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**Physical Therapists Clinical Instructors Perceptions, Practices and Experience when Supervising an Underperforming Student in Clinical Education**

by:

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This dissertation is submitted in partial fulfillment of the requirements for the

Doctor of Philosophy Degree

School of Health and Medical Sciences

Department of Interprofessional Health Sciences and Health Administration

Seton Hall University

Nutley, NJ

2022

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## APPROVAL FOR SUCCESSFUL DEFENSE

Doctoral Candidate, **Ruth Lyons Hansen**, has successfully defended and made required modifications to the text of the doctoral dissertation for the Ph.D. during the **Fall 2022 semester**.

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**Note: the chair and any other committee members who wish to review revisions will sign and date this document only when revisions have been completed. Please return this form to the Office of Graduate Studies, where it will be placed in the candidate's file and submit a copy with your final dissertation to be bound as page number two.**

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### Abstract

Physical Therapist (PT) clinical instructors' (CIs) perceptions, practices, and experiences when supervising an underperforming student.

**Background:** The experience of supervising an underperforming student (UPS) in clinical education and failure to fail (FTF) are described in health professions such as nursing and medicine but there is little description of it in Physical Therapist (PT) clinical education.

**Purpose:** To explore the PT clinical instructors' (CIs) perceptions, practices and experience when supervising an under-performing student, and to determine if failure to fail exists in PT clinical education and if so, what organizational, personal, and demographic factors may be related to it.

**Methods:** A non-experimental, descriptive, explanatory sequential mixed methods design, consisting of investigator created electronic survey, followed by semi structured interviews, using a qualitative phenomenological approach was employed. Snowball sampling was used for the survey. Interview participants volunteered at end of survey. The survey asked CIs questions regarding their perceived role, ability, and grading practices. CIs who had supervised an UPS where asked questions specific to their experience. Delphi process for face and content validity, Exploratory Factor Analysis (EFA) for construct validity and Cronbach alpha ( $\alpha=.721$ ) for survey internal consistency reliability were used. Descriptive statistics and Spearman correlation assessed associations between variables. Interviews were transcribed verbatim. Transcripts were coded using in-vivo and descriptive coding then collapsed into categories for thematic analysis. Interviews were conducted until saturation in codes was achieved. Intercoder consensus was obtained.

**Results:** 397 CIs completed the survey; 177 had supervised an UPS; 7 participated in interviews. EFA showed variables loaded on 8 factors: DCE support, stress/time, perceived ability, doubt-distress, pressure to pass, professional duty, failure to fail (FTF) perceptions, and co-worker support (Eigenvalues

>1). Greater than 95% of CIs agreed they would be able to effectively manage an UPS, and they have a duty to both profession and student to provide objective evaluations. Despite this, greater than 50% agreed they would submit a satisfactory evaluation to an UPS who was trying, in an earlier experience or not experiencing safety issues. Of those who had supervised an UPS, > 60% experienced stress, distress, and conflict. Strategies used by CIs included: one-on-one practice/instruction, feedback, goal setting and lowering expectations. 14% reported that they had FTF an UPS. Reasons cited were student effort/improvement or it was an early experience. There were significant, weak, correlation between perceptions of failing ( $r=.294$ ,  $p=.000$ ), pressure to pass ( $r=.174$ ,  $p=.030$ ), sense of duty ( $r=. -182$ ,  $p=.023$ ), support of DCE ( $r=. -194$ ,  $p=.024$ ), CI perceived preparation and ability ( $r=-.170$ ,  $p.034$ ) with FTF. Qualitative data revealed that CIs' experience supervising an UPS was difficult and challenging and they experienced negative emotions. CIs had negative perceptions of failing a student. Student level in the program played a role in FTF. Despite a weak correlation, comments reflect support from DCE and coworkers as beneficial. (1497)

**Conclusions:** Supervising an UPS is difficult and challenging. FTF does occur in PT clinical education. No conclusions can be made based on statistical correlations due to the low strength of relationships. Qualitative analysis supports that student level in the program and support from academic institution may play a role in FTF.

**Key Words:** Clinical Instructor, Underperforming Student, Failure to Fail, Physical Therapists

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## CHAPTER I

### Introduction

#### Background

Student success in physical therapist (PT) education is collectively viewed in terms of the student's ability to successfully move through both the didactic and clinical portions of the curriculum and the ability to pass the National Physical Therapy Exam (NPTE). In the United States (US) the physical therapist education program (PTEP) is a post baccalaureate program, taking between 3 and 3.5 years to complete, leading to a Doctor of Physical Therapy (DPT) degree. The PT student, therefore, often incurs a significant amount of debt to finance this degree (Berry, 2021) and invests a significant amount of time and effort to gain entry to the field. Failure at any point in the curriculum can be devastating to the student both emotionally and financially.

Academic institutions are accountable for student progression in the program with two outcome measures heavily weighted in the accreditation and reaccreditation process: graduation rate and NPTE pass rate. Physical Therapist academic programs must maintain annual graduation rates above 80% (Commission on Accreditation of Physical Therapy Education, (CAPTE), 2019) as well as NPTE passing rate above 85% (CAPTE, 2019). These outcomes are reported annually to the Commission on Accreditation of Physical Therapist Education (CAPTE), the accrediting body for physical therapy programs in the US. Interestingly, although graduation rates are reported to CAPTE, the actual point in the program at which students are dismissed or voluntarily choose to leave the program is not reported thus, limiting insight generation.

There is a significant amount of research exploring admission criteria and demographic factors that contribute to academic difficulty and NPTE failure. Experiencing academic difficulty while in the program (Riddle, et al., 2009), particularly in the first year (Ruscigno, et al., 2010), low program grade

point average (GPA) (Fell, et al., 2015; Roman & Buman, 2019), English being a second language (Coleman-Salgado & Barakatt, 2018) and being of an ethnic or racial background other than Caucasian (Utzman et al., 2007) have been predictive of NPTE pass rate. A fair amount of attention has been given to predictors of academic success in the first year of the program. Academic performance in the first year is predictive of overall GPA and NPTE success (Ruscingo, et al., 2010; Utzman, et al., 2007) and anecdotally seems to be the most frequent point in the curriculum where students experience difficulty and academic dismissal. Despite the amount of research on predictors of academic and NPTE success there is little research exploring poor clinical performance or clinical failure in the field of physical therapy even though successfully completing the clinical portion of the curriculum is a prerequisite for graduation and the ability to sit for the NPTE Exam.

The clinical education portion of the PT educational curriculum accounts for approximately 44.9% of the DPT curriculum depending on program (McCallum, et al., 2013). Typically, clinical education experiences give the student the opportunity to gain experience using their clinical and professional skills in real life situations on real patients in clinical sites that are affiliated but independent to the academic program (Jensen & Mostrom, 2013; McCallum, et al., 2013). In these experiences the student is mentored and evaluated by a clinical instructor (CI) who is a licensed physical therapist employed by the clinical site, not the academic institution (Jensen & Mostrom, 2013). The CI has patient care, productivity and sometimes, administrative responsibilities in addition to supervising and evaluating a student (Jensen & Mostrom, 2013). Often this occurs without any additional time or productivity accommodation for the added student supervision responsibility. Although many programs are starting to use short integrated clinical experiences throughout the program, coinciding with the delivery of didactic material, the majority of the clinical experiences are full time clinical experiences ranging in length of 4 to 16 weeks (Jette et al., 2014). Most programs do not start these until sometime in the second year of the program with the majority of these being completed after all didactic material

is complete (Jette, et al., 2014). Of concern, is if a student has trouble in one of these later clinical experiences, they would have already invested a significant amount of time, effort, and financial resources into the program. Poor performance in clinical education, if unable to remediate, can result in dismissal from the program. This situation can be problematic for the student, academic program, and the supervising CI. Often clinical instructors involved in the supervision of the under-performing student question how the student got this far (Bearman, et al., 2013; Hughes, et al., 2016) and may question their own teaching (Hrobsky, 2002), and supervisory capabilities (Hughes et al., 2016) or may experience distress about giving a possible unfavorable evaluation to the student (Luhanga, et al., 2014).

Despite clinical education making up 44.9% (McCallum, et al., 2013) of the PT educational curriculum, little is known about students who under perform in clinical experiences, fail a clinical experience or are dismissed as a result of a clinical experience failure. To date data regarding these important variables are not even reported to CAPTE by the educational programs or available in any aggregate program data published by CAPTE or APTA. Limited research in PT clinical education, particularly relating to dealing with students who are underperforming, offers an area for further investigation. However, based upon the available literature in this area inadequate knowledge, poor psychomotor skills, unprofessional behavior and poor communication has been noted as behaviors that led clinical instructors to question the competence of PT students (Hayes, et al., 1999; Jette, et al., 2007). In a survey of DCEs in NY and NJ, Silberman and colleagues (Silberman, et al., 2018) found that there were 76 incidences of students experiencing difficulty out of 958 students enrolled in clinical education experiences. There was a higher percentage of students having trouble in the intermediate and final clinical experiences than in first time clinical experiences. Deficiencies in the affective domain attributed to clinical difficulty were cited more frequently in the acute care setting, with cognitive domain issues more frequently cited in the outpatient setting. Of those incidents presenting with difficulty in clinical education, 69.7% successfully completed the clinical experience and 18.4% were not

successful in completing the clinical experience (Silberman et al., 2018). This study did not look at what strategies were used to help those students who were ultimately successful in completing the clinical experience after experiencing performance difficulties or the resources needed to assist the student to ultimately be successful.

In other health professions such as nursing, medicine, speech language pathology and occupational therapy there is some literature addressing the student who has performance issues in clinical education and what is termed the unsafe student (Davenport, et al., 2018). In nursing there is evidence indicating that nurse supervisors and preceptors are ill prepared for their role in supervising, mentoring and evaluating the student or new clinician who experiences clinical performance issues (Miller, et al., 2017). Supervisors of these students felt conflicted and unsupported in their evaluative role (Miller et al., 2017) and their responsibility to give the student a quality experience and helping them to develop skills to pass the experience (Clouder, 2009; Hrobsky, 2002). Often, they questioned their judgement, felt guilt, and sought reassurance from others (Hrobsky, 2002). In nursing (Hughes et al., 2016) and medicine (Cleland, et al., 2008; Dudek, et al., 2005) instances of passing the unsafe or less than competent student was reported. One study of Australian PTs found that CIs described their role as student supervisors stressful, due to trying to manage multiple roles and responsibilities relating to the student, patients, university and employer (Bearman et al., 2013). They also felt isolated and noted that the primary strategies put into place to deal with the student's performance issues, which included giving more feedback and supervision, were not always successful. This study further noted a lack of individualized learning plans being generated as interventions for the student's performance issues in clinic. (Bearman et al., 2013).

Regardless of the student's professional program, deficient performance in the clinical portion of the curriculum is of concern to all parties involved: the student, immediate clinical supervisor, academic institution, and the public. Maize (Maize et al., 2010) reported that 15% of all health



profession students experience performance difficulty in clinical education. Students cannot be allowed to enter clinical practice without effective clinical skills, and those needing remediation to pass clinical experiences can further increase educational costs (Foo et al., 2017). If students are allowed to move on without proper remediation, the potential exists that they will continue to experience clinical difficulty and provide poor or unsafe care in their professional careers (Hauer et al., 2009). Therefore, exploring the Clinical Instructor's experience of supervising the under-performing student in clinical education can provide insight that can help guide clinical instructors, students, clinical instructors' supervisors, and the sending academic institution to provide effective clinical experiences.

### **Operational Definitions**

Clinical Education: "A formal supervised experiential learning, focused on development and application of patient/client centered skills and professional behaviors. It is designed so that students gain substantial, relevant clinical experience and skills, engage in contemporary practice, and demonstrate competence before beginning independent practice." (Erickson et al., 2018, p.757)

Clinical Experience: "Experiences that allow students to apply and attain professional knowledge, skills, and behaviors within a variety of environments. Experiences include those of short and long duration (e.g., part-time, and full-time), provide a variety of learning opportunities and include physical therapy services for patients/clients across the lifespan and practice settings. Although the emphasis is on the development of patient/client physical therapy skills, experiences also may include inter-professional experiences and non-patient/client service delivery, such as research, teaching, supervision, and administration. Clinical education experiences are a part of the professional curriculum and include formal student assessment." (Erickson et al., 2018, p757)

Full time clinical Experience: “A clinical experience where a student is engaged in clinical practice at least 35 hours per week and counts toward the minimum number of weeks in clinic designated by CAPTE” (Erickson et al., 2018, p757). Length varies by program but is typically between 4 and 36 weeks (Jette et al., 2007).

Director of Clinical Education (DCE): “Faculty member from the PT academic institution who is responsible for managing the clinical education program including planning and evaluating the program and clinical faculty development” (Erickson et al., 2018, p.758).

Clinical Instructor (CI): “The physical therapist responsible for the physical therapist student and for directly instructing, guiding, supervising, and formally assessing the student during the clinical education experience. When engaged in full-time clinical education designated to meet the minimum number of weeks required by CAPTE, the clinical instructor must be a licensed physical therapist with a minimum of one year of full-time (or equivalent) post-licensure clinical experience.” (Erickson et al., 2018, p758)

Site Coordinator of Clinical Education (SCCE): “A professional who administers, manages, and coordinates clinical assignments and learning activities for students during their clinical education experience. In addition, this person determines the readiness of persons to serve as preceptors and clinical instructors for students, supervises preceptors and clinical instructors in the delivery of clinical education experiences, communicates with the academic program regarding student performance, and provides essential information to academic programs” (Erickson et al., 2018, p.758)

Clinical Performance Instrument (CPI): An assessment tool used to rate PT student’s clinical performance. This tool is a validated tool that originally adopted by the American Physical Therapy Association in 1997 (Roach et al., 2012). It has undergone revisions in accordance with change in

practice (Roach et al., 2012) and is currently an on-line assessment tool and most common tool utilized by PT programs in the US.

Entry Level Clinical Performance: When a student demonstrates the ability to consistently function independently, without supervision or guidance, to provide proficient examinations, interventions and clinical reasoning in client's ranging from simple to complex and is able to maintain 100% of a full-time PTs case load (American Physical Therapy Association, 2019).

Preceptor: In PT this term is used to describe individuals who provide learning experiences to students but are not the student's CI (Erickson et al., 2018) in other fields such as nursing this term is used to describe the student's immediate supervisor in the clinic.

Under-performing Student (UPS) - An under-performing student is a student who is experiencing performance difficulty in clinical education as demonstrated by one or more of the following: inadequate knowledge or clinical skill which impacts safety and effective care, inadequate professional behavior, poor communication skills, or is not meeting the performance expectations for their level of experience (Hayes et al., 1999).

Clinical performance success has been defined as acceptable ratings on the Clinical Performance Instrument (CPI) (Meiners, et al., 2017).

Failure to Fail: Assigning a passing grade to a student who has not met the minimum competencies to pass a clinical experience (Hughes et al., 2016).

### **Problem and Areas of Future Research**

In the area of Physical Therapy there is little research regarding the student who experiences clinical difficulty or under-performs, even though failure of a clinical experience can result in dismissal late in the program, after the student has already invested up to 3 years of time and tuition dollars. Little is known about the prevalence of this problem, the economic cost of the problem, the experiences

of those involved or the strategies that are most helpful in identifying students at risk and successful strategies for remediating problems. Additionally, little is known about the clinical instructors' perspective when dealing with UPS. If the experience of supervising and evaluating an UPS, from the clinical instructor's perspective, is better understood then academic programs may be better able to prepare CIs for their role and support them when they are dealing with a student who is under-performing and enable them to give honest candid and constructive student evaluations.

### **Purpose**

The purpose of this study is to explore the physical therapist CIs perceptions, practices and experience when supervising an UPS, and to determine if failure to fail exists in PT clinical education and if so, what organizational, personal, and demographic factors may be related to it.

### **Research Questions, Variables and Hypothesis**

The research questions (RQ), associated research questions (ARQ) independent variables (IV), dependent variables (DV) and hypothesis, if applicable, are listed below.

RQ1: How do CIs perceive their ability to effectively manage a student who is under-performing in clinical education?

ARQ1a: Is academic preparation of the CI (Entry Level Degree) associated with CIs' perceived ability to manage a student who is underperforming in clinical education? (QUAN)

IV: Entry level degree of CI

DV: Perceived ability to manage an UPS as measured by question # 17 "I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience."

Ho1a: There is no association between entry level degree (IV) and perceived ability to manage an UPS(DV).

Ha1a: There is an association between entry level degree (IV) and perceived ability to manage an UPS(DV)

ARQ1b: Is attending the APTA-Credentialed Clinical Instructor Program (CCIP) continuing education course associated with CIs' perceived ability to manage an UPS in clinical education? (QUAN)

Ho1b: There is no association between attending the APTA CCIP course (IV) and perceived ability to manage (DV) an UPS

Ha1b: There is an association between attending the APTA CCIP course (IV) and perceived ability to manage an (DV) UPS

IV: Attending APTA-CCIP course

DV: Perceived ability to manage an UPS

ARQ1c: Is years of experience as a PT associated with CIs' perceived ability to manage a student who is underperforming in clinical education? (QUAN)

1cHo: There is no association between years of experience as a PT (IV) and perceived ability to manage (DV) an UPS

1cHa: There is an association between years of experience as a PT(IV) and perceived ability to manage an (DV) UPS

ARQ1d: Is years of experience as a CI (IV) correlated with CIs' perceived ability to manage a student who is underperforming in clinical education (DV)? (QUAN)

1dHo: There is no association between years of experience as a CI (IV) and perceived ability to manage (DV) an UPS

1dHa: There is an association between years of experience as a CI (IV) and perceived ability to manage (DV) an UPS

ARQ1e: Is clinical setting type (IV) associated with CIs' perceived ability to manage a student who is underperforming in clinical education? (QUAN)

RQ2: What strategies/interventions do CIs use to help UPS? (Qual)

RQ3: Does failure to fail exist in Physical Therapy Clinical Education? (Quan - Qual)

RQ4: If failure to fail exists, what is the relationship between FTF and demographic and organizational factors? (QUAN-Qual)

ARQ4a: Is student level (time in program) associated with FTF?

ARQ4b: Is entry level degree of CI associated with FTF?

ARQ4c: Is support from academic institution (DCE support) associated to FTF?

Ho: There is no association between AI/DCE support and FTF

Ha: There is an association between AI/DCE support and FTF

ARQ4d: Is support from employer (factor SCCE/supervisor/peer) associated with FTF

Ho: There is no association between employer support and FTF

Ha: There is an association between employer support and FTF

ARQ4e: Is years of experience as a PT associated with FTF?

Ho: There is no association between years of experiences as a PT and FTF

Ha: There is an association between years of experiences as a PT and FTF

ARQ4f: Is years of experience as a CI associated with FTF

Ho: There is no association between years experiences as a CI and FTF

Ha: There is an association between years of experiences as a CI and FTF

RQ5: What is the CI's experience when supervising an underperforming student? (Qual-Quan)

ARQ 5a: Do CIs experience personal distress when dealing with a student who is underperforming in CE?  
(Quan-Qual)

ARQ5b: What do CIs perceive to be beneficial in supporting them in their role? (Qual)

ARQ5c: What do CIs perceive to not be beneficial in supporting them in their role? (Qual)

### **Theoretical Framework Underlying this Research**

The CIs experience of supervising the underperforming student is complex and multifaceted. After careful consideration, one theoretical framework could not be found to frame all aspects of the clinical instructor's experience in supervising a student who is under-performing. Theoretical frameworks that can partially frame aspects of this study are Adult Learning Theory (ALT), Perceived Organizational Support Theory (POST) and Role Strain Theory (RST). This is acceptable because according to Creswell, qualitative research may be used when there are inadequate theories to capture the complexity of the problem to be examined (Creswell, John., & Poth, Cheryl, 2018). Thus, in this mixed methods study three theoretical frameworks ALT, POST, and RST guided this exploration and are briefly described below.

The delivery of most clinical education experiences in PT occurs using a one-on-one student to CI supervisory model. The CI serves not only as a supervisor and evaluator, but also as a mentor to the student. Mentoring is a learning partnership built on learning theory (Dominguez& Hager, 2013) where

the mentor, in this case the CI serves as a facilitator to the mentee, the PT student. The CI's role is to develop mutual goals, encourage self-directed learning and confidence in the student (Dominguez & Hager, 2013). Self-directed learning is a major concept (component) of the Andragogy or ALT proposed by Knowles (Knowles, et al., 2005), and was used to partially frame this study. Self-directed learning is a necessary skill for the student to exhibit in the clinical education environment and to continue to display as part of their professional practice upon graduation as adult learners. Therefore, their educational learning experiences should be rooted in ALT (Knowles et al., 2005). This theoretical framework, which is described in detail in chapter two, is an appropriate choice because the six principles of Andragogy relate to learning in the work setting, which in this case is the clinical environment. When students struggle in clinical practice, they may be having difficulty utilizing one of these six principles (American Physical Therapy Association, 2012). To effectively mentor PT students during their clinical experiences, clinical instructors should be aware of this theory when setting goals, designing learning plans and developing learning activities for the promotion of adult learning.

Additionally, in this study POST (Kurtessis et al., 2017) was used to partially frame the CIs experience. Perceived organizational support theory describes the relationship an employee has with their employer or organization. The employee assesses the benefits of increased work effort and in return expects reward or support from the employer when needed (Kurtessis et al., 2017). Physical Therapy CIs are placed in a difficult position of trying to balance and respond to two different entities: the healthcare system they are employed by and the educational institution whose student they volunteer to supervise (Jensen & Mostrom, 2013) . Their primary employer expects them to deliver evidence-based, direct patient care in a cost- effective manner(Jensen & Mostrom, 2013). The academic institution expects them to deliver a quality educational experience to the student and to candidly and objectively evaluate the student (Jensen & Mostrom, 2013) . A student who is not performing well in the clinic adds to the CIs responsibility and stress. The CIs experience of managing the student situation



may be further impacted by the support or lack of support, they receive from both the academic institution as well as their employer. The support the CI receives can impact not only the quality of the educational experience but also the outcome of the experience.

Finally, the theory of role strain (Goode, 1960) was used to explore the concept of FTF a student who is not competent which has been noted in other health professions and may exist in physical therapy. The CI has several roles which at times may be conflicting and impact CI role strain. Ultimately, the CI may choose to give the benefit of the doubt to a student who is underperforming and pass them to avoid the stress of failing a student.

## Chapter II

### Literature Review

#### Introduction

This section will provide an overview of clinical education in physical therapy, including relevant research relating to supervising and managing an UPS as well as relevant literature in other professions relating to supervising students who are under-performing in clinical education.

#### Overview of Clinical Education

Clinical Education has been an important part of the education of new PTs since the very early roots of the profession (Gwyer, et al., 2003). Clinical Education in PT and other health professions programs takes place outside of the classroom and involves engagement of the student in real world work experience which allows them to gain competence of their clinical skills, interpersonal and professional skills (Gwyer et al., 2003). The clinical education component of the physical therapy curriculum has been estimated to make up to 44% of the curriculum depending on the academic program (McCallum, et al., 2013). The academic institution is charged with overseeing the quality of the clinical education program (McCallum, et al., 2013). This includes reporting to CAPTE the qualifications and evaluation of clinical faculty and clinical sites as well as mechanisms in place to protect students' rights and safety (McCallum, et al., 2013). Despite the fact that clinical education outcomes need to be reported to CAPTE, accreditation standards do not mandate colleges and universities to adopt a uniform model for delivery of clinical education, therefore there is great variability in how each PT program delivers their clinical education (Wetherbee, et al., 2010). Each program has a Director of Clinical Education (DCE) who manages the clinical education program. The DCE secures CE placements for students and strives to provide quality educational experiences for the students. Despite the large percentage of the curriculum spent in CE the majority of the manpower utilized to provide clinical education is provided by physical therapists (PT) employed by health care organizations in the

community (Bearman et al., 2013). In most cases, these PTs take on the additional responsibility of being a CI on a voluntary basis and receive no financial incentive. This is in contrast to the didactic portion of the program where faculty are employees of the PTEP and must abide by the quality and evaluative standards of the college/university (Jensen & Mostrom, 2013).

A difference exists between academic and clinical education which should be recognized. In academic teaching the control and organization are college or university centered (Jensen & Mostrom, 2013). Systems in place are organized with focus on efficiency and quality of the college or university, its administration and faculty (Jensen & Mostrom, 2013). In clinical teaching organizational control lies within the healthcare system, and its focus is on delivering care to the patient. This primary difference affects both the student and CI experience as well as the instruction and evaluation of the student (Jensen & Mostrom, 2013). Although there is a contractual agreement between the educational institution and the health care facility (Gwyer et al., 2003) there are many variables that can impact student learning that are out of control of the educational program or the DCE (McCallum, et al., 2013). Some of the variables that can influence quality of clinical experiences are experience of the CI, training of the CI, expectations of the CI, investment to CE of the CI, amount of supervision and feedback the CI gives the student and the culture of the clinical site in supporting CE. Additional factors that may affect a clinical experience are the volume of patients seen at the site, unforeseen staffing shortages at the clinical site, and productivity standards of the facility (McCallum, et al., 2013). These variables may not be problematic if a student is performing up to, or exceeding standards, but if a student is experiencing performance deficiencies in clinical education this variability can be problematic.

Physical Therapy CE is delivered in a unique model compared to other health professions. In nursing and medicine, students practice in small groups supervised by one clinical preceptor who is employed by the academic institution or has dual appointment between the health care facility and the academic institution (Jette et al., 2014). Clinical education often occurs a few days per week while

simultaneously coming back to campus for coursework (Jette et al., 2014). These preceptors meet periodically with faculty at the academic institution (Jette et al., 2014). In PT, students are mentored by one PT at a clinical site, for a full time experience lasting from 6-16 weeks or more (Erickson, et al., 2018). Often both the student and CI are more isolated from other students and program faculty than in other professions. Clinical instructors who are presented with a student who may be demonstrating questionable clinical skills or behaviors often question their own evaluation skills or the expectations for the student at that level (Bearman et al., 2013). Therefore, it is plausible, that a CI's lack of confidence in teaching and evaluation skills may lead to passing students who have not met performance standards (Larocque, 2013)

### **Entry Level Clinical Performance**

Students are expected to meet entry-level clinical practice in order to complete the clinical portion of the curriculum and to graduate from an accredited PT Program (CAPTE, 2019). The American Physical Therapy Association's (APTA) Clinical Performance Instrument (CPI) is an instrument that has been validated (Roach et al., 2012) and widely used by most PT program to evaluate PT students' performance in clinic (Sass et al., 2011). Entry-level clinical practice is clearly defined on the CPI; however, interpretation of this definition varies (Sass et al., 2011). Variations in interpretation may be due to different productivity standards in the clinic and variations in patient complexity between clinical sites. Additionally, although widely used, the CPI is not the only instrument used to evaluate clinical performance of the physical therapist student in the US.

### **Student Performance in Clinical Education**

The Physical Therapist student CPI clearly defines entry-level performance of a PT student. However, the interpretation of this definition in real life practice is up to the CI directly supervising a student and can vary between settings. Typically, students are expected to achieve entry-level practice abilities by the end of their final clinical experience. Although this guideline is accepted, clearly defined

performance expectations for first time and intermediate clinical experiences do not exist. These guidelines are typically set by the academic institution and may vary widely between programs. Compounding this issue further is the lack of clear definitions of poor performance and criteria for failure of a clinical experience.

Hayes and colleagues (Hayes et al., 1999), identified student behaviors that would alert clinical instructors to students who were experiencing difficulty in clinical performance. Semi-structured interviews of 28 female and five male CIs using critical incident technique, where CIs were asked to describe incidents of unsafe or ineffective behavior that they had observed a student do. CIs identified 134 incidents in 40 students. After review of transcriptions of interviews and coding three categories of problematic behaviors of students were identified. These categories were inadequate knowledge or skill, poor communication, and unprofessional behavior. Inadequate knowledge and skill involved inability to perform physical therapy skills, the inability to apply knowledge and skills in a safe and effective manner. Poor communication involved either verbal or nonverbal communications that interfered with the student's ability to transfer information effectively between therapist and client. Professional behavior included behaviors that disrupted the delivery of PT services or an inability to meet the demands of the job. This also included difficulty with self-evaluation and performing responsibilities. There was an association between the type of behavior exhibited and whether a student received feedback ( $\chi^2 = 12.4, DF=2, P=.002$ ). CIs were more likely to give feedback to students who were exhibiting inadequate knowledge and skills than to those students with poor communication or unprofessional behaviors. There was also a significant relationship between students receiving feedback and the likelihood of improving ( $\chi^2 = 4.15, DF = 1, P=0.04$ ). Those who did not receive feedback on their behavior were less likely to improve. Surprisingly, those who did receive feedback were equally likely to improve or not improve (Hayes et al., 1999).

In another qualitative study Jette (Jette et al., 2007) used a qualitative grounded theory approach to generate a model of how CIs determine if a student has achieved entry-level performance (ELP). Seven attributes were identified that CIs felt were essential in determining if a student had achieved ELP. Those identified were students possessing adequate knowledge, clinical skill (performing PT examinations and interventions), safety, clinical decision making, self-directed learning, interpersonal communication, and professional demeanor (Jette et al., 2007). CIs also expressed that they relied on a “gut feeling” (Jette et al., 2007, p.838) that a student had achieved entry-level proficiency. It was also noted that CIs in general did not feel a student had to be 100% independent in all aspects of care. They considered “mentored independence” (Jette et al., 2007, p.838) to be acceptable in entry level practice (Jette et al., 2007). In addition to these insights, the authors developed a visual framework describing the CIs process of determining ELP (Jette et al., 2007).

Silberman and colleagues (Silberman et al., 2018) polled DCEs from the New York-New Jersey Clinical Education Consortium to attempt to identify the incidence of student difficulty in CE by practice setting, level of clinical experience, and student characteristics; specifically domains of learning and the outcome of the experience. This was a descriptive, retrospective survey distributed to 24 DCEs in New York and New Jersey. Ten DCEs completed the study and reported 76 incidents of student difficulty in CE over a one-year period. Of these instances 34.2% occurred in acute care, 31.6% in outpatient settings, 17% in rehabilitation and 14.5% in pediatric settings. Difficulty in acute care was identified across all levels of clinical experiences where difficulty in rehabilitation and outpatient settings were more likely to occur in later clinical experiences (Silberman et al., 2018). This finding may be the result of CIs being more lenient on students in earlier clinical experiences or because most students do not do early experiences in these settings. Additionally, this study found that student difficulty was more likely attributed to problems in the cognitive domain in outpatient settings and to the affective domain for inpatient settings (Silberman et al., 2018). Prior academic difficulty was identified in 34.2% and prior

professional behavior issues were identified in 27.6% of the cases. Of the incidences of difficulty reported, 69.75% of students were successful in completing the experience and 18.4% were dismissed from the experience before completing it (Silberman et al., 2018). The limitations of this study are that due to the survey design, the investigators were unable to determine if each instance of difficulty occurred in different students or if one or two students had multiple issues of difficulty in successive clinical experiences (Silberman et al., 2018). Thus, limiting the author's ability to determine statistical significance. Additionally, they reported dismissal from the clinical experience but not dismissal from the program, therefore it is unclear if the students were able to remediate and successfully complete another clinical experience or if the clinical difficulty resulted in failure and dismissal from the program.

Two of the previous studies reviewed (Hayes et al., 1999; Jette et al., 2007), both cited safety as key to entry-level practice and/or identifying problems as being safety related. Often students identified as having clinical difficulty demonstrate poor safety awareness in clinic (Irwin, et al., 2018). Irwin and colleagues (Irwin et al., 2018) compared CPI midterm safety ratings of students who had demonstrated safety concerns on practical exams, and had undergone remediation, to students who had not demonstrated any safety concerns on campus during practical exams. CI safety ratings on midterm CPI were not significantly different between the two groups, indicating that students who demonstrated safety concerns could be effectively remediated prior to clinic and perform comparatively to those who did not experience safety issues on campus (Irwin et al., 2018). The authors concluded that early identification of safety issues and remediation on campus leads to competence in safety behaviors in clinic (Irwin et al., 2018).

Remediation of student clinical deficiencies is a critical issue that has implications for the student, the academic institution, and the public. In medicine, there is evidence that medical students and residents who fail to perform up to expected standards and do not remediate their deficiencies, become physicians who continue to have deficiencies in professional practice (Hauer et al., 2009;

Papadakis et al., 2005). Clearly, as a profession, there is a responsibility to protect the public from incompetence; however, there are economic implications to all involved to uphold this standard (Foo et al., 2017). A cost analysis of clinical education failure in the health professions estimated an additional cost of \$9371.00 US dollars for each student who fails clinical education (Foo et al., 2017). The student incurred most of this economic burden, followed by government, educational institution, health care organization and clinical educator (Foo et al., 2017).

### **Clinical Instructors**

Clinical instructors who are employees of the clinical site and not the college or university supervise PT students. Frequently these CIs have little training or mentoring on how to supervise and guide students. The APTA offers the voluntary Credentialed Clinical Instructor Program (CCIP) with content on dealing with students who experience clinical performance issues (American Physical Therapy Association, 2016). This training is voluntary and therefore PTs often opt to use continuing education time and funds for more clinically related content. Additionally, PTs who use the CPI to evaluate students are required to take an on-line training offered for free by the APTA (American Physical Therapy Association, 2019). Vendrely et al. (Vendrely & Carter, 2004) explored the impact of CCIP training and CPI training on the first five items on the CPI. They found that there was no significant difference on scoring items 2-5 but there was a significant difference in scoring between groups on the first item, "safety" (Vendrely & Carter, 2004). Those who had both CCIP, and CPI training scored students significantly lower in safety than those with CPI only training or no training (Vendrely & Carter, 2004). This study had 34 PTs watch a 12-minute video tape of actors portraying a student and patient interaction (Vendrely & Carter, 2004). The fact that a videotape was utilized is a limitation of this study and may have jeopardized internal validity because typically CPI ratings are done after observing a student over a period of time and rating "typical performance" (American Physical Therapy Association, 2019) and not just one interaction. The authors concluded that student performance assessment in the



clinical environment is complex and that further study of the use of the CPI is needed (Vendrely & Carter, 2004).

Although there is some description of what constitutes poor performance in clinical education, behaviors that may lead a CI to identify the student with performance issues and its incidence, there is little research exploring the process of failing a student or the CI's experience of dealing with this issue. Most of the literature exploring the experience of supervising an under-performing or failing student has been in the nursing or medical fields with limited research in occupational therapy (OT), Speech Language Pathology (SLP) and PT.

Hrobsky et al. (Hrobsky, 2002) explored the experience of nurse preceptors supervising failing nursing student using a qualitative approach with semi-structured interviews of four nurse preceptors. The authors identified the following common themes: hallmarks of poor clinical performance, preceptors feeling, and the role of the liaison faculty (Hrobsky, 2002). In this study, preceptors articulated that red flags occurred early in the clinical experience and were often attitudinal or behaviorally related such as unenthusiastic attitude or failure to ask questions (Hrobsky, 2002). Inadequate skill or issues with safety were red flags but were not the first indicator of poor behavior (Hrobsky, 2002). Safety concerns were often the behavior that confirmed to the supervisor the student was having difficulty and what triggered a call to the school's liaison faculty (Hrobsky, 2002). The second theme identified in this study had to do with the preceptors' confidence in their role as a supervisor. Preceptors expressed feeling "fear, anxiety and self-doubt" (Hrobsky, 2002) in their role as a supervisor. Feelings of fear related to their perception of what would happen to the student should they not pass (Hrobsky, 2002). The third theme identified in this study was the role of the faculty liaison. The preceptors identified listening, being supportive and following up as behaviors of faculty liaisons that were effective when dealing with the problematic student (Hrobsky, 2002). This study had only four interviewees, which may not have been enough subjects to obtain saturation.

In another qualitative study, Miller and colleagues (Miller et al., 2017) explored the work role transition of 20 expert nurses in their new role as a nurse preceptor. Themes and sub-themes that emerged in this study were “transfer of learning” (Miller et al., 2017, p.362) during the preceptorship experience, formal and informal training and expert to novice (Miller et al., 2017). Nurse preceptors felt that the responsibility of the success or failure of the student to be burdensome and felt ill prepared in managing conflict when the individual was not performing up to expected standards (Miller et al., 2017). Formal training for nurse preceptors was inconsistent; 12 of the 20 had attended formal classes either offered online or on the weekend but the remainder of participants did not receive any formal training for their role as preceptor (Miller et al., 2017). Inconsistencies in formal training was a concern to preceptors as was their ability to evaluate those they supervise (Miller et al., 2017). Although written guidelines were provided participants felt insecure and frustrated with the evaluation process. Participants were reluctant to ask for help when dealing with difficult learning situations and often waited too long to ask for help or counsel (Miller et al., 2017). Additionally, preceptors felt pressure in meeting their responsibilities to the patients and the nursing unit while trying to address the learning needs of the preceptee (Miller et al., 2017).

Presently, there are limited studies in physical therapy exploring the clinical instructor’s experience in dealing with the UPS. Bearman et al. (Bearman et al., 2013) utilized focus groups and a qualitative grounded theory approach to describe the clinical instructor’s perspective of their experience and strategies used when dealing with these students. CIs described their role as having multiple responsibilities including responsibility to their patients, the profession, other staff, the university and the student (Bearman et al., 2013). They described feelings of stress while trying to balance these responsibilities and found it difficult at times to help the student transfer classroom learning to the clinic (Bearman et al., 2013). In some environments, clinical education was not supported and the CIs felt that they were isolated and alone in making judgements about performance and ultimate entry into the

profession (Bearman et al., 2013). The disjointed approach to clinical education where CIs are not debriefed of how students performed in previous experiences was cited as an issue impairing the ability to address student performance issues promptly (Bearman et al., 2013). When exploring strategies used CIs commented on utilizing their own notes on student performance, criteria from formal evaluation tools and intuition in identifying under performers (Bearman et al., 2013). Interventions most commonly cited were providing more feedback and more supervision and generally giving “more of themselves” (Bearman et al., 2013, p.537) when dealing with the underperforming student. The authors noted a generalized lack of student-focused learning interventions utilized (Bearman et al., 2013). This study was conducted in Australia where the educational and medical systems may be different from the United States. Additionally, all clinical instructors in this study came from the same health care system and were all affiliated with the academic program of the researchers.

### **Failure to Fail**

In Miller’s study of 2017 it was noted that difficulty and lack of training with evaluation could lead to some clinicians passing underperforming students who were not competent (Miller et al., 2017). In nursing and medicine there are several studies noting that student clinicians who have not been deemed competent to practice have been given passing grades. Most of these studies are qualitative in nature and therefore do not provide quantitative data on the actual prevalence rates of this problem but do give insight into some of the factors that may come into play.

Dudek and colleagues (2005) explored failure to fail in 21 physicians’ clinical supervisors responsible for supervising residents and medical students in Canada (Dudek et al., 2005). Using semi-structures interviews, they identified four perceived barriers to failing to fail medical students. Reasons noted by the participants were (1) inadequate documentation, (2) not knowing what to documents, (3) concerns of an appeal process and (4) lack of options for remediation of the student (Dudek et al., 2005). Medical supervisors admitted to not documenting instances of poor performance throughout

the learning experience, therefore having inadequate documentation to back up a failing grade (Dudek et al., 2005). Some supervisors felt that they did not know what to document (Dudek et al., 2005). Another common theme was fear and anxiety of the appeals process. Supervisors felt that their professional judgement and reputation were questioned and even if their decision was upheld, the time and effort required while going through the process was not worth it (Dudek et al., 2005). Supervisors also verbalized that not having remediation options for the student was a deterrent to assigning a failing grade (Dudek et al., 2005). They sympathized with the student who had gotten that far and then would not graduate or progress (Dudek et al., 2005).

Cleland (Cleland et al., 2008), in another qualitative study, utilizing focus groups found similar themes in tutors and supervisors of medical students in the United Kingdom (UK). Similar to Dudek's study, these supervisors reported negative feelings about being challenged by the student in the short term as well as in a longer, formal appeal process (Cleland et al., 2008). They were more likely to be lenient with gaps in knowledge if the student was presenting earlier in their program of study but were more concerned if the problems were exhibited toward the end of the program (Cleland et al., 2008). They struggled with "duty to the public" (Cleland et al., 2008) in students who continued to underperform in later stages of the program. Having an acceptable remediation plan for the student made it easier for supervisors to assign a non-passing grade than if there was no remediation option available (Cleland et al., 2008). A student who was liked by the supervisor or colleagues, as well as a student perceived to be trying, made it more difficult for supervisors to report under-performance (Cleland et al., 2008). Time was another common theme in this study. Supervisors and tutors reported time constraints as a barrier to reporting under-performance. Supervisors lacked time to give feedback, perform the assessments and felt stressed in juggling responsibilities to patient care and to the student learning needs (Cleland et al., 2008). An additional theme generated in this study was that of self-efficacy of the supervisor. Some supervisors took the blame for student underperformance; questioning

their abilities to progress the student along. This was more common in less experienced supervisors and tutors (Cleland et al., 2008). Some supervisors in this study reported instances of feeling pressured by the university staff to pass underperforming students (Cleland et al., 2008).

Luhanga and colleagues (Luhanga et al., 2014) conducted a multi-disciplinary study of 33 Canadian nursing, education and social work faculty members, faculty advisors/liaisons and field supervisors/preceptors. This qualitative study, utilizing semi-structured interviews found five themes related to failure to fail a struggling student (Luhanga et al., 2014). Themes identified were: (1) failing a student was a difficult process, supervisors reported that it was often emotionally painful, and they questioned how the student got that far (2) both academic and emotional support were needed for all involved: the student, supervisor, and faculty. Supervisors often questioned their judgment and sought second opinions from colleagues or faculty. Encouragement was needed to assign the failing grade. (3) There are consequences of failure to the student, supervisor, and university. Supervisors recognized that students had invested considerable time, resources and money and represented loss to the student. Often, CIs noted feeling that they had failed the student. (4) Personal, professional and structural reasons“ (Luhanga et al., 2014) contribute to failing to fail a student. Some reported that failing grades were overturned by the university (5) additionally, it was recognized that failing to fail students could have a negative impact on the reputation of the college or university (Luhanga et al., 2014).

Hughes et al., utilized a comprehensive descriptive survey to explore Australian nursing academic and clinical supervisors' (n=149) experiences in evaluating students' performance that was not clearly passing (Hughes et al., 2019). Overall, the respondents did not find providing feedback difficult (91.9%), however 29.5% replied that they felt intimidated sometimes or often while providing feedback. Overall, respondents did not feel students should be “given the benefit of the doubt” (Hughes et al., 2019, p.208) (73.8%), however despite this 23.5% reported that they had at some point given a marginal student the benefit of the doubt and assigned a passing grade. Incidence of passing underperformers

decreased as length in the program increased: 12% supervising first year students, 4.7% supervising second year students, and 1.3% supervising third year students had assigned passing grades to students who had under-performed. Assessors (61.1%) reported that they had experienced students trying to manipulate them to assign passing grades and had a student place formal complaint against them (35.6%). Most supervisors (50.8%) felt supported by the college/university but 68% reported feeling significant distress in the “gatekeeping” (Hughes et al., 2019, p.214) role because of not being supported. Time constraints was another factor identified in this study. Feeling overwhelmed by their workload was reported by 68.4% of respondents with 71.1% of indicating it took longer to fail students than to pass (Hughes et al., 2019). Additionally, 68.4% of respondents reported limiting feedback in shorter earlier rotations due to time constraints (Hughes et al., 2019). Although this study was conducted in nursing, its attempt to quantify the experience of clinical supervisors in supervising and assessing students who experience performance difficulties in clinic provides insight for future research endeavors.

In another study conducted in nursing, Couper explored the relationship between role-strain, faculty stress and perceived organizational support of nursing faculty who were deciding to assign a failing grade (Couper, 2018). The author utilized a questionnaire which included a demographic section and three other tools: The Role Strain Scale (RSS) designed to measure stress or source of stress, The Faculty Stress Index (FSI) to measure stress and The Survey of Perceived Organizational Support (SPOS) which measures individuals’ perception of support from their employer or organization (Couper, 2018). The respondents included 390 clinical nurse faculty (CNF) in the United States and reported instances of failing students at all levels, including graduate and accelerated programs. Significant relationships were found between faculty stress and role strain and organizational support and role strain (Couper, 2018). As faculty stress increased so did role strain ( $r=.822$ ,  $p=.000$ ) and as perceived organizational support increased role strain decreased ( $r= -.601$ ,  $p=0.000$ ) (Couper, 2018). Variability in role strain was

explained by these two variables ( $R^2=.69$ ). Of this group of participants 82.6% assigned a failing grade and 17.4% did not assign the deserved failing grade, indicating that failure to fail is a real factor in nursing education (Couper, 2018). Other areas noted as concerns to CNF were the “evaluative process” (Couper, 2018) (36.3%), documentation practices (26.2%), remediation concerns (10.0%) absence of administrative support (9.5%), unsafe students (6.7%) and lastly professional growth and increased confidence in assigning a failing grade (4.5%)” (Couper, 2018) Findings of this survey study are consistent with those of previous qualitative studies and offer insight regarding failure to fail.

Only one study, a conference abstract, exploring the topic of FTF in physical therapy could be found. Carroll and colleagues (2019) in a qualitative study using focus groups, found that obstacles to failing an UPS were CI feelings of conflict, unclear objectives from the school, and student issues. Additionally, this study found that PT CIs felt unprepared and unsupported and were hesitant to fail an UPS (Carroll, et al., 2019)

### **What is Known**

PT student behaviors that signal clinical under-performance (Hayes et al., 1999) and domains of learning that may contribute to it in certain settings have been identified (Silberman et al., 2018). There is some evidence that PT CIs experienced stress in their role and the interventions used to manage UPS are primarily providing more student supervision and feedback and do not involve individualized learning plans (Bearman et al., 2013). Clinical supervisors in other disciplines, feel ill prepared for their role and do not feel skilled in giving feedback or appropriately evaluating an UPS (Miller, 2017). Submitting an unsatisfactory evaluation for an underperforming student is difficult to do (Luthanga et al., 2014). The phenomena of FTF does occur and has been well explored in both nursing and medicine (Dudek, 2006; Cleland et al., 2008; Couper et al., 2018; Hughes et al., 2019; Luthanga et al., 2014,). However, the literature focusing on the CIs experience of supervising an UPS and FTF in physical therapy is minimal (Bearman et al, 2013; Carroll et al, 2019).

## **Gaps in the Literature**

There is limited literature in physical therapy focusing on student underperformance in clinical education or the CI experience while supervising these students. Little is known of the strategies used by CIs to help students, the incidence of FTF, factors that may contribute to it and what can be done to support CIs during the experience.

## **Theoretical Framework**

As mentioned in the introduction, there are theories that pertain to various aspects of the CIs experience in supervising an underperforming student in clinic however, one theory did not adequately frame all aspects of this study exploring CI experiences. Three theories that were found to inform various aspects of the CI experience are: Adult Learning Theory, Perceived Organizational Support Theory and Role Strain Theory. In this section, each of these will be discussed in relation to their applicability to aspects of the CIs experience in supervising the underperforming student.

### ***Andragogy – Adult Learning Theory***

Andragogy, developed by Knowles, also known as adult learning theory, is a set of concepts that can be utilized in many learning situations. The theory includes “6 core principles: (1) learners need to know (2) self- concept of learner (3) prior experience of the learner ( 4) readiness to learn (5) orientation to leaning and (6) motivation”(Knowles et al., 2005 p3). Knowles further describes this model as it relates to encouraging adult learning processes. Adult learners are motivated based on what they feel they “need to know” (Knowles et al., 2005, p.64) and may not be motivated to learn concepts that they do not think they will need in their daily work practices. Therefore, an important role of the CI would be to point out the importance of learning certain skills or concepts (Knowles et al., 2005). Pointing out gaps in their performance, knowledge or skill that impact their ability to be a fully functioning practitioner and the importance of these skills to entry level practice would be strategies the CI may use if embracing this theory. Knowles describes adult learners as having a self- concept of being responsible



for their learning (Knowles et al., 2005). Some students may have difficulty transitioning from the dependent role predominantly utilized in the didactic portion of the curriculum to the self-directed role needed in the clinic. The supervisor's role is to help the learner move from a dependent to a self-directed learner (Knowles et al., 2005). Shifting the responsibility of learning and clinical progression away from the CI and onto the learner may alleviate some stress felt by CIs in dealing with the underperforming student. The third principle of Andragogy recognizes that "the adult learner comes with greater breadth and depth of experiences that will impact their learning" (Knowles et al., 2005). There will be greater variability among students (Knowles et al., 2005) that the CI must appreciate. The clinical supervisor should recognize that a learning plan developed for one student may not work for another and therefore, should be individualized. This ties into results of Bearman's study (Bearman et al., 2013), finding that most CIs dealing with underperforming students lacked individualized plans for these students. The fourth principle, "readiness to learn" recognizes that adult learners become ready to learn based on what they need to know to function in their environment (Knowles et al., 2005, p.67). This principle also emphasizes the "developmental nature of learning" (Knowles et al., 2005), where certain skills may need to be mastered before progressing to the next level (Knowles et al., 2005). In some instances, students may have been sent to the clinic before they had mastered the basic prerequisite skills necessary to function in the clinic or forgotten some skills. Early recognition of this may allow remediation of basic skills to foster success on more complex skills. Principle number five "orientation to learning" (Knowles et al., 2005, p.67) states that learners will seek to learn what they need to learn to help them solve problems that they will come into contact with on a regular basis (Knowles et al., 2005). An example of this in clinical education may be giving the student a hypothetical case and asking them to learn or practice on their own the skills they will need to treat the client (Knowles et al., 2005). The last principle motivation to learn (Knowles et al., 2005) states that adults are motivated to learn by both external and internal factors but are more motivated by "internal factors"

(Knowles et al., 2005, p.68). Internal factors that can affect learning are things such as satisfaction with career choice, comfort in the environment and other personal factors (Knowles et al., 2005). Although most adults are motivated to learn, some things can interfere with motivation, such as poor self-concept as a learner from previous experiences, lack of access and time constraints (Knowles et al., 2005). A student may have a negative attitude about a particular patient population or clinical setting; therefore, the CI should try to have the student realize how this experience may relate to their desired practice setting and develop learning experiences that foster the development of comfort in the environment. As a clinical supervisor knowing what motivates the student and knowing what barriers exist that may influence their learning is important when developing an adult student's learning plan. This framework could be used to explore if CIs are familiar with the concepts of adult learning and if so, how they utilize the concepts of this framework to facilitate learning in the clinical environment; particularly for those students who may be under performing or failing.

### ***Perceived Organizational Support Theory***

Perceived organizational support (POS) theory states that employees have a perception of how much their organization values their contributions and efforts and if the organization cares about their well-being (Kurtessis et al., 2017). Higher levels of POS are associated with increased work effort and a desire by the employee to help the organization fulfill its objectives (Eisenberger & Huntington, 1986). This theory may partially relate the CIs experience. In relation to the CI experience the organization may be viewed as either the health care agency, who employs the CI, or the academic institution where the student is enrolled. The CI's perceived support from either of these organizations can affect the CI's experience of supervising an UPS. Stressors identified in the workplace that decrease POS have been identified and include "work overload, involving demands that exceed what an employee can reasonable accomplish in a given time; role ambiguity, involving the absence of clear information about one's job responsibilities; and role conflict, involving mutually incompatible job responsibilities" (Rhodes

and Eisenberger, p 700.) If the employer is supportive of the CI, recognizes the stressors and makes accommodations to other job demands this could significantly impact the CI's experience and the quality of educational experience that they deliver. Additionally, if the CI feels supported by the academic institution and that their contribution to the student's experience and evaluation of the student is valued this could also affect the CI's experience.

### ***Role Strain Theory***

Role Strain Theory may come into play in the CI's experience especially in relation to the added stress of supervising a student who requires more of the CI's time and energy and may come into play if a CI fails to give an unfavorable evaluation to a student who should not pass. Role strain theory (Goode, 1960) attempts to explain how social institutions function. Social institutions or organizations are made up of units of roles which function "through the notion of role strain" (Goode, 1960, p.483) Individuals who function within a social structure, in this case the healthcare facility, experience a sequence of "role bargains" (Goode, 1960, p.483) and continuously select behaviors that reduce their role strain within the social structure. In this theory the roles are units of the social structure and in general people who function within a social structure generally can fulfill the obligations of their role. Total role obligations vary between individuals and individuals will experience different obligations which are perceived as role strains. Some organizational work titles come with multiple roles and relationships adding to role strain. With multiple roles and responsibilities strain increases and the individual must make choices to reduce role strain, sometimes the choices are unpleasant or not desirable but are made to reduce overall role strain (Goode, 1960). A CI may experience multiple sources of role strain which includes direct patient care productivity demands, the demand of providing a quality educational experience to the student. Additionally, the CI may experience the added strain of submitting an evaluation that could result in student dismissal or submitting an evaluation that is favorable to someone who should not

pass. The CI may fear additional strain because of grievance hearings if an unfavorable evaluation is submitted.

### **Summary**

Although clinical education comprises a significant portion of the PT curriculum there is limited research addressing student difficulty or failure in this area. Student behaviors that signal to a CI that a student is under-performing have been identified (Hayes et al., 1999), however how to manage or intervene when these issues appear has not been well studied. Surprisingly to date, limited exploration of how clinical instructors, who are a critical member of the clinical education team, manage these problematic learning situations has been undertaken and reported.

Using what is known about students who experience performance issues or clinical education failure from the literature in other health related professions, predominantly nursing and medicine offers some insight. The function of stress and role conflict of clinical supervisors has been identified (Couper, 2018). The experience of failing clinical education can be emotionally draining to all involved: student, supervisor, and faculty liaison. The concept of FTF those students who are not competent occurs in both nursing and medicine. Factors contributing to this are clinical supervisor's confidence in their teaching and supervising skills (Cleland et al., 2008), time constraints (Cleland et al., 2008; Dudek et al., 2005), relationship with student and perception that student is trying, remediation options available, level of the student and fear of the appeals process (Cleland et al., 2008; Dudek et al., 2005). The issue of FTF has not been extensively explored in PT education. Generalizations about this based on research from other professions may occur but physical therapy is a different profession with a very different model of clinical education delivery.

Based upon this review of the literature, only one study in physical therapy has explored the experience of the clinical instructor supervising the student who is having trouble in clinical performance (Bearman et al., 2013). This study found that CIs felt conflicted in their role and had difficulty managing

their multiple responsibilities as clinicians, educators, supervisors and in some cases administrators (Bearman et al., 2013). Additionally, the teaching practices that clinical supervisors used consisted of predominantly giving more supervision and more feedback to the student and lacked an individualized learning plan (Bearman et al., 2013). Although this study's findings are informative, the findings are also limited in their generalizability as the PT educational and healthcare systems in the US are different from that of the Australian where the study took place. Additionally, this study did not look at the support or lack of support from the academic institution or the health care facility, CIs awareness of learning theory and how to develop strategies to employ to assist the student or factors that may be involved in giving a candid evaluation of the student.

Only one study, that was published as a conference abstract, (Carroll et al., 2019) was found relating to FTF in physical therapy. This was a qualitative study where the authors concluded that CIs experienced challenges in evaluating students including not feeling prepared, lacking support and hesitancy to submit a failing evaluation. These findings are similar to findings in other professions and contribute some basic understanding of what can be happening in physical therapy.

There is more to learn about clinical education difficulty and failure in the field of physical therapy, especially how to manage it in the current American health care and educational system. Thus, this study sought to explore underperformance and failure of clinical education from the clinical instructor's experience, including the CIs strategies used to assist the student, how support or lack of support from the academic and/or clinical institutions play a role, if the concept of failure to fail exists in PT and if so, what contributes to it as well as what interventions are beneficial to assist the student in gaining clinical competence.

## Chapter III

### Methods

#### Introduction

This study explored PT CI's perceptions, practices and experiences when serving as a CI to an UPS. Additionally, this study identified if the phenomenon of FTF exists in PT clinical education and what organizational, demographic, and personal factors may contribute to it.

#### Study Design

This study used a non-experimental, descriptive, explanatory sequential (equal) mixed methods approach (Creswell, 2015). The quantitative aspect of the study used a non-experimental, exploratory, cross-sectional approach (Creswell, 2015) utilizing a web-based survey developed by the principal investigator. Quantitative data gained from the survey was used to explore relationships between demographic data and CIs' perception of preparedness in managing an under-performing student, sources of organizational support, and the CI's likelihood of submitting an unsatisfactory evaluation when warranted. Since this topic has not been well explored in the physical therapy literature, the PI developed the survey based on literature involving other but similar disciplines. The qualitative aspect of the study used a phenomenological approach using semi-structured interviews to gain an in-depth perspective of the CIs experience (Creswell, 2015). The qualitative aspect of the study was used to gain further information that may be unique to PT and not directly captured in the survey, as well as to better understand the quantitative data and to confirm or refute results of the quantitative data (Creswell 2015).

### **Instrumentation - Survey Design**

The PI developed survey tool contained questions centered on common themes found in the literature in the fields of nursing, medicine and physical therapy relating to CI or clinical preceptor's experience in dealing with the UPS. Specific constructs identified in the literature relating to the clinical supervisors/preceptors experience were sense of duty, perceived ability to manage UPSs (Cleland et al., 2008), failure to fail (Dudek et al., 2005; Hughes et al., 2016), time constraints (Cleland et al., 2008), organizational support (Couper, 2018), time/work pressures and personal stress/distress experienced by the CI (Bearman et al., 2013; Hrobsky, 2002). Constructs were divided into sub constructs, based on literature review and a question item for each subconstruct was developed along with demographic questions (Alreck & Settle, 2004). The survey was designed to ask questions of all clinical instructors with conditional branching (Alreck & Settle, 2004) for more specific questions targeting only those clinical instructors who had supervised a student defined as underperforming. Demographic questions were positioned at the end of the survey to allow the participant to become engaged in the questioning rather than getting disinterested by a series of demographic questions loaded at the beginning of the survey (Alreck & Settle, 2004). Branching was built into the survey to allow for participants to volunteer for the qualitative aspect of the study. The survey items were entered into the Research Electronic Data Capture (REDCap) survey tool hosted by Mercy College. REDCap is a secure, web-based software platform designed to support data capture for research studies (Harris et al., 2009).

### **Reliability and Validity of the Survey Instrument**

In order to improve reliability of the survey three things were considered: the clarity of the questions, getting the respondents to answer thoughtfully, and obtaining enough respondents to achieve statistical power (Alreck & Settle, 2004). Confirming clarity of the questions through the Delphi panel review described in the next section, helped to address reliability of the instrument because if participants clearly understand what is being asked; they will be more likely to answer appropriately and

improve reliability of the tool (Alreck & Settle, 2004). If participants are unsure what is being asked, they may answer haphazardly, and this would negatively affect reliability (Alreck & Settle, 2004). To help assure that respondents are answering thoughtfully several survey questions were reverse coded and interspersed throughout the survey (Alreck & Settle, 2004). Assuring sufficient statistical power is addressed in the sampling section of this paper. Cronbach's alpha was used for survey internal consistency reliability and is described in the results.

Currently, no other tools were found in the literature that measured CI's perceptions, practices, and experience when supervising PT students. Therefore, the PI developed survey could not be tested for criterion validity by comparing it to another instrument (White, 2020). Content and face validity of the survey was measured using a panel of experts to review the survey to determine if the survey measures the content it sets out to measure (Alreck & Settle, 2004). Construct validity was addressed using a Post-hoc Exploratory Factor Analysis to determine if individual subconstructs, represented by individual survey questions contribute to the main constructs.

A Delphi panel review (Falzarano & Zipp, 2013) was conducted to determine if the survey questions were clear and if they adequately addressed the constructs they were developed to measure. Purposive sampling was used to recruit the Delphi panelists (Falzarano & Zipp, 2013). This is an appropriate means of sampling because panelists are being recruited based on their expertise. The Delphi panel consisted of one expert in survey design who is a PT with a terminal degree and significant expertise in survey-based research involving PTs, two DCEs with terminal degrees and research experience, and three SCCEs, one who is still an active CI, who have research and publication experience. In round one review, expert panelists were asked to review each survey item for clarity, question appropriateness, and adequate reflection of sub constructs. The panelists were also asked to make suggestions for changes or improvement to the questions. After receiving and reviewing all panelist feedback, the PI revised those survey items that did not achieve 80% agreement (Falzarano &



Zipp, 2013) as well as any questions that were suggested to be re-worded. The revisions were sent out for a second round of review by the same panel of experts. This process was repeated for three rounds, obtaining 100% agreement on all items following the third round. The final version of the survey was converted into an electronic survey for electronic distribution.

After Institutional Review Board (IRB) approval was obtained, pilot testing of the electronic version of the survey was performed using a sample of convenience, via email to 8 clinical instructors, the intended audience. Respondents of the pilot survey were asked to answer the questions as a regular respondent would and to provide feedback on how the technology worked, time required to complete the survey, clarity of questions and to suggest improvements to the survey. Pilot participants reported requiring 8-12 minutes to complete the survey and that the technology worked properly. They did not suggest any changes to the survey questions, so the current version of the survey was implemented.

After the survey was conducted Cronbach's Alpha test was used to test for reliability and internal consistency between all survey items (Tavakol & Dennick, 2011) . After EFA, Cronbach's alpha was repeated on each of the identified constructs (Tavakol & Dennick, 2011).

### **Validity and Reliability of the Qualitative Aspect**

Validity in qualitative research, or trustworthiness (Creswell, 2014) refers to the accuracy of the findings from the perspective of the researcher, participant, and any additional readers of the study. The PI reflected on and bracketed personal biases brought to the study and developed a plan to minimize the impact of these biases in interviewing and data analysis. The accuracy of the transcription was checked by each participant, the PI and a second reviewer the PI dissertation chairperson. Each round of coding, code book development and modification, and thematic development was checked for agreement by a second researcher, the PIs dissertation chairperson to improve reliability and trustworthiness. Once accuracy of transcription was established the PI re-read the transcripts, wrote

memos, and developed initial codes using both in-vivo and descriptive codes (Creswell & Poth, 2018). After first round coding was completed a code book with definitions of each code was developed and a second round of coding was conducted (Creswell & Poth, 2018). Codes were collapsed into categories and themes were developed (Creswell & Poth, 2018). This process was checked for accuracy and agreement, at each stage by a second researcher, the PI's dissertation chairperson.

### **Participants**

The inclusion criteria for this study were PTs with at least 1-year post licensure experience, who had served as a CI anytime in the past 5 years. Exclusion criteria were physical therapists who had only served as CIs to PTA students or students from other professional disciplines and any PTs who may have participated in the pilot or Delphi panel. PTs who had served as CIs to students in the PT program that the PI is employed were excluded from the qualitative arm of the study.

### **Recruitment and Sampling**

A sample of convenience using non-probability, purposive and snowball sampling was used to recruit participants for this study (Alreck & Settle, 2004). Recruitment methods included sending an IRB approved recruitment letter via email through the APTA National Clinical Education Consortia (NCEC) list serve, the NYNJ Clinical Education Consortia list serve, purchasing an advertisement in the ACAPT bi-monthly newsletter, sending emails to SCCEs and CIs from the Mercy College Exxat and CPI databases, and contacting DCEs of accredited PT programs to ask them to distribute the survey to the CIs that supervise their students, if policy allowed.

An online sample size calculator ([www.calculator.net](http://www.calculator.net)) was used to calculate a-priori sample size for a descriptive survey, using an unknown population size and suggested a sample size of 373 for a 95% confidence interval. The image of the sample size calculator is displayed in Figure 1.

Figure 1

*Image of Sample Size Calculator\**

The screenshot shows a web browser window with the URL <https://www.calculator.net/sample-size-calculator.html?type=1&ci=95&ci=5&pp=50&ps=12000&...>. The page title is "Sample Size Calculator". Below the title, it says "Find Out The Sample Size" and "This calculator computes the minimum number of necessary samples to meet the desired statistical constraints." The result is displayed in a green box: "Result Sample size: 373". Below the result, it states: "This means 373 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within  $\pm 5\%$  of the measured/surveyed value." The input fields are: Confidence Level: 95%, Margin of Error: 5%, Population Proportion: 50% (with a note "Use 50% if not sure"), and Population Size: 12000 (with a note "Leave blank if unlimited population size."). There are "Calculate" and "Clear" buttons. On the right, there is a "Math Calculators" sidebar with links for Scientific, Fraction, Percentage, Triangle, Volume, Standard Deviation, Random Number Generator, and More Math Calculators. At the bottom, there is a Windows taskbar with the search bar and system tray showing the time as 4:15 PM on 12/2/2020.

*\*Used with permission*

## Data Analysis

REDCap survey data was downloaded from REDCap (Harris, et al., 2009) to Statistical Package for the Social Sciences (SPSS) version 27 (IBM, 2020) and stored on a password protected flash drive for data analysis.

Cronbach alpha test was performed on all survey Likert scale items to determine internal consistency reliability of the entire survey (Tavakol & Dennick, 2011). After exploratory factor analysis was conducted, Cronbach alpha was repeated on questions that clustered on individual factors or constructs (Ursachi, et al., 2015)

Kaiser-Meyer Olkin (KMO) test and Bartlett's Test of Sphericity were performed to determine if the sample was adequate for EFA. Post-hoc exploratory factor analysis was performed to determine if and what subconstructs contribute to the main constructs (statology.org). For those questions that cluster to constructs, the scores within the clusters were summed and the data was treated as interval data and Spearman correlation was used to look at associations between variables (Cooper & Johnson,

2016). For those items in the survey that did not contribute to any construct then individual Likert scale items were treated as ordinal data and expressed in descriptive terms with frequency distributions (Sullivan, 2017).

Research Question 1: “How do CIs perceive their ability to effectively manage a student who is experiencing performance issues in clinical education?” Items 8, 9, 11, 16, 17, 18, address aspects of student management and will be expressed with descriptive statistics (frequency distribution and Mode). For associated research questions 1a: academic preparation, 1b: continuing education, 1e: practice setting descriptive statistics were used to explore relationships and for associated research question 1c: years of PT experience and 1d years of experience as a CI spearman correlation was used (Sullivan, 2017).

Research Question 2: What strategies and interventions do CIs use to address performance concerns? Qualitative analysis will be used looking at codes, categories, themes, and frequency of comments.

Research Question 3: “Does failure to fail exist in Physical Therapy Clinical Education?” survey questions 19, 20, 21, 22, and 55 address this and were expressed with descriptive statistics and analyzed concurrently with the qualitative data.

Research Question 4: If failure to fail exists, what is the relationship between FTF and demographic and organizational factors? Spearman correlation was used to explore the relationship between FTF as measured by question 55 on the survey with demographic variables of years of experience as a PT, years of experience as a CI, and constructs identified by EFA. For items that did not contribute to a construct, relationships were expressed as crosstabulations (Alreck & Settle, 2004) Additionally, this analysis was integrated with qualitative data.

IVs: Education level, continuing education, years of experience, support from DCE, support from employer, perceived preparation

DV: Failure to Fail as measured by question 55: *"In retrospect, I realize I submitted a passing evaluation to a student who should have failed"*

Research Question 5: what is the CIs experience when supervising an underperforming student?

Associated Research Question 5a: Do CIs experience personal stress when dealing with a student who is underperforming in CE? Survey questions 38, 39, 40, 41, and 42 address this construct and will be expressed with descriptive statistics and analyzed concurrently with the qualitative data.

Associated Research Questions 5b and 5c: What do CIs perceive to be beneficial in supporting them in their role? (5b) and what do CIs perceive as not being beneficial in supporting them in their role? (5c) were analyzed qualitatively

Final analysis involved merging quantitative and qualitative results. Qualitative themes were analyzed in terms of what themes were expected, what were unexpected, what were dominant themes and how do the themes of the qualitative analysis relate to the quantitative data (Creswell, 2018).

### **Qualitative Data Analysis**

De-identified transcripts were first read through by the PI for immersion with the data. On a second reading, initial coding was conducted by the researcher using in-vivo and descriptive codes and reviewed by the dissertation chairperson for agreement. Codes were modified and a code book was developed after this initial stage of coding. The PI conducted a second round of coding using the revised codes and codebook. Third round coding, where codes collapsed into categories for thematic analysis, and theme development was performed. This process was reviewed by the dissertation chairperson for accuracy and agreement at each stage.

## Procedures

Institutional Review Board (IRB) approval was obtained from Mercy College IRB. After securing Mercy College IRB, Seton Hall IRB approval was obtained through an Institutional Review Board Authorization Agreement (IAA).

Participants gained access to the survey by either receiving an email with a link to the REDCap survey in the body of the email or by clicking on a link to the survey in an advertisement. Using a link to the survey, rather than delivering the survey through REDCap allowed for blinding of the survey; participants' email addresses were not linked to their responses therefore, maintaining anonymity of the participants and their responses. Once the survey link was opened an informed consent document appeared and participants were required to agree to participate by clicking the radio button stating "I have read the informed consent and agree to participate" to continue with the survey. Participants were instructed that they could withdraw their participation at any time by exiting out of the survey. The survey was estimated to take no more than 20 minutes to complete. At the end of the survey, conditional branching was used to invite CIs who had supervised an underperforming student to participate in the qualitative aspect of the study. Participants interested in participating in the qualitative portion were asked to provide their contact information (phone and email address) to allow the PI to contact them. This was done by directing them to another survey link, so their contact information was not linked to their survey responses to maintain anonymity. Interview volunteers were separated out by geographic regions of the country, based on the area code of their phone number, and then randomly selected. The PI contacted the potential participants and explained the qualitative portion of the study and the additional informed consent process. Once a participant indicated that they were willing to participate in the qualitative arm of the study they were sent a separate informed consent for interview participation via email. Once the informed consent was obtained the Zoom interview was scheduled and a Zoom link was sent to the participant. At the beginning of the interview

the PI explained the qualitative interview process again, informed them that the interview was being recorded and verbally confirmed informed consent again.

The qualitative aspect of the study used a phenomenological approach using semi-structured interviews (Creswell, John W., 2014). Since this was an explanatory sequential design, interview questions were developed after the quantitative analysis and will be discussed in the results section.

The target number of interviews to be conducted was between 6 and 10 or until saturation was achieved (Creswell, 2015). According to Creswell (2015), 3-10 subjects is recommended for a phenomenological study. Semi-structured interviews were conducted using Zoom web-based video conferencing platform. Zoom has been shown to be an acceptable means of conducting qualitative research (Archibald, et al., 2019). All interviews were audio and video recorded on Zoom and took between 30 and 45 minutes. Immediately after the interview the video file was deleted from Zoom and the audio file was downloaded and saved in a password protected file to the personal computer of the principal investigator (PI). Once downloaded, both the audio and video files were deleted from Zoom. The audio file was transcribed verbatim by the PI into a Microsoft Word document. All identifiable information such as name and employer were deleted from the transcription and fictitious names were assigned. Transcriptions were sent back to the participant to check for accuracy of transcription and any corrections were made by the PI. In appreciation for their time, interview participants were given a 20-dollar Amazon gift card delivered electronically to their email address provided within 3 days after the interview was conducted.

## Chapter IV

### Results

#### Introduction:

This chapter will review the study results. The first part addresses response rate, statistical power and the evaluation of validity and reliability of the survey. The second part addresses the demographics and results needed to answer the research questions previously described.

#### Response Rate and Statistical Power

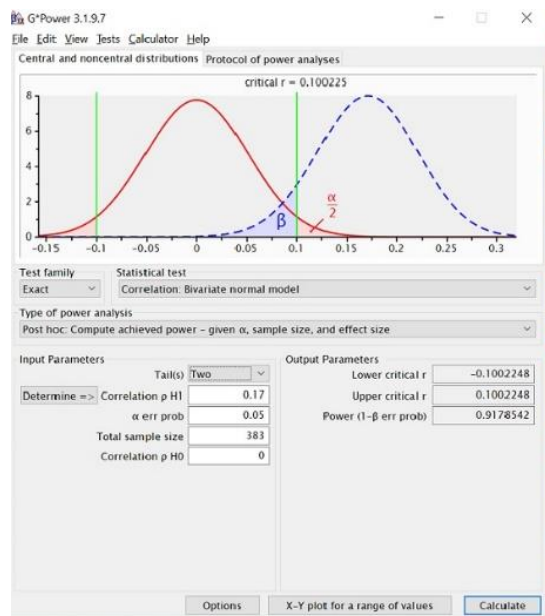
Participants for this survey were recruited using snowball sampling and advertisement, for this reason, a definitive response rate could not be calculated. Four hundred and forty-eight people opened the survey. Of them, 425 met the inclusion criteria, 405 either fully or partially completed the survey and 397 surveys were retained for data analysis. Since this survey had multiple areas of branching, incomplete surveys were managed as follows: if a survey was completed up to question 22, it was retained for analysis as a participant who had not supervised an underperforming student. If a participant indicated, they had supervised an UPS by checking “yes” to question 23 and completed up to question 42 the survey was retained for analysis. These cut-off points were chosen because they provided enough data to answer the research questions (Davies, 2020).

An a-priori projected sample size of 373 was calculated using an on-line sample size calculator for a descriptive survey ([www.calculator.net](http://www.calculator.net)) and is displayed in Figure 1 in chapter 3. Post Hoc g-power (Faul, et al., 2009) for correlational analysis was used to determine if an adequate sample was achieved for statistical power. According to g-power, post-hoc calculation, a power of .91 was achieved. A statistical power of at least .80 is desired (Carter, & Lubinsky, 2016)



**Figure 2**

*Image of Post-hoc G-power (Faul, et al.,2009)*



### **Instrument Validity and Reliability**

To address validity and reliability of the survey, a combination of Delphi panel review, Exploratory Factor Analysis (EFA) and Cronbach alpha was used. A Delphi panel review, described in the methods section, was used to establish content and face validity (Falzarano & Zipp, 2013; Avella, 2016). After three rounds of review by the panel of experts, 100 percent agreement was achieved on all questions establishing face and content validity (Avella, 2016). EFA was used to establish construct validity and Cronbach's alpha was used to establish internal consistency reliability (Knekta, et al., 2019) on all Likert scale questions of the survey. Since the survey was not constructed to be unidimensional but was meant to capture different aspect of the CIs experience, after constructs were identified by EFA, Cronbach alpha was repeated on the questions included in each of the factors identified through EFA (Tavakol & Dennick, 2011).

Cronbach alpha is a test commonly used to test how well multiple items on a survey or tool are correlated to each other and is used as a measure of internal consistency reliability (Tavakol & Dennick,

2011). Cronbach alpha on all 42 Likert type questions, displayed in Table 1, was .721 which is considered acceptable. According to Ursachi, et al., “an alpha level of 0.6-0.7 is considered acceptable, and 0.8 or greater is very good” (Ursachi, et al., 2015., p. 681). Alpha values greater than 0.95 may indicate that items are worded too similarly creating redundancy of items (Ursachi, et al., 2015).

**Table 1:**

*Cronbach's Alpha Reliability of all Likert Questions*

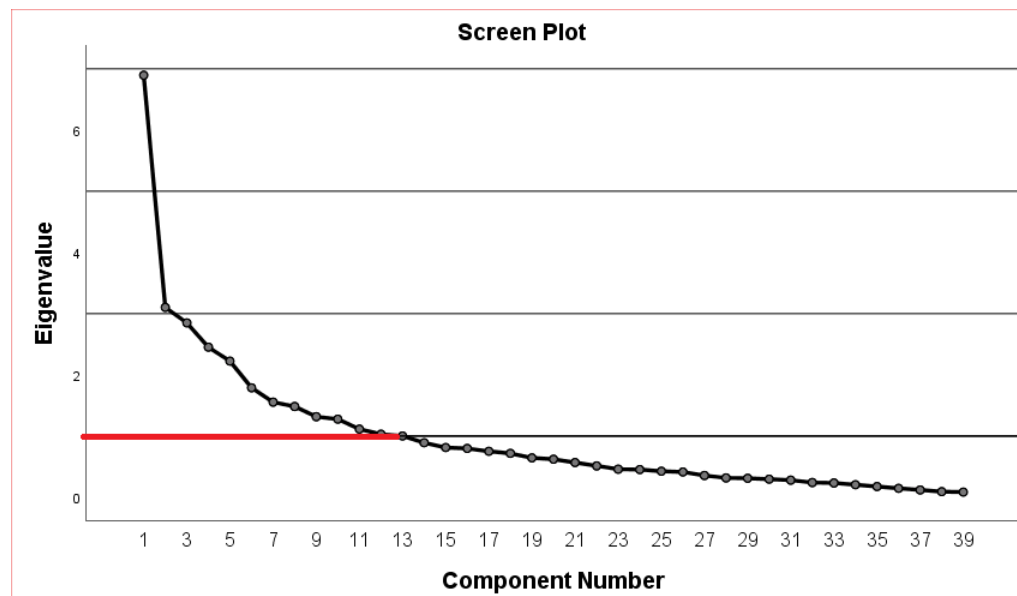
| Reliability Statistics |            |
|------------------------|------------|
| Cronbach's Alpha       | N of Items |
| .721                   | 42         |

After internal consistency reliability of all items of the survey was established, an EFA was used to examine construct validity (Knekta et al., 2019). Since this was a new survey instrument, that had never been used before, and validity was not previously established EFA was used to evaluate construct validity (Watkins, 2018). This is commonly used to determine if a combination of individual survey questions can be used to measure latent constructs that are not easily observed or measured (Knekta et al., 2019). Prior to doing the EFA, two tests were run to determine if the data was adequate for factor analysis. Keiser Meyer Olkin (KMO) test determines if the sample is adequate to find underlying factors (statology.org). This value should be at least .5 (Statology.org). In this sample KMO was .694 indicating the sample was adequate. Bartlett's test of sphericity checks to see if there is enough correlation between the individual question items to be able to be reduced to a smaller number of factors (Statology.org). Since Bartlett's Test of Sphericity is significant  $p=.0001$  the data was adequate to perform EFA. Results of KMO Test and Bartlett's Test of Sphericity are displayed in Table 2.

**Table 2***Kaiser Meyer Olkin (KMO) and Bartlett's Test of Sphericity*

| <b>KMO and Bartlett's Test</b>                   |                    |          |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .694     |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 2251.614 |
|  | df                 | 741      |
|  | Sig.               | .000     |

EFA was performed using all 42 Likert scale questions as variables. Variables loaded on 11 factors based on Eigenvalues greater than one (Watkins, 2018). Figure three illustrates the screen plot of the component matrix showing 11 factors identified and named as: DCE support, increased stress and time, perceived preparation, doubt and distress, pressure to pass, perceived confidence, duty and responsibility, failure to fail-empathy for student, SCCE/co-worker support, employer support, passing expectations.

**Figure 3***Screen Plot of Component Matrix*

Examination of the rotated component matrix helps to determine what variables are reflected in the factors by examining which variables are closely correlated to each other. Additionally, at least 3 or more variables are needed to determine a factor (Watkins, 2018.) There are no definitive rules as to what degree of correlation would indicate including or excluding a variable from a factor (Watkins, 2018, Kneckta et. al, 2019), however, Watkins, (2018) suggests that the researcher should include variables that are thought to logically be related to the factor (Watkins, 2018) and Knekta, et al., 2019 suggest that it can be based on “previously collected evidence and empirical knowledge” (Knekta, et al., 2019. p. 8). Therefore, factor number 6-percieved confidence, factor number 10-employer support, and factor number 11- passing expectations were dropped as factors because each had only 2 variables loading on them. Factor 6 initially had four variable loading on it but two of the variables were dropped from this factor. Question #8- *“I felt prepared for my role as a CI”* had a higher correlation .618 to the variables in factor three perceived preparation vs .421 to questions in factor six- perceived confidence. Additionally, Item question 22; *“I would be more likely to submit a passing evaluation of a student had the opportunity to remediate.”* did not seem to logically make sense to include in this factor so it was included in the factor relating to FTF. According to Watkins, a variable should only be included in one factor (Watkins Marley, 2018). Variables, correlations, and factor loadings are illustrated in Figure 4.

Figure 4

## Variables, Correlations, and Factor Loading from Rotated Component Matrix

| Factors                     | Rotated Component Matrix Variables  |
|-----------------------------|---|
| DCE Support                 | (.884) DCE guidance was helpful to manage the student having difficulty   |
|                             | (.874) DCE was supportive of assessment   |
|                             | (.871) DCE responded promptly   |
|                             | (.844) Strategies suggested helped student improve  |
| Stress-Time                 | (.702) Found it stressful to provide learning opportunities...responsibilities  |
|                             | (-.692) Typically have adequate time in the clinical environment...   |
|                             | (-.670) Adequate time to support an under-performing student  |
|                             | (.617) Conflicted in my responsibility to give the student adequate opportunities to practice and their inconsistent ability to provide effective care        |
|                             | (.557) Documentation to back up an unsuccessful evaluation time consuming   |
| Perceived Preparation       | (.778) I feel the training I received to be a CI was adequate   |
|                             | (.732) I feel skilled in accurately documenting student performance...  |
|                             | (.618) I felt prepared for my role as a CI  |
|                             | (.546) I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty...                   |
| Doubt & Distress            | (.771) I doubted my ability to accurately assess student's performance  |
|                             | (.749) I blamed the lack of student progress on my clinical teaching ability  |
|                             | (.520) I was unsure what to document to justify rating ...performance ...   |
|                             | (.473) I experienced distress about the possibility of the student failing  |
| Pressure                    | (.91) I received pressure from co-workers to submit an evaluation reflecting UPS had met performance expectations   |
|                             | (.875) I received pressure from my supervisor to submit an evaluation reflecting UPS met performance expectations   |
|                             | (.331) I received pressure from the student to submit an evaluation reflecting UPS met performance expectations.  |
|                             | (.421) I received pressure from academic institution personnel ....   |
| Professional Responsibility | (.854) I have a duty to the profession to provide honest, objective evaluations to students who are not performing at minimum standards                       |
|                             | (.829) I have a duty to the student to provide an honest candid evaluation of their performance even if it may prevent advancement in the program             |
|                             | (.504) I feel it is my professional responsibility to serve as a CI   |
| FTF/Empathy                 | (.790) I would be more likely to submit a satisfactory student evaluation for an UPS who was really trying  |
|                             | (.768) I would be more likely to submit a satisfactory evaluation for an UPS in an earlier (first or intermediate) clinical experience.                       |
|                             | (.494) I would not submit an evaluation reflecting performance below expectations for the level of clinical experience unless there were clear safety issues. |
|                             | (.412) I would be more likely to submit a failing evaluation if I knew there would be an opportunity for the student to participate in remediation            |
| Co-worker Support           | (.798) My immediate supervisor provided adequate guidance...  |
|                             | (.760) The Site Coordinator of Clinical Education (SCCE) at my place of employment provided adequate guidance to assist me with the UPS                       |
|                             | (.511) I sought a second opinion of the student's performance   |

To determine internal consistency reliability of each of the factors Cronbach alpha was repeated on variables included in each factor. The summary of results is displayed in Table three. Cronbach alpha values for the factors identified are all above .6 which is considered acceptable (Ursachi et al., 2015). The factors with lower values of alpha are those with a lower number of variable loadings. Lower alpha values can be the result of having fewer questions, unrelated variables, or multi-dimensional constructs (Tavakol, et al., 2011).

**Table 3***Reliability Statistics for Factors*

| Factor        |  | <u>Cronbach</u> | <u>N of</u>  |
|---------------|--|-----------------|--------------|
| <u>Number</u> | <u>Factor Description</u>                    | <u>alpha</u>    | <u>Items</u> |
| 1             | DCE Support                                  | .900            | 4            |
| 2             | Stress & time                                | .681            | 5            |
| 3             | Perceived Preparation & Ability              | .748            | 4            |
| 4             | Doubt and Distress about student failing     | .701            | 4            |
| 5             | Pressure to Pass                             | .727            | 4            |
| 6             | Perceived confidence & ability <sup>a</sup>  | .679            | 2            |
| 7             | Duty   | .649            | 3            |
| 8             | Perceptions on Passing UPS                   | .621            | 3            |
| 9             | Co-worker support                            | .643            | 3            |
| 10            | Employer/Administrative support <sup>a</sup> | .885            | 2            |

<sup>a</sup> Factors that were dropped due to inadequate number of variables loading

**Participant Characteristics**

The sample of this study consisted of 397 licensed physical therapists with at least 1 year post licensure experience who had served as a CI to a DPT student in the last five years. Of the 383 participants 177 had supervised an UPS and 220 had not. Participants came from 33 different states, with representation from all geographic regions of the United States. The entry level degree of participants consisted of 11 percent bachelor's degree, 18.2 percent master's degree and 70.2 percent Doctor of Physical therapy (DPT) degree. Participant demographics of age, years of experience as a PT and as a CI and total students supervised are summarized in Table 4, race and ethnicity are summarized in Figure 3 and practice setting of participants is summarized in Table 5. Participants in this study sample were similar to the population of PTs employed in the US in terms of age, race/ethnicity and practice

setting according to APTA workforce data (APTA, 2020) and United States Bureau of Labor Statistics (bls.gov, 2019).

**Table 4**

*Participant Demographics*

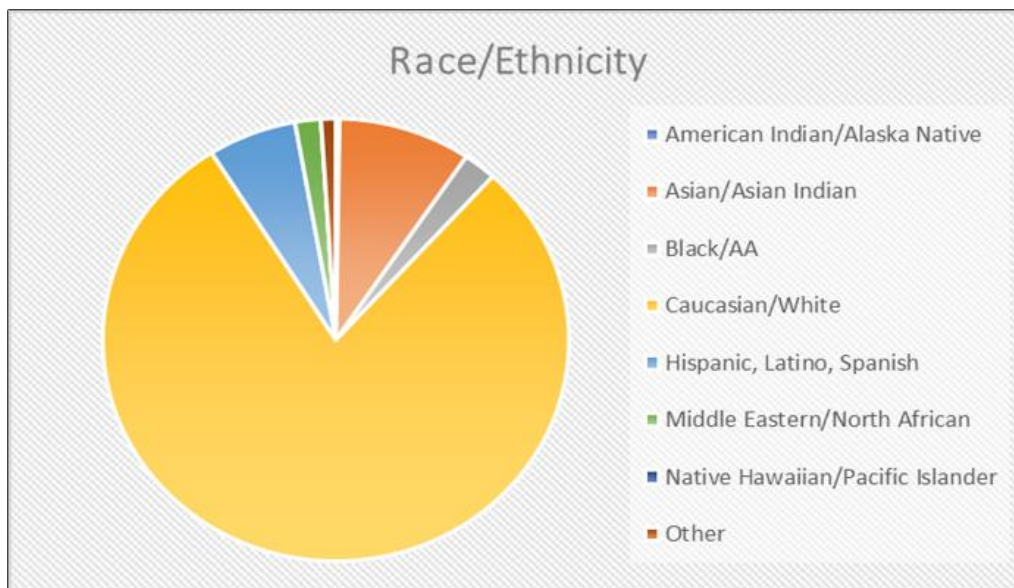
| <u>Variable</u>           | <u>Median</u> | <u>Mean</u> | <u>SD</u> | <u>Range</u> |
|---------------------------|---------------|-------------|-----------|--------------|
| Age (years)               | 36            | 38.8        | 9.5       | 24-66        |
| Years as licensed PT      | 10            | 12.8        | 9.4       | 1-47         |
| Years serving as CI       | 6             | 8.8         | 8.1       | 1-40         |
| Total students supervised | 6             | 10.8        | 14.8      | 1-120        |

|                    | <u>N</u> | <u>%</u> |
|--------------------|----------|----------|
| Gender             | 109      | 29.1     |
| Male:              |          |          |
| Female:            | 265      | 70.7     |
| Non-binary:        | 1        | 3        |
| Entry Level Degree |          |          |
| BS:                | 41       | 11       |
| MS:                | 68       | 18.3     |
| DPT:               | 262      | 70.6     |
| APTA Credentialed  |          |          |
| Yes:               | 251      | 63.2     |
| No:                | 146      | 36.8     |

**Figure 5**

*Pie Chart Showing Participant Race/Ethnicity*



**Table 5***Practice Setting Where Participants Supervised Students*

| <u>Practice Setting</u>                          | <u>Count</u> | <u>Percent</u> |
|--|--------------|----------------|
| Health system/hospital-based outpatient facility | 124          | 29.8           |
| Private outpatient office/group practice         | 102          | 24.5           |
| Acute care hospital                              | 87           | 21.0           |
| Inpatient rehabilitation facility (IRF)          | 47           | 11.3           |
| School system (preschool/primary/secondary)      | 18           | 4.3            |
| Skilled nursing facility (SNF)/long-term care    | 10           | 2.4            |
| Patient's home/home care                         | 8            | 1.9            |
| Academic institution (post-secondary)            | 7            | 1.7            |
| Industry   | 7            | 1.7            |
| Health and wellness facility                     | 5            | 1.2            |
| Research center                                  | 1            | 0.2            |
| Total  | 416          | 100            |

**Professional Responsibility**

Overall, the CIs in this sample agreed that it was their professional responsibility to serve as a CI and that they had a duty to both the student and the profession to provide objective evaluations to students who were underperforming in the clinic. A breakdown of responses to questions relating to professional responsibility and duty are found in Table 6.



**Table 6***CI Perceptions on Professional Responsibility and Duty*


---

| <u>Survey Question (Q)</u>  | Strongly Agree |          | Agree        |          | Disagree     |          | Strongly Disagree |          |
|---|----------------|----------|--------------|----------|--------------|----------|-------------------|----------|
|   | <u>Count</u>   | <u>%</u> | <u>Count</u> | <u>%</u> | <u>Count</u> | <u>%</u> | <u>Count</u>      | <u>%</u> |
| I feel it is my professional responsibility to serve as a CI.   | 254            | 65.1     | 122          | 31.3     | 13           | 3.3      | 1                 | 0.3      |
| I have a duty to the profession to provide honest, objective evaluations to students who are not performing at minimum standards.           | 309            | 79.4     | 79           | 20.9     | 1            | 0.3      | 0                 | 0        |
| I have a duty to the student to provide an honest candid evaluation of their performance even if it may prevent advancement in the program. | 300            | 77.1     | 85           | 21.9     | 3            | 0.8      | 1                 | 0.3      |

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**Perceived Ability to Manage an Underperforming Student**

To answer research question number one, “how do CIs perceive their ability to manage an UPS in full-time clinical experiences,” six Likert type questions pertaining to this construct were asked and described by descriptive statistics using frequencies and percentages. Overall, CIs felt prepared and confident in their ability to manage an under-performing student, with 80 percent of CIs agreeing or strongly agreeing to questions relating to CIs perceiving themselves positively in terms of their preparation to be a CI and ability to manage an UPS. A summary of participant responses to these questions can be seen in Table 7.

**Table 7***Perceived Ability to Manage an Under-performing Student*

| <u>Survey Question (Q)</u>   | Strongly Agree |          | Agree        |          | Disagree     |          | Strongly Disagree |          |
|--|----------------|----------|--------------|----------|--------------|----------|-------------------|----------|
|  | <u>Count</u>   | <u>%</u> | <u>Count</u> | <u>%</u> | <u>Count</u> | <u>%</u> | <u>Count</u>      | <u>%</u> |
| I felt prepared for my role as a CI (Q #8)   | 186            | 46.7     | 186          | 46.7     | 26           | 6.5      | 0                 | 0        |
| I feel confident in my ability to modify my clinical teaching to meet the needs of the student. (Q # 9)  | 227            | 57.2     | 163          | 38.4     | 7            | 1.9      | 0                 | 0        |
| I feel confident in my ability to provide constructive feedback to students.<br>(Q #11)  | 235            | 59.2     | 157          | 36.9     | 5            | 1.2      | 0                 | 0        |
| I feel skilled in being able to accurately document student performance using the evaluation tools provided by the academic program (CPI, PTMACS, etc.) (Q #16)  | 171            | 43.1     | 203          | 51.1     | 20           | 4.7      | 3                 | .8       |
| I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience. (Q #17) | 133            | 33.6     | 221          | 52       | 42           | 10.6     | 0                 | 0        |
| I feel the training I received to be a CI was adequate. Item #18)  | 119            | 29.9     | 207          | 52       | 68           | 17       | 4                 | 1        |

### **Entry Level Degree of CI and Perceived Ability**

To explore if entry level degree was associated with CIs perceived ability to appropriately manage an UPS, CI responses to question number 17: *“I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience”* were explored using descriptive statistics (frequencies, percentages and cross tabulation) and are displayed in Table 8. Because there were unequal groups, percentages of each group were explored further. Although there was a greater percentage (54%) of bachelor’s degree prepared PTs who responded strongly agree compared to other groups when both categories of “agree” and “strongly agree” were combined the percentage of PTs who agreed was between 88% for bachelor’s and master’s degree prepared CIs and 91% for DPT prepared CIs.

**Table 8:**

*Perceived Ability to Manage an UPS and Entry Level Degree*

| Entry Level Degree | <u>Strongly Agree</u> |    | <u>Agree</u> |    | <u>Disagree</u> |    | <u>Strongly Disagree</u> |   | Total | %   |
|--------------------|-----------------------|----|--------------|----|-----------------|----|--------------------------|---|-------|-----|
|                    | Count                 | %  | Count        | %  | Count           | %  | Count                    | % |       |     |
| Bachelor’s Degree  | 22                    | 54 | 14           | 34 | 5               | 12 | 0                        | 0 | 41    | 100 |
| Master’s Degree    | 22                    | 32 | 38           | 56 | 8               | 12 | 0                        | 0 | 68    | 100 |
| DPT Degree         | 78                    | 30 | 159          | 61 | 25              | 10 | 0                        | 0 | 262   | 100 |
| Total              | 122                   |    | 211          |    | 34              |    | 0                        |   | 371   |     |

<sup>a</sup> Question #17 - *“I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience.”*

### **CI Credentialing and Perceived Ability to Manage an UPS**

To answer Associated research question 1b: “Is the APTA Credentialled Clinical Instructor Program (CCIP) associated with CIs perceived ability to manage a student who is underperforming in

clinical education”, the relationship between responses to survey question number 17 and if the participant had indicated attending the APTA CCIP was explored using frequencies, percentages, and cross-tabulation. Again, the groups were not equal having more CIs who had attended the course (n=251), versus those who did not attend (n=145) therefore, the percentages of each group are presented. Of those who had attended the CCIP 93.6% responded positively (either agree or strongly agree) to item number 17 where only 82% percent of those who did not attend the CCIP responded positively. Additionally, 6.4% of those who had attended the CCIP course responded negatively where 18% of those who did not attend responded negatively, disagreeing with the statement *“I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience.”* Results are presented in Table 9.

**Table 9**

*Perceived Ability to Manage an UPS and Attending APTA CCIP Course*

| Attended APTA CI<br>Credentialling Course | Strongly Agree   |      | Agree             |      | Disagree         |     | Strongly Disagree |   | Total |
|---|------------------|------|-------------------|------|------------------|-----|-------------------|---|-------|
|   | Count            | %    | Count             | %    | Count            | %   | Count             | % |       |
| YES                                       | <u>86</u><br>251 | 34.3 | <u>149</u><br>251 | 59.3 | <u>16</u><br>251 | 6.4 | 0                 | 0 | 251   |
| NO  | <u>47</u><br>145 | 32   | <u>72</u><br>145  | 50   | <u>26</u><br>145 | 18  | 0                 | 0 | 145   |
| Total                                     | 133              |      | 221               |      | 42               |     | 0                 |   | 396   |

<sup>a</sup> Question #17 - *“I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience.”*

***Years of Experience and Perceived Ability to Manage an UPS***

Spearman’s rho correlation was used to explore both the relationship between the independent variables: years of experience as a licensed PT and years of experience as a CI with the dependent variable perceived ability to manage an UPS based on responses to question #17 *“I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience.”*

Correlations are presented in Table 10. There was a weak positive correlation between years of experience and perceived ability to manage an UPS,  $r(355) = .16, p = .002$ . There was a weak positive correlation between years serving as a CI and perceived ability to manage an UPS,  $r(350) = .27, p = .000$ . According to Akoglu, (2018) correlation below .29 is considered a weak correlation. Correlations are shown in Table 9.

**Table 10**

*Correlation (Spearman's rho) Between Years of Experience with Perceived Ability to Manage UPS*

|                |   |                         | Years<br>licensed<br>as a PT | Years<br>serving<br>as a CI |
|----------------|---|-------------------------|------------------------------|-----------------------------|
| Spearman's rho | I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience | Correlation Coefficient | .164**                       | .272**                      |
|                |   | Sig (2-tailed)          | .002                         | .000                        |
|                |   | N                       | 367                          | .352                        |

\*\* Correlation is significant at the  $p < 0.01$  level (2-tailed)

### **Practice Setting and Perceived Ability to Manage an UPS**

To explore the relationship between perceived ability to manage an UPS and practice setting type descriptive statistics using frequencies and percentages were used and are illustrated in Table 11. Percentages of those responding positively, either agree or strongly agree were similar between the top five practice settings ranging from 88% for hospital-based outpatient to 95% for school-based PT. Only one practice setting, health, and wellness, showed a higher degree of disagreement and there were only five participants from this setting and is not a common setting that PTs usually supervise student in.

**Table 11***Practice Setting and Perceived Confidence in Managing Learning Experience for UPS<sup>a</sup>*

| <u>Practice Setting</u>   | <u>Degree of Agreement</u> |          |              |          |                 |          |                          |          | <u>Total</u> |
|---------------------------|----------------------------|----------|--------------|----------|-----------------|----------|--------------------------|----------|--------------|
|                           | <u>Strongly Agree</u>      |          | <u>Agree</u> |          | <u>Disagree</u> |          | <u>Strongly Disagree</u> |          |              |
|                           | <u>Count</u>               | <u>%</u> | <u>Count</u> | <u>%</u> | <u>Count</u>    | <u>%</u> | <u>Count</u>             | <u>%</u> |              |
| Acute care hospital       | 29                         | 33       | 50           | 57       | 8               | 9        | 0                        | 0        | 87           |
| Hospital/HCO outpatient   | 34                         | 28       | 73           | 60       | 15              | 12       | 0                        | 0        | 122          |
| Private outpatient office | 37                         | 37       | 54           | 53       | 10              | 10       | 0                        | 0        | 101          |
| Inpatient Rehab Facility  | 18                         | 38       | 24           | 51       | 5               | 11       | 0                        | 0        | 47           |
| School system/preschool   | 5                          | 28       | 12           | 67       | 1               | 6        | 0                        | 0        | 18           |
| SNF/LTC                   | 2                          | 20       | 8            | 80       | 0               | 0        | 0                        | 0        | 10           |
| Homecare                  | 2                          | 25       | 6            | 75       | 0               | 0        | 0                        | 0        | 8            |
| Academic                  | 4                          | 57       | 3            | 43       | 0               | 0        | 0                        | 0        | 7            |
| Industry                  | 2                          | 29       | 5            | 71       | 0               | 0        | 0                        | 0        | 7            |
| Health & Wellness         | 0                          | 0        | 3            | 60       | 2               | 40       | 0                        | 0        | 5            |
| Research                  | 1                          | 100      | 0            | 0        | 0               | 0        | 0                        | 0        | 1            |

<sup>a</sup> Item #17 - "I feel confident that I would be able to appropriately manage student learning experiences for a student who is having difficulty meeting the expected performance standards in a full-time clinical education experience."

### **Strategies Used to Help Student Improve**

Most frequent responses to the open-ended question which asked participants to "List up to 3 strategies you used to help the student improve" were: more one on one time with the CI for instruction, practice or guided problem solving, setting goals, modification(reducing) the students' caseload or objectives of the experience, providing more or changing how feedback was given including providing

feedback in writing. Less frequent strategies were homework and self-study, reflection and learning contracts. These results are represented in Figure 6.

**Figure 6**

*Bar Graph Most Frequent Strategies Used by CIs to help Student Improve*



### **Failure to Fail**

To explore FTF two approaches were used. First all participants answered four questions relating to their perception of submitting a satisfactory evaluation to an UPS given different situations. Greater than 50 percent responded positively indicating that they would FTF an UPS in the given situations. Table 12 displays the summary of results to those questions. Second, those participants who had supervised an underperforming student were asked: “In retrospect I have submitted a passing evaluation for an UPS who should have failed.” Results to this question are illustrated in Figure 7. Of the 156 participants who responded to this question, 22 (14%) responded affirmatively that they had submitted a passing evaluation to an underperforming student who should have failed and 134 (86%) had not.

**Table 12**

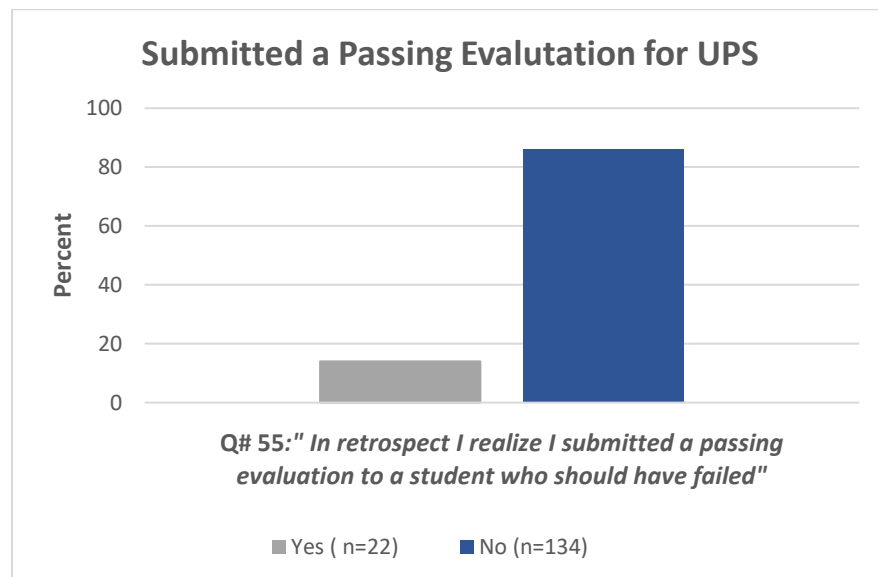
*Table showing items relating to perceptions on failure to fail*

| <u>Variable</u>  | <u>Strongly Agree</u> |          | <u>Agree</u> |          | <u>Disagree</u> |          | <u>Strongly Disagree</u> |          |
|--|-----------------------|----------|--------------|----------|-----------------|----------|--------------------------|----------|
|  | <u>Count</u>          | <u>%</u> | <u>Count</u> | <u>%</u> | <u>Count</u>    | <u>%</u> | <u>Count</u>             | <u>%</u> |
| I would be more likely to submit a failing evaluation if I knew there would be an opportunity for the student to participate in <b>remediation</b> (Q #22)           | 42                    | 10.8     | 223          | 57.5     | 113             | 29.1     | 10                       | 2.6      |
| I would be more likely to submit a satisfactory evaluation for an underperforming student in <b>an earlier (first or intermediate) clinical experience</b> (Q #20)   | 12                    | 3.1      | 206          | 53.1     | 150             | 38.7     | 20                       | 4.7      |
| I would be more likely to submit a satisfactory student evaluation for an underperforming student who was <b>really trying</b> (Q #19)                               | 11                    | 2.8      | 191          | 49.1     | 170             | 43.7     | 17                       | 4.4      |
| I would not submit an evaluation reflecting performance below expectations for the level of clinical experience unless there were clear <b>safety issues</b> (Q #21) | 20                    | 5.2      | 110          | 28.4     | 227             | 58.5     | 31                       | 8        |



**Figure 7**

*Bar Graph Percent CIs who Submitted a Passing Evaluation for UPS*

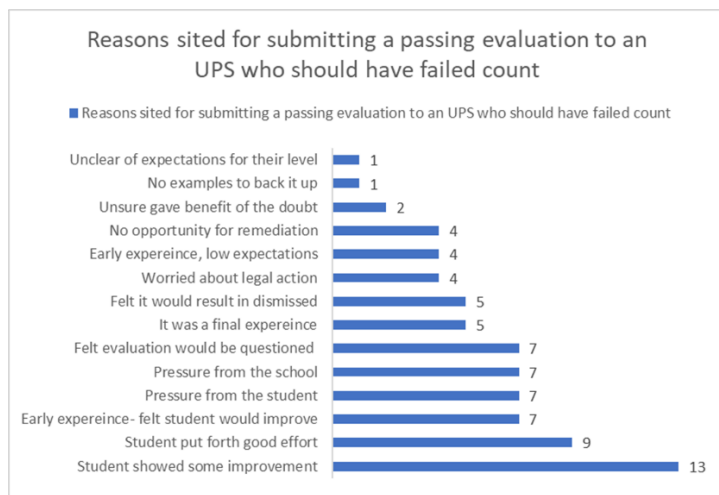


### **Possible Factors Contributing to FTF**

Since FTF was identified as occurring in PT clinical education further exploration of what might contribute to it was explored via several closed and an open-ended question on the survey, descriptive statistics and correlation between the dependent variable, submitting a passing evaluation to an UPS (question #55) and independent variables including: education level, CI training/preparation, years of experience, support from the academic institution, support from employer and clinical education structure of the department. Results of the most common reasons based on frequency of responses to the check box items are summarized in the Figure 8. The two most common reasons were the student showed some improvement and the student put forth good effort.

**Figure 8**

*Bar Graph of Most Frequent Reasons for Submitting a Passing Evaluation to an UPS*



### **Entry Level Degree and FTF**

Groups were unequal between Bachelor's, Masters and DPT prepared clinicians, therefore percentages are presented in Table 13. Bachelor's prepared CIs had a higher percentage of individuals who submitted a passing evaluation for an UPS (29%) compared to those with Masters (13%) or DPT degree (13%). However, there was a much smaller sample of bachelor's degree prepared PTs compared to master's and DPT prepared CIs. Table 13 shows a summary of CIs' entry level degree and FTF as measured by question 55.

**Table 13**

*Relationship Between Entry Level Degree and FTF<sup>a</sup>*

|  | Bachelors |    | Masters |    | DPT |    | Total |
|--|-----------|----|---------|----|-----|----|-------|
|  | n         | %  | n       | %  | n   | %  | n     |
| Submitted a<br><u>Passing evaluation</u> |           |    |         |    |     |    |       |
| No                                       | 10        | 71 | 27      | 87 | 96  | 87 | 134   |
| Yes                                      | 4         | 29 | 4       | 13 | 14  | 13 | 22    |
| Total                                    | 14        |    | 31      |    | 110 |    | 156   |

<sup>a</sup> Q#55- "In retrospect I realize I submitted a passing evaluation for a student who should have failed"

***Relationship of FTF with Other Variables***

To explore the relationship between the independent variables: years of experience as a PT and years of experience as a CI, to FTF, Spearman rho correlation was used. Spearman rho is a non-parametric statistical test to explore correlation when one or more of the variables is either categorical or nominal (Sullivan, 2017). To explore the relationship between CI training and preparation, perceptions on failure to fail, support from the academic program, and support from PT department (employer) variables that loaded onto those factors in EFA were summed for each factor and the factor sum was used in Spearman rho correlation. Results are summarized in Table 14. There was a weak but positive correlation between perceptions of FTF ( $r=.294$ ,  $p=.000$ ) and pressure to pass ( $r=.174$ ,  $p=.030$ ) to FTF (submitting a passing evaluation for an UPS). There were weak negative correlations between sense of duty ( $r= -.182$ ,  $p=.023$ ), support of DCE ( $r= -.194$ ,  $p=.024$ ) and CI perceived preparation and ability ( $r= -.170$ ,  $p=.034$ ) respectively, with FTF as measured by question #55. There was not a significant correlation between years of experience as a PT, years of experience as a CI, attending CI credentialing course, SCCE/co-worker support, doubt, and time-stress with FTF.

**Table 14***Factors Correlated to Failure to Fail*

| Spearman's rho                           | Q 55: In retrospect, I recognize that I have submitted a passing evaluation for a student who should have failed. |                |          |
|--|---|----------------|----------|
|  | <u>Correlation Coefficient</u>  | <u>P value</u> | <u>N</u> |
| Perceptions on FTF (sum)                 | .294**  | .000           | 156      |
| Duty (sum)                               | -.182*  | .023           | 156      |
| DCE support (sum)                        | -.194*  | .024           | 136      |
| Pressure (sum)                           | .174*   | .030           | 156      |
| Perceived preparation & confidence (sum) | -.170*  | .034           | 156      |
| Co-worker support (sum)                  | -.118   | .143           | 156      |
| Doubt (sum)                              | .106  | .188           | 156      |
| APTA Credentialling                      | -.089   | .269           | 156      |
| Years as a PT                            | .054  | .511           | 151      |
| Years as a CI                            | .050  | .546           | 149      |
| Time/Stress (sum)                        | .032  | .694           | 156      |

\*Correlation is significant at the  $p < 0.05$  level (2-tailed).

\*\*Correlation is significant at the  $p < 0.01$  level (2-tailed).

**Clinical Instructor Stress and Distress**

To explore if CIs experienced stress or other negative emotions when supervising an UPS five survey questions were used and are summarized in Table 15. Greater than 60 percent of CIs either agreed or strongly agreed with the statements relating to stress, experiencing distress about the possibility of student failing, and conflict in their responsibility to the patient and student. Overall, CIs did not blame themselves for student lack of progress with 52% disagreeing and 20.4% strongly disagreeing with the statement relating to blame and 50.9% disagreeing and 20.4% strongly disagreeing with the statement relating to being worried their evaluation would be questioned in a grievance.

**Table 15***Table Showing Questions Relating to CIs Emotions*

|   | Strongly Agree |         | Agree |         | Disagree |         | Strongly Disagree |         |
|---|----------------|---------|-------|---------|----------|---------|-------------------|---------|
|   | Count          | Percent | Count | Percent | Count    | Percent | Count             | Percent |
| I found it stressful to provide adequate learning opportunities to the student while fulfilling my other responsibilities (Item # 38)   | 33             | 20.2    | 71    | 43.6    | 54       | 33.1    | 5                 | 3.1     |
| I experienced significant distress about the possibility of the student failing (Item #39)  | 34             | 20.9    | 72    | 44.2    | 46       | 28.2    | 11                | 6.7     |
| I blamed the lack of student progress on my clinical teaching ability. (Item #40)   | 7              | 4.3     | 37    | 22.8    | 85       | 52.5    | 33                | 20.4    |
| I felt conflicted in my responsibility to give the student adequate opportunities to practice clinical skills considering their inconsistent ability to provide effective care to my patients. (Item #41) | 37             | 22.7    | 79    | 48.5    | 40       | 24.5    | 7                 | 4.3     |
| I worried that my evaluation of the student may be questioned in a grievance process. (Item #42)  | 8              | 4.9     | 39    | 23.9    | 83       | 50.9    | 33                | 20.2    |

### Areas Needing Further Exploration in Qualitative Arm of Study

As a result of the quantitative data analysis, questions for the qualitative arm of the study were developed. Overall, a greater depth of understanding of the overall CI experience when supervising an UPS student was desired, as well as CIs interpretations of FTF and what they felt contributed to it. The issue of student level playing a role in FTF was partially touched on in the survey but only as it pertained to an earlier student and not necessarily a student in a final experience. Therefore, student level in the program needed to be explored in more depth. Lastly, more detail regarding barriers and facilitators to submitting an unsatisfactory evaluation when it was warranted and what CIs perceived as supportive and not supportive in their role as clinical educators was needed. As a result of the quantitative analysis the following qualitative questions were developed:

1. Tell me about your background as a Clinical Instructor?
2. How would you describe your experience of managing the student who is underperforming in clinic?

Possible probes:

- How did you feel while you were going through this experience, what were your emotions?
- How did you identify that the student you supervised was not meeting performance standards?
- Were there any factors unique to your practice setting that you think impacted your experience?
- How was the academic institution involved in the situation?

3. How would you describe the concept/term of failure to fail as it relates to PT clinical Education?

Possible probe:

- What do you think may contribute to this?
  - Can you describe any situations where it may be acceptable?
  - Can you describe any situations where it absolutely would not be acceptable?
  - How does student level in the program play a role?
4. What challenges, if any, were there in giving an unfavorable evaluation to the student?
  5. What facilitators, if any, were there to give an unfavorable evaluation?

6. Was there anything that you felt was beneficial in supporting you in your role as a CI at the time?
7. Was there anything that you felt was not beneficial in supporting you in your role at the time?
8. Is there anything else you would like me to know?

### **Qualitative Data Analysis**

De-identified transcripts were first read through by the PI for immersion with the data. On a second reading, initial coding was conducted by the researcher using in-vivo and descriptive codes and reviewed by the dissertation chairperson for agreement. Codes were modified and a code book was developed after this initial stage of coding. The PI conducted a second round of coding using the revised codes and codebook. Third round coding, where codes collapsed into categories for thematic analysis, and theme development was performed. This process was reviewed by the dissertation chairperson for accuracy and agreement.

### **Interview Participants**

Seven PTs who had served as a CI to an UPS in the last 5 years voluntarily participated in interviews between November and December of 2021. Table 16 summarizes the characteristics of the interview participants. Recruitment for interview participation stopped after seven interviews when it was felt data saturation was achieved (Creswell, 2015; Saunders et al., 2018) . Interview participants demographics are presented in Table 16. Participants came from a mix of inpatient and outpatient settings which are the two most frequent practice settings for PTs and represented a broad range of experience as a CI.

**Table 16***Interview Participant Demographics*

| <u>Variable</u>               | <u>Median</u>  | <u>Mean</u> | <u>SD</u>          | <u>Range</u> |
|-------------------------------|----------------|-------------|--------------------|--------------|
| Age                           | 41             | 42.86       | 10.96              | 32-64        |
| Years licensed PT             | 16             | 15.86       | 9.39               | 6.5-26       |
| Years serving as CI           | 9              | 10.14       | 7.49               | 2-24         |
| Number of UPS supervised      | 1              | 2.42        | 1.81               | 1-5          |
|                               |                |             |                    |              |
| Gender                        | 2 M            | 5 F         |                    |              |
| Race/Ethnicity                | 5 W/C          | 1 AA/B      | 1 missing          |              |
| Practice Setting              | In-patient: 3  |             | 4 out-patient      |              |
| APTA CI Credential            | 5 Credentialed |             | 2 not Credentialed |              |
| M = Male F = Female           |                |             |                    |              |
| W/C= white/Caucasian          |                |             |                    |              |
| AA/B = African American/Black |                |             |                    |              |

**Themes:**

In relation to the CIs experiences four global themes emerged based on responses to all open-ended questions. Emergent themes were consistent throughout the data and not specific to any one question. Themes identified were: 1) It was a difficult and challenging experience; 2) Identification of the UPS and intervention strategies; 3) CI perceived factors relating to failure to fail; 4) Support Scaffolding. Text was edited to include gender neutral pronouns and filler words such as “um” and pauses have been removed for brevity.

***Theme 1: It was a difficult and challenging experience***

CIs described the experience of supervising an UPS as a difficult and challenging experience.



*"My first student was underperforming and being a sole provider, it was hard for me to deal with, and to really get to the bottom of why?" (p,7)*

*"It was a pretty challenging experience." (p, 3)*

*"Being able to be critical, without destroying somebody's confidence, I think, was one of the big things is that it's really hard." (p,5)*

They spent a significant amount of time and effort to help the student succeed and this was sometimes exacerbated by the complexity of their setting in terms of caseload, productivity, and documentation.

*"I think it was hard, because I felt like I was putting so much work into them..." (p,1)*

*"I put a lot of effort into trying to help him..." (p,2)*

*"... we're spread sort of thin clinically, and documentation wise, and responsibility wise prior and then a student, you know it's obviously a lot more time involved to be with them, and discuss with them what's going on and getting them up to speed, and then, when you have a student that's not meeting expectations it's, it's even more time" (p,3)*

They recognized their responsibility to the profession and student to provide feedback but often avoided giving negative feedback, calling the school, or not passing the student.

*"You don't want to ruin a person's career, but you also have a responsibility to not pass someone who is underperforming..." (p,7)*

*"we'll see how the rest of this week goes and next week if I don't see some of these changes, we're gonna have to talk to your school. And you know, I didn't want to have to do that..." (p,5)*

*"there's an avoidance, you don't want to have a difficult discussion, and there's the fact that you may genuinely like and enjoy the person you're working with, and you don't want to disappoint them or make them feel uncomfortable or make them not like you, so there is a personal, interactional thing, makes it hard to bring up difficult news and it's just unpleasant in general for people to say the hard thing." (p, 4)*

They reported several negative emotions, the most common being frustration and doubt.

*"...that was frustrating for me..." (p,6)*

*"...I remember feeling really frustrated." (p, 2)*

*"...my very first response is always I did not explain this clearly enough" (p, 5)*

*"...so, I did have a little self-doubt in the sense that I would keep thinking, am I, being too hard on the student?" (p,3)*

*"...so, it was that we actually felt really sad... because we couldn't help" (p, 1)*

*"... there was so, so much stress on my level" (p, 7)*

*"Is (the student) really that frustrating or is it me? ...So. I struggled with that as well. (p, 2)*

### **Theme 2: Identifying the UPS and Intervention Strategies**

CIs identified performance issues by student's lack of improvement or change despite being given feedback on multiple occasions.

*"I feel like they just never improved. I would give them criticism and they wouldn't change, and I would tell them the same thing and they wouldn't change" (p, 1)*

*"They don't seem to be retaining teaching. And so, we'll talk about doing something a certain way, and then it will not happen, and we'll talk about it again and they'll be sometimes quite unaware that this was exactly the thing we had talked about..." (p, 4)*

*"...It was the amount, the type, and degree or severity of queuing at times or instruction that was required for sometimes seemingly basic clinical skills ..." (p, 5)*

*"...when the students freeze during a session, and they just have a blank stare and that happens all too frequently" (p, 1)*

*"...but nothing changed so by midway through a 12-week internship, I realized that he was still making the same errors that he was making at the start, and so that, that's what was a red flag, there was no progression in his knowledge." (p,7)*

Problematic performance included problems in basic knowledge, clinical decision making, safety and professional behaviors (perception of student not trying, not being prepared, not putting in the effort and communication issues).

*"...their communication skills were poor; they could not build rapport with patients." (p, 1)*

*"...there was a lot of lack of any additional effort to excel in the setting we were in" (p, 3)*

*"They would just pass things off and really wasn't interested... things didn't get better (p, 2)*

*"It showed like carelessness, poor clinical judgment" (p, 6)*

Strategies described to help the student included giving more direct feedback, weekly goals, case studies, student, and one-on-one practice.

*"...we had a lot of structured meetings where we sat down, and we talked about what was going on how to improve things and we talked and we talked but things didn't get better" (p, 2)*

*"...write weekly goals with them, and have the students sign off on it. Like, it was like a written contract." (p, 6)*

*"We decided we're going to extend or do or learning contract," (p, 1)*

*"I think just coming up with more concrete goals" (p, 2)*

*"...we tried tons of methods as far as goal setting, and assigning research and you know, one on ones, and scenarios, and, nothing seemed to really help, so that was why it was so difficult for me. "(p, 7)*

At times, expectations were lowered for the UPS.

*"I will certainly upgrade my expectations to expect more of someone, I think, can give it. I try to be really alert, to not downgrading my expectations, when I find someone is not doing as well as I would hope" (p, 4)*

*"...every student doesn't have to be good, people just have to graduate, and be okay, and so, you know, you change your mindset, and you're like you know that's true. You just have to be okay to graduate, you don't have to be good, and so changing your mindset to think that it's like, I guess this person is OK, to pass, that doesn't mean that they are good, and no, I would not want them to treat me, but they are okay" (p, 1)*

*"So, we've gotten very good at being clear, like what the expectations are for the unit...I know your student is struggling here, but these are the things they need to do to graduate not necessarily our patient population, but can they do these skills? I think like that has helped me a lot, to kind of frame my mind as to what a student needs to be successful in a clinic." (p, 2)*

In retrospect, some CIs felt they should have addressed the problems earlier and had clearer expectations.

*"I probably should have asked for more help sooner" (p, 6)*

*"I should have been firmer" (p, 6)*

*"it's valuable to have a conversation maybe with a student head on about the expectations of the clinic." (p, 3)*

*"...maybe, ending it sooner and not letting it drag out, or being more clear." (p, 2)*

*"...so, I feel like the professional behaviors with this student, it probably could have been addressed sooner (p, 3)*

### **Theme 3: CI Perceptions and Factors Relating to FTF**

CIs felt that there is an expectation that students should pass. They expressed empathy toward the student and perceived failing the student as negative and detrimental to the student. They also perceived that failing a student was reflection on them as a CI.

*"... you are expected to pass your clinical internships, I think that's the expectation that the student's going to get through, and that if you are going to fail, a student, it's one, it's a big deal and two, I think you are going to be held out, like responsible somewhat, because you were the CI." (p, 7)*

*"I mean from a site's standpoint you really don't want to be the one to say hey you're not good enough to pass!" (p, 2)*

*"I think we all want people to succeed, and you feel like am I, being too hard on them?" (p, 3)*

*"I think some of it is just being a therapist in and of itself, is that we always try to see what is possible and what can be with our patients, and with the students that we don't want to ever recommend that they fail" (p, 5)*

*"To fail or recommend that they repeat something is, I guess, it to me it feels a bit harsh." (p, 5)*

*"...it's detrimental to the student, more so than anything else you can do." (p, 7)*

*"I would think back to my own time as a student and the difficulties that I would have in those scenario, so remembering, that was always something that I try to do, because it's easy to forget, how much you've learned and how much you've been able to grow as a therapist when you've been doing it for several years, especially at the same place, and their new here, and they don't know these things, then they're drinking from a fire hose." (p, 5)*

CIs felt it was inappropriate to pass a student if there were safety issues but were more likely to be forgiving with problems with professional behaviors.

*"it's not acceptable when it's an issue of like safety and or understanding of basic concepts and basic knowledge" (p, 1)*

*"I think, as long as they're meeting safety guidelines and they seem to have a critical knowledge base, I feel like it's Okay" (p,3)*

*"If I feel they're unsafe or they're truly clueless about what they're doing, that I find very difficult and I would not wish to pass that person on" (p, 4)*

*"...if a student does something that is completely contraindicated, or detrimental to a patient as far as safety, I think that student has to fail." (p, 7)*

*"I think the hard part with that is, I don't know how much of that (professional behaviors) is our job to fix (p, 3)*

*"...when someone happens to just be a mediocre performer... they can still pass they're okay... they know that base knowledge, and basic things they need to do, they maybe are not the most creative. They're not the most innovative, but they can get by and really PT school is just a base" (p, 1)*

Student level in the program influenced decisions. CIs felt it would be easier to pass a student along in an earlier experience because expectations were lower, and the student had future clinical

experiences to improve their skills. Unless there were clear safety issues, they found it difficult to fail a student in a final experience because of the financial and time investment the student had put into the program.

*"I think that sometimes like when it's, especially when it's not someone's last affiliation or if they're like almost there or just okay people will just pass them, I think that happens all the time" (p, 1)*

*"...especially when somebody is so close to being done it feels almost excessively punitive at times, especially if it's not to the point where it's a red flag" (p, 5)*

*"I think there's a lot of financial pressure as well, when a student is paying 30 to \$50,000 a year, if you fail them, they have to repeat, that's you know, a huge deal (p, 7)"*

*"I felt some pressure from this student, in the sense that she had voiced to me her financial constraints... you feel this pressure of like oh wow, am I, putting a financial hardship on the student if I don't pass them, so I do think there are factors that are difficult to define, especially if you have students that are taking the Boards immediately." (p, 3)*

*"I do get the feeling, sometimes that I have received students that have had issues that other CIs did not address. And they're kind of like, I don't have to say your entry level, so somebody else can clean this mess up." (p, 3)*

*"...with the National Board you sort of feel like that's gonna, that's the ultimate, you know, that's the thing that's going to stop them from being a PT. Uhm So, a lot of people feel like, you know, that's always the backstop you know." (p, 7)*

*"Well, I did. (Failed to fail) Because the school really pushed me to, so I do not, I mean, having the reasoning, and I would say, lack of support from the school" (p, 6)*

#### **Theme 4: Support Scaffolding**

Organizational support from employer sources were most frequently described by the CIs, these included the SCCE and coworkers as sources of support to bounce ideas off and to confirm CIs assessment of the student. Support and guidance from the SCCE and confirmation from co-workers seemed to be valued more than interaction with the academic institution in terms of dealing with the student performance issues.

*"The SCCE was very instrumental in helping me, definitely, when I've had the students that were underperforming, just saying it's not a reflection of you or us like, it's okay to give this grade." (p ,1)*

*“So, I got support from other therapists I work with, who also let the student work with them. So, like you don’t always have patients, so you have them work with other therapists. They would give me feedback. on him like “(p, 2)*

*“My student goes with another therapist, and I ask them how they did (p, 5)*

*“Talking with other therapists was a big support, kind of getting their opinions on how to address those things” (p, 6)*

*“So, the person who was the site director of students and my immediate supervisor helped me. They tried to help me structure our meetings, and ...so I like had like THEM supporting me.” (p,2)*

*“I thought my boss did a good job of supporting me and listening to what was going on, I didn't communicate with our site director person very much, but I got the impression of support you know saying, she will speak with the school if you need her to, you know back you up on this, we agree with what you're saying, don't worry about it, you know that sort of thing, so I felt support in the sense that I felt like they had my back.” (p,3)*

Organizational supports such as department culture, a CI orientation, written guidelines and the credentialing course were cited as valuable to CIs.

*“So, it was part of our departmental culture, which was incredibly supportive, everybody was doing it or knew that they would be, when they hit one year and there was a lot of support to be had, because everybody was getting experience” (p, 4)*

*“I really liked the clinical instructor education course, and I think it was eye opening to me. Uhm and I saw, I think that's a huge benefit for us.” (p ,7)*

*“An OT sent me this whole, like packet of things and I was like, I wish I had this on day one. um but she's the OT not the PT so, um after I chatted with her, I honestly kind of like went to her way more for advice and help than my own SCCE. (p, 6)*

*“...As I said before, I wish I'd had other staff members that I could lean on and nowadays, there is, we have you know clinical educator chat forums and other things as well, not to mention, I work with two other people at this stage.” (p, 7)*

Involvement and support from the academic institution were mixed with some CIs feeling supported by the school and having positive experiences and others having negative experiences. CIs described instances of the school passing a student after an unfavorable CI evaluation and in these instances the CI felt a lack of support.

*“One on one support early in my career, was talking to my folks on the academic side.” (p, 4)*

*“The school was also great as far as, helping brainstorm and problem solve, and I will tell you, like the school was not against it (failing the student). Which was somewhat surprising to me. So, they definitely were supportive, but they obviously stressed the significance of it.” (p, 7)*

*I hoped that the school would have been a little bit more engaged. (p, 6)*

*“I didn’t rate him as entry level and I definitely rated him lower than where I wanted him to be, and I know the school still passed him.” (p, 2)*

## **Summary of Findings and Research Questions**

### **RQ 1: How do CIs perceive their ability to effectively manage a student who is underperforming in clinical education?**

This question was answered descriptively. Quantitative results suggest that overall CIs perceived themselves and being prepared for their role as a CI and were confident that they would be able to manage an underperforming student. Those CIs who had supervised an UPS agreed with statements indicating that they were able to effectively manage an underperforming student. Despite this, qualitative comments reflect that CIs, while supervising an UPS, often sought support and confirmation from their co-workers or SCCE. There was no association between entry level degree of CI, practice setting, years of experience as a PT or as a CI and perceived ability to manage an UPS. CIs who attended the CCIP had greater agreement with the statement relating to perceived ability to manage an underperforming student but because descriptive statistics were used statistical significance could not be determined. Therefore, I failed to reject the null hypothesis for ARQ 1a, b, c, d, e.

### **RQ2: What strategies/interventions do CIs use to address performance concerns? (Q#51) (Qual)**

Most frequent strategies used were more one-on-one time with the CI for instruction, practice or guided problem solving, reducing caseload or expectations of the student, providing more, or changing how feedback is given, homework and self-study, reflection and learning contracts.

### **RQ 3: Does failure to fail occur in Physical Therapy Clinical Education?**

Ho: Failure to fail does not occur in PT clinical education

Ha: Failure to fail does occur in PT clinical education

This question was answered descriptively using frequency and percentages based on results of question #55, "In retrospect, I recognize I submitted a passing evaluation for a student who should have failed." Since 14 % of those CIs who had supervised an UPS responded positively to this question the null hypothesis will be rejected and the alternative accepted.

**RQ4: If failure to fail exists, what is the relationship between FTF and demographic and organizational factors?**

DV: FTF as measured by question #55

IVs: Entry level degree, years of experience as a PT, years of experience as a CI, factor CI preparation and perceived ability, factor perceptions on FTF, factor DCE support, factor support from PT department (employer), student level in program.

4A<sub>Ho</sub>: There is no association between entry level degree and FTF.

4A<sub>Ha</sub>: There is an association between entry level degree and FTF.

Bachelor's prepared CIs had a higher percentage of individuals who submitted a passing evaluation for an UPS (29%) compared to those with Masters (13%) or DPT degree (13%). Although, there appears to be an association between entry level degree and FTF, there was a small number of bachelor's prepared CIs and parametric statistics could not be performed therefore I failed to reject  $H_0$ .

4B<sub>Ho</sub>: There is no association between CI years of experience as a PT and FTF.

4B<sub>Ha</sub>: There is an association between CI years of experience as a PT and FTF.

There was not a significant correlation between years of experience as a PT and FTF therefore I failed to reject the null hypothesis.



4CHo: There is no association between CI years of experience as a CI and FTF.

4CHa: There is an association between CI years of experience as a CI and FTF.

There was not a significant correlation between years' experience as a CI and FTF therefore I failed to reject the null hypothesis.

4DHo: There is no association between perceived preparation and ability and FTF.

4DHa: There is an association between perceived preparation and ability and FTF.

There was a statistically significant but weak negative correlation ( $r = -.170$ ,  $p = .034$ ) between CI's perceived preparation and ability to FTF. Although results were statistically significant the correlation was negligible and there is insufficient evidence to determine a relationship exists therefore, I failed to reject the null hypothesis.

4EHo: There is no association between CI perceptions on failure to fail and FTF.

4EHa: There is an association between CI perceptions on failure to fail and FTF.

There was a statistically weak positive correlation ( $r = .294$ ,  $p = .000$ ) between CIs perceived perceptions on FTF (summed factor) and FTF. Descriptive statistics showed that greater than 50% of CIs agreed or strongly agreed to statements relating to FTF. Additionally qualitative data confirmed that CIs were less likely to submit an underperforming student unless there were clear safety issues or gross deficits in knowledge base. Therefore, the null hypothesis was rejected and the alternative accepted.

4FHo: There is no association between academic program-DCE support and FTF.

4FHa: There is an association between academic program-DCE support and FTF.

There was a statistically significant but negligible correlation ( $r = -.194$ ,  $p = .024$ ) between academic program-DCE support and FTF. This correlation is negligible and there is insufficient evidence to determine a relationship. Therefore, I failed to reject the null hypothesis.

4GHo: There is no association between support from employer/coworker-SCCE support and FTF.

4GHa: There is an association between employer/coworker-SCCE support and FTF.

There was a statistically significant but negligible correlation ( $r = -.118$ ,  $p = .143$ ) between coworker/SCEE – employer support and FTF. This correlation is negligible and there is insufficient evidence to determine a relationship. Therefore, I failed to reject the null hypothesis. There is a discrepancy between this and qualitative results which describe SCCE and coworker support as being highly values to CIs.

The association between student level in the program and FTF was explored descriptively and qualitatively. Of those CIs who had submitted a passing evaluation to a student who should have failed 82% agreed or strongly agreed with the statement pertaining to being more likely to pass and UPS in an earlier clinical experience versus 50% of those who had not submitted a passing evaluation for an UPS. Qualitative analysis confirmed that student level in the program does play a role in FTF. Qualitatively CIs felt it was easier to pass and UPS in an earlier experience the student would have more time in clinic to improve in future experiences. CIs often failed to fail a student in a final experience unless there were safety issues due to not wanting to negatively impact a student's career and financial implications.

RQ5: Do CIs experience personal distress when dealing with a student who is underperforming in CE?

Survey responses indicate that CIs did experience negative emotions of stress, distress, and conflict. Negative emotions were confirmed qualitatively but the most frequent emotions described qualitatively were frustration and doubt.

**Summary:**

The sample of CIs reporting in this study perceived themselves to be prepared for their role as a CI and were confident in their abilities as clinical educators. Failure to fail was identified as occurring in PT clinical education however there was only a weak correlation between various variables explored. CIs experienced negative emotions while working with an UPS and seemed to appreciate support of their co-workers and the DCEs.

## **Chapter V**

### **Discussion**

#### **Introduction**

This section will discuss the quantitative and qualitative results of this study and how these results compare to pre-existing literature in other professions. An explanation of how the three theories chosen to frame the study contribute to an explanation of the results will also be discussed. Finally, limitations of this study will be noted.

#### **CI's Perceived Ability to Manage an UPS**

Quantitative data from this sample of CIs supports that CIs perceive themselves as being prepared and confident in their ability to manage an UPS, including being able to provide feedback and accurately documenting performance using the evaluation tool. This contrasts with findings in nursing (Miller, 2017) and medicine (Cleland, 2008; Dudek, 2006) where clinical preceptors felt ill prepared to provide feedback and summative evaluations. Interestingly, literature in other professions indicates that there is little formal training for clinical supervisors (Dudek, 2009; Yepes-Rios et al., 2016) The fact that PTs receive training on clinical instruction as part of the entry level DPT degree and the requirement of having to take an online training module before using the PT-CPI, the evaluation tool used to evaluate most PT students, may contribute to PT's perceived confidence in these areas. In this sample of PTs 63% were APTA Credentialed CIs which may have further contributed to their high degree of perceived confidence.

#### **Identifying the UPS and Strategies Used**

Performance that led CIs to identify the student as under-performing was lack of improvement despite feedback provided on multiple occasions. Performance deficiencies identified were lack of basic knowledge and skills, safety issues, and poor professional behaviors. This is consistent with previous studies in physical therapy (Hayes, et al.,1999) (Jette, et al., 2007). CIs main strategies used to help

under-performing students were providing more one-on one time with the CI for practice, instruction or guided problem solving and providing more or modifying how they gave feedback. This is consistent with findings by Bearman et al. (2013) who found that PTs' main strategies were providing more supervision, more feedback and "giving more of themselves" (Bearman, 2013, p.351). Of concern is that the strategies being employed do not reflect active adult learning theory and the principles associated with Andragogy, even though APTA CICP supports employing adult learning strategies.

### **Failure to Fail**

Failure to fail in clinical education has been well documented in nursing (Couper, 2018; Docherty, 2018; Hughes, 2019, Hughes, 2016, Hrobsky, 2002, Larocque, 2013,) and medicine (Cleland, 2008, Dudek, 2006). Similar to findings in nursing and medicine, FTF occurred in this sample of PT CIs. Most of the literature relating to FTF has been in medicine and nursing and the majority has been qualitative in nature with few studies quantifying this phenomenon. Hughes (2019) reported that 23.5% of nurse preceptors in their sample had passed a questionably performing student and Docherty (2018) reported a rate of 67% in nurse preceptors. Although the percentage of FTF in this sample of PTs is lower, the fact that FTF does occur can have a negative impact on safe and effective care to the public.

In medicine barriers to submitting a failing evaluation included lack of knowledge of what to document and fear of their evaluation being questioned in a grievance appeal (Dudek, 2006), this was not the case in this sample of CIs based upon the themes that emerged in the data. The APTA CICP and education on being a CI as part of entry level curriculum may contribute to higher confidence in PT CIs. Training through CPI-web based training and CICP have shown to have a positive effect on accuracy of CPI ratings (Vendrely, 2004). Additionally, CIs do not submit the grade in PT, the DCE does so CIs would not likely be involved in the appeals process.

### **Perceptions on Failing an UPS**

PT CIs had negative perceptions on failing a student and this is similarly to medicine (Cleland, 2008) and Nursing (Hrobsky, 2002). Qualitative comments in this sample reinforce that CIs avoided giving negative feedback or calling the school and felt failing a student to be detrimental to the student. This is similar to Miller's findings (2017) where nurse preceptors were reluctant to ask for help and often waited too long to ask for help. Similarly in a sample of nursing faculty Adkins and Aucoin (2021) found that nurse preceptors avoided giving negative feedback for fear of eliciting negative emotions of the receiver and to avoid causing their own bad mood. Avoiding giving negative feedback, calling the school, or submitting a failing evaluation may be explained as an attempt to reduce their own role strain. Hughes et al., (2016) reported that 68.4% of nurse preceptors felt overwhelmed and 71.1% agreed it took longer to fail a student than to pass. This supports role strain as a potential contributing factor.

### **Barriers and Facilitators to Submitting an Unsatisfactory Evaluation**

Students demonstrating safety issues was a facilitator and main reason CIs would submit an unsatisfactory evaluation for an UPS, this has also been described in nursing (Hughes, et al.,2016) where nursing preceptors cited safety issues needing to be present, to fail a student in CE.

Student level in the program appeared to be a more substantive focus and barrier to submitting an unsatisfactory evaluation in this sample of CIs than what is described in studies in other disciplines. Although studies in medicine (Dudek, et al.,1999) have described difficulties in failing final students due to lack of time to remediate and time invested in the program, only one study in nursing found similar results as this study were FTF was cited as being easier to occur for both the early student, due to hopes for improvement and the later student due to negative implications of failing a student so late in the program (Docherty & Diekmann, 2015). Silberman et al., (2018) found a higher incidence of student underperformance in later clinical experiences which may reflect leniency and hopes of future improvement for UPS in their first or early clinical experiences.

An academic program DCE perceived as disengaged to the CI or who questioned the CIs evaluation was a barrier to submitting an unsatisfactory evaluation, where DCE support was seen as a beneficial. This is consistent with findings of Hughes (2016) where nurse preceptors felt having support from the academic program as necessary to submit an unsatisfactory evaluation and Hrobsky (2002) where preceptors felt faculty liaisons that were supportive and followed up as being beneficial when dealing with an UPS. DCEs that listen, provide suggestions, and follow up represent a perceived organizational support from the academic institution that is beneficial and may support CI's in providing honest objective evaluations.

#### **CIs Experience of Supervising and UPS:**

CIs described the experience of supervising an UPS as challenging and difficult and they experienced stress, distress, conflict (Quan), frustration and doubt (Qual). This is similar to findings in other disciplines and to previous study in PT. (Bearman, 2013) (Carrol, 2019). Sources of support during the experience were their SCCE and their peers to give guidance and reinforcement and the academic program DCE.

#### **Conceptual Framework.**

Perceived Organizational Support Theory, Role Strain Theory and Adult Learning Theory were all used to frame this study and helped to explain the various aspects of the CI experience observed. Although supervising an UPS was an exceedingly difficult and challenging experience, CIs did perceive support from their employers in the form of SCCE/supervisor and peer support as highly valuable and having a positive impact on them during the experience of supervising an UPS. Working with an academic program DCE that was engaged and supportive was also found to be a positive support. Other organizational supports that CIs cited as beneficial were having a department culture that valued having students in the clinic, having structured guidelines for progressing students and support from the professional organization in the form of the CI credentialing program. Thus, the findings from this study

further support POS Theory which states that organizational support from one's employer or organization affects work quality, output, and experience. In this sample of CIs organizational support from employer, academic program and professional organization were highly valued during this experience.

Additionally, CIs did perceive the experience of supervising an UPS as difficult and challenging and reported experiencing several negative emotions. They also reported having negative perceptions regarding failing, and perceived it as detrimental to the student, and preferred avoiding giving negative feedback, thus further supporting the RST. Role Strain Theory may help to explain CI's justification of FTF as an attempt to diminish their role strain by avoiding something that they perceive as detrimental to the student, uncomfortable and difficult to do.

Surprisingly, strategies used by many CIs did not reflect the principles of adult learning theory as proposed. Strategies utilized were more focused on what the CI could do to help the student perform and not on what the student could do to help themselves improve. While this finding is consistent with Bearman's (2013) findings, it is surprising given that the CACP course dedicates a section to this topic and a substantial percentage of this sample of CI were credentialed CIs. CIs need to utilize adult learning strategies to advance students' critical thinking skills during their clinical education experiences in order to better prepare them for clinical practice. Additionally, educators must more effectively prepare CIs for their clinical instructor role specific to advancing adult learning strategies.

### **Limitations**

As with all studies there are limitations which must be acknowledged if we plan to do our due diligence in promotion evidenced based knowledge translation practices. Specifically, in this study the PI created survey was not evaluated for reliability and validity. Criterion validity cannot be established given the absence of a comparable survey (Alreck and Settle, 2004). Caution must always be taken when



a survey is long as this one was which may have led to participant fatigue, in accurate reporting, memory fog, and overall inability to complete the entire survey (Alreck & Settle). This study also utilized a sample of convenience; therefore, sampling bias may have occurred. Specifically, recruiting volunteer participants via APTA clinical education sources, the sample may have been more invested in clinical education than the overall population of PTs. Of real concern is that FTF a student who is not performing up to standards is not something that some would like to admit to, so there could have been a social desirability bias (Alreck & Settle). The survey set out to capture multiple components of the CI experience and FTF and in doing so may have been too broad to obtain more significant results. Finally, Covid-19 may be a confounding variable. Distribution of this survey occurred between July and September of 2021 during the Covid-19 pandemic. At this time clinical education was just starting to resume after pausing for several months in 2020 and some sites had not yet resumed taking students. Some clinics had not yet called all their PTs back to work and some PTs had left the field. This could have limited access to the survey to some CIs. Additionally, many PTs worked through the pandemic as essential workers in inpatient settings and saw first-hand the devastating effects of the virus, this may have contributed to higher levels of emotional distress overall.

## **Chapter VI**

### **Conclusion**

#### **Introduction**

The conclusions of this study will be stated in this chapter. Additionally, the implications of these findings and potential areas of future research will be discussed.

#### **Conclusion**

PT CIs perceive themselves as being prepared and confident in their ability to manage an UPS. Despite these perceptions the lived experience of supervising an UPS was considered as difficult and challenging and CIs experienced several negative emotions. Based upon the data from this study, FTF is present in PT clinical education. While current data reflect that student level in the program, entry level degree of the CI and support from coworkers and the academic institution may play a role in addressing FTF further exploration of the contributing factors is imperative if we as a community of educators want to prepare a work ready healthcare force.

#### **Significance**

This study quantifies that FTF in PT clinical education occurs and hopefully will start a dialogue on preventative measures. A place to start the dialogue might be in developing educational programs to educate CIs regarding negative perceptions of failing and the impact to the student and the profession as well as education to academic programs and DCEs on acting swiftly to remediate student performance deficits before entering the clinic.

This study sheds light on the CI's experience when supervising an UPS and how difficult and challenging it is. CIs are a valuable and necessary resource needed for the education of our new professionals. With the proliferation of new and expansion of existing PT programs in the country CIs are being asked to supervise more students while experiencing increasing productivity demands and

administrative burden (APTA). This can lead to moral injury and burnout (Kellish, et al., 2021). Leaders in PT education should start a dialog regarding what can improve the CI experience and further support them in their vital role. Additionally discussing ways to build supports within healthcare organization such as SCCE development and structured frameworks for clinical learning may be beneficial.

### **Areas of Future Research**

Follow up studies with narrower focus may be able to delve deeper into various aspects of the CI experience and FTF. Exploration of practices of DCEs and academic faculty revolving around FTF is of interest. The impact of a CI educational program and SCCE development on FTF could also be explored. Additionally, there is little research involving the student's perspective on clinical failure and warrants exploration.

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## Appendices

## Appendix 1A: Mercy College Institutional Review Board Approval Letter



## MEMO

**To:** Ruth Hansen, DPT  
**From:** Kathleen Golisz, OTD, OTR, FAOTA  
 Chairperson, Mercy College IRB  
**Subject:** IRB Review of Proposed Research  
**Date:** May 24, 2021

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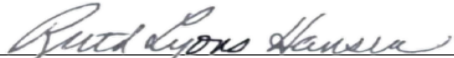
**Project #** 21-62  
**Project:** Physical Theray (PT) clinical instructors' (CIs) perceptions, practices and experiences when supervising an underperforming student.

The committee has reviewed and **Approved** your research proposal. **The stamped approved informed consent should be the one you provide participants.**

Listed below are your responsibilities to your study participants regarding informed consent and confidentiality and to the IRB. Please sign, date, and return one copy of this memo to the IRB. Good luck with your research.

Research investigators are responsible for:

- Ensuring that informed consent is documented using the consent language approved by the IRB.
- Ensuring that each person is given a copy of the consent form – participants must be able to download a copy of the IRB stamped consent language in an online survey.
- Protecting study subject confidentiality and confidentiality of their records.
- Submitting for IRB review, any advertisements to recruit research subjects. This includes, but is not limited to, newspaper, radio, and television advertisements and notices, public service announcements, posters and flyers.
- Reporting the progress of the research to the IRB, as often as and in the manner prescribed by the IRB, but no less than once per year.
- Reporting promptly in writing to the IRB, any injuries to human subjects or any unanticipated problems that involve risks to the human research participants or others. Investigators are encouraged to call the IRB with these reports in addition to preparing a written report.
- Reporting promptly, in writing to the IRB, any proposed changes in a research protocol that shall not be initiated by research investigators without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subject.
- Reporting promptly, in writing to the IRB, any serious or continuing noncompliance with the requirements of this approval or the determinations of the IRB.

  
 Principal Investigator(s)

5/27/2021

Date



## Appendix 1B: Seton Hall University IRB Approval via Institutional Authorization Agreement

### Institutional Review Board Authorization Agreement Seton Hall University and Mercy College

This Reliance Agreement by and between Seton Hall University and Mercy College allows the Relying Site (Seton Hall University) to cede IRB review to Mercy College Institutional Review Board (Mercy IRB) for human subject research (Research) that will be conducted at the Relying Site.

Name of Institution Providing IRB Review:

|                        |   |
|------------------------|---|
| Name of Institution    | <b>Mercy College</b>  |
| Address                | 555 Broadway Dobbs Ferry NY   |
| Institutional Official | Kathleen Golisz   |
| Designated Contact     | <b>Dr. Kathleen Golisz, OTD, OTR, FAOTA</b><br>Chair, Institutional Review Board for Research<br>Mercy College<br>555 Broadway<br>Dobbs Ferry, NY 10522<br>914-674-7814<br>914-674-7250 (fax)<br><a href="mailto:MCirb@mercy.edu">MCirb@mercy.edu</a> |
| Assurance (FWA)        | FWA00009578   |

Name of Institution Relying on Mercy College IRB:

|                         |   |                             |
|-------------------------|---|-----------------------------|
| Name of Institution     | <b>Seton Hall University</b>                                      |                             |
| Address                 | 400 South Orange Avenue, South Orange, NJ                         |                             |
| Institutional Official  | Michael LaFontaine  |                             |
| Designated Site Contact | Dr. Michael F. LaFontaine<br>Director, Institutional Review Board | 973-761-9334<br>IRB@shu.edu |
| Assurance (FWA)         | FWA00001223   |                             |

Designated Site Contact (Relying Site):

|                     |               |
|---------------------|---------------|
| First and Last Name | same as above |
| Title               |               |
| Phone Number        |               |
| Email Address       |               |

This Agreement is limited to the following specific protocol(s) or Class of Studies (Study):

|                                      |   |
|--------------------------------------|---|
| Title or Class of Study/ies          | Physical Therapy (PT) clinical instructors' (CIs) perceptions, practices and experiences when supervising an underperforming student. |
| Mercy College IRB #                  | 21-62   |
| Mercy College Principal Investigator | Ruth Hansen, BS, MS, DPT  |
| Relying Site Principal Investigator  | N/A   |

**Responsibilities**

***Mercy College IRB/Institutional Responsibilities*** – The Mercy College IRB agrees that it will:

|     |  |
|-----|--|
| 1)  | Maintain an FWA with OHRP and maintain registration with OHRP.   |
| 2)  | Maintain IRB board membership that satisfies the requirements of 45 CFR 46, 21 CFR 56 and provide special expertise as needed from IRB members or consultants to adequately assess all aspects of the Study.   |
| 3)  | Make available to the Relying Site, upon request, the Mercy College IRB Standard Operating Procedures.   |
| 4)  | Perform initial reviews, continuing reviews, reviews of unanticipated problems that involve risks to subjects or others, amendments, and reviews of any other documents submitted by the Principal Investigator of the Study to the Mercy College IRB.   |
| 5)  | Maintain and make accessible to the Relying Site upon request the Mercy College IRB application, protocol reviews, letters to Principal Investigators, approved consents, and minutes of the Mercy College IRB meetings relevant to the Study and the Relying Site.  |
| 6)  | Provide an approved study-wide informed consent form.  |
| 7)  | Review conflict of interest disclosures, which must be submitted by all key personnel at Relying Sites to the Mercy College IRB. The Mercy College IRB will apply its standard policies regarding confidentiality of review of information and disclosures submitted to it regarding potential investigator conflicts of interest.<br><br>Communicate positive conflict of interest disclosures reported by Relying Site investigators and their associated COI management plans to the Designated Site Contact. If the Relying Site determines that the management plan is not acceptable, the Designated Site Contact will promptly inform the Mercy College IRB and the Study may not be eligible for review under this Agreement.  |
| 8)  | Verify that human subjects protection training is complete and up to date for all key personnel at Relying Sites. Key Personnel at Relying Sites must abide by Mercy College 's education and training requirements. Mercy College will also review the CVs for Relying Site Principal Investigators to verify appropriate expertise for conducting human subjects research.   |
| 9)  | Notify the Designated Site Contact promptly if there is a suspension or restriction of the Mercy College IRB's authorization to review studies.  |
| 10) | Notify the Designated Site Contact promptly of any Mercy College IRB policy decisions or regulatory matters that might affect the Relying Institution's reliance on Mercy College IRB reviews or the performance of the Study at the Relying Site.   |
| 11) | Notify the Designated Site Contact promptly if the Mercy College IRB decides to suspend, disapprove or terminate the Study as a consequence of receiving allegations of serious or continuing non-compliance or of unanticipated events that have the potential to cause harm to research subjects or others.  |
| 12) | Notify the Designated Site Contact promptly if the Mercy College IRB determines that serious or continuing non-compliance has occurred in the Study at the Relying Site. Notify the Designated Site Contact of steps the Mercy College IRB deems necessary for the remediation of the non-compliance including, but not limited to, any suspension, disapproval or termination of the Study, or any sanctions or limitations imposed on researchers at the Relying Site. The Mercy College IRB may request that the Relying Site conduct an investigation and report back to Mercy College or Mercy College may conduct its own investigation.<br><br>If the Mercy College IRB determines that it must report the findings of an investigation to OHRP and/or other oversight entities, it will notify the Designated Site Contact in advance. The Mercy College IRB will provide the Relying Site the opportunity to review and comment on the report before it is sent to OHRP or other parties. Nothing in this Agreement shall prevent the Relying Site from making its own report to OHRP or from taking additional remediation steps at its own institution. |
| 13) | Notify the Designated Site Contact about the need for a Mercy College Quality Review/Audit at the Relying Site for reasons other than serious or continuing non-compliance or unanticipated events involving risks to subjects or others, such as routine audits or internal monitoring. Mercy College may ask the Relying Site to conduct its own Quality Review/Audit and supply results to the Mercy College IRB or Mercy College may conduct its own review.   |

***Relying Site - Institutional Responsibilities:*** The Relying Site agrees that it will at all times while this Agreement is in effect:

|     |  |
|-----|--|
| 1)  | Maintain a Federal Wide Assurance (FWA).   |
| 2)  | Maintain a human subject's protection program, as required by the DHHS OHRP.   |
| 3)  | Designate a Site Contact who is responsible for, and has Relying Site authority for, all communication regarding the Study/ies. Provide to the Mercy College IRB the name and contact information for that individual and notify the Mercy College IRB promptly should the Designated Site Contact change. The Designated Site Contact is also responsible for serving as a resource for research personnel at the Relying Site and answering any questions or concerns Relying Site personnel may have.   |
| 4)  | Ensure that the investigators and other personnel at the Relying Site who are involved in the Study are appropriately qualified and meet the Relying Site's standards for eligibility to conduct research. This includes, but is not limited to, having the required professional staff appointments, credentialing, insurance coverage, and background checks for their assigned role in the Study.   |
| 6)  | Educate and train its investigators to perform research in compliance with human research protection regulations.  |
| 7)  | Perform local analysis of any specific requirements of state or local laws, regulations, policies, standards (social or cultural) or other factors applicable to this Study, and include any relevant requirements or results of the analysis that would affect the conduct of the research as part of the information provided to Mercy College for consideration.  |
| 8)  | Perform review by all local ancillary committees as applicable and required by its policies (such as nursing review, radiation safety, pharmacy and any others), and include any relevant requirements or results of the reviews that would affect the conduct of the research as part of the information provided to Mercy College for consideration.<br><br>It is the responsibility of the Relying Site to identify and interpret the requirements of its applicable state and local laws, regulations, policies, and ancillary review processes as relevant to the Study and to communicate the requirements to the Mercy College IRB.   |
| 9)  | Ensure that the provisions of the grant or contract that funds the Study are consistent with the approved Study protocol and consent form (i.e., provisions in clinical trial agreements that address research related injuries).  |
| 10) | Notify the Mercy College IRB within twenty-four hours of becoming aware of a suspension or restriction of a Relying Site investigator or other personnel involved in the Study, a subject death, the discovery of serious or continuing non-compliance, or an unanticipated problem that involves risks to subjects or others.   |
| 11) | Cooperate promptly and upon request with any Mercy College investigation regarding routine monitoring and auditing, serious or continuing non-compliance and unanticipated problems related to the Study. Such cooperation will include, but is not limited to, providing research records and related information and meeting with institutional research representatives upon request.<br><br>Mercy College may ask the Relying Site to conduct a full investigation and report its findings to Mercy College or may conduct its own investigation. The Relying Site will provide to Mercy College updates, as reasonable and upon request, and a copy of the report of its findings. Any findings of fact made by a Relying Site will be shared promptly with Mercy College to ensure the safe and appropriate performance of the Study at the Relying. If the investigative process, by Mercy College or the Relying Site, results in the production of a report that will be made available externally, Mercy College will afford the Relying Site an opportunity to comment on a draft of such report. Nothing in this Agreement shall prevent the Relying Site from conducting its own investigation. |
| 12) | Ensure an institutional mechanism exists by which complaints about the Study can be made by local Study participants or others. Promptly report such complaints to the Mercy College IRB if they meet the criteria of a potential unanticipated event that causes risk to subjects or others, as defined by Mercy College policies.  |
| 13) | Ensure that the Relying Site maintains policies regarding the disclosure and management of conflicts of interest related to research and share those policies with the Mercy College IRB as requested.<br><br>Ensure that Relying Site investigators and other personnel involved in the Study disclose financial interests as required under Mercy College's policies. The Mercy College IRB will notify the Relying Site of both positive disclosures and approved management plans. The Relying Site agrees to promptly provide Mercy College any   |



|     |  |
|-----|--|
|     | relevant and necessary information should Mercy College require additional information when creating or reviewing COI management plans for Relying Site investigators. The Relying Site will ensure the compliance of all management plans related to the Study.   |
| 14) | The Relying Site will maintain policies and procedures regarding confidentiality of review of information.   |
| 15) | Maintain policies and procedures for dealing with injuries to human research subjects and share these policies and procedures with the Mercy College IRB as requested.<br><br>To the extent of its own policies, the Relying Site shall provide or arrange for treatment of injuries to human subjects, if any, that may result from Study-related procedures that occur at the Relying Site. Nothing in this Agreement shall prevent institutions collaborating on a specific Study to make other arrangements between or among them at the outset of a specific Study to allocate differently the responsibility for costs associated with injuries to human subjects that might occur during the course of the Study. |
| 16) | Ensure compliance with applicable regulations and policies by its investigators and research staff (including, but not limited to; physicians, research nurses, coordinators, data managers, or other members of the research team) in the conduct of the Study.   |
| 17) | Require Relying Site investigators to maintain records of all Study and related activities conducted under this Agreement for at least seven years and longer if required by law after completion of any Study.  |
| 18) | Require all investigators to promptly submit all continuing reviews and amendments, including investigator changes or changes in other research key personnel, and all reportable events to the Mercy College IRB according to Mercy College 's policies. Require all investigators to submit all sponsor-initiated amendments within 30 calendar days of Relying Site investigators being informed of sponsor amendments.   |
| 19) | Require all investigators to submit to the Mercy College IRB within 30 calendar days any audit report requiring corrective action at the Relying Site and all other audit reports that occurred since the last study review at the time of continuing review.  |

### Authority

Once IRB review for a Study has been ceded to the Mercy College IRB pursuant to this Agreement, the research protocol will remain under the Mercy College IRB review for the life of the research protocol unless this Agreement is terminated as set forth below.

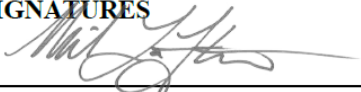
This Agreement will become effective as of the date of the last signature below and will remain in effect until the conclusion of the Study, defined as the time when all human subject activities at the Relying Site conclude. The Agreement may be terminated by: (i) either party without cause; such termination will be effective upon the Mercy College IRB receiving notification from the Relying Site IRB that the Relying Site IRB has assumed responsibility for the Study; (ii) by either party upon breach of the other party which in the sole discretion of the non-breaching party is capable of cure, if the breach has not been cured to the satisfaction of the non-breaching party within 30 days of notification of breach; or (iii) by either party immediately upon written notice upon breach of this Agreement which in the sole discretion of the non-breaching party is not capable of cure, including but not limited to any activity or reason that may place human subjects at risk.

All notices under this Agreement shall be sent to the addresses set forth above addressed to the appropriate contact.

This Agreement is governed under the laws of the State of New York.

By signing this Agreement, both institutions agree that the Mercy College IRB will serve as the IRB of record and agree to uphold their individual responsibilities as set forth in this document and as required by law and regulation. This Agreement is not effective until all institutional official and PI signatures have been obtained. This document must be kept on file by both Mercy College and the Relying Site and provided to OHRP upon request.

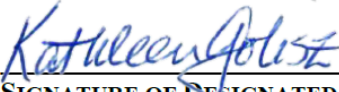
**SIGNATURES**



\_\_\_\_\_  
**SIGNATURE OF SETON HALL UNIVERSITY  
DESIGNATED OFFICIAL**

06/04/2021

\_\_\_\_\_  
**DATE**



\_\_\_\_\_  
**SIGNATURE OF DESIGNATED OFFICIAL MERCY COLLEGE**

5/24/2021

\_\_\_\_\_  
**DATE**

**KATHLEEN GOLISZ, OTD, OTR, FAOTA  
CHAIR OF THE INSTITUTIONAL REVIEW BOARD  
ASSOCIATE DEAN, PROFESSOR  
MERCY COLLEGE**

**Appendix 1C: Permission to Use Screen Shot of Sample Size Calculator from Calculator.net**

10/6/22, 4:45 PM

Mail - Ruth L Hansen - Outlook

**Re: calculator.net contact us**

Huiming Gu &lt;hgu@maplet.com&gt;

Wed 10/5/2022 4:11 PM

To: Ruth L Hansen &lt;ruth.hansen@student.shu.edu&gt;

Hi Ruth,

Thanks for reaching out. Please feel free to use the screenshot in your dissertation.

Best regards,

Calculator.net

=====

Name: Ruth Hansen

Email: [Ruth.hansen@student.shu.edu](mailto:Ruth.hansen@student.shu.edu)

Message:

I used your sample size calculator to calculate a target sample size for a survey I used in my doctoral dissertation at Seton Hall University. I would like to use a screenshot of that calculation in my written dissertation manuscript. The title of my project is "Physical Therapist Clinical Instructors perceptions practices and experience when supervising an under-performing student. If this is acceptable to you would you please provide me with written permission at the email above. Thank you very much

Respectfully,  
Ruth Hansen

**\*\* WARNING:** This email originated from outside of Seton Hall University. Do not click links or open attachments unless you recognize the sender and know the content is safe. \*\*