measure Transformational, Transactional and non-transactional Laissez-faire leadership has been criticized by several authors for its lack of discriminant validity among factors comprising the survey (Avolio & Bass, 2004), for including behavioral and impact items in the same survey scales and because the factor structure initially proposed by Bass (1985) had not always been replicated in subsequent empirical research (Hunt, 1991; Smith & Peterson, 1988; Yukl, 1994).

The MLQ manual provides detailed information on the development of the scales and their psychometric properties and should be referred to for details. The theoretical basis of the scales is clearly explained and ample evidence of construct validity including the factor structure is provided in the manual. Alpha reliability coefficients for the self-rating form range from .60

to .92. When using the rater form with subordinates or coworkers, the alpha reliability coefficients ranged from .77 to .95 (Barge & Schlueter, 1991). Bass and Avolio (1985) are careful to point out that self-ratings tend to be higher and also more consistent than ratings by others and recommend that the former be used for research purposes. Although the reliability of self-ratings is lower than ratings by subordinates and coworkers, they are higher in the MLQ than in other measures of leadership such as the Leader Behavior Analysis II which reports reliability for self in a range of .43 to .60. (McNeely, 1994).

Test-retest reliabilities took place over a six month period for the factor scales and range from .44 to .74 for the self-rating form and from .52 to .85 on the rater form. However, between the times that the two measures were taken, the leaders participated in team development and individual training. The lack of consistency over time may be reflective of a true developmental change and not a large error margin in the instrument. Because of its good construct validity, adequate reliability, and strong research base, the test is strongly recommended for research uses (Bessai, 1996). The MLQ Form 5X-Short stands apart from other measures of leadership in its sound psychometric properties (Kirnan & Snyder, 1996) and as an instrument that shows the relationship between leadership behaviors and outcomes (Anktonakis, Cianciolo, & Sternberg, 2003; Avolio & Bass, 2004; Barge & Schlueter, 1991).

Descriptive statistics and reliabilities for MLQ Form 5X-Short are presented in the MLQ Technical Report (Bass & Avolio, 2004, 1995) distributed by Mind Garden, Palo Alto, California. Reliabilities for the total items and for each leadership factor scale ranged from .74 to .94. All of the scales' reliabilities were generally high, exceeding standard cut-offs for internal consistency recommended in the literature. More recently, Bass and Avolio (2004) surveyed 2080 individuals across health care, government and military organizations and



obtained alpha coefficients for the MLQ Form 5X ranging from .74 -.96. These subscales have good internal consistency with Cronbach's alpha meeting the criterion of .70 (Munro, 2001).

Alpha coefficients of the factors and outcomes are greater than .70 making the MLQ Form 5X-Short a reliable test to measure leadership behaviors and outcomes.

Further refinements to the MLQ Form 5X –Short were made and the construct validity of the revised version was re-examined in a study with over 3,786 respondents in fourteen samples ranging in size from 45 to 549. The divergent and convergent validity of five Transformational, four Transactional and one non-leadership factor were examined with generally positive results (Avolio, Bass, and Jung 1999). In a recent study, Antonakis, Toth, and Sivasubramaniam (2003), enhanced the generalizability of the survey by providing a comprehensive assessment of the validity and reliability of the MLQ Form 5X-Short. Avolio and Bass (2004) reported the following scores listed in Table III-2 for the transformational behaviors measured by the MLQ Form 5X-Short.

Table III-2: Transformational behaviors measured by the MLQ

Transformational behavior	Research score
Idealized Influence: Attributed	.70
Idealized Influence: Behaviors	.64
Individual Motivation	.76
Intellectual Stimulation	.64
Individual Consideration	.62

#### Variable 2: Demographic Profile

For this study the Demographic Profile questionnaires for CCCEs and CIs (Appendices D and E) were based on the literature review where identified common content themes for demographic characteristics emerged (Archie, 1997; Buccieri, et al., 2001; Casida, & Pinto-Zipp,

2007; Hughes, et al., 2010; Kelly, 2007; Morren et al., 2008; Plack, 2008; Reiss, 2000).

Additionally, the Demographic Profile questionnaires were based upon the Physical Therapist Student Evaluation Clinical Instrument (PTSE) which provides established characteristics of the CI. Although, the PTSE tool has not been tested for reliability or validity, expert content validity was provided by members who are experts in clinical education special interest group, and the APTA education department. The demographic information sought to obtain background data of CCCEs and CIs working in physical therapy clinical education specific to this study. Also, the demographic information was used to examine if there was a relationship between CCCE's and CI's leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics. The demographic data was non identifiable and thus could not be used to identify the personal and clinical characteristics of the CCCEs and CIs in this study.

### Sample

The leadership styles of the sample were investigated for the purpose of being able to make generalizations about the targeted population under investigation (Creswell, 2002; Portney & Watkins, 2009). To achieve a sample, of Academic Coordinators of Clinical Education (ACCEs), Clinical Coordinators (CCCEs) and Clinical Instructors, an electronic solicitation letter to participant in the study and the importance of the research to add to the professional body of physical therapy education knowledge was sent to 2328 Educational Section members via the APTA Section for Educational List Server and 45 members of the APTA Clinical Education Consortium was sent. The ACCEs were asked to forward the solicitation letter to their educational managers who if willing to participate will forward the solicitation letter to the CCCEs and CIs.

The criterion for participating in the study were that participants had to be a clinical coordinator (CCCE) or a clinical instructor (CI) for clinical education of physical therapy students for at least one year and have participated in clinical education within the last year.

### Power

According to Munro (2001), small, medium, and large effect sizes for hypothesis tests about the Pearson correlation coefficient ( $r$ ) are  $r = 0.1$ ,  $r = 0.3$ , and  $r = 0.5$ , respectively. An effect size of 0.30 corresponds to a comparison of the null hypothesis that  $r = 0.0$  compared to the alternative hypothesis that  $r \geq (0.30)$ . For example, if the true correlation between the idealized attributes leadership score and the extra effort score is 0.30 or greater, this study had an 80% chance of detecting (i.e., achieving statistical significance) this correlation at the 0.05 level of statistical significance. Thus, for this study utilizing a two tale test, a sample size of 350 subjects (175 CCCEs and 175 CIs) was justifiable for detecting a medium effect size of 0.3, with an alpha of .05 and a power of .80. Parametric statistics were used to analyze the data with the assumption meet that a normal distribution of the population was represented in the sample size of subjects (Munro, 2001; Portney & Watkins, 2009).

### Procedure

Upon receipt of the research approval from Seton Hall University Institutional Review Board (Appendix J) the primary researcher sent out an electronic solicitation letter (Appendix F and H) via the APTA Section for Educational List Server and the APTA Clinical Education Consortium to solicit participants and outline the research study. All prospective participants received an e-mail invitation to request their participation in the study. The e-mail invitation also

identified the importance of the research to advancing the professional body of physical therapy clinical education knowledge. In order to ensure that ethical considerations involving human participants were addressed the e-mail also contained a standard informed consent statement (Appendix F) consisting of the purpose of the study, the population being studied, the reason for the selection of participants, the time frame for the return of the questionnaires, the risks and benefits of the study to the participants, instructions regarding the right to withdraw consent and the safeguards for ensuring anonymity of responses (Portney & Wakins, 2009; Creswell, 2003) and a link to access a Web host site that contained the surveys. Consent was assumed when participants submitted completed surveys. If an email response was received identifying that the email was not transmitted no follow up email request was sent. The Web host site served to distribute and collect the MLQ Form 5X-Short survey instruments (Appendix C), and Demographic profile (Appendices D and E), instructions for taking the surveys, and a request that the questionnaires be completed and returned to the surveyor within 7 days. A follow up request email was sent via email after 14 and 28 days (Appendix G) and data collection was terminated one month following the date of the initial request. The Webhost site, has a secured database, which is only viewed only by the surveyor. The data will be maintained for a period of 3 years after publication, at which time it will be destroyed (Portney & Watkins 2009; Creswell, 2003).

Participants were assured that returned data would be held in strict confidence. The participants in the study were informed that no individual information or information about their place of employment would be disclosed to others. Confidentiality was ensured to protect participants and to maintain the validity of the study (Portney & Watkins, 2009; Creswell, 2003).

## Data Analysis

Completed MLQ Form 5X –Short instruments and demographic surveys were coded for identity, without name of the respondent. The number assigned was used to track the completed questionnaires when the data was being inputted into excel spreadsheets. No questions were asked which put the respondents in any personal or professional risk. The data collected were not identified or presented by individual clinic site, rather they were considered in the aggregate so as to preclude association of any responses to a particular clinic for identification of the respondent. Survey information obtained, and data analyses are stored in a secured locked file cabinet in the office of the researcher, which is a locked office. At the end of the holding period, all electronic data will be permanently deleted from the computer, and all hard copy documents will be shredded.

The researcher collected the data from the completed Multifactor Leadership Questionnaire 5X Short Form and the Demographic Profile Questionnaires. All questionnaires were reviewed and the data entered into an excel spreadsheet and the Statistical Package for Social Sciences version 22.0. The researcher reviewed all questionnaires to identify errors such as questions left blank or more than one response per question. In accordance to the Multifactor Leadership questionnaire manual results were calculated as per the instructions (Avolio & Bass, 2004). The instructions in the manual provided by Avolio and Bass (2004) were followed for scoring of the results for the MLQ Form 5X-Short. The score is derived by summing the items and dividing by the number of items that make up the scale. In agreement with the scoring instructions if an item on the questionnaire is left blank, the total score is calculated by dividing the total for that scale by the number of items answered (Avolio & Bass, 2004). According to Bass and Avolio (2004) it is common for these types of questionnaires to have been unanswered,

but as noted in the literature this does not require excluding the data. MLQ Form 5-X questionnaires returned with evidence of incompleteness the unanswered questions were left blank, the remaining data was entered in the excel spreadsheet.

The excel spreadsheet was used to calculate means and standard deviations, while the SPSS version 22.0 was used to test hypotheses. The level of significance was set at 0.05, which is the acceptable standard in research for non-medical research (Portney & Watkins, 2009). The researcher verified the accuracy of all data by double all data entered into the excel spreadsheet and the SPSS version 22.0, as well as the results were double checked by the researcher to ensure the highest reliability of the results.

The Statistical Package for Social Sciences (SPSS) version 22.0 was utilized for data analysis. The statistical procedures implemented in analyzing the data of this study include descriptive and inferential statistics. The study sample and the data from the MLQ Form 5X-Short were described using measures of central tendencies (mean and median) and dispersion (standard deviation and range) for continuous or ordinal scaled variables, frequencies, and percentages the categorical scale variable was used. The nominal scale was used to categorize information such as gender, marital status, educational level, and their sites clinical education program. Descriptive statistics allow data to be summarized and the characteristics of the sample and leadership styles to be described (Massey, 1991; Munro, 2001, Portney & Watkins, 2009). Descriptive analysis used in this study helped summarize leadership style and outcomes data and describe characteristics of the sample (Portney & Watkins, 2009). The study gathered demographic data such as age, gender, highest educational degree, number of years worked in present position, and their clinical education program, to gain a better perspective of the participants.

The hypotheses were tested using correlation and multiple regression analysis of variance (ANOVA) techniques. Additionally, Pearson's "r" correlation coefficient was utilized to assess leadership factors and leadership outcomes. The success factors were measured using Cronbach's alpha to measure the internal consistency reliability of the MLQ scores.

Inferential statistics was utilized to test the research hypotheses, in which conclusions and inference were drawn on the probability of the finding observed in the sample that may also occur in a larger population (Munro, 2001; Portney & Watkins, 2009), such as in various physical therapy clinics. Multiple regression analysis and Pearson's correlation were used to identify a relationship between the independent and the dependent variables (Portney & Watkins, 2009). Pearson r correlations are reported between predictor and outcome variables. The level of significance was set at 0.05. Regression analysis of variance (ANOVA) techniques were performed with the predictor and outcome variables to show the amount of variance that predictor variables explained. For this study the outcome variables are the leadership outcomes of CCCEs and CIs and the predictor variables are the leadership behavior factors for each leadership style. The success factors were measured using Cronbach's alpha to measure the internal consistency reliability of the MLQ scores.

## CHAPTER IV

### Results

This research study focused on the relationship of leadership styles CIs and CCCEs and to discern if there was a correlate between CI's and CCCE's perceptions of leadership style and perceptions of leadership effectiveness base on the three outcomes as measured by the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short. The study also sought to find the dominant leadership style of CCCEs and CIs in physical therapy clinical education. Additionally, this study focused on the influence of background demographic factors and leadership style as measured by the MLQ Form 5X-Short. The purpose of this chapter is to present the analysis of the collected data. Tables and figures are used to help summarize and explain the data findings.

This study consisted of a total of 138 respondents. Though the response rate was low not all members of the section or the consortium may have been eligible to participate in the study due to the inclusion criteria. Using a random sample versus a sample of convenience like other studies who have a high response rate (Archie, 1997; Casada & Pinto-Zipp, 2007; McQuire & Kennerly, 2006; Spinelli, 2006) may have contributed to the low response rate. However, the response rate of this study is similar to the study conducted by Snodgrass, et al., (2008). The returned surveys were categorized by position as follows: 82 CCCEs, and 57 CIs. Of the surveys returned 58 CCCEs surveys were analyzed due to 24 CCCEs' respondents not completing the MLQ Form 5-X survey. Of the 57 surveys returned by CIs only 19 were analyzed due to 38 CIs' respondents not completing the MLQ Form 5X-Short survey instrument.



## Descriptive Analysis

Eighty eight surveys were returned by CCCEs but only 58 completed the Profile survey completely and the MLQ Form5X-Short survey instrument. The data for CCCEs was analyzed on the 58 participants who completed both surveys. Fifty seven surveys were returned by CIs. The data for CIs was analyzed on the 19 participants who completed both the Profile survey and the MLQ Form5X-Short.

The demographic information for the CCCEs and the CIs and their clinical education programs in this study are contained in Table IV-1 through Table IV-15. Consistent with APTA data a large majority of CCCEs in the sample were female 94.82% and Caucasian 91.37%. The average age was 42.29 years but the 30-39 age category had the highest percentage of CCCEs (Table IV-1). As Figure IV-1 and Figure IV-2 present, the mean the mean number of years as a therapist was 18.1 years and the mean years in their current clinic is 14.24 years.

Table IV-1: CCCE Demographic Information

Characteristic	N	Frequency (%)
Gender		
Female	55	<b>94.82</b>
Male	3	5.17
Age		
20-29	4	6.89
30-39	25	<b>43.10</b>
40-49	12	20.68
50-59	11	18.96
60 and over	16	10.34
Ethnicity		
Afro-American	1	1.17
Asian	1	1.17
Caucasian	53	<b>91.37</b>
Hispanic	4	8.96

Figure IV-1: Years as a Therapist

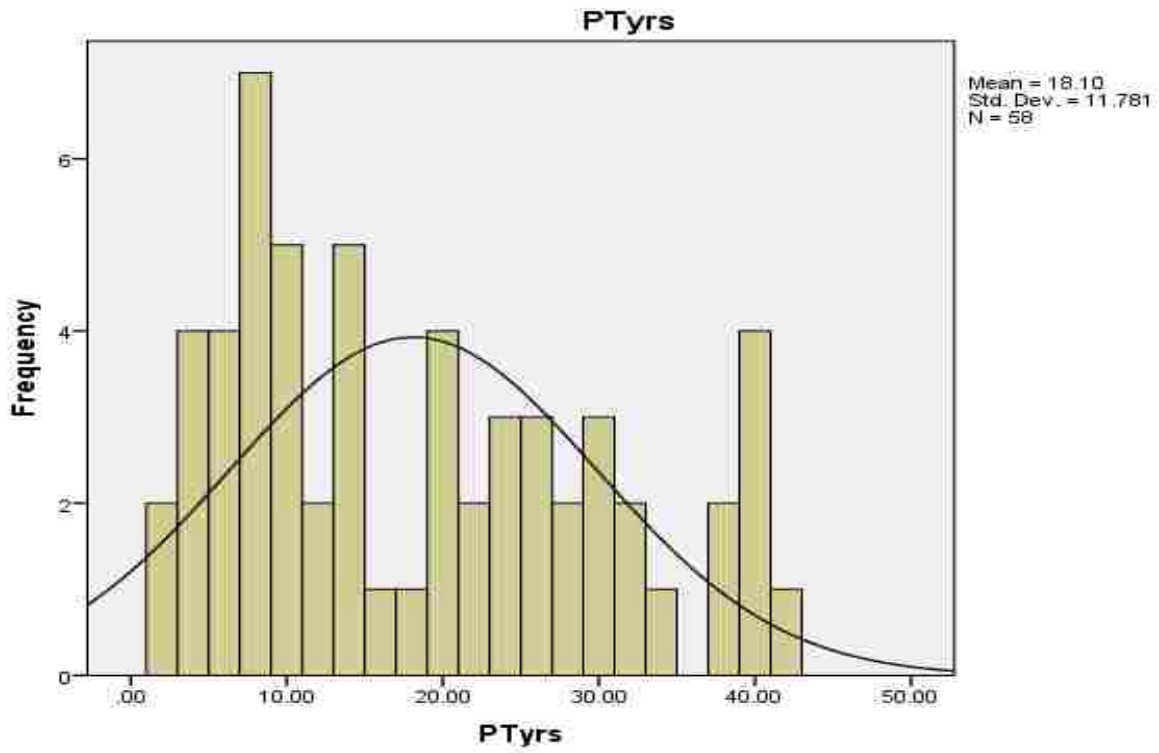


Figure IV-2: Years at Clinic Site

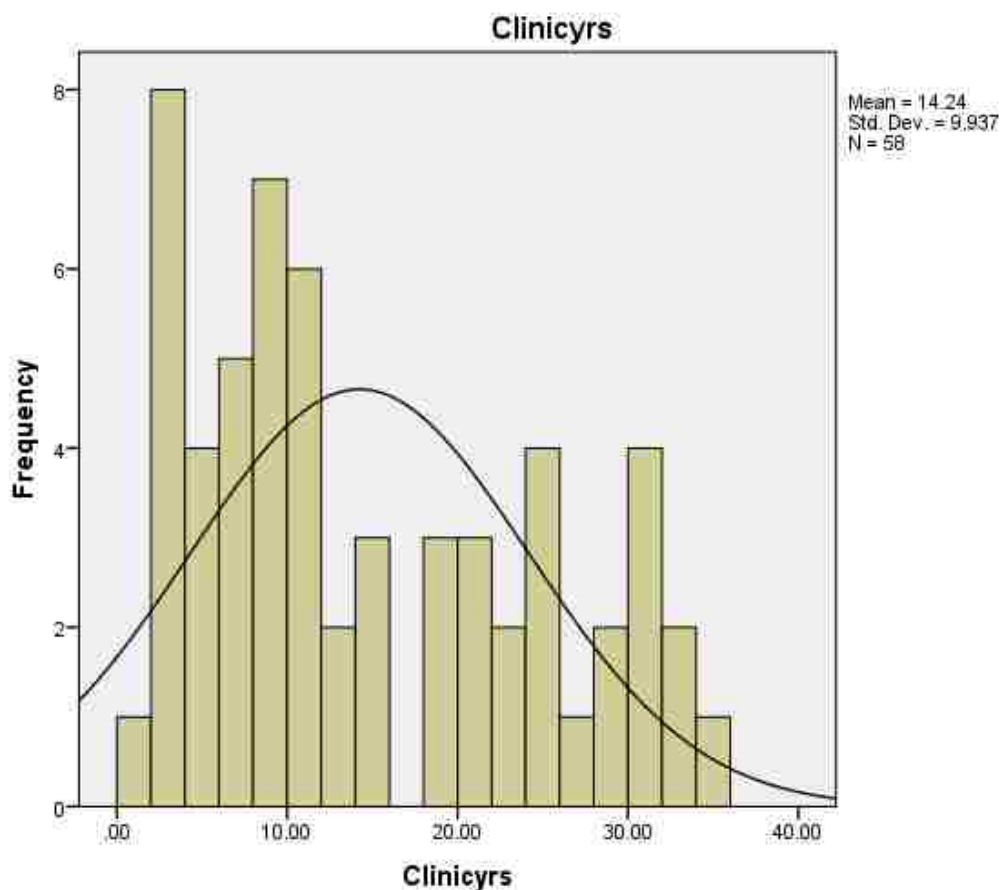


Table IV-2 describes the professional attributes of the CCCEs. These attributes include highest type degree obtained, clinical instructor credentialing, and leadership training. A majority of CCCEs reported they were credentialed clinical instructors (87.93%, n=51). A large percent of CCCEs (43.10%, n=25) had obtained post professional degrees. What is significant for both the entry level degree and post professional degree CCCEs is that the majority (74.39%, n=47) reported receiving some level of formal development seminars for leadership training.

Table IV-2: CCCE Training level

Degree Level	Credentialed Clinical Instructor		Leadership Training		Leadership Course			
	N	Frequency	N	Frequency	N	Frequency		
Entry Level	33	56.89	29	87.87	28	78.78	4	12.12
Post Professional	25	43.11	22	88.00	19	76.00	8	32.00
Total	58	100						

Table IV-3 provides an itemization of the type of entry level and post professional degrees CCCEs earned. Additionally, the table provides information if credentialing and leadership training occurred based on degree level. No significant difference was noted between entry level versus post profession level degree and the percent of CCCEs who were credentialed and who had received leadership training.

Table IV-3: CCCE Professional Attributes

Attribute	Degree Level		Credentialed Clinical Instructor		Leadership Training	
	N	%	N	%	N	%
<b>Entry level (n=33)</b>	33	100	29	87.87	26	78.78
Entry level BA/BS	14	42.22	12	41.37	11	42.31
Entry level Masters	9	27.27	8	27.58	6	23.08
Entry level DPT	10	30.30	9	31.03	9	34.61
<b>Post Professional (n=25)</b>	25	100	22	88.00	19	76.00
Post professional Masters	9	36.00	7	77.77	5	55.55
Post professional DPT	15	60.00	14	93.33	13	86.66
Academic Doctorate	1	4	1	100.00	1	100.00

As Table IV-4 describes there is a significant difference between where entry level degree versus post profession degree CCCEs receive their leadership training. Entry level degree CCCEs report a majority of their training is through work resources. Post professional degree CCCEs report a large percent of training is through outside sources. Both entry level and post professional degree CCCEs had small percentages who receive leadership training through clinical instructor credentialing or APTA resources. Of the respondents who reported leadership training through APTA resources only two respondents (3.4%) reported training through the APTA leadership training programs LAMP and ELI. Additionally, the largest percentage 83.33% of training is occurring at the entry level or post professional doctoral level physical therapy degree. Lastly, a large majority (72.73%, n=20) of CCCEs reported no course work for leadership with their degree curriculum.

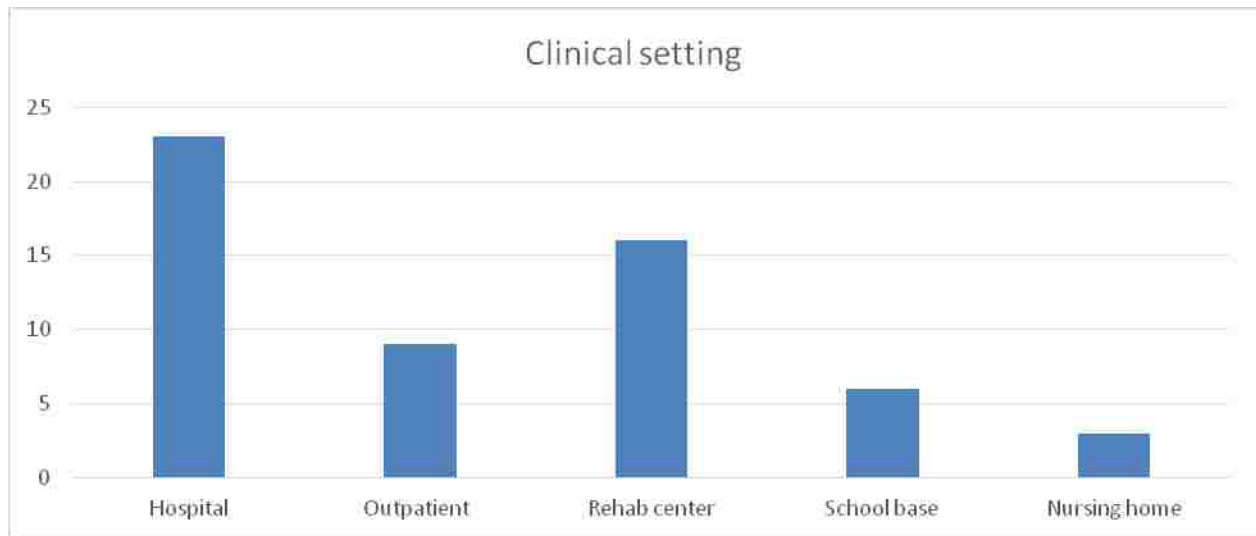
Table IV-4: CCCE Leadership Training

<b>Degree level</b>	<b>Leadership training</b>	<b>Work</b>	<b>Credential Clinical Instructor Courses</b>	<b>APTA</b>	<b>Outside vendors of leadership seminars / courses</b>	<b>Other</b>
<b>Freq. (%)</b>	<b>Freq. (%)</b>	<b>Freq. (%)</b>	<b>Freq. (%)</b>	<b>Freq. (%)</b>	<b>Freq. (%)</b>	<b>Freq. (%)</b>
<b>Entry level BS N=14</b>	78.57 n=11	63.63	18.18	9.09	0	9.09
<b>Entry level Masters N=9</b>	66.66 n= 6	33.33	0	33.33	33.33	0
<b>Entry level DPT N=10</b>	80.00 n= 8	75.00	12.50	0	12.50	0
<b>Post Professional Masters N=9</b>	55.55 n=5	40.00	0	40.00	20.00	0
<b>Post professional DPT N=15</b>	86.66 n=13	23.07	15.38	7.69	46.15	7.69
<b>Academic terminal EdD/PhD N=1</b>	100 n=1	0	0	0	100	0

N=58

Information regarding the clinical education environment was also gathered. The mean number of years as a CCCE was 15.6 years. Consistent with the profession most CCCEs work in a hospital base, rehabilitation or outpatient setting, type of clinical setting (Figure IV-3)

Figure IV-3: CCCE Type Clinical Settings



A majority (63.8%, n=37) of CCCEs reported that they treated 9-16 patients a day (Table IV-5). Additionally, many (44.44%, n=26) of CCCEs reported that staff treat on average 9-16 patients a day. There was fairly equal distribution in the different staff size categories in which CCCEs interact with (Table IV-5). The category other was identified by the majority (41.4%, n=24) for number of years for staff clinical experience (Table IV-5).



Table IV-5: CCCE Clinical Setting

<b>Patients Treated 8 Hour Day</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Other</b>	3	5.2	5.2	5.2
<b>1-8</b>	17	29.3	29.3	34.5
<b>9-16</b>	37	<b>63.8</b>	63.8	98.3
<b>17-24</b>	1	1.7	1.7	100
<b>Total</b>	58	100	100	
<b>Number of Staff Therapist</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Other</b>	4	17.2	17.2	17.2
<b>1-8</b>	16	27.6	27.6	44.8
<b>9-16</b>	16	27.6	27.6	72.4
<b>17-24</b>	16	27.6	27.6	100
<b>Total</b>	58	100	100	
<b>Yrs. Of Experience</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Other</b>	24	<b>41.4</b>	41.4	41.4
<b>1-8</b>	13	22.4	22.4	63.8
<b>9-16</b>	13	22.4	22.4	86.2
<b>17-24</b>	8	13.8	13.8	100
<b>Total</b>	58	100	100	

Table IV-6 provides information about the CCCE clinical staff training for the physical therapy clinical education program for students. The clinical setting with a staff of 1-8 therapist had the majority (48.15%, n= 28) of therapist eligible to be a clinical instructor and also the majority for number of therapist who are credentialed CIs for part one (51.85%) and for part one and two (59.26%, n= 16).

Table IV-6: CCCE Staff Training for Clinical Education

Number of staff eligible to be CIs Frequencies (%)	Percentage
1-8	48.15
9-16	29.63
17-24	11.11
Other	11.11
Number of physical therapist who are credentialed clinical instructors Frequencies Part One (%)	
1-8	51.85
9-16	18.52
17-24	7.41
Other	22.22
Number of physical therapist who are credentialed clinical instructors Frequencies Part Two (%)	
1-8	59.26
9-16	14.81
17-24	3.70
Other	22.22

N=58

Table IV-7 provides information about the clinical education program framework for students accepted per year. The majority of clinics (44.8%) took 1-8 students a year for full time clinical experiences with the majority (60.3%) being 9-12 weeks in length (Table IV-7). The majority of clinics (75.9%) used a one to one ratio of student to CI for supervision (Table IV-7).

Table IV-7: CCCE Clinical Education Programs

<b>Total Students Per Year</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Other</b>	9	15.5	15.5	15.5
<b>1-8</b>	26	44.8	44.8	60.3
<b>9-16</b>	17	29.3	29.3	89.7
<b>17-24</b>	6	10.3	10.3	100
<b>Total</b>	58	100	100	
<b>Supervision Ratio Model</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Other</b>	14	24.1	24.1	24.1
<b>1 to 1</b>	44	<b>75.9</b>	75.9	94.8
<b>Total</b>	58	100	100	
<b>Length in Weeks of Clinical Experience</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Other</b>	5	8.6	8.6	8.6
<b>1-4</b>	2	3.4	3.4	10.3
<b>5-8</b>	16	27.6	27.7	37.9
<b>9-12</b>	35	60.3	60.3	98.3
<b>Total</b>	58	100	100	

The majority (66.67%) of eligible therapist have one student a year, leading to 90 to 100% of students completing their clinical experiences on time (87.9%, n=51). It is uncommon for a student not to finish a clinical rotation for other reasons than professionalism or academic reasons (1.7%, n=1). A small amount of students finished their clinical experience on time but required remediation (12.4%, n=7). The percentage of students who were removed from clinic by the CCCE or ACCE/DCE was minimal 0-10% (70%, n=19). None of the CCCEs reported changes in direct CI supervision due to CI-student personality issues. Changes in CI supervision due to CI scheduling change was rare 0-10%. The success of CCCE clinical education programs is reported in Table IV-8 and offers further insight into the clinical education program experience.

Table IV-9: CCCE Clinical Education Program Outcomes

	Complete On Time		Not Complete Not Academic		Not Complete Academic		Complete on Time Remediation		Complete Extra Time and Remediation	
	N	%	N	%	N	%	N	%	N	%
<b>90-100%</b>	51	87.9								
<b>89-80%</b>	5	8.6					3	5.2		
<b>79-70%</b>	2	3.4					1	1.7		
<b>69-60%</b>							3	5.2		
<b>10-0%</b>			1	1.7	58	100			13	22.4
<b>Other</b>			57	97.3			51	88.0	45	77.6
<b>Total</b>	58	100	58	100	58	100	58	100	58	100

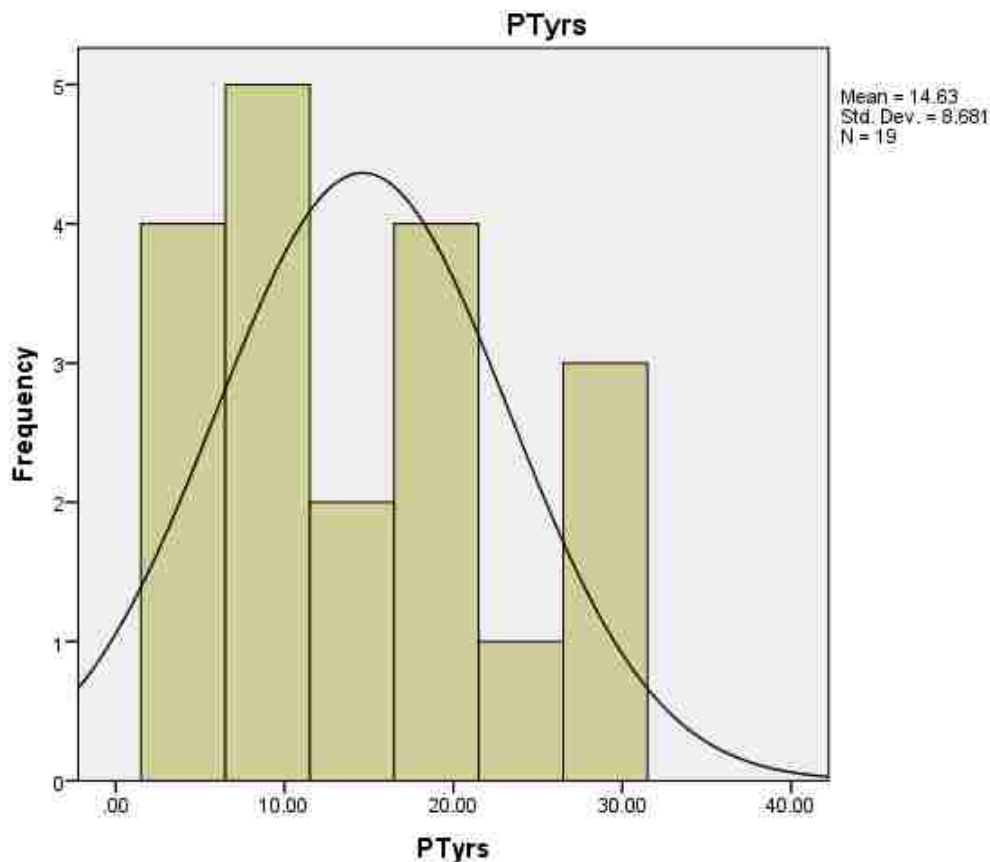
Consistent with the CCCEs in this study a majority of the CIs were female (70.83%) and Caucasian (91.37). The average age is 40 years (Table IV-10). As

Figure IV-4 presents the mean number of years as a therapist was 14 years and six months. The mean number of years at the clinic was 9.0 years.

Table IV-10: CI Demographic Information

Age, Mean	40
Gender	Frequencies (%)
Female	70.83
Male	29.17
Ethnicity	Frequencies (%)
African American	4.17
Asian	4.27
Caucasian	87.5
Hispanic	4.17

Figure IV-4: CI Years as a Therapist



The mean number of years as a CI was 11 years and five months. A majority (37.5%, n=9) of CIs' had 1-5 years of experience in their role as CI and a majority (78.9%, n=15) were credentialed clinical instructors through the APTA. A majority of the group (78.9%, n=15) were credentialed for part one only while a minority (20%, n=3) were credentialed in both part one and part two.

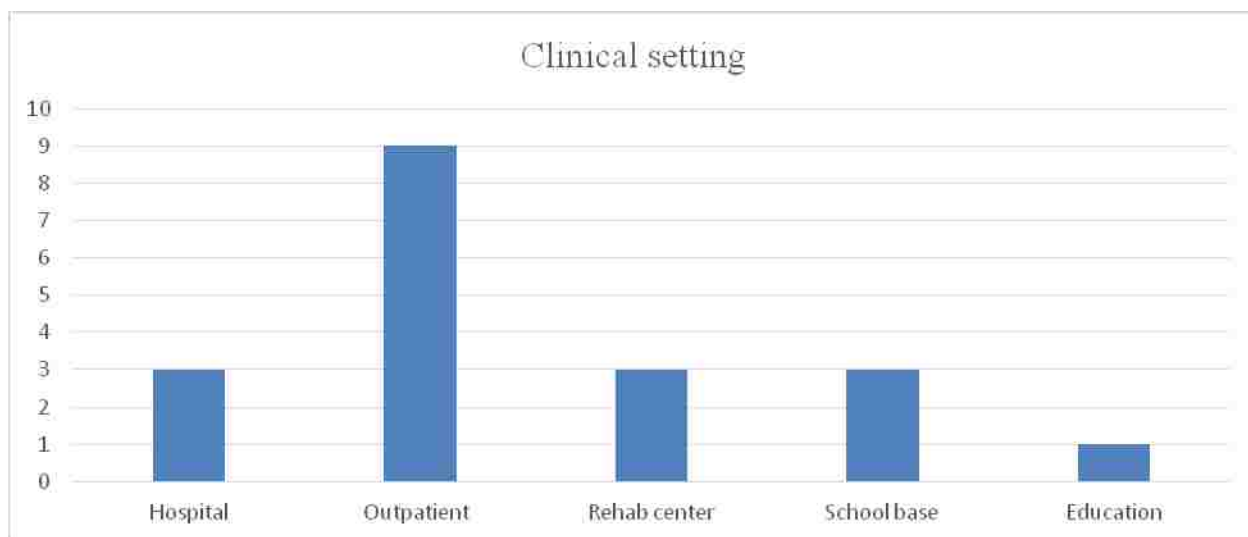
CIs were further described by educational background and clinical instructor training. The educational level was equally divided among those who had obtained entry level degrees and those who had post professional degrees (Table IV-11).

Table IV-11: CI Educational Level

Attribute	Description	
Highest educational degree (Frequency, %)	N = 10	100 %
<b>Entry level (n=10)</b>		
Entry level AA	2	20.00
Entry level BA/BS	4	40.00
Entry level Masters	1	10.00
Entry level DPT	3	30.00
<b>Post Professional (n=9)</b>	N=9	100 %
Post professional Masters	4	44.44
Post professional DPT	4	44.44
Academic Doctorate	1	11.11
<b>Credentialed Clinical Instructor</b>	<b>N=19</b>	
Yes	15	78.94
No	4	21.05
Credentialed Part One	15	78.94
Credentialed Part One and Two	3	20.00

Information regarding CIs clinical practice setting provided additional insight into the CIs characteristics (Figure IV-5). Most (47.3%, n=9) worked in an outpatient clinic setting. The majority of CIs (66.67%, n=16) treated 9-16 patients in an 8 hour day.

Figure IV-5: CI Clinical Setting



Part of the CI Profile survey contained the acquisition of information about their role in the clinic's physical therapy clinical education program for students. From the profile information it was noted that the most frequent (31.6%, n=6) number of students for the past two years 2012-2014 was in the 6-10 range (Table IV-12). "Other" answers ranged from 4 to over 40 students within the past two years at the clinic. The majority of CIs (84.2%, n=16) utilized the one to one ratio of student to CI for supervision (Table IV-13). In the "Other" answer CIs reported utilizing a 1 student 2 CIs. The majority of CIs (52.6%, n=10) supervise students for a 9-12 week clinical experience (Table IV-14).



Table IV-12: CI Total Students Years 2012-2014 Clinical Education Program

Students Per Year	Frequency	Percent	Valid Percent	Cumulative Percent
Other	2	10.5	10.5	10.5
1-5	2	10.5	10.5	21.1
6-10	6	31.6	31.6	52.6
7-15	4	21.1	21.1	73.7
21-25	5	26.3	26.3	100
Total	19	100	100	

Table IV-13: CI Clinic Student Supervision Model

Ratio Model	Frequency	Percent	Valid Percent	Cumulative Percent
Other	3	15.8	15.8	15.8
1 to 1	16	84.2	84.2	100
Total	19	100	100	

Table IV-14: CI Clinics Length of Clinical Experience

Length in Weeks of Clinical Experience	Frequency	Percent	Valid Percent	Cumulative Percent
Other	1	1.7	5.3	5.3
1-4	1	1.7	5.3	10.5
5-8	7	12.1	36.8	47.4
9-12	10	17.2	52.6	100
Total	19	100	100	

The final part of the CI Profile Survey contained information about the success of the clinical education program (Table IV-15). Upon review it was noted that 90 to 100% of students completed their clinical experiences on time (94.7%, n=18). It is uncommon for a student not finish a clinical rotation for other reasons than professionalism or academic reasons (15.8%, n=3). Additionally, many clinical instructors reported in the open ended question that they had

not encountered non- academic concerns for a reason why students did not complete clinical experiences. A small amount of students finished their clinical experience on time but require remediation (10.6%, n=2). It was rare for a student to require extra time and remediation to finish their clinical experience (5.3%, n=1). The percentage of students who were removed from clinic by the CCCE or ACCE/DCE was 0-10% (5.3%, n= 1). The percentage of changes in direct CI supervision due to CI-student personality was rare, 0-10% of the time (5.3%, n= 1).

Table IV-15: CI Clinical Education Program Outcomes

	Complete On Time		Not Complete Not Academic		Not Complete Academic		Complete on time remediation		Complete Extra Time and Remediation	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
90-100%	18	94.7					2	10.6		
89-80%										
79-70%	1	5.3								
69-60%										
10-0%			3	15.8	58	100			1	5.3
Other			16	84.2			17	89.4	18	94.7
Total	19	100	19	100	19	100	19	100	19	100

### CCCE Leadership Styles and Outcome Results

The MLQ Form-5X contained 45 question items within the construct of the full range of leadership theory model (Avolio & Bass, 2000; Avolio, Bass, & Jung, 1999). There are 36 questions designed to measure the independent variables of the three leadership styles including, Transformation leadership with five factors (Attributed Charisma, Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individual Consideration), Transactional leadership with three factors (Contingent Reward, Management-by-Exception Active, and Management-by-Exception Passive), Laissez-faire leadership and the dependent variables of

satisfaction, extra effort and effectiveness outcomes (Avolio & Bass, 2000; Avolio, Bass, & Jung, 1999). There are nine questions designed to measure leadership outcomes. The MLQ questions ask the respondents to indicate on a “Likert-style” scale of 0 = Not at All, 1 = Once in a While, 2 = Sometimes, 3 = Fairly Often, and 4 = Frequently or Always, to answer each of the 45 questions. The aggregate, mean scores are suggestive of how frequently CCCEs and CIs perceive themselves to demonstrate certain behaviors or characteristics of Transformational, Transactional and Laissez-faire leadership styles. Each of the returned MLQ instruments were completed by the respondents and all were used in the data analysis. The purpose of this section was to present the mean scores and standard deviations of the leadership factors within the three leadership styles, as well as the mean scores and standard deviations for the three leadership outcomes. Additionally, Cronbach’s alpha was computed to determine the reliability of measurement for the leadership behavior factors and leadership outcomes. Strong alpha coefficients indicates similar items have been answered the same way by the research participant (Munro, 2001). For the participants of the study, the coefficient alphas for the variables ranged from .65 to 1.0.

### Transformational Leadership Style

Transformational Leadership. The process in which “leaders and followers raise one another Leadership Styles to higher levels of motivation and morality” (Burns, 1978, p. 20). Transformational leadership, an independent variable, includes the dimensions of idealized influence (attributed), idealized influence (behavior), inspirational motivation, individual consideration, and intellectual stimulation.

Of the 58 CCCEs who self-rated their leadership style using the MLQ Form-5X, 100 % identified themselves as Transformational leaders. Ratings by the CCCEs who perceived

themselves as Transformational leaders had higher mean scores in four of the five leadership factors of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation and individual consideration than leadership behaviors of Transactional or Laissez-faire leadership styles. The mean, standard deviation, alpha coefficients are represented in Table IV-16. Overall mean Transformational leadership style self-report score for all CCCE respondents was 3.02, with a standard deviation of 0.36 (Table IV-16). This mean, categorized as often, indicates that CCCEs perceived themselves to demonstrate transformational behaviors regularly. The standard deviation is an indication of how closely the values are clustered around the mean. The coefficient alphas ranged from .65 to .82.

The mean score for the transformational behavioral factors was between two and four. A score of two represents display of the behavior “sometimes”, while three represents display of behavior “fairly often” and the score of four represents display of behavior “frequently if not always”. For CCCEs’ transformational behavioral factors the highest mean score (3.27) was individual consideration behavioral factor.

Table IV-16: CCCE MLQ Transformational Leadership Style and Behaviors Means, Standard Deviation, Alpha Scores

MLQ Scales (Number of items)	Mean	SD	Alpha Score
Transformational Leadership style (20)	3.02	.36	.76
Idealized Influence –Attributed (4)	2.40	.60	.76
Idealized Influence-Behavioral (4)	3.18	0.49	.80
Inspirational Motivation (4)	3.19	0.48	.81
Intellectual Stimulation (4)	3.07	0.44	.82
Individual Consideration/Simulation (4)	3.27	.52	.65

N= 58

Upon review of the data it demonstrates that as the transformational composite score increased the transactional composite score decreased. CCCEs who displayed Transformational

leadership styles had lower mean scores in the Transactional leadership factors except for one factor contingent reward.

### Transactional Leadership Style

Transactional leadership style is primarily characterized by behaviors of risk avoidance, close attention to time constraints and efficiency, maintenance of control through processes and operating within existing systems (Bass, 1997). Exchange of value occurs between the leader and the follower with the goal of moving both their agendas forward (Spinelli, 2006). The leader gets the job completed or the goal achieved, and the followers get promotions, money, or other benefits.

The mean Transactional leadership style self-report score for all CCCE respondents was 1.81, with a standard deviation of 0.56 (Table IV-17). This mean, categorized as sometimes, indicates that CCCEs perceived themselves to demonstrate transactional behaviors intermittently. The three leadership behavior factors according to Bass and Avolio (2004) associated with the Transactional leadership style include contingent reward, management by exception–active, and management by exception–passive. As indicated in Table IV-17 contingent reward had the highest mean score of 3.08. Also, CCCEs perceived themselves displaying use of management by exception (active) and management by exception (passive) leadership behavioral factors “once in a while” (1) to “sometimes” (2).

Table IV-17: CCCE's Transactional Leadership Style and Behaviors Means, Standard Deviations, and Alpha scores

MLQ Scales (Number of items)	Mean	SD	Alpha
Transactional Leadership Style (12)	1.81	.56	.74
Contingent Reward (4)	3.08	.54	.65
Management by Exception –Active (4)	1.42	.60	.77
Management by Exception-Passive (4)	.93	.56	.80

N= 58

### Laissez-faire Leadership Style

Laissez-faire leadership style is the leadership style is characterized by leaders who fail to follow up on requests for assistance, refrain from expressing views on issues of importance and neglect to accept responsibilities (Avolio & Bass, 1994). Of the 58 CCCEs who self-rated their leadership style using the MLQ Form -5X, none of them identified their leadership style as primarily Laissez-faire leaders. This leadership factor is viewed as passive, and ineffective and has only one leadership factor associated with it known as Laissez-faire (Avolio & Bass, 2000). The mean score as self-rated by CCCEs for Laissez-faire was 0.46, and the standard deviation was 0.37 (Table IV-18). This mean, categorized as not at all, indicates that CCCEs perceived themselves to not demonstrate Laissez-faire leadership behavior at any time. The low Laissez-faire leadership style observed in this study is not surprisingly seen as ineffective by Bass & Avolio (2004).

Table IV-18: CCCEs Laissez-faire Leadership Style and Behaviors Means, Standard Deviations, and Alpha scores

MLQ scales (Number of items)	Mean	SD	Alpha
Laissez-Faire Leadership Style (4)	0.46	0.37	.10
Laissez-Faire (4)	0.46	0.37	.10

N= 58

### CI Leadership Styles and Outcome Results

The mean, standard deviation, minimum, and maximum scores were calculated for all Transformational leadership behavioral factors, Transactional leadership behavioral factors, and the overall Transformational, Transactional, and Laissez-faire leadership scores (Table IV-19 through Table IV-21). Of the 19 CIs' who self-rated their leadership style using the MLQ Form-5X, 100 % identified themselves as Transformational leaders. Ratings by the CIs who perceived themselves as Transformational leaders had higher mean scores in the five leadership factors of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation and individual consideration than leadership behaviors of Transactional or Laissez-faire leadership styles. The Transformational leadership style and behaviors means, standard deviations, alpha coefficients are represented in Table IV-19. Overall mean Transformational leadership style self-report score for all CIs' respondents was 3.11, with a standard deviation of 0.62 (Table IV-19). This mean, categorized as often, indicates that CIs perceived themselves to demonstrate transformational behaviors regularly. The standard deviation is an indication of how closely the values are clustered around the mean. The coefficient alphas range from .89 to .94. As displayed in Table IV-19 Idealized Influence-Behavioral factor had the highest mean score of 3.21.

Table IV-19: CI MLQ Transformational Leadership Style and Behaviors Means, Standard Deviation, Alpha Scores

MLQ Scales (Number of items)	Mean	SD	Alpha Score
Transformational Leadership style (20)	3.11	.62	.92
Idealized Influence –Attributed (4)	2.94	.95	.89
Idealized Influence-Behavioral (4)	3.21	.71	.90
Inspirational Motivation (4)	3.19	.51	.88
Intellectual Stimulation (4)	2.97	.61	.80
Individual Consideration/Simulation(4)	3.23	.88	.94

N= 19

The data shows as the transformational composite score increases the transactional composite score decreases. CIs who displayed Transformational leadership styles had lower mean scores in the Transactional leadership factors.

The overall CIs' Transactional leadership mean was 1.65, with a standard deviation of 0.55. This mean, indicates that CIs perceived themselves to demonstrate transitional behaviors between once in a while to intermittently. As displayed in Table IV-20 contingent reward factor had the highest mean score 2.89. Also, CIs' perceived themselves demonstrating management by exception (active) and management by exception (passive) factors "once in a while"(1) to "sometimes" (2).

Table IV-20: CI Transactional Leadership Style and Behaviors Means, Standard Deviations, and Alpha scores

MLQ Scales (Number of items)	Mean	SD	Alpha Score
Transactional Leadership Style (12)	1.65	.55	.84
Contingent Reward (4)	2.89	.86	.86
Management by Exception –Active (4)	1.98	1.0	.84
Management by Exception-Passive (4)	1.07	.61	.83

N=19

The overall CIs' Laissez-faire mean was .52, with a standard deviation 0.60 (Table IV-21). This mean, categorized as not at all, indicates that CIs do not perceived themselves as demonstrate Laissez-faire leadership behavior factor.

Table IV-21: CI Laissez-faire leadership style and Behaviors Means, Standard deviations, and Alpha scores

MLQ scales (Number of items)	Mean	SD	Alpha
Laissez-Faire Leadership Style (4)	0.52	.60	1.0
Laissez-Faire (4)	0.52	0.60	1.0

N=19



## Leadership Outcomes

A section exists within the MLQ Form 5-X that is associated to leadership outcomes. The three leadership outcomes which are results of leadership styles are effectiveness, extra effort, and satisfaction (Avolio & Bass, 2004). Researchers contend that leadership outcomes such as extra effort; effectiveness and satisfaction are impacted negatively or positively by leadership styles (Avolio & Bass, 2004; Gellis, 2001; Kelloway & Barling, 2000). The results of the mean leadership outcome scores as attained through the MLQ Form 5-X for CCCEs and CIs are presented below and the data is summarized in Table IV-22 and Table IV-23.

The first leadership outcome is effectiveness, which refers to the leader's ability to lead the group effectively, meet others' job related needs, while also meeting organizational requirements and how well leaders represent their followers to authorities of a higher level (Avolio & Bass, 2004). The mean score as self-rated by CCCEs was 3.26 for effectiveness, with a standard deviation of 0.43 (Table IV-22). This mean score indicates that CCCEs perceive effectiveness, leadership outcomes occur frequently. These findings reveal that for CCCEs effectiveness, is the most closely link of the three leadership outcomes. The mean score as self-rated by CIs was 2.94 for effectiveness, with a standard deviation of 0.96 (Table IV-23). This mean score indicates that CIs perceive effectiveness, leadership outcomes occurs fairly often. These findings reveals that for CIs effectiveness, is least linked of the three leadership outcomes.

The second leadership outcome is extra effort, which focuses on the leader's ability to increase followers' desire to exceed expectations, succeed and encourage them to put forth additional effort to transcend (Avolio & Bass, 2004). The mean score as self-rated by CCCEs was 2.83 for extra effort, with a standard deviation of 0.57 (Table IV-22). This mean score

indicates that CCCEs perceive extra effort leadership outcomes occur frequently. These findings reveal that for CCCEs extra effort is slightly less linked of the three leadership outcomes. The mean score as self-rated by CIs was 2.70 for extra effort, with a standard deviation of 0.96 (Table IV-23). This mean score indicates that CIs perceive extra effort leadership outcomes occurs fairly often. These finding reveal that for CIs the extra effort is the second linked of the three leadership outcomes.

Satisfaction is the third leadership outcome and includes feelings of satisfaction and the perception that followers' needs are well represented because of the leaders and the leadership styles (Avolio & Bass, 2000). The mean score as self-rated by CCCEs was 3.25 for satisfaction, with a standard deviation of 0.53 (Table IV-22). This mean score indicates that CCCEs perceive satisfaction leadership outcomes occurs regularly to always. These finding reveals that for CCCEs satisfaction and effectiveness are closely/equally linked of the three leadership outcomes. The mean score as self-rated by CIs was 3.15 for satisfaction, with a standard deviation of 0.86 (Table IV-23). These finding reveals that for CIs satisfaction is the strongest linked of the three leadership outcomes.

Table IV-22: CCCE MLQ Leadership Outcomes Mean and Standard Deviations

MLQ Scales ( 9 Number of items)	Mean	SD
Effectiveness(4)	3.26	.43
Extra Effort (3)	2.83	0.57
Satisfaction (2)	3.25	0.53

N= 58

Table IV-23: CI MLQ Leadership Outcomes Mean and Standard Deviations

MLQ Scales ( 9 Number of items)	Mean	SD
Effectiveness(4)	2.94	.90
Extra Effort (3)	2.70	.96
Satisfaction (2)	3.15	.86

N=19

### Correlational Analysis

For this study correlational analysis was used to determine if there was a significant relationship between the variables in the study. The variables consisted of CCCEs' and CIs' leadership styles and leadership outcomes. Also, correlational analysis was used to determine if there was a significant relationship between CCCEs and CIs leadership style as measured by the MMLQ Form - 5X and several demographic characteristics. The leadership styles were identified as Transformational, Transactional, and Laissez-faire; the outcome factors were identified as extra effort, effectiveness, and satisfaction. The MLQ Form-5X variable dimensions were 0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, and 4 = frequently if not always. These dimensions measure the independent variables of leadership styles: Transformational, Transactional, and Laissez-faire. The specific numerical interpretation of the variables described the relationship as no relationship, a mild relationship, a moderate relationship, or a strong relationship to leadership styles and outcomes.

As noted in the literature, if the Pearson's correlation is less than 0.5, there is a mild relationship. If the relation is greater than 0.5 but less than 0.7, there is a moderate relationship. A Pearson's correlation of 0.7 to 1.0 indicates a strong relationship (Portney & Watkins, 2009). Pearson correlation coefficient values are used to describe the measure of association and help to determine the significance/strength of a linear relationship between the MLQ Form 5X

leadership behavioral factors and leadership outcomes. Linear regression and multiple regression techniques can be utilized to predict a relationship (Munro, 2001; Portney & Watkins, 2009). To determine if a relationship between the mean scores of Transformational leadership factors, Transactional leadership factors, with the outcome measures of effectiveness, efficiency and satisfaction the analysis of variance (ANOVA) tests are performed. ANOVA tests were also performed to determine if a relationship between mean leadership style scores with the demographic measures. (Munro, 2001; Portney & Watkins, 2009).

### Hypotheses testing

There were four hypotheses and four null hypotheses tested in this research study. Each hypothesis was analyzed using SPSS version 22.0 with results presented in related tables and charts. The data was collected from the completed MLQ Form-5X and the CCCE and CI Profile Surveys. From the data alluded to earlier all of the CCCEs and CIs participants perceive to demonstrate their leadership style as Transformational leadership style. Most CCCEs and CIs have been in there roles for an average of 13.5 years. The data also alluded that a majority of the clinical education programs at the clinic are successful with students complete their clinical experiences on time or on time with remediation. The hypotheses were tested at a level of 0.05 for significance.

#### Hypothesis 1

Hypothesis One: CCCE's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation,

individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction.

Null Hypothesis One: There is no positive relation of CCCE's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation related to outcomes of extra effort, effectiveness and satisfaction.

Analysis of Hypothesis 1. The null hypothesis can be rejected if there is a positive correlation between the CCCEs leadership outcomes of extra effort, effectiveness and satisfaction and leadership behavioral factor scores. To test hypothesis 1, nine Pearson r correlations were conducted with each of the leadership outcomes; extra effort, effectiveness and satisfaction with the nine MLQ Form -5X leadership behavioral factor scores of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration, intellectual stimulation, contingent reward, management by exception-active, management by exception-passive, and laissez-faire (Table IV-24).

Table IV-24: CCCE Pearson r Correlation between Extra Effort, Effectiveness, Satisfaction and MLQ Leadership Behaviors

MLQ leadership Behaviors	CCCEs Extra Effort	CCCE Effectiveness	CCCE Satisfaction
Idealized Influence-Attributed	.23	*.32	*.29
Idealized Influence-Behavioral	** .34	** .48	** .44
Individual Consideration	*.30	*.27	.24
Inspirational Motivation	*.31	** .54	** .51
Intellectual Stimulation	*.28	*.27	*.26
Contingent Reward	** .46	** .45	** .36
Management by Exception-Active	-.03	-1.0	-.10
Management by Exception-Passive	-.22	-.24	.04
Laissez-Faire Leadership	-.03	-.21	*-.26

N=58 \* p<.05 \*\*p<.01

A significant relationship exists between extra effort outcome, and five MLQ Form 5-X leadership behavior factors (Table IV-24). As extra effort scores increase, idealized influence-behavioral, inspirational motivation, individual consideration, intellectual stimulation, and contingent reward scores increase, while idealized influence attributed, management by exception-active, management by exception-passive, and laissez-faire scores decrease. A mild effect size was noted for all of the leadership behaviors considered transformational and one transactional behavior and extra effort. For the remaining two outcomes of effectiveness and satisfaction similar effect size was found except for one Transformational leadership behavior individual motivation which for both outcomes had a moderate effect size. Three Pearson r correlations were conducted on each outcome with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire Table IV-25.

Table IV-25: CCCE Pearson r Correlation between Extra Effort, Effectiveness, Satisfaction and MLQ Leadership Styles

MLQ leadership Behaviors	CCCEs Extra Effort	CCCE Effectiveness	CCCE Satisfaction
Transformational leadership	** .41	** .53	** .49
Transactional leadership	.09	.03	.14
Laissez-faire	-.03	-.21	-.26*

\*p <.05    \*\*p<.01

A significant relationship exists between extra effort and Transformational leadership style,  $r(58) = .41, p < .01$ . No significant relationship exists between extra effort and Transactional leadership style,  $r(58) = .09, p = .48$ . As extra effort scores increase transformational scores also decreased except for one behavior factor. One transactional behavioral factor, contingent reward, presented a significant relationship with extra effort,  $r(58) = .46, p < .01$ . No significant relationship exists among extra effort, and Laissez-faire leadership style,  $r(58) = -.03, p = .79$ . As extra effort scores increase, Laissez-faire leadership decrease. These findings are consistent with the findings of Bass and Avolio, 1997 and Spinelli (2006) research whereby positive correlations were reported between Transformational leadership behavior factors, as well as the Transactional leadership behavior factor contingent reward, while a negative correlations were found with the other Transactional leadership behavior factors, and Laissez-faire leadership behavior factors. Contingency reward is considered both a transformational and a transactional behavior and an effective means to motivate followers (Bass, Jung, Avolio & Berson, 2003; Goodwin, 2006). Goodwin, (2006) suggest contingent reward in the context of Transformational leadership, may result in the follower perceiving the interaction as establishing a shared vision among leader, organization and followers.

A positive relationship exists between CCCEs effectiveness outcome and five out of the five Transformational leadership behavior factors (Table IV-24). As effectiveness scores increase, idealized influence attributed, idealized influence-behavioral, inspirational motivation, individual consideration, intellectual stimulation, and contingent reward scores increase, management by exception-active, management by exception-passive, and laissez-faire scores decrease. Three Pearson  $r$  correlations were conducted on effectiveness with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire. A significant relationship exists between effectiveness and Transformational leadership style,  $r(58) = .53$ ,  $p < .01$ . No significant relationship exists between effectiveness and Transactional leadership style,  $r(58) = .03$ ,  $p = .77$ . As effectiveness scores increased Transactional scores decreased. No significant relationship exists between effectiveness, and Laissez-faire leadership style,  $r(58) = -.21$ ,  $p = .10$ . As effectiveness scores increase, Laissez-faire leadership decrease.

A significant relationship exists between satisfaction outcome and four out of five Transformational behavior factors (Table IV-24). As satisfaction scores increase, idealized influence attributed, idealized influence-behavioral, inspirational motivation, , intellectual stimulation, and contingent reward scores increase, while individual consideration, management by exception-active, management by exception-passive, and Laissez-faire scores decrease. Three Pearson  $r$  correlations were conducted on satisfaction with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire. A significant relationship exists between satisfaction and Transformational leadership style,  $r(58) = .49$ ,  $p < .01$ . No significant relationship exists between satisfaction and Transactional leadership style,  $r(58) = .14$ ,  $p = .27$ . As satisfaction scores increase transformational scores also increase. A significant



negative relationship exist among satisfaction, and Laissez-faire leadership style,  $r(58) = -.26$ ,  $p < .05$ . As satisfaction scores increase, Laissez-faire leadership decrease.

Multiple regression analyzes were conducted for each of the outcome criteria with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire. Linearity, homoscedasticity, and absence of multicollinearity assumptions were made. Extra effort was the first leadership outcome analyzed with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire. The model was significant,  $r^2 = .182$ ,  $F(3, 54) =$ ,  $p < .01$ ; and Transformational, Transactional, and Laissez-faire leadership style scores predicted 87% of the variance in extra effort scores. Also, the model was significant,  $r^2 = .310$ ,  $F(3, 54)$ ,  $p < .01$ ; and Transformational, Transactional, and Laissez-faire leadership style scores predicted 73% of the variance in effectiveness scores. Lastly, the model was significant,  $r^2 = .521$ ,  $F(3, 54)$ ,  $p < .01$ ; and Transformational, Transactional, and Laissez-faire leadership style scores predict 77% of the variance in satisfaction scores. Regression coefficients are presented in Table IV-26 through Table IV-28, where for every one unit increase in extra effort scores Transformational leadership scores, increase by .73, Transactional leadership style scores, decrease by .12, and Laissez-faire leadership style scores, increased by .13. One unit increase in effectiveness scores, Transformational leadership scores increase by .68, Transactional leadership style scores decreased -.14, and Laissez-faire leadership style scores decreased by -.06. The last outcome score is satisfaction. For every one unit increase in satisfaction, Transformational leadership scores increase by .65, Transactional leadership style scores increase by .07, and Laissez-faire leadership style scores decrease by -.25.

Table IV-26: Multiple Regression on Extra Effort Outcome and Three MLQ Leadership Styles of Transformational, Transactional and Laissez-faire of CCCEs

Predictors	B	SE	B	t	Significance
Transformational	.73	.22	.46	3.3	** .001
Transactional	-.12	.21	-.07	-.56	.57
Laissez-faire	.13	.20	-.08	.65	.51

\*\*p<.01

Table IV-27: Multiple Regression on Effectiveness Outcome and Three MLQ Leadership Styles of Transformational, Transactional and Laissez-faire of CCCEs

Predictors	B	SE	B	t	Significance
Transformational	.68	.45	.56	4.4	** .00
Transactional	-.14	.15	-.12	-9.9	.32
Laissez-faire	-.064	.15	-.05	-.44	.65

\*\*p<.01

Table IV-28: Multiple Regression on Satisfaction Outcome and Three MLQ Leadership Styles of Transformational, Transactional and Laissez-faire of CCCEs

Predictors	B	SE	$\beta$	t	Significance
Transformational	.65	.19	.44	3.3	.00*
Transactional	.07	.19	.05	.37	.70
Laissez-faire	-.25	.18	-.17	-1.3	.17

\*\*p<.01

Based on these finding hypotheses one which states, “CCCE’s perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction” was supported. Alternately, the null hypothesis one that stated, “there is no positive relation of CCCE’s perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized

consideration and intellectual stimulation related to outcomes of extra effort, effectiveness and satisfaction” was rejected.

The second hypothesis and null hypothesis are listed below.

Hypothesis Two: CI’s perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction.

Null Hypothesis Two: There is no positive relation of CI’s perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation related to outcomes of extra effort, effectiveness and satisfaction.

Analysis of Hypothesis 2. The null hypothesis can be rejected if there is a positive correlation between the CIs leadership outcomes of extra effort, effectiveness and satisfaction and leadership behavioral factor scores. To test hypothesis 2, nine Pearson r correlations were conducted each of the leadership outcomes; extra effort, effectiveness and satisfaction with the nine MLQ Form -5X leadership behavioral factor scores of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration, intellectual stimulation, contingent reward, management by exception-active, management by exception-passive, and laissez-faire (Table IV-29)

Table IV-29: CI Pearson r Correlation between Extra Effort, Effectiveness, Satisfaction and MLQ Leadership Behaviors

MLQ leadership Behaviors	CI Extra Effort	CI Effectiveness	CI Satisfaction
Idealized Influence-Attributed	*.56	** .74	** .63
Idealized Influence-Behavioral	** .72	** .73	** .85
Individual Consideration	** .71	** .86	** .88
Inspirational Motivation	** .73	** .73	** .77
Intellectual Stimulation	* .48	** .67	.39
Contingent Reward	* .52	* .55	** .66
Management by Exception-Active	.35	.41	** .60
Management by Exception-Passive	.15	-.00	.00
Laissez-Faire	-3.1	-4.0	-3.9

\*  $p < .05$  \*\*  $p < .01$

As presented in Table IV-29 significant relationships exist between extra effort and effectiveness outcomes and the same six MLQ Form 5-X leadership behavior factors. As extra effort and effectiveness scores increase, idealized influence attributed, idealized influence-behavioral, inspirational motivation, individual consideration, intellectual stimulation, and contingent reward scores increase, while management by exception-active, management by exception-passive, and laissez-faire scores decrease. A significant relationship exists between satisfaction outcome and six MLQ Form 5-X leadership behavior factors (Table IV-29). As satisfaction scores increase, idealized influence attributed, idealized influence-behavioral, inspirational motivation, individual consideration, contingent reward, and management by exception -active scores increase, while, intellectual stimulation, management by exception-passive, and Laissez-faire scores decrease. A moderate to strong effect size was found between all five Transformational leadership behaviors and one Transactional leadership behavior and all three outcomes. Three Pearson r correlations were conducted on extra effort, effectiveness, and satisfaction outcomes with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire (Table IV-30).

Table IV-30: CI Pearson r Correlation between Extra Effort, Effectiveness, Satisfaction and MLQ Leadership Styles

MLQ leadership Behaviors	CI Extra Effort	CI Effectiveness	CI Satisfaction
Transformational leadership	** .76	** .89	** .91
Transactional leadership	** .50	* .57	** .73
Laissez-faire	-.31	-.40	-.32

\*p <.05 \*\*p<.01

A significant relationship exists between CIs extra effort outcome and Transformational leadership style,  $r(19) = .76, p < .01$ . A significant relationship exists between extra effort and Transactional leadership style,  $r(19) = .50, p < .01$ . As extra effort scores increase transformational and transactional scores also increase. A significant relationship exists between CIs effectiveness outcome and Transformational leadership style,  $r(19) = .89, p < .01$ . A significant relationship exists between effectiveness and Transactional leadership style,  $r(19) = .57, p < .05$ . As effectiveness scores increase transformational and transactional scores also increase. A significant relationship exists between satisfaction and Transformational leadership style,  $r(19) = .91, p < .01$ . A significant relationship exists between satisfaction and Transactional leadership style,  $r(19) = .73, p < .01$ . As satisfaction scores increase transformational and transactional scores also increase.

Multiple regression analyzes were conducted for each of the outcome criteria with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire. Linearity, homoscedasticity, and absence of multicollinearity assumptions were made. Extra effort was the first leadership outcome analyzed with the three MLQ Form 5-X leadership styles of Transformational, Transactional, and Laissez-faire. The model was significant,  $r^2 = .589, F(3, 15), p < .01$ ; and Transformational, Transactional, and Laissez-faire leadership style scores predicted 95 % of the variance in extra effort scores. Also, the model was significant,  $r^2 = .827,$

F (3, 15),  $p < .01$ ; and Transformational, Transactional, and Laissez-faire leadership style scores 21% of the variance in effectiveness scores. Lastly, the model was significant,  $r^2 = .837$ , F (3, 15),  $p < .01$ ; and Transformational, Transactional, and Laissez-faire leadership style scores predict 92% of the variance in satisfaction scores. Regression coefficients are presented in Table IV-31 through Table IV-33, where for every one unit increase in extra effort scores Transformational leadership scores, increase by 1.3, Transactional leadership style scores, decrease by -.25, and Laissez-faire leadership style scores, decreased by -.02. One unit increase in effectiveness scores, Transformational leadership scores increase by 1.5, Transactional leadership style scores increased .18, and Laissez-faire leadership style scores decreased by -.09. The last outcome score is satisfaction. For every one unit increase in satisfaction, Transformational leadership scores increased by 1.1. Transactional leadership style scores increase by .18, and Laissez-faire leadership style scores decrease by -.05.

Table IV-31: Multiple Regression on Extra Effort and Three MLQ Leadership Styles of Transformational, Transactional and Laissez-faire of CIs

Predictors	B	SE	$\beta$	<i>t</i>	Significance
Transformational	1.3	.39	.86	3.3	**<.01
Transactional	-.25	.43	-.14	-.59	.56
Laissez-faire	-.02	.28	-.01	-.10	.92

\*\* $p < .01$

Table IV-32: Multiple Regression on Effectiveness and Three MLQ Leadership Styles of Transformational, Transactional and Laissez-faire of CIs

Predictors	B	SE	$\beta$	<i>t</i>	Significance
Transformational	1.5	.24	1.0	6.1	**<.01
Transactional	-.36	.26	-.22	-1.3	.19
Laissez-faire	-.09	.17	-.56	-.56	.58

\*\* $p < .01$

Table IV-33: Multiple Regression on Satisfaction and Three MLQ Leadership Styles of Transformational, Transactional and Laissez-faire of CIs

Predictors	B	SE	$\beta$	<i>t</i>	Significance
Transformational	1.1	.22	.80	4.9	**<.01
Transactional	.18	.24	.11	.74	.46
Laissez-faire	-.05	.16	-.04	-.35	.72

\*\*p<.01

Based on these finding hypotheses two which states, “CIs perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction” was supported.

Alternately, the null hypothesis two that stated, “there is no positive relation of CI’s perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation related to outcomes of extra effort, effectiveness and satisfaction” was rejected.

The third hypothesis and null hypothesis are identified as follows.

Hypothesis Three: There is a relationship between CCCEs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.

Null Hypothesis Three: There is no relationship between CCCEs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.

Analysis of Hypothesis: The null hypothesis can be rejected if there is a positive correlation between the CCCEs leadership style and demographic characteristics. To test hypothesis 3, nine Pearson r correlations were conducted on the demographic profile items with the nine MLQ Form -5X leadership behavioral factor scores of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration, intellectual stimulation, contingent reward, management by exception-active, management by exception-passive, and laissez-faire (Table IV-34).

Table IV-34: CCCE Correlation MLQ Leadership Behavior Factors and CCCE Demographic

Behavioral Factor	Pearson Correlation	Level of Significance
Individual Influence Attribute Clinical Years	.95	** .01
Individual Influence-Behavioral No leadership Course Degree	-.27	* .03
Student Not Complete	.28	* .03
Individual Consideration Age	.32	* .01
CCCE Yrs.	.42	* .00
PT. Yrs.	.37	** .00
Clinic Yrs.	.41	** .00
Ratio Model	-.26	* .04
Intellectual Stimulation CCCE Yrs.	.35	** .00
PT. Yrs.	.29	* .02
Clinic Yrs.	.30	* .02
Manage By Exception- Active Staff experience	*-.27	* .03
Manage By Exception-Passive CI Part One Training	-.27	* .03
N=58		$p < .05^*$ $p < .01^{**}$

As presented in Table IV-35 significant relationships exist between CCCE demographic items and six of MLQ Form 5-X leadership behavior factors. A moderate to strong effect size



was noted with three Transformational and one Transactional leadership behaviors and CCCE demographic items.

There was a strong effect size between one Transformational leadership behavior, individual influence attribute, and years of experience. No significant relationship existed between individual motivation, contingent reward and laissez- faire factors and demographic items. There was a statically significant correlation between years of experience as a therapist, years of experience as a CCCE, years at the clinic demographic items and individual influence attribute, individual motivation and intellectual stimulation Transformational leadership behavioral factors. There was a moderate effect size between staff experience demographic item and management by exception active leadership behavior, while there was a moderate effect size, negative relationship between CI training demographic item and management by exception- passive leadership behavior.

Table IV-36: CCCE Correlation Leadership Style and Demographic

	Transformational leadership
Demographic Factor	
CCCE Yrs.	** .33
Clinic Yrs.	** .37

$p < .05^*$     $p < .01^{**}$

A significant relationship exists between Transformational leadership style and several demographic items (Table IV-36). Transformational leadership scores increased with an increase score in years of experience as a CCCE, number of years at the clinic, and student's complete rotation on time with remediation items. No significant relationship was found to exist between Transformational and Laissez-faire leadership.

Based on these finding hypotheses three which states, “There is a relationship between CCCEs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics” was supported. Conversely, the null hypothesis which states, “There is no relationship between CCCEs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics”, is rejected.

The fourth hypothesis is identified as follows.

Hypothesis Four: There is a relationship between CIs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.

Null Hypothesis Four: There is no relationship between CIs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics.

Analysis of Hypothesis: The null hypothesis can be rejected if there is a positive correlation between the CIs leadership style and demographic characteristics. To test hypothesis 4, nine Pearson r correlations were conducted on each of the three sections of the demographic profile characteristics with the nine MLQ Form -5X leadership behavioral factor scores of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration, intellectual stimulation, contingent reward, management by exception-active, management by exception-passive, and laissez-faire (Table IV-37).

Table IV-37: CI Correlation MLQ Leadership Behavior Factors and CI Demographic

Behavioral Factor	Pearson Correlation	Level of Significance
Individual Influence Attribute		
Clinical Years	.56	*.05
Complete On Time	-.74	**<.01
Individual Influence-Behavioral		
Complete On Time	-.74	**<.01
Individual Consideration		
Complete On Time	-.88	**<.01
Individual Motivation		
Complete On Time	-.56	**<.01
Contingent Reward		
Complete On Time	-.52	*.02
Manage By Exception- Active		
Gender	-.46	*.04
CI Yrs.	-.50	*.02
CI Training	-.64	**<.01
Complete On Time	-.46	*.05
Laissez-faire		
Ethnicity	.48	*.05
No Complete Non Academic	.65	*.05
Remediation Complete On Time	.47	*.04
N= 19		$p<.05^*$ $p<.01^{**}$

As presented in Table IV-37 a significant relationship exists between 7 of the MLQ leadership behavior factors. No significant relationship exists between intellectual stimulation, and management by exception passive. There was a mild to moderate effect size noted. Students completing clinical experiences on time item was significant for all leadership behavior factors. Gender, years of experience and training as a clinical instructor were also significant items for management by exception leadership factor. Ethnicity, remediation and completing rotation on time, and no completion of clinical experience no academic concerns were significant items for Laissez-faire leadership behavior factor.

Table IV-38: CI Correlation Leadership Style and Demographic

Transformational leadership		Level of Significance	Transactional leadership	Level of Significance
Demographic Factor				
Complete On Time	-.82	**<.01	-.57	**<.01
Credentialed Training Part One			-.57	**<.01

*p*<.01

Based on these findings hypotheses four which states, “There is a relationship between CIs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics”, was supported. Conversely, the null hypothesis which states, “There is no relationship between CIs’ leadership styles as measured by the Multifactor Leadership Questionnaire Form 5X-Short and several demographic characteristics” is rejected.

## CHAPTER V

### Discussion

#### General Discussion of Study Findings

While much is understood about leadership from work done in the business arena, many unanswered questions still remain especially in the area of healthcare. To date the majority of what is known about leadership in healthcare comes from studies conducted in the nursing profession or the high executive levels within healthcare organizations. Thus, leaving allied healthcare and leadership practices a fruitful arena for research to emerge. As we seek to understand leadership in healthcare more fully we look to the different types of leadership theories presented in the literature. Transformational leadership theory as posited by Bass (1985; Avolio & Bass; 2000) consists of three second order domains that include transformational, transactional and laissez-faire. This is referred to as the full range of individual leadership styles under the Transformational leadership theory (Bass, 1990). Transformational and some Transactional leadership style behaviors are seen as positive with effective leaders displaying both behavioral types (Avolio & Bass, 2000). While there are several studies in healthcare that have used this framework to examine leadership there are no published studies that have examined the leadership styles implemented in physical therapy clinical education and its relationship on outcomes. Most published studies on physical therapy clinical education are from a student's perspective or only examine teaching characteristics of CIs.

There are several published studies that have examined a variety of facets of clinical instructors and clinical education however, there are no published studies in physical therapy that

have examined variables contributing to the role of the CCCE. Specifically, there are no published studies that address the CCCE or CI leadership style and demographic characteristics, such as level of degree, level of degree and leadership training, length of time in position, setting, their clinics' clinical education program success, etc. This is the first study to address the gap of knowledge by identifying the leadership styles of CCCEs and CIs, exam if a relationship exists with leadership style and outcomes that may affect clinic's clinical education programs. Lastly, this study examined if there is a relationship between CCCEs and CIs leadership style and demographic characteristics. The findings from this work aide in addressing this gap of knowledge in physical therapist clinical education.

A wide range of variables that effect student learning are influenced directly by the effects of leadership (Leithwood & Levin, 2010). Leadership is the ability to influence others (Northouse, 2007; Yuki, 2002). The process of leading will depend on the leadership style (Hill 2007). The Full Range Leadership style known as Transformational leadership posited by Bass and Avolio, (2000), was the leadership framework for this study. Transformational leadership consists of three second order domains that include Transformational, Transactional and Laissez-faire. CCCE and CI leadership styles were determined by the MLQ Form 5X instrument. The MLQ Form 5X compliments the Full Range Leadership style of Transformational leadership theory and is supported in the literature as a valid and reliable tool (Avolio & Bass, 2004).

Bass and Avolio (1985) are careful to point out that self-ratings tend to be higher and also more consistent than ratings by others, and recommend that the former be used for research purposes. Although the reliability of self-ratings is lower than ratings by subordinates and coworkers, they are higher in the MLQ than in other measures of leadership such as the Leader

Behavior Analysis II (McNeely, 1994). This study explored the nature of the relationship of CCCE and CI leadership styles with leadership outcomes.

Findings of this study suggest that both CCCEs and CIs perceive themselves as implementing Transformational leadership style on a regular basis. Additionally, they perceive themselves as being effective in their clinical education role, are able to influence follows to provide extra effort, and that followers are satisfied with their current leadership behaviors/styles. CCCEs and CIs perceive themselves as displaying Transformational leadership behavioral factors in most areas except for one leadership behavior factor that can be considered both a Transactional and Transformational leadership behavior factor. No CCCE or CI perceived themselves as displaying Laissez-faire leadership behavioral factor.

One of the major findings from this study is that both the CCEs and CIs consistently score higher on Transformational leadership behaviors as measured by the MLQ Form 5-X. Overall, CCCEs perceive themselves as demonstrating Transformational leadership style on a regular basis, Transactional leadership style occasionally and Laissez-faire not at all. Overall, CIs perceive themselves as demonstrating Transformational leadership style on a regular basis, Transactional leadership style occasionally, with the exception of contingent reward behavior demonstrated on a regular basis, and Laissez-faire not at all. These finding are consistent with previous studies conducted by Bass (1985), Bass and Avolio, (1997) and Spinelli, (2006).

Consistent with the research literature on leadership styles in other fields the finding in this study found a positive relationship between Transformational leadership behaviors and effectiveness of leadership outcomes. For both CCCEs and CIs all three leadership outcomes that correlate with Transformational leadership were statistically significant. Values for CCCEs

were .41 extra effort, .53 effectiveness, .49 satisfaction. Values for CIs were .76 extra effort, .89 effectiveness, and .91 satisfaction. Additionally, statistically significant, outcomes were noted for CI Transactional leadership, with .50 extra effort, .57 effectiveness. Significant findings from the present study indicate that a relationship does exist for the leadership styles of CCCEs and CIs and leadership outcomes. Clinical educators have been challenged with extraordinary changes in recent years both within their clinical practice as a clinician, and increase demands/expectations of clinical education program outcomes. In their roles as leaders CCCEs and CIs must be the change agent to adapt to these changes and meet the mission of preparing student for entry level practice. Implementing Transformational leadership behaviors as a strategy to be the change agent and be an effective approach to meeting the outcomes of clinical education programs is a valuable tool for CCCEs and CIs. The findings in this study support the finding conducted in other allied health professionals and educational studies for achieving organizational goals through the implementation of Bass theory of full range transformational leadership style (Casida & Zipp, 2007; Firth-Cozen & Mowbay, 2001; Gellis, 2001; Leithwood, & Levin, 2010).

#### Significant Findings on the Relationship of CCCEs Leadership Styles and Outcomes

Finding of the present study support hypothesis (H1) that a CCCE's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation. While a statistical significant relationship is found when all the MLQ behavioral



factors are correlated, it is the Transformational leadership behavioral factors coefficient that was statistically significant at the .01 level. As predicted, correlation between the global Transformational leadership score measured by the MLQ Form 5-X and leadership outcomes were significant higher than the correlations among Transactional, Laissez-faire leadership behaviors factors and leadership outcomes. The highest correlation was the Transformational leadership score and effectiveness outcome. No statistically significance was found with Transactional or Laissez-faire leadership style.

#### Significant Findings on the Relationship of CIs Leadership Styles and Outcomes

Finding of the present study support hypothesis (H2) that a CI's perception of their leadership styles as determined by the Multifactor Leadership Questionnaire Form 5X-Short including Transformational leadership including idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individualized consideration and intellectual stimulation are positively related to outcomes of extra effort, effectiveness and satisfaction. While a statistical significant relationship is found when all the MLQ behavioral factors are correlated, it is the Transformational leadership behavioral factors coefficient that was statistically significant at the .001 level. As predicted, correlation between the global Transformational leadership score measured by the MLQ Form 5-X and leadership outcomes were significant higher than the correlations among Transactional, Laissez-faire leadership behaviors factors and leadership outcomes. The highest correlation was the Transformational leadership score and satisfaction outcome.

Scores for CCCEs and CIs were high for contingent reward with a mean score of 3.08 and 2.89. Contingency reward is considered both a transformational and a transactional behavior and an effective means to motivate followers (Bass, Jung, Avoilio & Berson, 2003; Goodwin, 2006). Goodwin (2006) suggest contingent reward in the context of Transformational leadership, may result in the follower perceiving the interaction as establishing a shared vision among leader, organization and followers.

The statistically significant positive correlations reported in this study between Transformational leadership style behavior factors of idealized influence-attributed, idealized influence-behavioral, inspirational motivation, individual consideration and intellectual stimulation, and the correlations between Transformational leadership behavior factors and the one Transactional, contingency reward leadership behavior and outcomes for hypothesis one and two in the present study support the finding of Snodgrass, et al., (2008). Snodgrass, et al., (2008) study involved 73 occupational therapists, from a random sample chosen from the Tennessee Occupational Therapy Association, rating their rehabilitation manager using the MLQ Form 5-X based on Transformational leadership. In both Snodgrass, et al., (2008) and this study the findings suggest a positive association with Transformational leadership style and all three leadership outcomes of extra effort, effectiveness and job satisfaction and with Transactional leadership style for contingent reward. Not surprising a negative association of Laissez-faire and management by exception Transactional style was found with all three leadership outcomes. Implications for these findings include support of Transformational leadership style to be practiced in clinical education if positive outcomes such as extra effort, effectiveness and satisfaction are desired.

The findings of this study support previously published studies in healthcare that have examined Transformational leadership style using the MLQ Form 5-X as the instrument. Gellis (2001) evaluated the Transformational leadership model using the MLQ Form 5-X with 187 clinical social workers in a hospital setting. Gellis (2001) findings revealed that Transformational leadership positively impacted the perceived extra effort, effectiveness and satisfaction outcome. Additionally, finding of Gellis, (2001) are also supported by this study as both report statistically significant negative correlation with Transactional leadership style behaviors of management by exception and the Laissez-faire leadership style.

Findings of Spinelli (2006) are also supported by this study as both report statistically significant positive correlations between perceived Transformational leadership behaviors and leadership outcomes using the Transformational leadership theory of Bass. The MLQ Form 5-X was completed by 101 subordinates who rated their health administrator's leadership behaviors and outcomes. The results further support the application of blending Transformational and Transactional contingent reward leadership for increasing followers' trust, their desire to exert extra effort, and increased job satisfaction. Not surprising, the relationship between Transformational leadership style and leadership outcomes were positive and stronger than Transactional or Laissez-faire leadership styles. The results also revealed that Transactional leadership style showed a stronger positive relationship with leadership outcomes than the Laissez-faire leadership style.

Lastly, the findings for CIs of this study support the finding of Byman, (1992) and Bass & Avolio, (1994) who suggest that positive effects are most likely related to individual influence attribute and individual motivation. For CCCEs only individual motivation was supported. Additionally the next most important factors were individual consideration, intellectual

stimulation, and contingent reward. Not identified as statistically significant in this study however, similar finding of management by exception passive was found to be slightly related to outcomes. Consistent with Bryman (1992) and Bass & Avolio, (1994) Laissez-faire leadership style most often had a negative relationship to leadership outcomes.

Findings of the present study support that there is a relationship between CCCEs' leadership styles as measured by the Leadership Questionnaire Form 5X-Short and several demographic characteristics. Additionally, the findings support that there is a relationship between CIs' leadership styles as measured by the Leadership Questionnaire Form 5X-Short and several demographic characteristics. When turning to the literature to review previous studies that have examined different characteristics and qualifications of clinical educators it was discovered while there are some studies that have been conducted examining different characteristics and qualifications of CIs, there have been no studies conducted on the CCCEs. Finding of this study suggest that a large majority of CCCEs and CIs are credentialed clinical instructors through the APTA and use a one to one student supervision ratio model. The high percent of CIs and CCCEs in this study who reported completing the APTA clinical instructor credentialing program is not consist with the finding of Buccieri, Schultze, et.al., (2006); Hughes, et al., (2010); Wetherbee, Nordrum, et al., (2008), who reported less than 50% of CI participants were credentialed. Morren (2008) finding suggest that the APTA credentialing had a strong significant positive association between student's CI PT Student Evaluation and CI characteristics. The CCCE and CI demographic items of, age, years of experience as a therapist, years of experience as a clinical educator, and length of employment at a clinic had a statistically significant correlation with several Transformational leadership behaviors. There was a significant positive correlation between CCCEs' length of experience as a CCCE and years in the

clinic with Transformational leadership. Additionally, CIs' length of employment at the clinic had a moderately positive correlation with, individual influence active, Transformational leadership behavior. The findings of this study support the findings of previous studies by of Buccieri, Schultze, et. al., (2006); Hughes, et al., (2010); Wetherbee, Nordrum, et al., (2008) that clinical education and clinical educator self-reported and student reported effectiveness is positively affected by age, years of experience as a therapist, years of experience as a clinical educator, and length of employment at a clinic. Also, Bucciere, Schultze, et al., (2006) reported the number of students supervised in the past two years was positively correlated to effectiveness however, for this study no significant correlation was found for CCCEs or CIs with the number of students supervised over two years.

Although not statistically significant, it is interesting to note for both CCCEs and CIs to report it was rare for there to be a change in supervision due to CI-student personality fit. Several respondents reported lack of personality fit was not significant grounds for changing supervision. However, Rayermann (2003) findings suggest that for a positive clinical experience students who require structure and direct supervision, be placed with a nurse preceptor who has a directive or supportive leadership style. The results also suggest that when student's skill sets do not match the preceptor's leadership style the potential exists for a negative clinical experience for both individuals. Similar finding were reported by Giberson, Bleck, Pinertion, (2008) that suggested increase student satisfaction with clinical experience when organization fit and demographics were similar. The results of this study do not support Rayemann finding with CCCEs and CIs reporting 90-100% completion success with no changes made due to lack of fit between a CI and student relationship.

Also, not statistically significant, nevertheless interesting was the large percent of CCCEs who reported some type of leadership training. This finding does not support Cangelosi, (2009) or Smedly & Race, (2010) finding of insufficient leadership training for clinical educators. Further, examination based on entry level and post professional degree revealed where clinical educators received training was very different. Participants with entry level degrees received leadership training through work. Participants with post professional degrees reported leadership training occurred through outside vendors. Both groups reported a small percent seek training through the APTA. Wylies and Gallagher 2009 finding suggested professionals will use leadership skills if trained properly.

The strong negative correlation of CIs Transformational leadership and the moderate negative correlation of Transactional leadership and the demographic item complete on time was not expected, since a high percent of CIs reported students complete their clinical experiences on time. Kelly (2007) finding suggest that open communication, facilitation of clinical reasoning, supportive environment, adapt experience to student needs and open communication are all characteristics of what is an exemplary clinical instructors. The findings of Kelly's study are parallel with the all of behaviors of transformational behaviors which is considered desirable.

Furthermore, both CCCEs and CIs findings suggest that 90-100% of students complete their clinical experiences on time or on time with a remediation plan. It was rare for a student to be removed from clinic by the ACCE or to not complete the clinic experience due to other reasons not related to professionalism or knowledge base.

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demographic characteristics. Findings of the present study support that there is a relationship between CIs' leadership styles as measured by the Leadership Questionnaire Form 5X-Short and several demographic characteristics. When turning to the literature to review previous studies that have examined different characteristics and qualifications of clinical educators it was discovered while there are some studies that have been conducted examining different characteristics and qualifications of CIs, yet there have been no studies conducted on the CCCEs. Finding of this study suggest that a large majority of CCCEs and CIs are credentialed clinical instructors through the APTA and use a one to one student supervision ratio model. The high percent of CIs and CCCEs in this study who reported completing the APTA clinical instructor credentialing program is not consist with the finding of Buccieri, Schultze, et.al., (2006); Hughes, et al., (2010); Wetherbee, Nordrum, et al., (2008), who reported less than 50% of CI participants were credentialed. Morren (2008) finding suggest that the APTA credentialing had a strong significant positive association between student's CI PT Student Evaluation and CI Characteristics. The CCCE and CI demographic items of, age, years of experience as a therapist, years of experience as a clinical educator, and length of employment at a clinic had a statistically significant correlation with several Transformational leadership behaviors. There was a significant positive correlation between CCCEs' length of experience as a CCCE and years in the clinic with Transformational leadership. Additionally, CIs' length of employment at the clinic had a moderately positive correlation with, individual influence active, transformational leadership behavior. The findings of this study support the findings of previous studies by of Buccieri, Schultze, et. al., (2006); Hughes, et al., (2010); Wetherbee, Nordrum, et al., (2008) that clinical education and clinical educator self-reported and student reported effectiveness is positively affected by age, years of experience as a therapist, years of experience as a clinical

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#### Limitations

While the present study builds on previous research findings, the author recognizes as with all research there are limitations. The specific study limitations include design choice, data collection method, and sample population.

A limitation in the methodology of this study was the correlational design. While a correlation may show a direct relationship between two factors, it cannot prove or mean causation (Portney and Watkins, 2009). While the findings of this study demonstrate the empirical evidence supporting a relationship between leadership style and outcomes of CCCEs and CIs one can only interpret the findings as association.

Data collection methods for this study were limited. Surveys are thought to be impersonal and the researcher may not receive the entire account or careful feedback (Neuman, 2002). This study only used the self-rater form of the MLQ Form 5-X for both CCCEs and CIs with no follower rater forms to examine if what CCCEs and CIs perceive as their leadership style

is perceived by their followers. Additionally, self-report questionnaires run the risk of response bias due to the respondents reporting what they think the researcher is looking for rather than what they think. Another limitation was the extraneous variables such personal stressors could have caused the subject's answers to be skewed. The environment has been found to exert a powerful influence on emotions and behavior (Portney & Watkins, 2009). The researcher was not able to control the environmental context of the study due to the manner in which the data were collected, however, randomization partially controlled for this limitation. The use of two lengthy questionnaires totaling of 83 questions was a limitation. The lengthy questionnaires (response burden) could have CCCE or CI answers to vary due to time constraints, or the unwillingness of the CCCE or CI to read each question before they responded.

The Demographic Profile questionnaire for both the CCCE and the CI had limitations. The structure of a few questions for percentage of students complete their clinical experiences should have clarified of the students who were having difficulty what percentage of students completed on time etc. Additionally, the CI Demographic Profile questionnaire should have included questions about their education in leadership training within the degree course work or through professional development courses. Lastly, this study only utilized the rater form of the MLQ Form-5X with no follower form completed by followers of the CCCE or CI.

A random sample, solicited through the APTA Education Section, Clinical Education SIG, APTA Clinical Education Consortium, was utilized for the study which strengthened the internal validity by avoiding sample bias which can occur when using a sample of convenience. However, a limiting factor was that it was unknown as to the number of members who were solicited through the APTA Education Section, Clinical Education SIG, APTA Clinical Education Consortium how many of them were CCCEs or CIs as this data type is not collected

by the APTA. The inclusion criteria of having to be a CCCE or CI within the last year was also a limiting factor as it eliminated other clinicians who are CCCEs and CIs but just not recently. Additionally, if a clinical site contact list was obtained from PT schools and used as a method to contact clinical instructors this would have ensured that all individuals contacted were active CCCEs or CIs.

Finally, a limitation also exists with regard to the external validity. Findings of this study may not be generalized clinical educators outside physical therapy. To overcome this limitation an option would be to include other allied health professionals, such as occupation therapist, in a similar study.

#### Future Research

This study only examined the raters' perception of leadership style and outcomes and did not examine the followers' perception. A future study to address this involves examining leadership style ratings by the leader and the follower for the Transformational and Transactional leadership styles of CCCE and the CI. This would include CCCE and the CI completing the MLQ Form 5-X as a rater and physical therapy students completing the MLQ Form 5-X as a follower.

Future research involving a qualitative study should be undertaken to explore influences of leadership styles and outcomes of ACCEs as perceived by CCCEs leaders and CI followers as qualitative data will offer additional insight that will enable one to look at this issues form a triangulated perspective. Stroschein, Hagler, & May, (2002) reported an absence of common philosophy for clinical education may contribute to an inconsistent approach to clinical supervision. Students' perceptions of physical therapy clinical education when compared with

those of clinical educators and with academic faculty differed in some of their perceptions of appropriate roles, power sharing in the supervisory relationship and of approaches to facilitating learning.

Additionally, another future study can be directed at comparing and contrasting ACCE, CCCE and CI outcomes before and after training in Transformational leadership. The individuals would use the MLQ Form 5-X as the instrument. ACCEs would be rated by CCCEs and CCCEs would be rated by CIs. Cross (1995) reported if there was an adopted widely shared philosophy of clinical education with implementation of formal educational practices around the preparation of clinicians it would ensure a process of quality preparing clinician for the role of clinical educators.

Strohschein, Hagler, et al., (2002) suggest that consist and effective approach to clinical education requires a guiding philosophy that is clearly communicated, understood, and embrace by the all the groups and individuals involved in the clinical education process. A future study could be conducted using the CI and the student as the two groups. The CI would complete the MLQ Form 5-X as a leader and the student would complete the MLQ Form 5-X as the follower. This information could support the findings of Buccieri, Schultze, et al., (2006) that suggest effective CIs provide timely feedback, clearly explain the goals of the clinical education program, integrates students' learning style and provide constructive formal evaluation. These characteristics are consistent with several MLQ Form-5X leadership behavior factors.

Taken together, the results of this study can help programs address the CAPTE criteria "How do the program assess the effectiveness of its clinical educators?" Additionally, it may identify how well the vision and mission of the clinics' clinical education program is being

achieved based on the leadership outcome scores. These findings may also serve as the ground work for a similar study among other allied health care professional clinical educators, such as occupational therapist, speech therapist and nursing. Clinicians in these disciplines who serve as clinical educators complete the MLQ Form 5-X. This type of study would broaden the generalized of the results of this present study.

## CHAPTER VI

### Conclusions

The results of this study support the current thinking that full range Transformational leadership as compared with Transactional leadership has greater impact on motivation, satisfaction, efficiency in health care and the educational arenas (Casida & Pinto-Zipp 2008; Firth-Cozens & Mowbray, 2001; Gellis, 2001; Leithwood, & Levin, 2010). Findings from this study support the earlier findings of Thyer's (2003) that Transactional leadership is commonly found in hospitals and other bureaucratic organizations for the contingent reward behavior.

This study identified current leadership styles of CCCEs and CIs and systematically explored the relationship between leadership styles of CCCEs and CIs and leadership outcomes consistent with Transformational leadership in physical therapy clinical education. This research was built on previous research and contributes new knowledge about the leadership style as perceived by CCCEs and CIs in physical therapy clinical education. The findings of this study offer support for the hypothesized positive relationship between Transformational leadership and leadership outcomes of extra effort, effectiveness, and satisfaction.

Several implications emerge from these findings that may have application to areas of clinical education, education and research. For CCCEs the Transformational model could be a framework upon which all clinics could base their clinical education programs. Additionally, the model could be a framework upon which all CIs base clinical education decisions upon. CCCEs and CIs could demonstrate Transformational leadership through their own behaviors, values and transmission of their values to the staff and students. Some examples of behavior are: providing

a vision for the future of the clinical education program that is communicated to all staff, displaying a positive outlook for having students, focusing on the benefits of having students, and instilling a sense of pride in the educational process for preparing future clinicians in the physical therapy profession.

CCCEs can encourage the creativity of CIs and CIs can encourage the creativity of their students by soliciting information from them on ideas on how to improve the educational process. The use of input for decision making, group goal setting, and a problem solving team approach can facilitate an individual to move beyond individual goals to the goals of the organization, and increase overall effectiveness of the organization (Bass & Avolio, 1994). CCCEs can mentor CIs to implement Transformational leadership through staff development activities either through one on one mentoring or group setting.

While Transformational leadership style is preferred there is the one leadership behavior “contingent reward of transactional style” that has been recognized as active and positive for leadership behavior. Although clinicians do not receive a monetary reward for serving in the role of CCCE or CI other forms of recognition can be just as important, and meaningful. For example, personal notes recognizing a job well done from ACCEs to their CCCEs and CIs or CCCEs to their clinicians who serve as CIs and CIs to their students. Academic institutions can have recognition events to thank CCCEs and CIs for their contribution to the institution’s goal of graduating students who are ready to enter the field of physical therapy. A strong relationship between academic institute, the clinic and all three clinical educators providing environments that are transformational may encourage more clinician to step forward and put forth the additional effort for taking on the role as a clinical educator. A Transformational leadership style in the clinical setting would encourage clinicians to make the commitment to clinical education

as a CCCE or CI because they would understand the values and vision of physical therapy clinical education program.

Transformational leaders can be developed throughout physical therapy clinical education. Programs have been developed and have shown to be successful in training attendees to implement Transformational leadership behaviors (Snodgrass, et al., 2008). Currently, there is limited leadership training twice a year through the APTA Administration section known as LAMP or through the Education section for academic educators known as ELI, which takes a new cohort only once a year. This research recommends clinic settings and the APTA consider establishing tailored leadership development program specifically for the individuals in the clinical setting, specifically the CCCE and CI who are pivotal in the success of students in clinical education physical therapy. Specific emphasis on Bass and Avolio's Transformational Full Range leadership style can allow for the development of the necessary skill set to transition from clinician into clinical educators and leaders. Thereby, potentially empowering clinicians to be more effective in the development and implementation of the clinic's clinical education program and the success of its strategic plan. As a profession we must realize that professional development offers a continuum for the growth of future leaders, while also offering programmatic tools for recruitment and retention of future leaders in clinical education the ACCE, CCCE and the CI.

The ACCE role is to ensure physical therapy students are placed in clinical settings that will foster the growth and development of professional behavior and the skill sets that will best prepare them for entrance into the field as a novice clinician. The clinician who becomes a CI goal is to provide an environment that encourages the opportunity for students to develop the skill set and abilities necessary for entry into clinical practice. The CCCE goal is to ensure



clinicians, in the role of CI are satisfied, and are committed to providing extra effort and are effective in their role as a CI. The collaborative goal of all three clinical educators, the ACCE, CCCE and the CI, is to provide a clinical setting with an environment that allows students to feel they are satisfied with their experience, have educators who are effective and efficient in their role for achieving the overall goal of clinical education which is to prepare students as contemporary clinicians entering into the physical therapy for professional practice in physical therapy.

Transformational leaders have the ability of fostering rapid change by maintaining as much of the diversity found in individuals as possible as well as molding those diverse values and customs into a new positive socio-culture in fervent periods (Avolio, 1999; Bass, 1998; Yukl, 2006). Considering today's healthcare environment, when more work must be accomplished with fewer resources, Transformational leadership would be beneficial to physical therapy clinical education by increasing clinicians working in the field willingness to exert extra effort by becoming a clinical educator while transcending their goals beyond themselves.

Until this study there were no published studies that examined the importance of leadership styles and its influence on clinical education outcomes in PT. Given that, APTA recognizes both the CCCE and the CI as leaders, the information gained from this study offers insight in to the self-rated perceived leadership styles and outcomes of clinical educators. The results of this study also provide a clearer understanding of the current status in clinical education for perceived leadership style implements and its outcomes. Additionally, this study provides a clearer understanding of the characteristics of CCCEs, CIs, and clinical education program that foster successful student outcomes. While there remains many needs in clinical education to be addressed, leadership training may be one approach to meet these needs. Further

research is needed to establish leadership parameters, understand leadership training needs and leadership effectiveness. The MLQ Form 5-X is a reliable and valid instrument that could be used in measuring the leadership relationships that exist in clinical education that impact student learning. Strengthening the relationship among clinical educators is essential to improving clinical education. It is incumbent on academic programs to facilitate the professional development of clinical educators and to help establish a full understanding of what constitutes success for students in clinical education.

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## APPENDICES

### Appendix A (Word Definitions)

ACCE: Academic Coordinator/Director of Clinical education (ACCE or DCE) is:

The individual responsible for managing and coordinating the clinical education program at the academic institution, including the facilitating clinical site and clinical faculty development.

This person is also responsible for coordinating student placements, with clinical educators about academic program and student performance, and maintaining current on clinical sites.

APTA: American Physical Therapy Association is the professional organization for physical therapists and physical therapist assistants.

CAPTE: Commission American Physical Therapy Education is a collective group of stakeholders' who establish minimal criteria for all aspects of the physical therapy educational programs including the clinical education portion.

CCCE: Clinical Coordinators of Clinical Education are individuals who are responsible for overseeing and directing assignments and learning activities during student's clinical education experiences.

Charisma: The leader is expected to instill a sense of value, respect, and pride and to articulate a vision.

CI: Clinical Instructor is a professional who directly supervise student's daily activities during clinical experiences are referred to as clinical instructors

Contingent Reward: The leader contracts exchange of rewards for effort, promises rewards for good performance, and recognizes accomplishments.

**Extra Effort:** Individuals have a heightened motivation to succeed. They attempt to surpass their own and the group's performance expectations.

**Effectiveness:** The unit composed of the leader and the leader's group, meets, and in many cases, surpasses its goals.

**Individual Attention:** The leader pays attention to followers' needs and assigns meaningful projects so that followers grow personally.

**Intellectual Stimulation:** The leader helps promote followers' intelligence, rationality, and creative problem solving.

**Laissez-faire leadership:** The leader is passive in their approach providing little or no direction to followers.

**Management by Exception:** The leader permits followers to work on the task and does not intervene unless goals are not being accomplished in a reasonable time and at a reasonable cost.

**Satisfaction:** Individuals are content with the leader and the leader's methods and feel increased pride in individual contributions to group accomplishment. They feel their work-related needs are well represented and satisfactorily met.

**Transactional leadership:** The leader is not concerned with the follower's needs. Exchange of value occurs between the leader and the follower with the goal of moving both their agendas forward.

**Transformational leadership:** The leader is concerned for the follower's performance and also in developing the follower into their full potential by empowering them. The leader guides the follower to instill the goal/vision of the organization as their own.

Appendix B  
(Copyright Permission MLQ Form 5X)

For use by Allison Kellish only. Received from Mind Garden, Inc. on November 19, 2012



[www.mindgarden.com](http://www.mindgarden.com)

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material;

Instrument: *Multifactor Leadership Questionnaire*

Authors: *Bruce Avolio and Bernard Bass*

Copyright: 1995 by *Bruce Avolio and Bernard Bass*

for his/her thesis research.

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Robert Most  
Mind Garden, Inc.  
[www.mindgarden.com](http://www.mindgarden.com)

Appendix C

(Multi-Factor Leadership Questionnaire Form 5X)

## Multifactor Leadership Questionnaire

### Leader Form

My Name: \_\_\_\_\_ CCCE \_\_\_\_\_ Date: \_\_\_\_\_

Organization ID #: \_\_\_\_\_ Leader ID #: \_\_\_\_\_

This questionnaire is to describe your leadership style as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.**

Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits you. The word "others" may mean your peers, clients, direct reports, supervisors, and/or all of these individuals.

Use the following rating scale:

**Not at all, Once in a while, Sometimes, Fairly often, Frequently if not always**

0                      1                      2                      3                      4

- 1. I provide others with assistance in exchange for their efforts..... 0 1 2 3 4
- 2. I re-examine critical assumptions to question whether they are appropriate ..... 0 1 2 3 4
- 3. I fail to interfere until problems become serious ..... 0 1 2 3 4

## Multifactor Leadership Questionnaire

### Rater Form

Name of Leader: \_\_\_\_\_ Cl \_\_\_\_\_ Date: \_\_\_\_\_

Organization ID #: \_\_\_\_\_ Leader ID #: \_\_\_\_\_

This questionnaire is used to describe the leadership style of the above-mentioned individual as you perceive it. Answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Please answer this questionnaire anonymously.

**Important** (necessary for processing): Which best describes you?

- \_\_\_ I am at a higher organizational level than the person I am rating.
- \_\_\_ The person I am rating is at my organizational level.
- \_\_\_ I am at a lower organizational level than the person I am rating.
- \_\_\_ Other than the above.

Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing.

Use the following rating scale:

**Not at all, Once in a while, Sometimes, Fairly often, Frequently if not always**

0                      1                      2                      3                      4

*The Person I Am Rating. . .*

- 1. Provides me with assistance in exchange for my efforts ..... 0 1 2 3 4
- 2. \*Re-examines critical assumptions to question whether they are appropriate ..... 0 1 2 3 4

## Appendix D

## Clinical Coordinator Clinical Education Profile Data Collection Tool

Please mark an X in the box to the left of the response and fill in the blanks with appropriate information

**Part I. Clinical Coordinator Demographic Profile**

1. Age \_\_\_\_\_
2. Gender  male  female
3. Ethnic Background  African American  Asian  
 Caucasian  Hispanic  
 Native American  Other
4. Total number of years of clinical coordinator leadership/management experience \_\_\_\_\_
5. Total number of years as a physical therapist \_\_\_\_\_
6. Total number of years at the clinic \_\_\_\_\_
7. Are you a credentialed clinical instructor  yes  no
8. Educational background. Please indicate below all degrees you have earned:  
 AA/AAS  BA/BS  Professional Entry Level Master's degree  
 Post-Professional Master's degree  Professional Entry Level DPT degree  
 Post-professional DPT degree  Academic Doctorate (PhD, EdD, etc)
9. Have you attended any **formal professional development seminars** for leadership training?  
 yes  no  
If yes please specify \_\_\_\_\_
10. Have you had in your course work for your degree listed above a leadership course?  
 yes  no  
If yes please specify \_\_\_\_\_



**Part II: Clinical Profile**

## 1. Type of clinical setting

- |   |   |
|---|---|
| <input type="checkbox"/> Hospital (acute care, critical care)                 | <input type="checkbox"/> Industrial Health Center     |
| <input type="checkbox"/> Outpatient clinic or office                          | <input type="checkbox"/> Independent                  |
| Contract Services   |   |
| <input type="checkbox"/> Rehabilitation facility (in-patient or out-patient)  | <input type="checkbox"/> Schools                      |
| <input type="checkbox"/> Athletic Facility or Team care                       | <input type="checkbox"/> Research Center              |
| <input type="checkbox"/> Skilled Nursing, extended care, or subacute facility | <input type="checkbox"/> Wellness/Prevention facility |
| <input type="checkbox"/> Education (University/College)                       | <input type="checkbox"/> Home Health Care             |
| <input type="checkbox"/> Hospice  | <input type="checkbox"/> Women's Health Center        |
| <input type="checkbox"/> Other (specify)                                      |   |

## 2. Total number of staff (PT/PTA) that are in the physical therapy department//clinic?

1-8       9-16       17-24       other\_\_\_\_\_

## 3. Total number of staff who are eligible to be clinical instructors and take a student

1-8       9-16       17-24       other\_\_\_\_\_

## 4. Total number of full time physical therapist who are credentialed clinical instructors Part 1

1-8       9-16       17-24       other\_\_\_\_\_

## 5. Total number of full time physical therapist who are credentialed clinical instructors for Part 1 and Part 2

1-8       9-16       17-24       other\_\_\_\_\_

## 6. Number of years of experience full time physical therapist have in the field

1-8       9-16       17-24       other\_\_\_\_\_

## 7. Total number of patients a therapist treats during an average 8 hour day

1-8       9-16       17-24       other\_\_\_\_\_

## 8. Number of students accepted each year for full time clinical experiences/ rotations

1-8       9-16       17-24       other\_\_\_\_\_

## 9. Average length in weeks of full time clinical experiences

1-4       5-8       9-12       13-16       other\_\_\_\_\_

## 10. Number of students assigned to an eligible staff member a year

1     2                       3                       4       other\_\_\_\_\_

## 11. What is the supervision ratio model utilized for student and clinical instructor

1 student 1 clinical instructor       2 students 1 clinical instructor  
 3 students 1 clinical instructor       other\_\_\_\_\_

**Part III: Clinical Education Profile: Based on the past two academic years 2010-2011 and 2011-2012**

1. How many total students were assigned to your clinical facility within the last two years?  
 1-5       6-10       7-15       16-20       21-25  
 26-30       other\_\_\_\_\_
2. What percent of students completed the clinical experiences on time and without problems?  
 90-100%     89-80%     79-70%     69-60%     59-50%  
 49-40%     39-30%     other\_\_\_\_\_
3. What percent of students did not complete the clinical rotation for reasons other than academic or professional (i.e. medical reasons)?  
 90-100%     89-80%     79-70%     69-60%     59-50%  
 49-40%     39-30%     other\_\_\_\_\_
4. What percent of students completed the clinical rotation with a remediation plan but within the normal expected time frame?  
 90-100%     89-80%     79-70%     69-60%     59-50%  
 49-40%     39-30%     other\_\_\_\_\_
5. What percent of students completed the clinical rotation with a remediation plan and additional time?  
 90-100%     89-80%     79-70%     69-60%     59-50%  
 49-40%     39-30%     other\_\_\_\_\_
6. What percent of students did not complete the rotation and was removed by either the CCCE or the DCE/ACCE?  
 0-10%       11-20%     21-30%     31-40%     41-50%  
 51-60%     61-70%     other\_\_\_\_\_
7. How many changes in direct CI supervision did you have to make due to CI-student personality?  
 0-10%       11-20%     21-30%     31-40%     41-50%  
 51-60%     61-70%     other\_\_\_\_\_
8. How many changes in direct CI supervision did you have to make due to CI schedule change?  
 0-10%       11-20%     21-30%     31-40%     41-50%  
 51-60%     61-70%     other\_\_\_\_\_

Thank You So Much

## Appendix E

## Clinical Instructor Clinical Education Profile Data Collection Tool

Please mark an X in the box to the left of the response and fill in the blanks with appropriate information

**Part I. Clinical Instructor Demographic Profile**

1. Age \_\_\_\_\_
2. Gender  male  female
3. Ethnic Background  African American  Asian  
 Caucasian  Hispanic  
 Native American  Other
4. Total number of years of clinical instructor experience \_\_\_\_\_
5. Total number of years as a physical therapist or physical therapist assistant \_\_\_\_\_
6. Total number of years at the clinic \_\_\_\_\_
7. Number of years of experience as a clinical instructor  
 1-5  6-10  10-15  16-20  
 other \_\_\_\_\_
8. Are you a credentialed clinical instructor  yes  no
9. Are you an APTA credentialed clinical instructors Part 1  
 yes  no
10. Are you an APTA credentialed clinical instructors for Part 1 and Part 2  
 yes  no
11. Educational background. Please indicate below all degrees you have earned:  
 AA/AAS  BA/BS  Professional Entry Level Master's degree  
 Post-Professional Master's degree  Professional Entry Level DPT degree  
 Post-professional DPT degree  Academic Doctorate (PhD, EdD, etc)



\_\_\_90-100% \_\_\_89-80% \_\_\_79-70% \_\_\_69-60% \_\_\_59-50%  
 \_\_\_49-40% \_\_\_39-30% \_\_\_other\_\_\_

20. What percent of students you supervised completed the clinical rotation with a remediation plan and additional time?

\_\_\_90-100% \_\_\_89-80% \_\_\_79-70% \_\_\_69-60% \_\_\_59-50%  
 \_\_\_49-40% \_\_\_39-30% \_\_\_other\_\_\_

21. What percent of students you supervised did not complete the rotation and was removed by either the CCCE or the DCE/ACCE?

\_\_\_0-10% \_\_\_11-20% \_\_\_21-30% \_\_\_31-40% \_\_\_41-50%  
 \_\_\_51-60% \_\_\_61-70% \_\_\_other\_\_\_

22. How many changes in direct CI supervision did you have to make due to CI-student personality?

\_\_\_0-10% \_\_\_11-20% \_\_\_21-30% \_\_\_31-40% \_\_\_41-50%  
 \_\_\_51-60% \_\_\_61-70% \_\_\_other\_\_\_

Thank You So Much

## Appendix F

### Solicitation Letter for Clinical Coordinators for Clinical Education and Clinical Instructors

My name is Allison Kellish and I am a doctoral student candidate at Seton Hall University's School of Health and Medical Sciences. I am conducting an exploratory study for my dissertation titled "*Leadership Styles of Clinical Coordinators and Clinical Instructors of Clinical Education in Physical Therapy Education*" which will culminate in my dissertation.

You are being invited to participate in this exploratory study if you have been a clinical coordinator (CCCE) or a clinical instructor (CI) for clinical education of physical therapy students for at least one year and have participated in clinical education within the last year.

The purpose of my study is to examine the clinical coordinators self-rating of their leadership style and clinical instructors self- rating of their leadership style and three outcomes of effectiveness, satisfaction and extra effort.

Procedure: Your participation in this study will include the completion of 2 questionnaires, at your own convenience in a quiet room, which will take approximately 30 minutes in total to complete. Your informed consent is implied when you enter the Survey Monkey website and submit your completed surveys.

For Clinical Coordinators these questionnaires include the following:

1. *Clinical Coordinator of Clinical Education Demographic Profile*. The purpose of this questionnaire is to collect demographic information including age, gender, years of experience as a clinical coordinator, years of employment and educational background.
2. *The Multifactor Leadership Questionnaire- Leader Form- 5X*. This questionnaire asks your various questions about your leadership style. The questionnaire will ask questions which include individual attention provided, flexibility, respect and value for followers etc.

For Clinical Instructors these questionnaires include to following:

1. *Clinical Instructor of Clinical Education Demographic Profile Questionnaire*. The purpose of this questionnaire is to collect pertinent information about the subject, their clinic, and their clinical education program. The questionnaire will ask questions which include demographics, number of years as a therapist, number of years as a clinical instructor, the number of students supervised every year etc.

2. *Multifactor Leadership Questionnaire Leader Form 5-X*. The questionnaire asks your opinion of the leadership style of your clinical coordinator. The questionnaire is frequently utilized by researchers in investigating leadership styles. The sample of questions you will encounter in this form include: the amount individual attention provided, flexibility, respect and value for followers etc.

**Risk and Benefits:** There are no anticipated risks associated with participation in this study. You are free to exit the survey at any time for any reason. There are no anticipated direct benefits to you for your participation in this study. However, participation in the study may provide aspiring and experienced clinical coordinators of clinical education with an understanding of the preferred leadership style practice in clinical setting today. Additionally, results of this study will provide an avenue for advancing our knowledge of leadership in physical therapy clinical education.

**Cost:** there is no cost to participate in this study.

**Compensation:** Participants will not receive any compensation, payment or incentives for participating in this study.

**Confidentiality:** All documents and information pertaining to this research study will be kept confidential in accordance with all applicable federal, state and local laws and regulations. Data generated by the study may be reviewed by Seton Hall University Institutional review Board, which is the committee responsible for ensuring research participant welfare and rights, to assure proper conduct of the study and compliance with university regulations. Any presentation or publications resulting from this research will not identify participants by name. The primary investigator Allison Kellish is the only individual who will have access to all of the research data for a period up to three years after research is published. Thereafter, all research related documents will be destroyed.

**Alternative Procedures:** There are no alternative ways to participate in this study. Participation in this study is voluntary. You have the right to withdraw, skip any questions or exit the survey at any time, without penalty. However, once you submit the survey online, you are then unable to withdraw from the study. Your completion and submission of the surveys constitutes your consent to be a participant in the study. Please print a copy of this letter for our records.

Thank you for your participation is invaluable, to me, and to our profession at large. It is greatly appreciated.

You have the right to ask questions concerning this study at any time. If you have any questions concerning this study or your rights as a study participant, please contact the primary investigator, Allison Kellish, through the office of Dr. Genevieve Pinto –Zipp, Dissertation

Advisor and faculty member within the School of Health and Medical Sciences at Seton Hall University at 973-275-2457. Participants may also email this researcher and request study results.

This project has been approved by the Seton Hall University Institutional Review Board (IRB) for Human Subjects Research. The Office of the IRB at Seton Hall University may be reached at 973-313-6314.

Thank you very much for your invaluable contribution to this project. To participate, please click on this link

(<https://www.surveymonkey.com/s/ClinicalEducationSurvey>) which will connect you to the online survey. If it does not open please copy and paste link.

Allison Kellish

Doctoral Candidate

School of Health and Medical Sciences

Seton Hall University



Appendix G  
Follow-up Letter

Dear Potential Research Participant,

My name is Allison Kellish and I am a doctoral student candidate at Seton Hall University's Health and Medical Sciences School. I am conducting a study for my dissertation titled "*Actual and Perceived Leadership Styles of Clinical Coordinators of Physical Therapy Education*". This study has been approved by Seton Hall University IRB.

A few weeks ago you were invited to participate in this study if you have been a Clinical Coordinator of Clinical Education or a Clinical Instructor for clinical education of physical therapy students for at least one year and have participated in clinical education within the last year.

The purpose of my study is to examine clinical coordinators self-rating of their leadership style and clinical instructors self-rating rating of their leadership style and three outcomes of effectiveness, satisfaction and extra effort.

Your participation in this study will include the completion of 2 questionnaires which will take approximately 30 minutes in total to complete. This study will conclude in four weeks.

I am very interested in better understanding this subject. However, this will not be realized without your help. Your participation is invaluable, to me, and to our profession at large. Results of this study may provide aspiring and experienced clinical coordinators of clinical education with the preferred leadership they should practice in clinical setting today. Additionally, results of this study will provide an avenue for advancing our knowledge of leadership in physical therapy clinical education.

Your participation is completely voluntary and anonymous. Each of the above mentioned questionnaires will be coded by letters and numbers to maintain complete anonymity at all times. Thank you very much for your invaluable contribution to this project.

Thank you very much for your invaluable contribution to this project. To participate, please click on this link ( <https://www.surveymonkey.com/s/ClinicalEducationSurvey> ) which will connect you to the online survey.

Allison Kellish  
Doctoral Candidate  
School of Graduate Health and Medical Sciences  
Seton Hall University

## Appendix H

## ACCE Solicitation Letter

Dear ACCE,

My name is Allison Kellish and I am a doctoral student candidate at Seton Hall University's School of Health and Medical Sciences and a few weeks ago you were invited to participation in distributing this survey to each of your CCCEs and CIs. I am conducting a research study exploring the leadership styles and outcomes utilized in clinical education by CCCEs and CIs. The intent of the compiled results is to provide information regarding leadership styles utilized and leadership outcomes in physical therapy clinical education. The success and the value of the survey will depend on the number of clinical faculty who ultimately respond.

If you are willing to invite your CCCEs and CIs to participate in this study please forward this letter with the embedded link to the survey and the attached consent letter "Dear Faculty" to each of your clinical faculty members. Your participation and their participation are voluntary and anonymous, as indicated below. This survey will conclude in four weeks and you will receive two reminders.

This project has been approved by the Seton Hall University Institutional Review Board (IRB) for Human Subject Research. The Office of the IRB at Seton Hall University may be reached at 973-313-6314.

Thank you very much for your invaluable contribution to this project. To participate, please click on this link (<https://www.surveymonkey.com/s/ClinicalEducationSurvey>) which will connect you to the online survey.

Allison Kellish

Doctoral Candidate

School of Graduate Health and Medical Sciences

Seton Hall University

Appendix J

REQUEST FOR APPROVAL OF RESEARCH, DEMONSTRATION OR RELATED ACTIVITIES INVOLVING HUMAN SUBJECTS

All material must be typed.

PROJECT TITLE: "Leadership Styles of Clinical Coordinators and Clinical Instructors in Physical Therapy Education"

CERTIFICATION STATEMENT:

In making this application, I(we) certify that I(we) have read and understand the University's policies and procedures governing research, development, and related activities involving human subjects. I (we) shall comply with the letter and spirit of those policies. I(we) further acknowledge my(our) obligation to (1) obtain written approval of significant deviations from the originally-approved protocol BEFORE making those deviations, and (2) report immediately all adverse effects of the study on the subjects to the Director of the Institutional Review Board, Seton Hall University, South Orange, NJ 07079.

Arlison Kellish RESEARCHER(S) OR PROJECT DIRECTOR(S) 1/30/14 DATE

\*\*Please print or type out names of all researchers below signature. Use separate sheet of paper, if necessary.\*\*

My signature indicates that I have reviewed the attached materials and consider them to meet IRB standards.

Genevieve D... RESEARCHER'S ADVISOR OR DEPARTMENTAL SUPERVISOR 1/30/14 DATE

\*\*Please print or type out name below signature\*\*

The request for approval submitted by the above researcher(s) was considered by the IRB for Research Involving Human Subjects Research at the Feb 2014 meeting.

The application was approved [checked] not approved [ ] by the Committee. Special conditions were [ ] were not [checked] set by the IRB. (Any special conditions are described on the reverse side.)

Mary J. Ruzicka, Ph.D. DIRECTOR, SETON HALL UNIVERSITY INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECTS RESEARCH 2/26/14 DATE