Self-efficacy as a Predictor of Interview Performance and Admission Yield for Doctor of Physical Therapy Applicants

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Self-Efficacy as a Predictor of Interview Performance and Admission

Yield for Doctor of Physical Therapy Applicants

by

Jordan Rose Wiehebrink

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy
Education and Social Change
School of Education
Bellarmine University

Chair: Dr. Grant Smith
Dr. Mike Vetter
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Date of Approval:
August 1, 2018

Keywords: self-efficacy, emotional intelligence, motivation, goals, graduate admission, physical therapy education

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DEDICATION

This dissertation is dedicated to my sweet Nana, Frances Wiehebrink, who was called to heaven towards the very end of my doctoral journey. She joined my loving Papa Clarence Wiehebrink, Grandma Rosie and Grandpa Luke Kendall, all of whom will forever inspire me.
ACKNOWLEDGEMENTS

This dissertation was completed with the encouragement and support from various individuals that played profound roles throughout the entire process.

First and foremost, I dedicate my deepest gratitude to my loving, gracious and selfless parents: Jim and Pam Wiehebrink. You have always instilled in me the importance of hard work and determination, which were fundamental during this experience. You give me courage and inspiration even in the most difficult times. Thank you for always believing in me - I am so grateful for your continuous pride and faith in my pursuits.

To my best friend Jack “Gus” Jacobs – you were my strength each time I felt I had none, and I hope you always will be. You have such an incredible and special ability to keep me motivated and focused, while most importantly laughing through it all. Thank you for always giving me confidence by loving me in a way that enables me to appreciate myself.

For my brothers Josh and Jamie Wiehebrink, I couldn’t have asked for better role models and supporters from the very beginning. To all other family and friends, thank you for being so understanding and thoughtful. And I would be remiss to not mention my sweet dog “Hooch”, who was always available to provide comfort and love when I needed it most.

To the institution that always believed me, thank you Bellarmine for giving me opportunities that have truly changed my life. I am so fortunate to be affiliated with such an incredible institution. For the Doctor of Physical Therapy department especially, I could not have completed this without your participation and support. My sincere appreciation also goes to each of my colleagues that continued to encourage me along the way.
Thank you to my committee, Drs. Mike Vetter, Mark Wiegand, and Grant Smith (my wise and talented chair). You each played a key role in making this process the perfect balance of both challenging and gratifying.

Finally, I owe all acknowledgment and gratitude to my glorious God. He has given me the courage and capabilities that were foundational for this accomplishment. His grace and guidance will always empower my efforts and achievements in His name.
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ABSTRACT

As the demand for physical therapists continues to grow, so too does the importance of student selection for their professional education programs. Doctor of Physical Therapy (DPT) programs have become competitive due to high application volume from increased projected job demand. Admissions committees responsible for identifying applicants must determine which application variables to consider and how to measure. They must also identify individuals that will be able to successfully perform both within the program and the profession. For this study, consideration of perspectives from positive psychology and emotional intelligence highlighted the concept of self-efficacy. Further, identification of its associated measurements of goals and motivation were suggested through various sources of theoretical support, primarily Social Cognitive Theory, Self-Determination Theory, and Goal-Setting Theory. These ideas were combined with the intent to address the problem associated with effectively identifying interview performance and admission yield. By connecting these key constructs, a four-dimensional self-efficacy framework adapted from a seminal study was further developed and applied to evaluate interview responses. Measurement of these responses were analyzed through logistic regression, with no statistically significant results. Nonetheless, valuable implications and conclusions surrounding the data were identified to guide practical recommendations in continuing to build upon this study.
CHAPTER 1

INTRODUCTION

Background

Physical Therapists are health care providers responsible for the promotion, restoration, and maintenance of physical function. According to the American Physical Therapy Association (APTA), "Physical therapists are professionals who help individuals maintain, restore, and improve movement, activity, and functioning, thereby enabling optimal performance and enhancing health, well-being, and quality of life" ("About Us", 2018). Practice as a physical therapist in the US requires acceptance into a CAPTE (Commission on Accreditation in Physical Therapy Education)-accredited professional, entry-level education program, through which a Doctor of Physical Therapy (DPT) degree is granted at completion ("Physical Therapist Education Overview", 2015). While the role and relevance of physical therapy in health care has continued to expand, the supply of qualified physical therapists has historically been insufficient in relation to market demands and continues still (Burgess, 2004). The growing role for physical therapists in both wellness and prevention has only augmented the future need for qualified therapists.

According to Andrews, Johansson, Chinworth, & Akroyd (2006), "Furthermore, the increasing number of elderly citizens and their disproportionate use of health care services indicate an increased demand for therapists in the next few decades, and, therefore, the potential for a shortage of physical therapists" (p. 14). Fortunately, due to the unique nature of the profession and continued projected job growth, interest in pursuing the DPT degree has continued to grow. While the number of applications annually has increased, the size of the
applicant pool still far exceeds the average number of available spaces in most DPT programs (Agho, Mosley, & Williams, 1999). The 2016-2017 CAPTE Aggregate Program Data Report confirmed that since 2014, the average number of applications to DPT programs in the US has been 475 annually; the average cohort size is only about 43 students. Further, the majority of applications that most DPT programs receive is typically considered a qualified applicant pool (meeting the respective minimum admission requirements), making the selection process even more difficult (Ruscingo, Zipp, & Olson, 2010). The report also predicted an increase in the needed number of graduates over the next three years, from 8,500 to 10,700, and a currently 99.2% job placement rate within six months of graduation.

**Admissions**

Given the role that physical therapists play in patient treatment and prevention, combined with the anticipated number of graduates needed to supply market demand, it is clear that student selection and acceptance into DPT programs is important for both quality control and patient protection. The student selection process is controlled by a program's admissions committee, who have the responsibility to admit students they believe possess the academic, professional, and personal criteria to complete all program and degree requirements successfully, pass the national licensure examination, and ultimately become competent practitioners that will contribute to the field (Agho et al., 1999). Because there is no specific admissions structure mandated, programs and their committees are given the freedom to create an approach that fits their individual institution, professional program and mission. Despite the ambiguity, most committees attempt to model the admissions processes of benchmark programs, which typically involves identifying and measuring a variety of factors from information made available during the application process (Agho et al., 1999).
To ensure that the most qualified applicants are admitted, there are two types of criteria that have traditionally been reviewed: academic and nonacademic variables. Academic criteria are evaluated primarily through examination of the GPA (grade point average) provided on the application, and nonacademic criteria evaluated through the interview (Ruscingo et al., 2010). The reliability of such factors in identifying potentially successful DPT students (and eventually DPTs), has been examined and debated (Schmalz, Rahr, & Allen, 1990). Across health care disciplines, the majority of programs have identified GPA as a primary academic factor to examine, and interview performance and a primary nonacademic factor to examine during the admissions process (Noonan, Lundy, Smith, & Livingston, 2012).

GPA

Historically, most health care education programs have placed more emphasis on academic attributes during the admissions process to identify applicants (Levine, 1986). The most frequently examined criteria used to predict an individual's potential pre-professional achievement is the GPA (Andrews et al., 2006). Despite some debate regarding the GPA as a precise indicator, the GPA nonetheless provides a defined value to examine an application and continues to be the primary factor used across discipline (Noonan et al., 2012). As a result, programs typically admit students that can provide evidence of the highest (Nuciforo, Litvinksky, & Rheault, 2014). The annual CAPTE Aggregate Program Data report revealed a 3.6 average GPA for admitted applicants of the most recent 2016-2017 DPT application cycle.

In addition to the cumulative GPA, which is the sum of all received course grades divided by the number of credits taken, most DPT programs also require a set of prerequisite courses that an applicant must complete. The prerequisite GPA then is the sum of all received prerequisite course grades divided by the number of prerequisite course credits taken. These typically include
core courses in the sciences, believed to be foundational to professional curriculum, and a separate GPA is calculated for that coursework (Elam, Seaver, Berres, & Brandt, 2000). In 2010, a study by Ruscingo, Zipp, and Olson looked at the relationship between both prerequisite GPA and cumulative GPA with the professional GPA in the program. They found that cumulative GPA was only related to the GPA during the first year of the program, while the prerequisite GPA suggested no correlation. Another study suggested that neither GPAs had a strong correlation with success in clinical performance, which is where the majority of learning and application during the program takes place (Dirschl, Campion, & Gilliam, 2006). A component of the application process that has been linked directly to successful clinical performance, however, is the interview score (Gleeson & Utsey, 2003).

**Interviews**

The utilization of interviews for admission into health care education programs serves four purposes: "information gathering, decision making, verification of information in the application and recruitment" (Rippentrop, Wong, & Altmaier, 2003). The implementation of interviews allows admissions committees to assess nonacademic variables that cannot be captured on an application form (Levine, Knecht, & Eisen, 1986). Hollman, Rindflesch, Youdas, Krause, Hellyer, & Kinlaw (2008) also found that interviews had a statistically significant correlation with performance on the National Physical Therapy Examination (p. 102). It has been suggested that measures such as standardized test scores and GPAs should only be used as preliminary measures until the interview can evaluate the noncognitive characteristics of an applicant (Albanese, Snow, Skochelak, Huggett, & Farrell, 2003). It is a challenge to measure personal qualities reliably and validly because committees must be able to evaluate an applicant strictly within the confines of the information disclosed during the admissions process, so
interviews allow for somewhat more authenticity compared to an application form (Patrick, Altmaier, Kuperman, & Ugolini, 2001).

Despite the value of interviews, however, their implementation within an application process remains an imperfect practice which makes it even more difficult for admissions committees to have a standardized process. There is significant variance between interview content, structure, format, and scoring (Gabbard, Porzio, Oxford, & Braun, 1997). In addition, while incorporating interviews in the admissions process is beneficial, coordinating them can be costly for an institution and as available resources in higher education diminish, consideration of a program's operating expenses is important. Annually, the average expense for programs to host interviews can range from $20,000-$30,000 annually (Seymour & Gramet, 1995). In addition, the time spent averages 261 hours per school (for both faculty and staff participation) (Gabard et al., 1997). Most programs must also interview more candidates than they actually admit, so they must be efficient with the time and resources spent on conducting them. Interviewing in surplus is oftentimes required due to an average turnover following admission offer acceptance.

**Problem**

**Micro-level**

At the micro-level, DPT admissions committees must ensure they are doing what they can to protect the progression of their own programs, particularly as more are being created to meet market demands. The CAPTE Aggregate Program Data report revealed that the number of developing and accredited programs in the US has grown from 238 to 257 since 2012, and that number is predicted to increase. As a result, the relationship between DPT programs has become more competitive. Many applicants are applying to multiple programs, so committees must
extend more admission offers due to applicant turnover. Identification of applicants that are the most invested and likely to yield becomes imperative for a program, which is a factor that may be more easily captured in person during an interview than through a checked box on an application form. As a result, resource consideration as it relates to strategized interview costs, and concern for enrollment yield following admission offer, comprise the first part of this complex problem.

**Macro-level**

At the macro-level, the identification and evaluation of factors to admit the most qualified students is a critical process that institutions must stay proactive about to protect the future of the profession. A gap in the literature on which nonacademic application criteria is related to a successful interview score, combined with an organizational lack of required application criteria, has laid the foundation for the following study. The current context suggests the need for identification of nonacademic factor(s) that can be measured during the interview and potentially be predictive of successful interview performance, admission acceptance into a DPT program, and success in the PT field. This would ideally result in effective selection of DPT students and ultimately clinicians to benefit the relative program and profession.

Finally, just as important as admitting the most ideal candidates is to ensure a program's return on their investment, which also includes retention and graduation (Noonan, 2012). Attrition in DPT programs can cause institutions to lose significant amounts of tuition revenue (Andrews et al., 2006). This can be even more detrimental for private colleges and universities, which is exactly half of the DPT programs landscape currently. College and universities are accustomed to focusing on the enrollment and retention during the first year, which is presumably the "most difficult" transition point (Kitsantas, Winsler, & Huie, 2008). Time
management, academic preparedness, and self-efficacy are designated as some of the most common challenges faced by students during the transition (D’Lima, Winsler, & Kitsants, 2014). According to a report released in 2015 by the Education Testing Service (ETS), “A number of contextual and intrapersonal factors have been associated with graduate student attrition: financial strains, a lack of social support, and feelings of inadequacy, to name a few” (Schramm-Possinger & Powers, 2015).

Historically, researchers have been impelled to examine the motivational profile of first-year undergraduate students to address such challenges being faced at the entry point of college to better recruit, retain, and graduate (Tuckman, 2003). However, as the ETS has outlined above, it is clear that graduate students are actually facing very similar (if not more complex) obstacles. Taking these obstacles into consideration and acknowledging the context of the problem, combined with the researcher’s experience working in both the DPT admissions context and higher education for the past 5 years, having multiple conversations surrounding admission criteria discrepancies, and anticipating the future of health care education prompted the exploration of a more modernized approach. Further, review of the literature on admissions processes across discipline and student profile initiated the consideration of a different set of variables for DPT admissions committees to measure during the interview process. Finally, application of a variety of conceptual and theoretical lenses was used to further understand the potential incorporation of measuring non-traditional, nonacademic variables in the interview process to measure through interview performance.

Conceptual Framework

Positive Psychology
When considering the intent of an interview, one purpose is to identify positive aspects that an individual may occupy. In doing so, the goal is not to directly focus on an individual’s weaknesses and deficits, but rather to highlight their strengths instead. This purpose directly aligns with the perspective of positive psychology, which is a lens that provides the modernized perspective of identifying positive traits, states, experiences and institutions that make life good with the underlying goal of a happy and flourishing life (Seligman, 2002). Further, the primary focus of positive psychology is on the concept of happiness, which is the sum of all positive emotions (Shikha, 2017). Emotions guide every human decision, behavior and thought, including significant functional processes such as career selection and even intelligence (Jiang, 2017; Robert & Cary, 2003).

**Emotional Intelligence**

Emotional intelligence is the developed skill that enables efficient assessment, generation and regulation of emotion for the purposes of adaptation, stress-management, response to difficult situations, and various other important functional capabilities (Mayer, Caruso, & Salovey, 1997). A highly developed emotional intelligence has been linked to various positive outcomes, such as better career exploration, greater career commitment, and greater professional resiliency (Di Fabio, Palazzeschi, & Bar-On, 2012). Most importantly, emotional intelligence has been regarded as a central predictor of career decision-making self-efficacy (CDMSE) (Taylor, Betz, & Luzzo 1993). Self-efficacy is the individual perception of capability (Sahin, 2017). When applied to career development, it is the individual perception of capability to successful perform career decision-making tasks, such as career exploration and professional goal setting, which is also referred to as career decision-making self-efficacy (CDMSE) (Jiang,
To best understand the idea of self-efficacy, it is important to consider the founding theoretical perspective that focused directly on self-efficacy: Social Cognitive Theory.

**Theoretical Framework**

**Social Cognitive Theory**

Social Cognitive Theory (SCT) conceptualizes human learning and performance as a culmination of reciprocal interactions personally, behaviorally, and environmentally (Cook & Artino, 2016). For example, when students enter a classroom, they bring a different set of beliefs, challenges, goals, and experiences that have also interacted differently to create their perspective (Simons, Dewitte, & Lens, 2004). SCT identifies self-regulation as the cyclical process that helps a student manage their goals (Cook & Artino, 2016). It also states that self-efficacy beliefs are considered primary drivers of motivation (Cook & Artino, 2016). Because of this, a student's self-efficacy and self-regulation are important to understand at the entry of a new academic environment (Kitsanas et al., 2008). Robbins, Lauver, Le, Davis, Langley, & Carlstrom conducted a meta-analysis of more than 100 empirical studies over 20 years and determined that self-efficacy was the strongest single predictor of students' achievement and performance in college (2004). General self-efficacy has also been linked to both goal orientation and development (Chen, Gully, & Eden, 2001).

**Goal Setting Theory**

This theory suggests that goals are a product of what an individual believes they can achieve, which is directly related to their self-efficacy (Locke & Latham, 1994). An individual's goal orientation is a culmination of their attitudes, beliefs, and goals that define their reason for pursuing achievement in a specific academic area (Ames, 1992). The orientation of goals establishes the basis of motivation to control its impact and direction (Locke, Shaw, Saari, &
Latham, 1981). When considering the distance of goals, both can act as a directive function, but distant goals can be more guiding in nature, while proximal goals have a more immediate impact on action (Rummel & Feinberg, 1988).

Goals have the ability to drive motivation through responses to self-regulation and self-evaluation as it relates to an individual's perceived potential to achieve goals (Bandura, 1988). Developed performance goals have actually been linked to better study strategies and overall GPA (Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000). However, Goal Theory suggests that students have multiple, complex, and even sometimes conflicting goals that can drive motivational patterns and learning styles (Simons et al., 2004). It also suggests that goals are determined by how an individual defines success and they perceive their own self-efficacy (Stavrou, Psychountaki, Georgiadis, Karteroliotis, & Zervas, 2015). Because of the interconnected relationship between goals and motivation, a difference in goals between individuals can also elicit different motivational patterns, both of which are reflected within an academic environment (Ames, 1992).

**Self-Determination Theory**

Self-Determination Theory (SDT) defines three main types of motivation: extrinsic (external), intrinsic (internal), and amotivation (lack of motivation) (Cook & Artino, 2016). Motivation is defined as the process through which activities that are goal-directed are both sustained and initiated (Cook & Artino, 2016). Academic motivation can be categorized by both intrinsic and extrinsic degrees, so for the purposes of this study, amotivation is not considered (D’lima et al., 2014). Intrinsic motivation is determined by how much an individual works towards a task for their own personal interest (Ryan & Deci, 2000). Extrinsic motivation is defined by the desire to achieve a task for external reasons, such as money or recognition (Ryan
The type of motivation that a college student possesses can actually dictate their academic successes within the classroom (D'lima et al., 2014). Following enrollment in a program, motivation can actually affect the effort given by a student in the classroom based on how they classify their career goals (Levine et al., 1986). Cook & Artino (2016) suggested that we "call for research that builds and extends motivation theory for education generally and health professions specifically" (p. 1012).

In other areas of research, motivation has been a factor evaluated by medical school interviews due to its predictive properties of academic achievement, combined with the educational rigors associated with the field of medicine. A study by Rippertrop, Wong, & Altmaier found motivation to be one of the most common characteristics identified in admitted students during medical school interviews (2003). Other studies have examined the prevalence of both motivation and self-confidence within the medical school interview in determining student selection (Powis, Neame, Bristow, & Murphy, 1988; Nowacek, Bailey, & Sturgill, 1996). Given the patient care parallel between the fields of medicine and physical therapy, this study seeks to examine motivation as a potential variable to assess in the DPT application process.

Motivation is considered to have an additive relationship with other motivation-related factors, so such factors can have effects on a single outcome (Harackiewicz et al., 2000). Since motivation is not unidimensional, it is important to consider the relationship between motivational profile and goal orientation (Ryan & Deci, 2000). If a difference in goals can result in a variance in motivational patterns, then further examination of the intersection of the two themes is necessary (Ames, 1992). Until recently, the majority of literature on motivational patterns in health profession education has only taken into consideration the effects of motivation.
from a singular motivational perspective without also considering the intersection of goal theory perspectives as well (Cook & Artino, 2016).

**Seminal Study**

A study by Simons, Dewitte, & Lens (2004) combined the two constructs of goals and motivations and applied them to the measure of academic performance in nursing students. By using SDT and two goal theories (Future Time Perspectives Theory and Goal Theory), they defined four dimensions of instrumentality used to classify an individual's motivational regulation and goal profile. Using a theoretical lens as a basis for the design of their framework, they suggested that an individual can be motivated through either internal or external regulation, and guided by either proximal or distal goal utility. This results in the following four classifications: proximal-internal, proximal-external, distal-internal, and distal-external (Simons et al., 2004). Using Simons et al. (2004) identified instrumentalities and associated descriptors, an example of each possible type of student relative to this study is provided in the table below:

| **P-E** | "I want to become a PT. I am studying hard because I have to." |
| **P-I** | "I want to become a PT. I am studying hard because it is good for my personal development." |
| **D-E** | "I am studying hard because I want to be a good PT to eventually have my own practice because it will make me financially stable." |
| **D-I** | "I want to become a PT, so I am studying hard to allow me to perform my job as best as possible in the future." |
Simons et al. (2004) found that an individual’s goal and motivational profile can have a different influence on learning strategies, study behaviors and academic achievement. Their study, however, was limited to the field of nursing and academic performance within one class. This specific study applied the same type of classification to measure individuals applying through a competitive DPT admissions process based preliminarily on the theoretical framework used to support the instrumentalities categorized in the study by Simons et al. (2004).

**Study**

The following study used the interview responses of over 300 candidates interviewed at a small, private institution in Louisville, Kentucky during the 2016-2017 application cycle. The interviews for this institution consisted of two parts: an individual on-demand written portion and a group verbal portion. To avoid possible response bias by answering after another applicant, only the written portion was used in this study. Also, since perceived GSE has been previously referred to as the guiding foundation for both goals and motivation, analysis was limited to the specific question asking why an applicant felt they were a good fit for both the program and the profession.

Responses from the interview question were coded according to Simon et al.’s (2004) instrumentality dimensions. Using a semantic differential scale created by the researcher, each respondent was given a coordinate with two values: one representing goal utility and one representing motivation regulation (X, Y). The values were then compared to the respondents' interview score, and then their admission status, to investigate the relationship between their instrumentality dimension and their interview score, and ultimately their admission status into the program.
Research Questions

By combining the context of this study with the researcher’s relative purpose, and applying a theoretical and conceptual lens to better understand the problem, the associated research questions were divided into two parts:

1. Which self-efficacy dimension was associated with best interview performance, as defined by highest interview scores?

2. Which self-efficacy dimension was associated with acceptance of an admission offer to a DPT program?

Hypotheses

Simon et al.’s study found that within their sample, students that fell within the D-I (distal-internal) dimension were the "most task oriented, most excited about the courses, persisted longest, studied most regularly and performed best" (p. 356). In addition, Goal Setting Theory and sub-theory Future Time Perspectives Theory suggest that high distal goal-setting is related to a high self-efficacy, so it was hypothesized that individuals categorized by high distal goal utility would perform better on the interview, resulting in an admission offer. Self-Determination Theory and its sub-theory Cognitive Evaluation Theory suggests that high intrinsic motivation would enable greater confidence and self-determination, so it was hypothesized that individuals categorized by high intrinsic motivation regulation would perform better on the interview, resulting in an admission offer. As a result, the first hypothesis is as follows:

1. Applicants whose responses are characterized by the High Distal-High Intrinsic dimension (3,1) are likely to have the highest interview scores.
Based on Goal-Setting Theory and the Goal Gradient Hypothesis, high proximal goal-setting is related to lower self-efficacy, so it was hypothesized that individuals categorized by high proximal goal utility would be more likely to yield because their confidence in the ability to be admitted into other programs is not as high. Self-Determination Theory and its sub-theory Cognitive Evaluation Theory support the expectation that individuals categorized by a high intrinsic motivation would still be the most likely to yield because their internal motivation to pursue this specific proximal goal would still be prevalent. As a result, the second hypothesis is as follows:

2. Applicants whose responses are characterized by the High Proximal-High Intrinsic dimension (1,1) are likely to accept an admission offer.

Assumptions

The first assumption associated with this study was that even though SDT defines amotivation (lack of motivation) as an actual motivation type, it was assumed that interview respondents were either intrinsically or extrinsically motivated so that type was not considered in a possible dimension. Second, it was assumed that the answer each respondent provided during their interview was honest and transparent, and thus the most accurate reflection of their predominant dimension. There were also two parts to the interview (an individual written portion and a group verbal discussion portion) and it was assumed that the written component would be more indicative of the appropriate dimension since it was based on individual performance, not relative to the group like that of the verbal portion. It was also assumed that the specific question analyzed within this study was actually representative of both goal utility and motivational regulation based its descriptive prompt, yet open-ended structure. Finally, it
was assumed that the dimensions of instrumentality are not situation-dependent, but rather central to an individual and their GSE based on the theoretical framework.

**Limitations**

The first limitation within this study was that it only measured interview responses from applicants at one institution, and one application cycle for that DPT program. Despite the limitation of location and time, the sample includes over 300 applicants so the researcher felt this was sufficient. The next limitation was that motivation is difficult to measure based on a written response (Cook & Artino, 2016). Use of theoretical context and perspective is used to improve the measurement.

Another limitation was that all responses were self-reported during the interview so there could have been positivity bias associated with the answers given. The researcher justified that there was less pressure given during the individual, written portion of the interview so this might not have been a significant problem. Finally, while the study relied on previously defined instrumentality dimensions, the researcher created a semantic differential scale to code and assign value to each response. The scale was reviewed by representatives of the PT program to assure validity. A sample of the interview items were coded by PT representatives to verify alignment with the researcher’s results and ensure reliability of the data.

**Summary**

DPT admissions committees have historically used GPA as a primary predictor of applicant selection during the admission process. As some previous research has suggested, the interview component of the process may be more indicative of which candidates will perform best clinically following completion of the program (Hollman et al., 2008). However, interviews...
are oftentimes more costly and time-consuming to conduct, so knowing what specific variables to assess during interview conduction was warranted. Very limited research in physical therapy prompted the exploration of other health care discipline admissions practices. Initial exploration of personal GSE profile, further measured through an individual’s goal utility and motivational regulation, were identified. Based on previous findings, a four-dimension instrumentality framework using those nonacademic constructs was applied in an effort to solve a two-pronged problem serving as the impetus for this study.

Not only must DPT programs identify the most ideal applicants as future practitioners for their professional field, they must also be able to determine which applicants will most likely yield to enroll in their program. The purpose of this study was to identify which dimension of instrumentality was most representative of applicants that scored highest during interviews, resulting in admission into a DPT program. It was also to identify which dimension was most representative of those high performing applicants who also accepted the admission offer given by a specific DPT program. This study analyzed the responses from applicants during one application cycle at a small, private institution and coded the responses using a theoretical lens. The next chapter elaborates on this theoretical lens and how it was applied to further understand and analyze the responses needed to address the research questions associated with this study.
CHAPTER 2

LITERATURE REVIEW

Introduction

This chapter will begin by addressing the current landscape of physical therapy admissions and education. It will continue by taking a comprehensive look across academic disciplines and the literature surrounding traditional admission approaches using academic factors. It will also further examine the literature surrounding some non-traditional variables based upon the profession and suggested competencies associated with successful PTs. Then, it will explore a variety of theories that are combined to create a framework supporting the incorporation of such variables. Finally, it will conclude with an explanation of a reproduced conceptual framework through which this study was designed.

Physical Therapy

The American Physical Therapy Association (APTA) is the professional organization representing the field of physical therapy, comprised of physical therapists, physical therapist assistants, and all students currently pursuing education and credentials in both. The APTA defines physical therapists (PTs) as “movement experts who treat people of all ages and abilities, helping them improve and maintain function and quality of life”. They create treatment plans based on a patient’s individual need in order to meet their specific physical goals (“About Us”, 2018). The Bureau of Labor Statistics states that PT employment is expected to grow 28% between 2016-2026, which is deemed faster than the average for all occupations. Their employment projection is supported by the theory that baby boomers who are aging are living longer and staying more active later in life, but as a result are more at risk of health-related issues.
that can be treated by PTs, such as strokes or diabetes (“Occupational Outlook Handbook”, 2018). This discrepancy has continued to deepen for decades as the number of elderly citizens and disproportionate healthcare services increases (Andrews et al., 2006).

**Education**

PTs are able to effectively perform their job through the combination of research, clinical experience, and professional education (“About Physical Therapists”, 2018). According to the APTA, “PT professional education refers to the didactic and clinical education that prepares graduates for entry into the practice of physical therapy”. In order to practice as a PT in the United States, a Doctor of Physical Therapy (DPT) degree must be earned from a Commission on Accreditation in Physical Therapy Education (CAPTE)- accredited physical therapist education program, and then successful passing of the NPTE (National Physical Therapy Examination) licensure exam (“Physical Therapist Education Overview”, 2015). As of December 2017, CAPTE reported 242 DPT programs (*CAPTE bears no responsibility for interpretations presented or conclusions reached based on analysis of the data) (“Aggregate Program Data”, 2018).

**Applications**

The CAPTE 2016-2017 Aggregate Program Data Fact Sheet reported an average total application pool of 489 per program since 2014. Of those that applied, 325 were considered qualified according to the program’s individual minimum admission requirements, such as grade point average, interview performance (if applicable), etc. Since 2014, the average number of DPT applicants that were enrolled, however, was 43 with an average anticipated cohort size of 45. An average application cumulative GPA of 3.53 was reported for these enrolled applicants, with a 3:1 female to male enrollment ratio. This data reveals that the volume of qualified
applicants to DPT programs is significantly greater than the available space within professional programs.

By combining these statistics with the historical context of PT education, it is clear that applying to a DPT program is considered competitive selection process. Considering this and the important role that PTs play in health care, it would be assumed that DPT programs have standardized guidelines that all must adhere to when selecting an admitted cohort from such a large number of applications. Surprisingly, DPT programs are not required to any incorporate specific requirements. While most programs will use factors such as GPA, GRE score, volunteer experience, references, and interviews, each program can vary in reference to what they choose to measure and how they choose to weigh it during their respective admissions process (“Physical Therapist Admissions Process”, 2016). By examining the literature on which variables DPT programs should be looking for specifically in candidates, some conflicting suggestions and significant gaps were found.

The number of applicants to DPT programs has historically always exceeded available space (Agho et al., 1999). The application pool has continued to far exceed the number of open positions in most DPT programs, yet the supply of qualified PTs has remained inadequate when considering the growth of market demand (Burgess et al., 2004). The APTA provides an application service known as the Physical Therapy Centralized Application Service (PTCAS), which is a platform through which prospective students can apply to various DPT programs using one single application (“Welcome to PTCAS”, 2018). Each year they release a report that provides an overview of the previous admissions cycle related to the most recent entering class. For the purposes of having relative context for the data utilized in this study, only the Applicant Data Report for the 2016-2017 cycle will be examined.
According to CAPTE report (released in December, 2017), the following application information was disclosed with various total numbers for seats available in the next entering class for PTCAS programs during the 16-17 cycle (*uses of this data acknowledge that APTA bears no responsibility for interpretations presented or conclusions reached based on analysis of the data):

<table>
<thead>
<tr>
<th>Admissions Cycle 2016-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Programs in PTCAS</td>
</tr>
<tr>
<td>Total # of PTCAS Applications</td>
</tr>
<tr>
<td>Total # of PTCAS Applicants</td>
</tr>
<tr>
<td>Mean # of PTCAS Applicants Per Program</td>
</tr>
<tr>
<td>Total # of Accepted Applicants in PTCAS</td>
</tr>
<tr>
<td>TOTAL # of Seats Available in Next Entering Class for Programs in PTCAS</td>
</tr>
<tr>
<td>MEAN # of Seats Available in Next Entering Class for Programs in PTCAS</td>
</tr>
<tr>
<td>MEDIAN # of Seats Available in Next Entering Class for Programs in PTCAS</td>
</tr>
<tr>
<td>MEAN # of PTCAS Applications Per Seat Available in Next Entering Class</td>
</tr>
</tbody>
</table>

*The mean number of applications per seat was calculated by dividing the total number of verified PTCAS applications by the total number of seats available in the next entering class for programs in PTCAS, as reported by programs in the 2016-2017 PTCAS Directory. The anticipated number of seats available in the 2016-2017 PTCAS Directory may differ from the actual number of seats filled.

**Figure 1.** Available seats for PTCAS programs. Adapted from Commission on Accreditation in Physical Therapy Education. (2017). Retrieved from [http://www.capteonline.org/AggregateProgramData/](http://www.capteonline.org/AggregateProgramData/).

In sum, a high volume of people apply to become PTs, but only a small percentage are actually admitted and matriculate through DPT programs. While the number of programs nationally is steadily increasing, there is still a limit on classroom and clinical capacity, faculty representation, and resources to educate students without losing quality. Further, programs must also remain selective about their candidates given the rigor of the health care curriculum and the high expectations of a PT. Programs cannot admit every applicant to accommodate a high application pool or growing societal demand, but must rather be intentional about the selection of applicants that will eventually make the best practitioners.
Physical Therapy Admissions

A departmental or program admissions committee is responsible for developing a comprehensive interview process that will best identify potential students for both their individual program and the profession. This can be based on the historical context of the program and institution, supporting research and findings, relative benchmark comparisons, and examination of current internal circumstances (Ruscingo et al., 2010). Particularly for health care programs, there is an even greater pressure related to patient protection that must be taken into consideration, so their admissions approach be even more strategic and relative (Schamlz et al., 1990). Ultimately, these programs share the same goal: to graduate responsible leaders and advocates into the profession and produce successful clinicians that will aid in the production of positive outcomes for patients in their specific fields (Ruscingo et al., 2006). In addition, given the complex nature of the PT profession, admissions committees must be intentional in identifying applicants that will be effective practitioners.

According to Jensen, Gwyer, Shepard, & Hack (2000), “The practice of physical therapy has become increasingly complex. Rapid changes in the health care system are placing increased pressure on physical therapists for effective and efficient management of patients amidst high patient turnover” (p. 29). Being able to identify and understand what enables PTs to practice best can help to guide educational programs in facilitating the necessary skills and professional development to create future practitioners (Jensen et al., 2000). Current practice as a PT is associated with greater responsibilities, risks, accountability, autonomy, and most importantly the need for developed and effective clinical reasoning (Venskus & Craig, 2017). In addition, a combination of heavy caseloads, long hours, controlled work environments and transitional
organizational structures have been directly linked to increased burnout in healthcare professionals (Irving, Dobkin, & Park, 2009).

**Admission Criteria**

Unfortunately, there is no question on a graduate application form that will (or can) ask if you will be able to successfully manage the stresses of the profession after you complete the program, so programs are tasked with finding reliable ways to capture such compound information. Despite an inconsistency in required admission criteria for student selection, physical therapy and other health care disciplines tend to consider the same standard variables as admission predictors. However, the value placed on each variable and the combination of which to use varies. According to Seymour & Gramet (1995), “The process of selecting and giving various weights to criteria is difficult and often done arbitrarily” (p. 26). A comparison by Elam, Seaver, Berres, & Brandt (2000) outlined the requirements and admission processes across five healthcare professions: medicine, dentistry, pharmacy, physical therapy, and physician assistant. They concluded that most programs require prerequisite coursework, standardized tests, and interviews, but concluded by encouraging applicants to reach out to individual programs since processes can vary so drastically (Elam et al., 2000).

Currently, the most commonly utilized factors that admissions committees identify and attempt to quantify throughout the application process include both academic and nonacademic components (Agho et al., 1999). Academic criteria typically includes GPA (cumulative and prerequisite) and GRE (Graduate Record Examination) scores, while nonacademic criteria incorporates interview scores, letters of reference, volunteer hours, and personal essays (Ruscingo et al., 2010). While not required, CAPTE-accredited DPT programs report using individual variations of the following: GPA, GRE score, volunteer experience, references, and
interviews (“Physical Therapists Admissions Process”, 2016). For the purposes of this study and the institutional context of the program being used, the academic variable of GPA and the nonacademic variable of interview performance are further explored.

**Academic Variables.** Most health care education programs have historically looked at easily defined and identifiable academic criteria when reviewing applications (Levine et al., 1986). The criteria primarily used to predict academic aptitude is the GPA (Andrews et al., 2006). According to the APTA and the CAPTE database of accredited programs, most DPT programs have a minimum GPA requirement, but it can vary between program (“Physical Therapists Admissions Process”, 2016). The 2016-2017 CAPTE Aggregate Data Report does confirm an average of a 3.6 GPA for applicants admitted during this specific cycle. The undergraduate GPA remains the most commonly used factor in student selection for PT programs, despite a lack of agreement on its predictability of graduate success (Noonan et al., 2012).

**GPA.** A study by Ruscingo, Zipp, & Olson (2010) examined 63 DPT students from three consecutive classes at Seton Hall University from 2002-2004 to determine if there was a relationship between the GPA in the first year of the program curriculum, and the academic variables of cumulative GPA, prerequisite GPA, and degree status. The nonacademic variables of age and gender were also included. A Spearman correlation was used to determine one statistically significant relationship between the independent variable cumulative GPA and independent variable first-year program GPA, with no significant relationship between prerequisite GPA and professional GPA (Ruscingo et al., 2010). A significant limitation of this study was that sample size was small considering the average number of DPT students across the
three cohorts, and the study was also limited to one dependent variable (first-year program performance) and its relationship with few admission variables.

Another study by Andrews, Johansson, Chinworth, & Akroyd (2006) looked at 198 students that matriculated through a DPT program to determine if attrition could be predicted by academic (GPA and GRE, undergraduate institutional quality as defined by average reported SAT scores), or nonacademic (age, race, and gender) variables. Using a logistic regression, undergraduate cumulative GPA was able to predict attrition, but only when combined with undergraduate institutional quality (with a reported p-value of .04.). Therefore, the cumulative GPA was not considered to be a significant predictor until the profile of the student’s previous institution was considered (Andrews et al., 2006). A gap in this study was that it only looked at the relationship between academic and nonacademic variables with program attrition, not likelihood of program admission. It also did not include interview performance as a nonacademic variable.

Nonacademic Variables. Nonacademic variables are those not directly related to an individual’s academic performance, including demographic variables and other personal attributes (Noonan et al., 2012). A primary nonacademic measurement associated with a DPT program admissions approach is interview performance, as defined by an interview score (Seymour & Gramet, 1995). While not required by all DPT programs, many implement this portion of the application process as a way to further measure the most qualified and/or competitive applicants. These can vary drastically in format, such as representatives that an applicant must meet with (faculty, staff, etc.), interview questions, communication (verbal vs. written), scoring, and much more (“Physical Therapists Admissions Process”, 2016). Because of the significant variation of implementation between programs, however, it is difficult to
determine which specific components of the interview are actually predicting academic and clinical success. Further, when screening applicants and admitting them, deciding which characteristics are most compelling can be both subjective and ambiguous, and knowing how to measure such characteristics becomes an even greater challenge (Albanese et al., 2003).

**Interviews.** Despite having some distinct differences in structure, interviews are considered to be valuable in the application process because they provide a platform for admissions committees to capture nonacademic information that could not gained otherwise (Ruscingo et al, 2010). According to Rippentrop, Wong, & Altmaier (2003), they serve four primary purposes: “information gathering, decision making, verification of information on the application, and recruitment” (p. 1). They also allow for the assessment of important personal qualities such as empathy and motivation (Schamlz et al., 1990). When considering other health care disciplines, interview predictability is also supported. A study by Patrick, Altmaier, Kuperman, & Ugolini (2001) looked at medical programs that used structured interviews for their admissions process. With a sample size of 490 applicants, they found that higher interview scores predicted a greater likelihood of being admitted into the medical program even though various other factors were given value and taken into consideration (Patrick et al., 2001).

Appropriate interview formats have been linked to identifying candidates that will be successful both during and after the program, compared to academic variables that are considered to be most predictive of success only during the program (Li, Wilbarger, & St. Louis, 2017). A study by Hollman, Rindflesch, Youdas, Krause, Hellyer, & Kinlaw (2008) looked at 89 DPT students to determine if there was a relationship between admission criteria (including academic variables of GPA and GRE score) and the nonacademic factor of interview scores with first-time NPTE licensure score. Interviews were found to be more statistically significant
predictors of NPTE performance than GPA when combined with GRE scores (Hollman et al., 2008).

While there is strong support of and assumptions associated with the benefits of interview scores as admissions variables, findings that confirm the appropriate utilization of interviews specifically in DPT admissions is still limited. Interviews can be considered subjective in nature, and many programs only have enough time and resources to allow for one institutional representative to interview one individual applicant (Schmalz et al., 1990). It is also difficult to determine what specific information is being captured appropriately and measured accurately (Rippentrop et al., 2003). As such, there remains a significant gap in the exploration of interviews and associated measures within the application process.

**Problem**

Student selection for health education programs can be strenuous given the programs’ responsibility to produce graduates with the appropriate cognitive, affective, and psychomotor traits to practice effectively (Dietrich & Crowley, 1982). An admissions committee is limited to the information disclosed on the application and during the interview, with little guarantee of what could be exaggerated or falsified, and what additional information about the applicant might be missing (Albanese et al., 2003). The individuals responsible for student evaluation and selection for these programs must also be able to assess personal attributes in collective ways (Dietrich & Crowley, 1982). Each program must shape their individual application processes and student preferences to ultimately determine the admitted student profile and eventually practitioner profile.

These responsibilities combined with a lack of required admission variables, conflicting and limited research, and projected growth for both DPT programs and the PT profession, has
justified the need for additional exploration. According to Ruscingo et al. (2006), “It is imperative that academic admissions committees utilize the most appropriate criteria to select the applicants with the greatest potential to succeed in these professional-level doctoral education programs and ultimately as autonomous practitioners” (p. 142). An important question still remains: what is the most appropriate criteria in applicant selection? Li, Wilbarger, & St. Louis (2017) suggested, “Further longitudinal evaluation may demonstrate the potential of the behavioral interview as a pre-admission tool identifying students who may be successful both in academic and fieldwork performance” (p.1). By expanding the traditional lens of DPT admissions, this study sought to explore outside of the standard admissions variables to examine performance from a new perspective.

**Conceptual Framework**

**Self-Efficacy**

Self-efficacy is identified as an individual’s conviction about their ability perform and capabilities to execute accordingly (Bandura, 1977). It essentially influences how an individual perceives their skills and ultimately how they use them as a result (Rathi & Rastogi, 2008). Self-efficacy is considered the individual perception of capability (Sahin, 2017). The initial identification of general self-efficacy was first identified by Albert Bandra (Taylor et al., 1993). Bandura’s idea of self-efficacy is best understood from the perspective of Social Cognitive Theory, which will be discussed later in this chapter. Since its initial identification, basic mental states like self-efficacy have become a primary focus of relatively newer field of psychology: positive psychology.
Positive Psychology

Following World War II, the field of psychology the treatment, repair and prevention of losses or weaknesses (Seligman, 2002). It wasn’t until the late 1990s that Martin Seligman, American Psychological Association president, brought to the forefront the idea of studying the opposite: positive states, traits, experiences and institutions that make life good (Watkins, 2016). At the group level it focuses on institutional virtues that make people better, while at the individual level, it focuses on positive personal traits that people possess and how to continue developing those (Seligman, 2002). It includes the interrelated concepts of well-being, dispositional optimism, and self-efficacy (Yulan & Luo, 2018). Optimism (the expectation of a good outcome) is believed to predict the subjective well-being (the positive state through which needs are met), which is directly influenced by the individual self-belief system: self-efficacy (Yulan & Luo, 2018). According to Seligman (2002), “And in this quest for what is best, positive psychology does not rely on wishful thinking, self-deception, or hand-waving; instead, it tries to adapt what is best…” (p. 4). In essence, positive psychology is not the fabrication or exaggeration of false positive traits, but rather the identification of preexisting positive traits to produce happiness for a flourishing, satisfying and meaningful life (Watkins, 2016).

Emotional Intelligence

Historically, the field of psychology has been fixed on what makes an individual unhappy, but the perspective of positive psychology emphasizes what leads to individual happiness and growing interest in the idea has led to a variety of studies on associated predictors and correlates (Shikha, 2017). Essentially, happiness is considered to be the sum of positive emotions, which is at the core of each individual and their related actions, decisions, thoughts, and experiences (Shikha, 2017). In the early 1990s, psychologists John Mayer and Peter Salovey
presented the idea of emotional intelligence as a classifying concept that explores how emotions play a significant role in cognitive processing by examining the three divisions of the mind: cognition (thought), affect (emotion), and motivation (Mayer, Caruso, & Salovey, 1997). Emotions comprise the second sphere of mental functioning, so they are believed to play an important supportive role (Mayer et al., 1997).

Based on this cognitive structure, the concept of emotional intelligence presents the perspective that positive emotions enable an individual not to think smarter, but to think more intelligently (Mayer et al., 1997). Emotional intelligence is the developed ability to generate, assess and regulate one’s own emotions and even that of others (Mayer, Caruso, & Salovey, 1997). Various studies have confirmed that a high emotional intelligence is directly related to success, happiness and satisfaction both personally and professionally (Shikha, 2017). For example, positive emotions for college students have been linked to the absence of psychopathology, enhanced subjective experiences, and positive individual qualities and virtues (Seligman & Peterson, 2003). A high emotional intelligence has also been linked to various positive qualities, such as better overall health, abilities to handle challenges, responses to difficult experiences, stress management, coping skills, and adaptive responses (Shikha, 2017).

Emotional intelligence conceptualizes emotions as central to an individual’s needs, decisions, goals, purposes, and choices. Because of this, it has become a widely accepted view in a one of the most defining life choices that an individual will make: career selection. Emotional intelligence has become an identified catalyst in the career-decision making process since emotions dictate thoughts and actions, particularly as it relates to career-related planning and actions (Jiang, 2017). Individuals with a stronger EI are considered to better able align their
personal interests with professional values to better identify best fit career options (Robert & Cary, 2003).

A higher emotional intelligence has also been linked to better career exploration, career commitment, and less career indecisiveness (Di Fabio, Palazzeschi, & Bar-On, 2012). Emotional intelligence has been regarded as a central predictor of career decision-making self-efficacy (CDMSE) (Taylor, Betz, & Luzzo 1993). CDMSE refers to an individual perception of capability to successful perform career decision-making tasks, such as career exploration, goal setting, future planning, and ultimately successful career selection (Jiang, 2017). Finally, emotional intelligence is considered to be an important factor that contributes to the formation of self-efficacy beliefs (Rathi & Rastogi, 2008). Control of emotions can develop stronger efficacious beliefs involved in the self-efficacy development process (Bandura, 1977). This process can best be understood from the theoretical perspective of Social Cognitive Theory.

**Theoretical Framework**

**Social Cognitive Theory**

In the 1970s, behaviorist Albert Bandura felt as though the preexisting learning theories were missing an important element, which he identified as “self-belief” (Pajares, 2002). As a result, Social Cognitive Theory (SCT) (formerly known as social learning theory) was born. Bandura changed “learning” to “cognitive” to elaborate the proactive role that cognition plays in his theory (Pajares, 2002). SCT explains human functioning as a self-reflective and self-regulatory process that takes place through a reciprocal interaction of personal, behavioral, and environmental factors, known as reciprocal determinism (Bandura, 1988). These subsystems are
causal in nature because their relationship contains interaction with and influence on each other (Schraw, Crippen, & Hartley, 2006).

SCT also describes the process through which an individual self-regulates to develop their individual strength of conviction in their competence relative to specific actions or behaviors (Rosenstock, Strecher, & Becker, 1988). Self-regulation incorporates the mechanism of self-efficacy, which is central to guiding an individual thoughts, behaviors, motivations, goals and efforts (Bandura & Simon, 1977). As Pajares (2002) explains it, this theory explains “how people interpret the results of their own behavior informs and alters their environments and the personal factors they possess which, in turn, inform and alter subsequent behavior” (p. 1). Finally, SCT perceives human behavior as a function of the subjective value placed on an outcome and the subjective probability that a perceived action will contribute to the achievement of that outcome (Rosentock et al., 1988).

By applying SCT within the context of education, self-regulation can refer to an individual’s ability to both understand and control their learning environment, and they do so through goal-setting and motivation (Schraw et al., 2006). By applying it to the professional context, it refers to the belief that an individual has in their professional role to carry out a specific task, which is also aided by the process of self-regulation and a perceived sense of self-efficacy (Rosenstock, et al., 1988). SCT also suggests that individual differences can affect personal reciprocal deterministic interactions (Bandura, 1988). The three primary aspects of this theory associated with regulatory patterns that can vary between individuals include competency development, strength of personal beliefs and self-efficacy and level of self-motivation through the creation of goal systems (Bandura, 1988).
At the core of SCT are self-efficacy beliefs, which is simply an individual’s personal judgment of their own capabilities that provides the foundation for motivation and accomplishment (Pajares, 2002). In other words, it is a measurement that can be used to describe how much an individual believes in themselves, and it is controlled by a person’s perception of their individual ability to perform (Bandura & Simon, 1977). While human functioning is of course influenced by factors such as knowledge and skills (as addressed in SCT), such strengths cannot be utilized to the same extent without sufficient development of self-efficacy (Pajares, 2002). In fact, SCT suggests that people who have comparable skills and knowledge will actually perform differently based on variance between their individual levels of self-efficacy (Bandura & Simon, 1997).

**General Self-Efficacy.** As the concept of self-efficacy has evolved, it has been divided into two dimensions: general self-efficacy (GSE) and specific self-efficacy (SSE). It has been suggested that SSE is more of a situational state, while GSE acts as a constant trait. Both are motivational in foundation and recognize an individual’s beliefs about their personal capabilities, but GSE is more resistant to transient influences and is believed to emerge over time as a result of successes and failures (Chen et al., 2001). While both are considered to be valuable constructs, GSE in particular captures differences amongst individuals, is known to influence SSE, and is positively related to motivational traits and goal orientation (Chen et al., 2001). Because of these factors, this study focused specifically on GSE when referring to self-efficacy since it is seen as foundational of the two self-efficacy constructs.

GSE is considered to permeate most environments that a person will exist within and move throughout, professionally, educationally, and personally. For example, from a healthcare perspective, One of the central qualities associated with effective clinical reasoning is self-
efficacy because it determines an individual’s thoughts, decisions, behaviors, and efforts (Venskus & Craig, 2017). As stated by Venskus & Craig (2017):

Competency in clinical reasoning is dependent on more than knowledge of practice and skill development. The capacity of an individual to initiate and regulate a clinical decision is dependent on that person’s beliefs or perception of how well he or she can execute courses of action required to deal with prospective situations—that is, personal efficacy (p. 14).

GSE has also repeatedly been linked to higher levels of academic achievement (Meissel & Rubie-Davies, 2016; Dixson, Worrell, Olszewski-Kubilius, & Subotnik, 2016; Robbins et al., 2004). Students enter a classroom with different beliefs, challenges, goals, and experiences (Simons et al., 2004). GSE is the motivational belief that can help guide academic pursuits and learning strategies within an educational context despite such individual differences (Pajares, 2002). The identification of a student’s GSE at the initial entry of a new academic environment has been considered a predictive factor of performance (Kitsantas et al., 2008). Robbins, Lauver, Le, Davis, Langley, & Carlstrom (2004) performed a meta-analysis of 109 studies and examined various constructs as predictors of GPA and retention. Of the nine that were studied, the strongest predictor of GPA was GSE (Robbins et al., 2004).

A developed GSE is also considered predictive of a student’s effort and persistence within the classroom (Schunk, 1991). It is considered a critical component in learning, motivation, and goal-setting, especially as it relates to academic performance (Dull et al., 2015). According to Dull, Schleifer, & McMillan (2015), "Self-efficacy describes students’ beliefs in their ability to accomplish something, and therefore helps to explain students’ achievement motivation and the goals they set for themselves” (p. 155). An individual’s GSE and personal efficacious beliefs are considered influencers of goal management, development, and achievement (Cook & Artino, 2016). Goals can also directly influence GSE because goals act an
internal status of external behavior, becoming a referential standard for an individual (Yu & Luo, 2018).

**Goal-Setting Theory**

In 1990, Locke & Latham introduced phase II of Latham’s goal-setting hypotheses and incorporated Bandura’s concept of self-efficacy to create the goal-setting theory, which suggests that goal choice is a function of what an individual thinks they can achieve (Locke & Latham, 1994). Goals act as a directive function through which an individual’s activities, choices, and behaviors are guided (Bandura & Simon, 1977). From this theory’s perspective, goals drive performance in four distinct ways as they affect: 1. attention towards goal-related activities and away from goal-irrelevant activities. 2. efforts towards goal-relevant activities by acting as an energizing function. 3. persistence in goal-relevant activities. 4. Action indirectly through pursuit of goal-related strategies (Locke & Latham, 2002). Goal setting theory also assumes that the ability level of an individual is sufficient in goal achievement and no situation restraints are present (Locke & Latham, 1994). This theory also recognizes the significant variance that can exist between each goal.

**Goal Utility**

**Specificity.** Since there are individual differences in the conceptualization of success, there are also differences in the establishment and specificity of goals. People can set either specific and nonspecific goals, which are neither better nor worse comparatively (Wallace & Etkin, 2018). According to Seijts & Latham (2001), “More than 500 studies have shown that setting a specific, difficult goal leads to higher performance than a general intention to do one’s best” (p. 291). The extent to which an individual perceives the instrumentality or utility of a specific outcome will determine how the individual designs the process related to the attainment
of that goal (Bembenutty, 2011). Having a specific goal allows for the implementation of reference points, so there’s an impact of each next step towards goal completion (Koo & Fishbach, 2012). Specific goals also have an end state, whereas nonspecific goals are more ambiguous in the type of performance needed achieve (Wallace & Etkin, 2018). For example, a goal to lose 10 pounds is a specific goal, while a goal to lose weight is a nonspecific goal. Having an established end state allows for a point of reference to direct motivation as a distance function towards the goal (Wallace & Etkin, 2018).

**Proximity.** The subjective distance from the goal that an individual perceives, the perceived current state in relation to the goal’s end state, and associated goals that may be required throughout, are referred to as goal proximity (Bandura & Simon, 1977). An individual’s perceived impact of behaviors relative to the goal is what drives the motivation to perform, so how they monitor their progression towards goal completion is what has the greatest impact on their motivation (Koo & Fishbach, 2012). Healthy self-regulated behavior is characterized by an innate desire to minimize the discrepancy between an individual’s current state and the goals they have set (Manderlink & Harackiewic, 1984). Because of this, the distance between a goal and where an individual perceives their current reference point in relation to it are indicative criteria in self-determination. Goal establishment requires the identification of goal proximity to estimate the associated resources necessary for attainment (Koo & Fishbach, 2012). Goal proximity is the most critical component of self-regulated behavior and intention (Bandura & Simon, 1977).

The two types of goals categorized by distance are proximal (preliminary steps towards a goal) and distal (the ultimate goal) (Simons et al., 2004). A distal goal is long-term/end-goal, while proximal goals are short-term/sub-goals that essentially break down the distal goal into
smaller, more manageable goals (Seijts & Latham, 2001). Even though the two goals are intended to be supplemental, an individual can set a distal goal without having any proximal goals, and proximal goals can be established without a defined distal goal (Seijts & Latham, 2001). Goal proximity is also considered to be the primary determinant of activity choice and willingness to work (Bandura & Simon, 1977). Sub-theories provide additional understanding of these two types of goals as defined by their distances acknowledges the differences and important of each in goal development and attainment.

**Goal Gradient Hypothesis.** The goal gradient hypothesis was originally developed in 1932 by Clark Hall, who was a behaviorist that suggested the closer in proximity an individual is to their goal, the faster they will work towards the goal and the more likely they are to complete it (Kivetz, Urmsky, & Zheng, 2006). The goal gradient effect refers to the accumulation of progress towards a goal, which is theorized to make an individual more motivated to achieve it (Wallace & Etkin, 2018). The goal gradient hypothesis suggests that people are more motivated to take action towards proximal goals because it allows for faster, identifiable progress and achievement (Koo & Fishbach, 2012).

Proximal goals are theorized to provide more immediate incentives and instant gratification, which is oftentimes more enticing for individuals due to human nature (Bandura & Schunk, 1981). Proximal goals can also increase self-efficacy as a result because there are more frequent opportunities for achievement (Bandura & Schunk, 1981). Establishment of a proximal goal is also suggested to increase the level of effort an individual is willing to give because they create the illusion that less work is required for achievement (Seijts & Latham, 2001). In sum, it is believed that an inverse relationship exists between the distance from completing a goal and
that motivation needed for goal attainment (Koo & Fishbach, 2012). Therefore, the goal gradient hypothesis supports the effectiveness of setting proximal goals in relation to distal goals.

**Future Time Perspectives Theory.** Future time perspectives (FTP) refers how an individual perceives time, as opposed to actual physical time (Bembenutty, 2010). According the FTP theory, goals are established by people based on what they wish to accomplish within a specific timeframe (Bembenutty, 2011). This theory suggests the importance of distal goals because the perception of a long-term task is believed to enhance motivation associated with an activity more when the goal has future implications (Simons et al. 2004). Placing a future-orientated perspective on a goal is predicted to increase the perceived utility value of activities and behaviors, which is described as the importance placed on an activity or effort due to its relation to ultimate goals (Simons et al., 2004). Therefore, establishment of distal goals are expected to increase the utility value of the process leading up to the ultimate goal, so individuals are believed to work harder and persist longer (Bembenutty, 2011).

The determination to perform and expend effort on an activity is referred to as intention, which is reliant on a future-oriented marker or goal (Bandura & Simon, 1977). Future goals are seen are being more representative of an individual’s primary aspirations because they are believed to capture ultimate desires, as opposed to immediate wants (Kivetz et al., 2006). However, they can also typically require more resources and be associated with more fallout once an individual realizes what is required of the distal goal’s pursuit (Koo & Fishbach, 2012). Because of this, people must have defined standards to measure performance as a means to judge their process towards (and likelihood of) goal achievement (Bandura & Schunk, 1981). The APTA even outlines a suggests goal-setting as a competency for DPT graduates and new professionals (“Competencies of the Transition DPT Graduate”, 2017).
**Goals and Motivation.** Goal-directed activities can differ in their point of origin: autonomous (self-determined) or controlled (non-self-determined) (Deci & Ryan, 2002). The origination and perception of an individual’s goal is directly related to the type of motivation expended to support the actions and behaviors necessary for the goal attainment process to take place (Ryan & Deci, 2002). Wallace & Etkin (2018) claim that, “The relationship between goal progress and motivation is one of the most robust and well-known findings in the goal pursuit literature” (p. 1033). Differences in individual perceptions of goals and goal attainment processes can elicit and direct different motivational patterns between people (Bandura & Simon, 1997). Goals are perceived to have the capacity to direct an individual’s motivational profile based on responses to self-regulation, particularly as it relates to a developed sense of self-efficacy (Bandura, 1988). Personal definitions of success will also determine individual goal pursuits, particularly if the self-efficacy capacity does not support the perception of success (Stavrou et al., 2015). Establishing the link between motivation, goals, efficacy and the respective environment is important in conceptualizing the entire process associated with individual goal development and attainment (Ames, 1992).

**Self-Determination Theory**

Researchers Richard M. Ryan and Edward L. Deci sought to identify a lens through which to better understand the interrelationship of motivation and self-regulation, well-being, and development (Ryan & Deci, 2000). As a result, they developed Self-Determination theory, which they deemed the “…investigation of people’s inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration” (Ryan & Deci, 2000, p. 68). SDT also suggests that motivational patterns can vary in type, degree, orientation, magnitude and quantity (Cook & Artino, 2016). This view stems from the idea
similar to SCT that goals are self-regulated and varied in their utility and direction (Simons et al., 2004). SDT also perceives goals as having differences in proximity, value, impact, and strength, which it suggests is directly interconnected with the type of motivation needed to support and pursue them (Locke et al., 1981).

From this perspective, motivation is the process through which goals or related activities are initiated and sustained (Cook & Artino, 2016). Its basic understanding describes it as the force that moves people to act (Ryan & Deci, 2000). It is also defined by an influential force or stimuli that is causing either a push or pull towards something (Van Nuland, Dusseldorp, Martens, & Boekaerts, 2010). In general, the study of motivation has been a central contributor to the field of psychology given its contextual framework for understanding human behavior (Toure-Tillery & Fishbach, 2014). More importantly, however, it has also become increasingly popular in examining from an organizational and leadership perspective given its ability to move people to act and produce (Ryan & Deci, 2000).

The acknowledgment of motivation has even begun to permeate a variety of fields, such as healthcare, education, religion, and sports (Ryan & Deci, 2000). Within the context of healthcare specifically, a certain level of motivation must be maintained to effectively meet the increased demands of more efficient and effective healthcare services (Karanovi & Stosic, 2016). The predictive powers of motivation combined with its strong relationship to self-efficacy and self-regulation have also been the impetus behind its growing popularity. A qualitative study by Jensen et al. (2000) sought to identify the dimensions associated with clinical expertise in the physical therapy profession. They found that four major dimensions emerged, two of which include self-assessment and a strong inner drive to succeed. Another qualitative study by Embry, Guthrie, White, & Detz (1996) examined clinical decision making amongst a group of
experienced and inexperienced pediatric PTs. They identified various themes that emerged from the sample and of those themes, self-regulation was highlighted as central to how they practice (Embry et al., 1996).

The importance of self-regulation and motivational belief within clinical practice and performance in not limited to professional practice; it permeates the educational context of academic performance as well (Kitsantas et al., 2008). Academic motivation has become a widely studied subjects because of its relationship to effort, persistence, self-efficacy, achievement expectations, and various other academic outcomes (Stover, De La Iglesia, Boubeta, & Liporace, 2012; Tanaka, Mizuno, Fukuda, Tajima, & Watanabe, 2009). Researchers and education practitioners are searching for effective strategies to measure and understand various motivational profiles within and past the classroom experience (Van Nuland et al., 2010).

Since education is future-oriented in nature, there has historically been a gap in making the connection between academic motivation and professional motivation as the two contexts are commonly analyzed independent of each other (Simons et al., 2004). By combining the presence of motivation in both healthcare and education, there has been an emerging focus within the health care education community to further understand how this construct can be best identified in potential students and practitioners (Tanaka et al., 2009). Further, the study of motivation has historically been compartmentalized with little regard for how the identification of one’s motivational pattern at one particular stage in life could be indicative of future stages (Hegarty, 2011).

**Motivation Regulation**

Regardless of an individual’s life stage or situational context, SDT defines three primary types of motivation that one can occupy (Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres,
Biddle, & Wang 2003). While not commonly referenced, the first type of motivation is known as “amotivation”, which is simply as a lack of motivation relative to a specific task or activity (Cook & Artino, 2016). It is further defined as a lack of intention to act or behave for the purposes of progression (Ryan & Deci, 2002). This occurs when people do not perceive a relationship between their actions and outcomes (Vallerand et al., 2003). Amotivation also assumes that the individual does not place value on an activity or the perceived outcome associated with it (Ryan & Deci, 2002). Because of these reasons, amotivation will not be considered or measured for the purposes of this study since it is assumed that the population being sampled does already maintain some type of motivation based on the demographic of individuals applying to a DPT program. Further, if they did not have some type of initial value placed on pursuit of a DPT degree, the researcher assumes that the participant would not have initially applied for program admission.

The two primary categories that have been used to classify motivation through which intentional control of behavior will operate through are intrinsic and extrinsic (Bandura & Simon, 1977). Intrinsic and extrinsic motivation are not mutually exclusive traits, but rather activity-specific frameworks through which in individual compartmentalizes their behavior towards a perceived purpose (Kusurkar, Croiset, & Ten Cate, 2011). These two types of motivation are not intended to be categorical or representative of an individual’s state of being (Vallerand et al., 2003). It is assumed that humans are naturally self-motivated, but internal values and external influences categorize this complex dichotomy (Ryan & Deci, 2000). Since humans are growth-oriented, their continuous search for challenge and engagement alludes to the need for and importance of both types of motivation to coexist (Ryan & Deci, 2002). SDT has
evolved to encompass mini-theories that better delineate between the two motivation types (Ryan & Deci, 2000).

**Intrinsic Motivation.** From the perspective of SDT, intrinsic motivation is seen as the initial point of proactivity within an individual, is assumed to be the natural basis for growth and development and is classified by the participation in an activity for its own sake (Vansteenkiste, Lens, & Deci, 2006). According to Tanaka et al. (2009), “Intrinsic motivation refers to the desire to do something because it leads to a particular outcome” (p. 385). It is participation in an activity for pleasure, interest, or satisfaction that is driven purely by an inherent desire or innate enjoyment (Vallerand et al., 2003). For example, a study by Fishbach and Choi (2012) looked at the effects of intrinsic and extrinsic motivation on exercise patterns and found that the participants spent more time working out when they were focused on the exercise experience rather than the outcome associated with it. It is also classified by the pursuit of an activity without the presence of an external stimulus (Van Nuland et al., 2010). Behaviors associated with this type of motivation are assumed to be initiated and maintained on the basis of enjoyment as opposed to obligation or requirement (Cerasoli & Ford, 2014).

Intrinsic motivation is believed to be what an individual is born with since it is characterized by innate desires, but as humans age and mature, extrinsic motivators begin to play an important role in the dichotomy of self-determined motivation (Ryan & Deci, 2000). It is also believed to be associated with better performance, learning, and well-being in comparison to extrinsic motivation (Kusurkar et al., 2011). Because of its internal initiation and perceived organic nature and internal stimulation, it is also believed to be associated with persistence and curiosity due to its lack of reliance on external stimulation (Van Nuland et al., 2010). Intrinsic motivation can also be further divided into three types: IM-to know, IM-to accomplish, IM-to
experience (Vallerand et al., 2003). For the purposes of this study, however, intrinsic motivation was used as a concept to encompass all three sub-types. Further explanation of intrinsic motivation can be better understood from examining the sub-theory perspective of Cognitive Evaluation Theory.

**Cognitive Evaluation Theory.** Cognitive evaluation theory is an extension of SDT that suggests an individual has an innate need for competence and autonomy. This need is the impetus behind the origination, sustainment, and further development of intrinsic motivation for pure enjoyment and interest purposes (Ryan & Deci, 2000). According to Deci, Cascio, & Krusell (1975), “Cognitive evaluation theory assumes that intrinsically motivated behavior is behavior which allows a person to feel confident and self-determining” (p. 82). Also referred to as the “locus of causality”, the initial point of interest and behavior is believed to have come from a perceived place of internal satisfaction (Ryan & Deci, 2000). When an individual feels they are doing something for themselves with no regard for external reward or recognition, they perceive the locus of causality to be internal (Deci, Cascio, & Krusell, 1975). The influence of external factors such as rewards and feedback, however, can cause an individual to perceive their locus of causality as external instead (Deci et al., 1975)

**Extrinsic Motivation.** Extrinsic motivation is defined by an individual’s desire to pursue or participate for external reasons (Ryan & Deci, 2000). This type of motivation is typically explained independent of intrinsic motivation’s point of initiation, which suggests a drive towards something that is not inherently interesting to the individual (Van Nuland et al., 2010). It is characterized by being driven by the pursuit of tangible rewards, which suggests a more negative connotation and undermining of intrinsically driven motivation (Deci et al., 1975). It is also views motivation as initiated to obtain an outcome that is separate from the activity itself
and is oftentimes characterized by a “means to end” approach (Vansteekiste et al., 2006). Further theoretical explanation of this type of motivation can be better understood through the sub-theory lens of Organismic Integration Theory.

**Organismic Integration Theory.** Organismic Integration Theory (OIT) is another sub-theory of SDT, which assumes that people are naturally predisposed to experience and pursue (Ryan & Deci, 2002). From this perspective, people internalize external prompts that move throughout a continuum until they are perceived as internally part of the sense of self (Ryan & Deci, 2002). This continuum categorizes extrinsic motivation into subtypes that are defined by the level of self-regulation that takes place. OIT provides a framework through which to further explain this process by identifying four primary types of external motivation (Deci & Ryan, 2000). Ryan & Deci (2002) developed a visual representation of this continuum (see below) to further explain the process of motivation regulation described by OIT (p. 16):
These include: external regulation (pursuit of rewards), introjected regulation (avoidance of guilt or enhancement of pride), identified regulation (external pressures have become a desired goal born out of utility, not desire), and integrated regulation (external forces integrate with internal interest becoming an inherent aspiration) (Cook & Artino, 2016). According to Cook & Artino (2016), “Thus, it is through internalization and integration that individuals can be extrinsically motivated and still be committed and authentic” (p. 1011). Essentially, extrinsic motivation acts a collective construct to encompass all four points along the regulation continuum before an external factor can becomes intrinsically motivated.

In sum, motivational patterns are not unidimensional, so it is important to not be limited by examining this factor independently (Ryan & Deci, 2000). Motivation is considered to have an additive relationship with other variables, meaning it can combine with another factor to produce a different effect (Harackiewicz et al., 2012). The focus on motivation in health professions has typically disregarded the presence of any intersection, but as previously suggested by SCT and SDT, motivation and goals are very much interrelated (Cook & Artino, 2016). In addition to the theoretical framework applied to this study, a seminal study was used as the foundation for applying a conceptual framework to further build this research design.

Seminal Study

Simons, Dewitte, & Lens (2004) designed a study that combined three theories associated with goals, motivation, and achievement to measure the goal orientation, motivational profile and academic performance of 184 first-year nursing students. The study sought to combine previous theoretical views and determine if there was a relationship between goal utility/distance and motivational regulation with learning strategies, confidence, persistence, excitement and performance. Goal utility was classified by either proximal or distal distance (as defined by Goal
Theory and Future Time Perspectives Theory), and motivation was classified by either intrinsic or extrinsic regulation (as defined by SDT). This resulted in a conceptual framework that Simons et al. referred to as the four dimensions of instrumentality, which include proximal-intrinsic, distal intrinsic, proximal extrinsic, and distal extrinsic. The primary purpose of the design of the dimensions of instrumentality was to further explore if the two factors of goals and motivation actually did interact with each other, and if so then how.

The participants in the study received a self-report questionnaire that used a Likert-type scale to assess motivation and goal orientation according to the previously defined dimensions of instrumentality. They concluded that the dimensions of instrumentality did have combined differential influences on motivation, learning, goal-setting, study behavior, and academic achievement. Participants that were identified by the distal goal utility and the intrinsic motivation regulation were more excited about the course, persisted longer, and had a stronger academic performance (Simons et al., 2004). While the results of this study were beneficial, the design had significant limitations because it only occupied predominantly female nursing students in one specific course in a curriculum. Regardless, the theoretical support and the identified dimensions of instrumentality provided an effective measurement tool to be used for the purposes of this study.

Summary

The researcher’s professional context working directly with a DPT admissions process allowed for the identification of a problem that affects the field of physical therapy at a micro-level academically, and at the macro-level professionally. A lack of mandated admission requirements for DPT programs to use initiated the need for this study. Research on commonly used admissions variables was either limited or conflicting, so nontraditional variables were
further explored by taking into consideration professional competencies of the PT field. In doing so, the concepts of self-regulation and self-efficacy, as related to an individual’s goals and motivation, came to the surface.

A theoretical lens comprised of various theories and ideas was developed to better understand these factors and how they may be predictive factors. A seminal study looked similarly at these two constructs to provide a conceptual framework to apply for the purposes of this study. The researcher combined these frameworks and use them as a foundational understanding for the following study. This next chapter will identify and outline how the previously mentioned studies, theories, and ideas blended to develop a research design to address the identified research questions aiming to draw a connection between goals and motivation with that of interview performance, admission yield, and clinical success.
CHAPTER 3

METHODOLOGY

Context

With a projected increase in the demand of effective physical therapy practice and treatment, it is anticipated that Doctor of Physical Therapy (DPT) programs will continue to have a high volume of applicant pools, but it is unknown whether the current programs available will be able to support such growth. In the meantime, it is important for admissions committees at such institutions to be both intentional and proactive in implementing a selective application process that can best identify the most potentially successful students and practitioners (Ruscingo et al., 2010). Since there is significant flexibility in the required factors, measures, and processes for DPT programs when making student selections, it is the responsibility of educators to continuously be mindful of the profession. Interviews are oftentimes incorporated to gauge an individual’s qualities that may not be best captured on an application form (Gabard et al., 1997). While beneficial, given the operating expenses associated with the interview process, admissions committees must be able to reliably identify the most successful future students and clinicians while conducting an efficient interview process. In doing so, is there a nontraditional variable to be considered that might be more indicative of eventual clinical success?

Competency in clinical reasoning requires more than just knowledge, skills, and experience; it requires a developed underlying construct of personal self-efficacy (Venskus & Craig, 2017). By looking specifically at the physical therapy clinical competency of self-efficacy, the purpose of this study was to the analyze the interview performance of applicants for a DPT program to determine if there was a relationship between self-efficacy (as defined by goal utility and motivation regulation) and admission offer based on interview score, as well as
likelihood of admission offer acceptance. The theoretical lenses of Social Cognitive Theory and Self-determination Theory, as well as the sub-theories of Cognitive Evaluation Theory, Organismic Integration Theory, Goal Gradient Theory, and Future Time Perspectives Theory, were used to measure the interview responses of candidates applying to a DPT program. This study was initiated with the goal of identifying a framework that could predict a high interview score and likelihood of admission yield to assist admission committees during the competitive DPT application process and student selection.

**Institutional Profile**

The DPT program associated with this study is housed in a small, private liberal arts institution in the Southeast region of the United States. This three-year, DPT-granting program starts a cohort of 72 students once per year, with an average of over 800 applications per admission cycle. This program accepts applications online via the Physical Therapy Centralized Application Service (PTCAS) and interviews a selected group of candidates (200-300) during the second phase of the application process. Historically, this program hosted individual interviews, but due to increasing application volume and faculty load, they began hosting group interviews during the 2015-16 application cycle. The 2016-17 application cycle was specifically chosen for the purposes of the study for the following reasons: 1. electronic interview scoring was implemented during this cycle, 2. the previous cycle was presumed to be a trial year for group interviews, and 3. the 2017-18 application cycle was still in progress at the time this study was conducted. During the 2016-17 cycle, the DPT program received 817 applications and interviewed approximately 341 applicants. In 2016-17, the program made 168 admission offers to yield a final cohort of 71, which was the impetus behind the development of research question #2 and will be discussed later in this chapter.
Data Collection

Participants

The sample used for this study was a convenience sample at the researcher’s home institution. The participants included all 341 individuals that applied to the program during the 2016-17 cycle and were selected to interview for admission. All candidates that interviewed during this cycle provided a response that was analyzed in this study. Even though the sample was limited to one application cycle, the researcher concluded that the amount of responses available for analysis was sufficient for data collection purposes. The program still started a cohort of 72 this year, but only selected 71 based on this interview pool because one student was admitted during the 2015-16 cycle and deferred admission to 2016-17, so that candidate’s interview response will not be included in any further data throughout this study. The interviewed applicant pool included a range of cumulative GPAs from 2.83-4.0, and a range of prerequisite GPAs 3.04-4.0. Of the individuals that were interviewed, 31 were internal candidates (applicants that had matriculated as undergraduate students through the program’s respective institution), and 19 were applicants who were reapplying for the second year.

Institutional Interviews

The program typically selects interviewees based primarily on highest prerequisite GPA (calculated based on a combination of 10 prerequisite courses required for admission into the program), and then highest cumulative GPA (calculated based on all courses taken during college). Interviews took place once monthly from October 2016-February 2017. The interview process contained two parts: a 30-minute on-demand writing portion (see Appendix A for form) and a 60-minute group discussion (see Appendix B for questions). Each interview group consisted of two full-time DPT department faculty members and 6-8 interviewees, with each
faculty member being responsible for scoring 3-4 of the interviewees within the group. The applicants received a scored based on 7 different categories, ranging from 0-2 (0 = does not meet expectations, 1 = meets expectations, 2 = exceeds expectations). Therefore, an interviewee could receive an interview score as low as 0 to as high as 14. Typically, admission offers are made to those applicants scoring the highest on the interviews, so it is assumed that applicants who received an admission offer performed best on the interview. The 7 categories included the following, as well as the designation between whether it was based on the written portion (bolded), discussion portion, or both:

- Interpersonal Experiences (discussion)
- Exposure to Health Care (written and discussion)
- Leadership/Responsibility (discussion)
- Persistence In Life (discussion)
- Persistence Towards Bellarmine (written and discussion)
- Overall Impression (discussion)
- Overall Impression (written)

For the purposes of this study, only the written communication was used to evaluate for individual self-efficacy. First, the information provided by applicants during the discussion portion of the interview was not recorded, so there would be no feasible means to analyze any responses given during that time. Second, it was assumed that conformity during the discussion portion of the interview may be present, so the researcher felt as though the information provided during the written portion would be more accurate. Conformity is a type of influence that can take place in social contexts when an individual’s belief or behavior is altered to match what is
believed to be the majority view (McLeod, 2016). Third, the group discussion did not ask any questions specifically relative to the purpose of this study.

Finally, of the written questions, one specific question was used for analysis in this study because it most closely aligned with the purpose of this study. The written question analyzed in this study was: Why should Bellarmine DPT invite you to be a student in this program and a future member of this profession? Based on prior research and experience, the researcher determined that this specific question would be the most indicative and transparent explanation of an applicant’s subjective perception of their individual self-efficacy through disclosure of goals and motivation related to becoming a DPT student and professional. The researcher also decided that the question was ambiguous enough to allow for candidates to answer more freely and comprehensively. All interviewees and their responses remained anonymous throughout this study.

Researcher Role

While the researcher does work at the institution used in this study and plays a role in application review for this DPT program, she does not take part in any of the interviews or interview scoring. Given her role in relation to the program, however, she was able to access the appropriate demographic, application, and interview information needed for this study. All interview responses were used as extant data that she was able to access and gather internally based on her position’s prior established permissions. Even though the data were used retroactively (after applicants had either been admitted or enrolled elsewhere), because the data did involve human subjects IRB approval was requested and approved (Appendix C).
Measurement

Practical

This study applied a measurement framework from a previously existing seminal study and further elaborated on its design, measurement, and theoretical support. In the original study by Simons, Dewitte, & Lens (2004), the researchers identified the following four dimensions of instrumentality based on goal utility and motivation regulation (p. 347):

<table>
<thead>
<tr>
<th>Degree of utility</th>
<th>External (controlled)</th>
<th>Regulation</th>
<th>Internal (autonomous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximal</td>
<td>PU-E</td>
<td></td>
<td>PU-I</td>
</tr>
<tr>
<td>Distal</td>
<td>DU-E</td>
<td></td>
<td>DU-I</td>
</tr>
</tbody>
</table>

The study by Simons et al. (2004) applied the theoretical framework of Self-Determination Theory (SDT) (internal and external regulation motivation regulation), Goal Theory and Future Time Perspectives Theory (proximal and distal degrees of goal utility, respectively) to identify the dimensions of instrumentality outlined above (p. 347). While this study was used foundationally to build upon, the following study sought to incorporate a more robust theoretical lens to measure goal utility and motivation regulation. While the design for the seminal study was well-developed and sufficient for the purposes of their research questions, the researcher concluded that more theoretically-defined categories were needed through which to score data responses appropriately and ultimately best answer the desired research questions. The next section outlines how each of the four constructs were defined and measured according
to previously established working definitions: proximal goals, distal goals, intrinsic motivation, extrinsic motivation).

**Theoretical**

Bandura’s Social Cognitive Theory (SCT) is grounded in the idea of intention, which is the determination to perform or attain, and how that is set will dictate the process of self-regulation of behavior (Bandura & Simon, 1977). Self-efficacy, which is how people perceive their individual capabilities to perform an action for a specific purpose, is what controls the pursuit of an intention (Pajares, 2002). Further, Bandura suggested that an individual’s actions can oftentimes be based more on what they subjectively believe about themselves to be true than what is objectively true (Pajares, 2002). Based on SCT, a developed self-efficacy has the power to influence an individual’s motivation and choice of pursuits (Pajares, 2002).

Ryan & Deci’s Self-Determination Theory (SDT) is grounded in the idea of self-regulation and motivation, and that the inherent growth tendencies of an individual is the basis for their motivation and behavior (Ryan & Deci, 2000). It is considered the process through which a person self-regulates and develops based on perceived psychological need, which is driven by motivational force (Ryan & Deci, 2000). SDT suggests that motivation can vary in type and strength depending upon the goal that it needs to support (Cook & Artino, 2016). By applying the theoretical understandings of SDT and SCT to the dimensions of instrumentality suggested by Simons et al. (2004), this study used the same goal and motivation constructs (as categorized by utility and regulation, respectively) to categorize interview responses. Based on the literature and theories related to goals and motivation, the following working definitions were used for the study to classify the two types of goals and two types of motivation during data
coding and analysis. The primary theory is denoted by (A/a) and the sub-theory is denoted by (B/b):

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Theory</th>
<th>Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximal Goals</td>
<td>A. Social Cognitive Theory</td>
<td>a. Closer perceived distance from current state to goal attainment, determines immediate choice of actions (Bandura &amp; Simon, 1977)</td>
</tr>
<tr>
<td></td>
<td>B. Goal Gradient Hypothesis</td>
<td>b. Accumulation of progress towards a final, ultimate goal (Wallace &amp; Etkin, 2018)</td>
</tr>
<tr>
<td>Distal Goals</td>
<td>A. Social Cognitive Theory</td>
<td>a. Further in perceived distance from current state to goal attainment, serves as a directive function (Bandura &amp; Simon, 1977)</td>
</tr>
<tr>
<td></td>
<td>B. Future Time Perspectives Theory</td>
<td>b. How an individual perceives time, as opposed to actual physical time, focusing on the value of the process leading to the goal (Bembenutty, 2011)</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td>A. Self-Determination Theory</td>
<td>a. “engaged in for their own sake”, “for the pleasure and satisfaction derived from their performance” (Deci, Vallerand, Pelletier, &amp; Ryan, 1991, p. 328)</td>
</tr>
<tr>
<td></td>
<td>B. Cognitive Evaluation Theory</td>
<td></td>
</tr>
</tbody>
</table>
The initial point of interest and behavior is believed to have come from a perceived place of internal satisfaction (Ryan & Deci, 2004).

Extrinsic Motivation

A. Self-Determination Theory
B. Organismic Integration Theory

a. “Extrinsically motivated behaviors...are instrumental in nature”, “performed not out of interest, but because they are believed to be instrumental to some separate consequence” (Deci et al., 1991, p. 328)

b. People internalize external prompts that move throughout a continuum until they are perceived as internally part of the sense of self (Ryan & Deci, 2002)

Coding

Interview responses were coded using a semantic differential scale (SDS), which is an attitude-measuring technique that uses bipolar adjectives (Tuckman, 1994). One SDS was used to categorize goal utility (X) and one SDS was used to categorize motivational regulation (Y). Each SDS had three points:

- Goals:
  - 1 (high proximal)
  - 2 (equal proximal/distal)
  - 3 (high distal)
Motivation:

- 1 (high intrinsic)
- 2 (equal intrinsic/extrinsic)
- 3 (high extrinsic)

Each participant received a score with two coordinates (X, Y) based on the coding of their response according to the working descriptors, operational definitions, and theoretical explanations of goals and motivation. For example, a participant whose responses mentioned that they have always dreamed of being accepted into a DPT program, with no mention of being successful in the profession would be coded as a “1” for their proximal goal utility because they are specifically referencing a proximal goal, not a distal goal.

If the same participant’s answer also mentioned their motivation for wanting to become a physical therapist was to help others because they’ve always had a passion for doing so and also want to own their own company, they would be coded as a “2” for their equal internal/external motivational regulation. Therefore, they would be coded as a (1,2). Participants were then plotted based on their coordinates within the quadrants below, which determined the dimension they were classified by. In this example, the participant would be categorized by a “High Proximal/Equal Intrinsic-Extrinsic” dimension. The order of the constructs and their coordinates was based on the views of SCT and SDT that goals are more directive in their function than motivation.
Research Design

This study applied a mixed methods approach to capture the desired data for the associated research questions. This type of design is commonly used in health services research because it allows for a more comprehensive collection of data (Tariq & Woodman, 2010). There are still some anticipated threats to validity associated with the design of this study, but the researcher took appropriate steps to control for these as much as possible. These include:

Internal threats to validity:

- Semantic differential scale – this study used 3 points along the SDS, while an SDS can typically have 5 or 7 (Tuckman, 1994). This study originated with 5, but during initial data analysis the researcher noticed that the data were only falling neatly within 3 points and 5 points were not justified, so the scale was adjusted accordingly.
• Subjectivity related to scoring – since all responses were coded by the researcher, some bias related to subjectivity in scoring and response categorization could occur. To establish interrater reliability of the scoring instrument, two other practitioners associated with the DPT program (one female pediatric physical therapist and one male sub-acute rehabilitation physical therapist) were given a randomly selected sample of responses to code and there was a 88% and 75% match in the data scoring/coding, respectively.

• Confounding variable – GPA was not included within this analysis, so inclusion of this variable could have possible played a role in the effects of the IV (self-efficacy dimensions) on the two DVs (interview performance and admission yield), but it was not included in the research design because it was not central to the purpose of the study and/or research problem.

External threats to validity:

• Sample selection – this study analyzed the interview performance and admission yield for one application cycle, so generalization of any findings associated with this study would have to assume that one year is representative of an average applicant pool. Also, given the sample size available for the study, the researcher decided that there was sufficient data to allow for thorough scoring and representation.

• Measurement dimensions – this study was based off of a suggested categorical framework only previously used in one other study, so the established history and support of this framework was underdeveloped.
Research Variables

A logistic regression was used in SPSS to determine if there was a relationship between the three variables within this study, with one dependent variable per research question. The nominal categorical variables for this study are as follows:

1. *Independent variable- dimension of instrumentality/self-efficacy profile*
   a. Proximal-Intrinsic (P-I)
   b. Proximal-Extrinsic (P-E)
   c. Distal-Intrinsic (D-I)
   d. Distal-Extrinsic (D-E)

2. *Dependent variable (Research Question #1)- receipt of admission offer based on interview performance and relative score*
   a. Yes
   b. No

3. *Dependent variable (Research questions #2)- decision to enroll in the specific DPT program after receiving an admission offer*
   a. Yes
   b. No

Data Analysis

Research Questions. A practical need drives the examination of the current landscape of DPT program admissions and its lack of suggested admissions protocol, combined with the growing demand in the professional field. A theoretical perspective provides a foundation to builds upon it by considering the recommended clinical competency of self-efficacy and defining it based on the lens of SCT and SDT through goal proximity and motivation regulation,
respectively. Given this unique, yet complex combination of perspectives, and the multi-faceted problem associated with this study, the associated research questions were developed with two objectives in mind. First, an admissions committee must efficiently and effectively identify successful future students and clinicians, which was the goal behind the first research question:

1. Which self-efficacy dimension was associated with best interview performance, as defined by highest interview scores?

In addition to this, admissions committees must also admit applicants that will yield to actual enrollment into the program. During the 16-17 application cycle, this DPT program made 168 total admission offers for a needed incoming cohort of 71. Therefore, 97 admission offers were extended and not accepted (38 declined the admission offer entirely, 10 withdrew accepted their admission offer and then withdrew their application, 25 accepted their admission offer/paid their deposit and then withdrew their application, and 24 received an admission offer but it was retracted based on lack of admission acceptance/deposit payment). Because of this, the second research question for this study was:

2. Which self-efficacy dimension was associated with acceptance of an admission offer to a DPT program?

Hypotheses. The hypotheses for this study were based upon theoretical understanding of the instrumentality dimensions. They include:

1. Applicants whose responses are characterized by the High Distal-High Intrinsic dimension (3,1) are likely to have the highest interview scores.

2. Applicants whose responses are characterized by the High Proximal-High Intrinsic dimension (1,1) are likely to accept an admission offer.
The first hypothesis was based on the theoretical perception of distal goals as being more comprehensive and directly related to an individual’s belief in their capabilities. Participants’ responses coded and categorized within the High Distal-High Intrinsic dimension (3,1) are hypothesized to receive the highest interview scores because their goals will be more bold and futuristic, allowing them to draw connections during the interview to showcase their strengths and passion for both the program and the profession, as well as perceive themselves as more capable to do so. Based on the theoretical view of intrinsic motivation as being more indicative of an individual’s innate desires, their scores are also hypothesized to be higher because their intrinsic motivation will be represented by an innate and genuine passion to become a PT student and practitioner, which will also contribute to a higher level of self-efficacy.

The second hypothesis was grounded in the theoretical view of proximal goals as being more immediate and successive. Participants’ responses coded and categorized within the High Proximal-High Intrinsic dimension (1,1) are hypothesized to be the most likely to accept the admission offer and enroll in the specific DPT program because their goals are more situated in the present, and their belief in their capabilities are not as high, so their application to this DPT program suggests their proximal goal is to get into this program specifically. Based on the theoretical view of intrinsic motivation as being more indicative of an individual’s passions, their likelihood to yield is also hypothesized to be high because their intrinsic motivation will again be represented by an inherent desire to immediately study physical therapy.

Summary

In sum, a theoretical and practical lens was used to define and develop this study, which seeks to address a two-part problem. For an academic discipline that could use a more nontraditional admission variable to measure in student selection, for a healthcare field that
needs effective and efficacious professionals, and for a specific DPT program that seeks to minimize its admission offer turnover and maximize its enrollment of ideal candidates, this study serves many purposes. The main perspectives of the primary theories, as well as supporting ideas and definitions from various sub-theories, allowed for the identification of an independent variable (dimension of instrumentality as defined by goal utility and motivation regulation, representative of self-efficacy) that could potentially indicate an interaction with two important dependent variables for the field of physical therapy: 1. admission offer based on interview performance and 2. likelihood of admission offer acceptance. The next chapter will analyze the associated findings and discuss further.
CHAPTER 4

RESULTS

A lack of previous research on the utilization of nonacademic admission variables within graduate admission processes across discipline served as the impetus for this study. Significant literary focus and theoretical support, however, suggested the importance of such variables in identifying potentially successful graduate students and practitioners. Further, this study focused primarily on the concept of emotional intelligence and one of its key components: self-efficacy. Thus, the primary purpose of this study was to identify a relationship between an applicant’s perceived self-efficacy (through measures of goal utility and motivation regulation) and interview performance for admission into a Doctor of Physical Therapy (DPT) program. This chapter will provide the characteristics of the population and corresponding dataset used in this study, reintroduce the associated research questions and respective hypotheses, and discuss all relative results.

As discussed in the previous chapter, this study used a combination of theoretical and practical perspectives to identify a solution to a problem at a micro-level and macro-level, affecting both a specific academic program and related admissions structure for all relative programs. Extant data analysis for this particular study was collected from a DPT program at a private, liberal arts institution whose average application cycle includes 800-900 applicants for the incoming cohort. This study looked specifically at the application cycle for the 2016-17 admission year, which included totals of:
All applicants must also provide their cumulative and prerequisite GPAs, as well as a GRE score, which is used predominantly to filter the applicants that are invited to participate in a mandatory interview process. All numerical data for the invited interviewee population is as follows:

*Interviewee Applicant Characteristics*

<table>
<thead>
<tr>
<th>(N=340)</th>
<th>Cumulative GPA</th>
<th>Prerequisite GPA</th>
<th>GRE Score (Verbal)</th>
<th>GRE Score (Quantitative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>2.83-4.0</td>
<td>3.04-4.0</td>
<td>136-168</td>
<td>138-161</td>
</tr>
<tr>
<td>Mean</td>
<td>3.63</td>
<td>3.59</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

Following the interview, each applicant receives an interview score and a corresponding overall interview remark, which predominantly dictates whether or not an admission offer is granted. The overall interview scores and remarks received by the 16-17 interviewee pool are below:

*Overall Interview Scores and Remarks*

<table>
<thead>
<tr>
<th>(N=340)</th>
<th>Interview Scores</th>
<th>Interview Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>4-14</td>
<td>-</td>
</tr>
<tr>
<td>Mean</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Highly Recommend</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>Recommend</td>
<td>-</td>
<td>108</td>
</tr>
<tr>
<td>Reservations</td>
<td>-</td>
<td>47</td>
</tr>
</tbody>
</table>
As is evident, the majority of applicants that are invited for an interview are considered to be competitive, so many of these individuals apply to multiple DPT programs before committing. As a result, DPT programs oftentimes must extend more admission offers than what actually yields. During this application cycle for program associated with this study, 167 were offers made with a yield of 71 enrolled (*for a total cohort of 72 students with one applicant admitted and rolled over from the previous application cycle). Therefore, a total of 96 applicants received an admission offer, but chose to most likely enroll elsewhere.

Because of this significant turnover and its impact on institutional resources, a primary focus of this study was to identify not only which applicants receive an admission offer, but more importantly which actually yield. The main purpose of this study was to identify whether self-efficacy, through measures of goals and motivation, could identify a possible relationship with the likelihood of either admission offer and/or yield. Before we can begin to discuss that, however, it is important to first consider the general factors and possible relationships between various demographic and application characteristics in the primary stages of the application cycle:

*Applicant Characteristics*

<table>
<thead>
<tr>
<th></th>
<th>All Interviewees (N=340)</th>
<th>Admission Offer (N=167)</th>
<th>Admission Yield (N=71)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>226</td>
<td>111 (49%)</td>
<td>47 (20%)</td>
</tr>
<tr>
<td>Male</td>
<td>114</td>
<td>56 (49%)</td>
<td>24 (21%)</td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>31</td>
<td>27 (87%)</td>
<td>22 (71%)</td>
</tr>
<tr>
<td>No</td>
<td>309</td>
<td>140 (45%)</td>
<td>49 (16%)</td>
</tr>
<tr>
<td><strong>Reapplicant</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>19</td>
<td>10 (53%)</td>
<td>6 (32%)</td>
</tr>
<tr>
<td>No</td>
<td>321</td>
<td>157 (49%)</td>
<td>65 (20%)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>322</td>
<td>159 (49%)</td>
<td>67 (42%)</td>
</tr>
</tbody>
</table>

67
When considering the above breakdown of applicants using various identifying factors throughout the primary stages of the application process, it is important to identify a few visible trends. First, the gender ratio of female to male applicants remains consistently at roughly 50% at each stage. Next, the number of internal applicants remains small during the initial interview phase at roughly 5%, but they actually comprise the final admission yield at 30%. Also, applicants identifying as “White” far exceeded the number identifying by other applicants during each stage of the process, comprising the final yield at 94%. Another interesting trend to note is that the number of out-of-state applicants is almost double the number of in-state applicants during the interview, and almost twice as many received an admission offer, but the in-state students yielded at a much higher rate classifying over 50% of the class. Finally, the percentage of first-generation applicants remained consistently at about 10% at every stage in comparison to those not identifying as first-generation.

While this general overview is important in providing context for the population of interest relative to this study, the primary focus was measuring self-efficacy and how that relates to the progression through each stage. As outlined in the previous chapter, self-efficacy was measured through the variables goal utility and motivation regulation, using a quadrant consisting of four possible dimensions. All 340 interview responses were analyzed, coded, and given two coordinates using a semantic differential scale of 0-3 to measure goals and motivation.
(X and Y, respectively). This study relied on multiple theoretical and working definitions for coding purposes and coordinate identification. These coordinates then corresponded to each axis along the self-efficacy quadrants. Applicants were categorized into quadrants based upon the coordinates that their interview response received. The quadrant frequency following this process can be found below:

**Quadrant Frequency**

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>128</td>
<td>37.6</td>
</tr>
<tr>
<td>2</td>
<td>81</td>
<td>23.8</td>
</tr>
<tr>
<td>3</td>
<td>78</td>
<td>22.9</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>15.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>340</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Initially, crosstab comparisons were performed to examine the initial relationships of quadrant frequencies with both admission offer and yield:

**Quadrant Frequency for Admission Offer**

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Admission Offer: No</th>
<th>Admission Offer: Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>79</td>
<td>66</td>
<td>145</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>36</td>
<td>66</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
<td>49</td>
<td>92</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>173</strong></td>
<td><strong>167</strong></td>
<td><strong>340</strong></td>
</tr>
</tbody>
</table>
**Quadrant Frequency for Admission Yield**

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Admission Yield: No</th>
<th>Admission Yield: Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>118</td>
<td>27</td>
<td>145</td>
</tr>
<tr>
<td>2</td>
<td>45</td>
<td>21</td>
<td>66</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
<td>17</td>
<td>92</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>6</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>269</td>
<td>71</td>
<td>340</td>
</tr>
</tbody>
</table>

To examine this further, crosstab comparisons were also performed to consider the individual relationships of X (goal) and Y (motivation) scores with both admission yield:

**Crosstab Comparison of Goals with Admission Yield**

<table>
<thead>
<tr>
<th>X (Goal)</th>
<th>Admission Yield: No</th>
<th>Admission Yield: Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>31</td>
<td>29</td>
<td>60</td>
</tr>
<tr>
<td>2</td>
<td>92</td>
<td>86</td>
<td>178</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>173</td>
<td>167</td>
<td>340</td>
</tr>
</tbody>
</table>

**Crosstab Comparison of Motivation with Admission Yield**

<table>
<thead>
<tr>
<th>Y (Motivation)</th>
<th>Admission Yield: No</th>
<th>Admission Yield: Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>47</td>
<td>13</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>2</td>
<td>138</td>
<td>40</td>
<td>178</td>
</tr>
<tr>
<td>3</td>
<td>83</td>
<td>17</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>269</td>
<td>71</td>
<td>340</td>
</tr>
</tbody>
</table>
Of the 340 responses that were coded, 208 did not fall directly within a specific quadrant. For example, a response with a code of (3,1) would clearly fall into the High Distal/High Intrinsic quadrant. A response with a code of (2, 3) would not clearly fall within a specific quadrant. As a result, the coordinates that were not considered to clearly fit within a quadrant were first identified by their axis using their definitive coordinate, and then put into one of the two quadrants relative to that axis on which the tie took place in an effort to establish a normal and balanced frequency across dimensions. After this process, the researcher concluded that only 132 of the 340 (39%) were considered clearly defined coordinates. The quadrant frequencies for the remaining were as follows:

*Quadrant Frequencies for Clearly Defined Coordinates*

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>34</td>
<td>10.0</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>2.4</td>
</tr>
<tr>
<td>3</td>
<td>78</td>
<td>22.9</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>132</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Both sets of data were used and tested with each of the following research questions. The first question is relative to the initial application phase of interest (admission offer)

1. *Which self-efficacy dimension was associated with best interview performance, as defined by highest interview scores?*

The hypothesis associated with this question was developed from combining the theoretical perspectives of positive psychology and Self-Determination Theory, which suggests that those intrinsically motivated will have a more developed sense of self-efficacy. As a result, individuals scoring higher in intrinsic motivation should perform better on their interview response regarding why they feel as though they would be a good fit for both the profession and
the program. In addition, Future Time Perspectives Theory suggests that distal goals act as a directive function, assuming that these individuals will work harder and persist longer. As a result, the following hypothesis for research question #1 was developed:

1. Applicants whose responses are characterized by the High Distal-High Intrinsic dimension (3,1) are likely to have the highest interview scores.

To test this research question, a binary logistic regression was used in SPSS. The model was not significant in predicting an applicant’s likelihood to receive an admission offer based on their classified self-efficacy quadrant (p > .05).

Admission Offer Based on Self-Efficacy Quadrant

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I.for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quadrant(1)</td>
<td>.092</td>
<td>.371</td>
<td>.062</td>
<td>1</td>
<td>.804</td>
<td>1.097</td>
<td>.530</td>
</tr>
<tr>
<td>Quadrant(2)</td>
<td>.454</td>
<td>.414</td>
<td>1.205</td>
<td>1</td>
<td>.272</td>
<td>1.575</td>
<td>.700</td>
</tr>
<tr>
<td>Quadrant(3)</td>
<td>.403</td>
<td>.392</td>
<td>1.054</td>
<td>1</td>
<td>.305</td>
<td>1.496</td>
<td>.693</td>
</tr>
<tr>
<td>Constant</td>
<td>-.272</td>
<td>.332</td>
<td>.672</td>
<td>1</td>
<td>.413</td>
<td>.762</td>
<td></td>
</tr>
</tbody>
</table>

(Omnibus $\chi^2 = 2.677$, Cox & Snell $R^2 = .008$)

To examine further, the coordinates X (goal) and Y (motivation) were also input separately to detect a possible relationship. After performing a binary logistic regression in SPSS, the analysis did not detect a statistically significant relationship between an applicant’s individual X (goal) and Y (motivation) measures with whether or not they received an admission offer ($p > .05$).
Goals and Motivation with Admission Offer

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X (Goal)</td>
<td>.011</td>
<td>.157</td>
<td>.005</td>
<td>1</td>
<td>.944</td>
<td>.989</td>
</tr>
<tr>
<td>Y (Motivation)</td>
<td>.046</td>
<td>.154</td>
<td>.088</td>
<td>1</td>
<td>.767</td>
<td>1.047</td>
</tr>
<tr>
<td>Constant</td>
<td>-.081</td>
<td>.440</td>
<td>.034</td>
<td>1</td>
<td>.854</td>
<td>.922</td>
</tr>
</tbody>
</table>

(Omnibus $x^2 = .099$, Cox & Snell $R^2 = .000$)

Since neither test was significant, the null hypothesis was not rejected. It was concluded that, within the data, neither self-efficacy dimensions nor individual goal and motivation measures were statistically significant predictors of whether or not an applicant received an admit offer.

When considering the amount of admission offers, the most important consideration for this study was self-efficacy measures and admission yield, which stimulated the next research question:

2. Which self-efficacy dimension was associated with acceptance of an admission offer to a DPT program?

The hypothesis developed for this research question was devised with the same theoretical assumption as research question #1 regarding motivation. It differed on goal utility, however, because the Goal Gradient Hypothesis was taken into consideration. It suggests that closer distance from a goal determines immediate choice of actions, so it is hypothesized that individuals who are more proximal in their goal mentality will be more likely to select this respective program since they perceive that as their immediate goal (with the PT profession as their more distal goal). As a result, the hypothesis for research question #2 was:

2. Applicants whose responses are characterized by the High Proximal-High Intrinsic dimension (1,1) are likely to accept an admission offer.
To test this research question, a binary logistic regression was used in SPSS. The model was not significant in predicting an applicant’s likelihood to yield and enroll in the program based on their classified self-efficacy quadrant \((p > .05)\).

### Admission Yield with Self-Efficacy Quadrant

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I.for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quadrant(1)</td>
<td>.167</td>
<td>.494</td>
<td>.115</td>
<td>1</td>
<td>.735</td>
<td>1.182</td>
<td>.449</td>
</tr>
<tr>
<td>Quadrant(2)</td>
<td>.880</td>
<td>.518</td>
<td>2.882</td>
<td>1</td>
<td>.090</td>
<td>2.411</td>
<td>.873</td>
</tr>
<tr>
<td>Quadrant(3)</td>
<td>.158</td>
<td>.521</td>
<td>.092</td>
<td>1</td>
<td>.762</td>
<td>1.171</td>
<td>.422</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.642</td>
<td>.446</td>
<td>13.557</td>
<td>1</td>
<td>.000</td>
<td>.194</td>
<td></td>
</tr>
</tbody>
</table>

(Omnibus \(x^2 = 5.611\), Cox & Snell \(R^2 = .016\))

To examine further, the coordinates \(X\) (goal) and \(Y\) (motivation) were also input separately to detect a possible relationship. After performing a binary logistic regression in SPSS, the analysis did not detect a statistically significant relationship between an applicant’s individual \(X\) (goal) and \(Y\) (motivation) measures with whether or not they yielded into the program \((p > .05)\).

### Goals and Motivation with Admission Yield

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X) (Goal)</td>
<td>-.168</td>
<td>.194</td>
<td>.752</td>
<td>1</td>
<td>.386</td>
<td>.845</td>
</tr>
<tr>
<td>(Y) (Motivation)</td>
<td>.296</td>
<td>.182</td>
<td>2.644</td>
<td>1</td>
<td>.104</td>
<td>1.344</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.441</td>
<td>.533</td>
<td>7.298</td>
<td>1</td>
<td>.007</td>
<td>.237</td>
</tr>
</tbody>
</table>

(Omnibus \(x^2 = 3.703\), Cox & Snell \(R^2 = .011\))
Since neither test was significant, the null hypothesis was not rejected. It was concluded that neither self-efficacy dimensions nor individual goal and motivation measures were statistically significant predictors of whether or not an applicant yielded into the program within this set of data.

In sum, the data analysis determined that there were no statistically significant relationships between self-efficacy with admission offer, and self-efficacy with admission yield. As a result, the null hypotheses for each research question were unable to be rejected. The next chapter will discuss the conclusions that can be drawn from these results, identification of possible confounding factors, and implications for future research.
CHAPTER 5

DISCUSSION

Introduction

The purpose of this mixed-methods study was to explore nontraditional admission variables to measure through an alternative approach to a competitive DPT application process. This chapter will begin with a brief summary of the study, as well as the associated research questions and hypotheses. It will include a discussion of the primary findings relative to the previously related research and the foundational frameworks that supported the study. It will also discuss practical implications for the associated findings and contributions to the field. Finally, this chapter will conclude by addressing the limitations of the study and will provide further recommendations to continue expanding ideas relative to this topic.

A combination of practical need and theoretical support encouraged the researcher to build the foundation for this study by exploring a variety of ideas, practices, and perspectives. Identification of the construct of self-efficacy as an effective predictor of human performance, particularly within education. It was further broken down and analyzed, which prompted consideration of a possible relationship with competitive admissions processes. Support in the literature highlighted the utilization of self-efficacy measures, which include goals and motivation, resulting in identification of four distinct dimensions of self-efficacy. These two themes and four resulting quadrants were applied to an extant dataset gathered from one full application cycle for a DPT program at a private, liberal arts institution. The dataset included 340 interview responses that were coded and assigned accordingly. Further statistical exploration took place to see if the hypotheses related to this study could be supported to address
the research questions relative to this study. As a result, the initial research questions were as follows:

1. Which self-efficacy dimension was associated with best interview performance, as defined by highest interview scores?

2. Which self-efficacy dimension was associated with acceptance of an admission offer to a DPT program?

By combining the ideas of positive psychology, emotional intelligence, and Social Cognitive Theory, the perspective that self-efficacy is best defined by measurement of goals and motivation was used to establish both corresponding hypotheses:

1. Applicants whose responses are characterized by the High Distal-High Intrinsic dimension (3,1) are likely to have the highest interview scores.

2. Applicants whose responses are characterized by the High Proximal-High Intrinsic dimension (1,1) are likely to accept an admission offer.

Since each hypothesis contained two distinct concepts to measure (goals and motivation), there were two variables to support for each hypothesis using various theories and perspectives.

The first hypothesis was developed primarily from components of Goal-Setting Theory and Self-Determination Theory, sub-theories Future-Time Perspectives Theory and Cognitive Evaluation Theory, as well as the findings of Simons et al. (2004). Goal-Setting Theory suggests that goal setting is a function of self-efficacy, so greater set goals are indicative of a more developed self-efficacy (Locke & Latham, 1994). Future Time-Perspectives Theory identifies distal goal-setting specifically as representative of a more comprehensive goal that is indicative of an individual’s ultimate desires (Kivetz et al., 2006). As a result, it includes various performance standards and sub-goals through which to measure progress (Bandura Schunk,
Based on these concepts, it was hypothesized that individuals categorized by high distal goal utility would perform better on the interview (resulting in an admission offer) because the theoretical framework suggests that higher self-efficacy relates to the establishment of greater goals set.

Self-Determination Theory and its sub-theory Cognitive Evaluation Theory suggest that high intrinsic motivation is an innate desire towards something with no regard for reward or recognition (Ryan & Deci, 2000). Thus, it was hypothesized that individuals categorized by high intrinsic motivation regulation would perform better on the interview (resulting in an admission offer) because a developed self-efficacy is a direct result of high motivational belief since it produces a higher confidence and determination (Deci, Cascio, & Krussel, 1975). Further, high intrinsic motivational belief is a direct result of pure interest (Ryan & Deci, 2000). Finally, the seminal study by Simons et al. (2004) supported better performance with those classified by the High Distal-High Intrinsic (3,1) dimension, so that also provided another source of support for this hypotheses for research question #1.

The second hypothesis was developed from a combination of Goal-Setting Theory and Self-Determination Theory, sub-theory Cognitive Evaluation Theory, and the Goal Gradient Hypothesis. As addressed in hypothesis #1, Goal setting theory identifies goals as a function of self-efficacy, so greater set goals are indicative of a more developed self-efficacy (Locke & Latham, 1994). In addition, the Goal Gradient Hypothesis suggests that proximal goals are more representative of immediate action and behaviors (Bandura & Schunk, 1981). Also, there is expected to be less fallout associated with proximal goals because they provide instant gratification (Koo & Fishbach, 2012). As a result, it was hypothesized that individuals categorized by high proximal goal utility would be more likely to yield and accept their
admission offer because their self-efficacy may not be as developed, potentially influencing the number of other programs they are applying to. In addition, their classification as oriented towards proximal pursuits suggests the importance that they are placing on the immediate goal of admission into the program itself (not necessarily the profession initially), indicative of a greater desire for this specific program.

Similar to hypotheses #1, Self-Determination Theory and its sub-theory Cognitive Evaluation Theory supported the expectation that individuals categorized by a high intrinsic motivation would also be the most likely to accept their admission offer and yield to the program. This classification was not anticipated to change for research question #2 since Self-Determination Theory and its sub-theory Cognitive Evaluation Theory suggest that high intrinsic motivation is an innate desire towards something with no regard for reward or recognition (Ryan & Deci, 2000). Thus, it was hypothesized that individuals categorized by high intrinsic motivation regulation would accept and yield because since intrinsic motivation is representative of innate desires, so if the associated goal is proximal program pursuit, then the corresponding motivation would be an innate desire for this specific program.

**Summary of Findings**

As discussed in the previous chapter, the data that was used for this study were not statistically significant after performing a binary logistic regression, so it did not support either hypothesis in response to each research question. Therefore, there was no statistically significant difference found between any specific self-efficacy dimension with whether or not the individual received an admission offer, and ultimately whether or not they yielded to enroll in the program. As a result, the findings of this study were not directly consistent with the preliminary theoretical support and previous findings. Because of a limited amount of research within this specific
field, however, any previous research was not directly related to the ideas presented within this study, particularly when considering the seminal study.

While the seminal study reported significant outcomes with a similar framework, the sample population in that study versus this study was comparatively different. This study included a representation of both genders within the field of physical therapy, as opposed to all females in the field of nursing. In addition, this study sought to focus more heavily on the concept of self-efficacy based upon significant theoretical support, which could have played a vital role if the differences in findings. This study also existed within the context of an admission process, as opposed to a classroom in which the sample had already been admitted into the program, which could have contributed to variance in responses as well. Further, data within this study was captured using a different self-reported response tool. Finally, this study incorporated a variety of other theories and perspectives in addition to the originally identified framework by Simons et al. (2004).

Additionally, the primary theory guiding this study was Social Cognitive Theory, which classifies individuals predominantly by the construct of self-efficacy and its development through goals and motivation. Perhaps the sample population in its entirety already maintained a high self-efficacy, particularly given the link between high self-efficacy and academic performance, which is why they received an invitation to interview initially. When considering the population that was analyzed, the individuals comprised a very homogenous sample. Because of this, it is possible that the difference in self-efficacy was so minimal that it was difficult to measure. Further, while goals and motivation were theoretically suggested direct correlates to self-efficacy, the way in which they were coded and measured could have produced
different instrumentality classifications. Finally, utilization of a more sensitive measurement could have been beneficial in capturing a predictive relationship.

Even though the data for his specific study did not support the associated theories or sub-theories, it did not necessarily contradict them either. There were still individuals classified by the (3,1) High Distal-High Intrinsic and the (1,1) High Proximal-High Intrinsic categories that both received an admission offer into the program and accepted the offer to yield to the program. The data suggests, however, that dimension representation and categorization as measured by interview responses were not direct predictors of offer extension and offer acceptance. While the researcher expected a much stronger relationship between the two specific quadrants that were identified in each hypothesis, there are still some significant interpretations relative to the unsubstantiated data, as well as various implications associated with this study.

**Implications**

Since the concepts of both positive psychology and emotional intelligence are considered relatively new fields of thought, particularly as it relates to self-efficacy, appropriate measurements have not yet been identified. As a result, a conceptual framework of contemporary ideas and perspectives were aligned with extensively historical theoretical support of various theories. The data from this study relied directly on self-disclosed information through interview responses, which will be addressed as a limitation in the next section. While the semantic differential scale and working definitions of each construct were created, data that did not fall clearly on either end of each scale was coded in the middle and unable to be categorized within a specific dimension. As a result, additional unanticipated data analysis required since this occurred in more than half of the total datasets. Therefore, if more in-depth,
reliable measurements were applied, a greater number of students could have been more clearly differentiated.

In addition to measurement difficulty, development of each hypothesis was also somewhat challenging because of various conflicting ideas presented in the literature around the topics of goals and motivation. For example, as it relates to goal utility, proximal goals are related to increased self-efficacy because there are more frequent opportunities for achievement (Bandura & Schunk, 1981). However, distal goals are regarded as more representative of higher self-determination, which is directly related to a high self-efficacy (Bandura & Simon, 1977). As it relates to motivation regulation, Organismic Integration Theory (the sub-theory of Self-Determination Theory) identifies extrinsic factors as potentially moving through a process of being intrinsically regulated (Ryan & Deci, 2002). Given this caveat, it is difficult to identify at which point motivation is purely intrinsic or extrinsically initiated and intrinsically regulated. In addition, as introduced by Self-Determination Theory, continuous reciprocal determinism and the fluid self-regulation process will control this individual development at various rates and stages (Ryan & Deci, 2000). As is evident, variances in individual points of goal establishment and motivation regulation, combined with how an individual self-identifies where they are at within each process, posed a significant challenge for data analysis.

Despite an unsubstantiated relationship between this study’s data and the general ideas and theories identified around it, a connection between admission offer and admission yield with self-efficacy is assumed to still have some confounding factors present and other angles to consider. The concept of positive psychology and emotional intelligence is still perceived to have some value in application for a competitive DPT admissions process. Further, the importance of identifying the variable of self-efficacy is straightforward and established, but the
process for best practice in doing so is not yet. After considering the previously discussed results and themes, consideration for ways to control the limitations and build upon the recommendations discussed in the following sections is encouraged to expand future implications developing from this topic.

Limitations

While this study did have some limitations, the researcher was intentional about identifying and controlling for them when possible and was also able to justify others. First, this study used a dataset that was only representative of one application cycle for one specific program at a single institution. The researcher concluded that this was acceptable, however, since the sample yielded 340 total responses from the entire populated of interviewed candidates that year. While the researcher would have liked to include another application year, previous cycles had used a different interview format (individual versus group), so treatment conditions would have been inconsistent which could have skewed the data. In addition, the application cycle used for the purposes of this study was the only dataset available when the study began. With regard to data from other programs, institutional knowledge and data access were not established by the researcher with any other institution, so a convenience sample was justified.

The next limitation was that the researcher was the only individual coding all responses. To establish preliminary inter-rater reliability, two other PTs/adjunct faculty members (one male and one female) within the DPT program, yet not directly involved with the admissions process, were given a randomly selected set of responses to code. They each separately coded responses blindly after the researcher had already done so individually and there was an 88% and 75% match in the coding. Another limitation was that there was only one question coded for this
study, but the researcher felt this was sufficient because it was the only question that related directly to the purpose of the study.

The next limitation was the potential for bias given the professional role of the researcher, who worked full-time at the institution and directly with the admissions committee for the DPT program specific to this study. However, the researcher was not present during any interviews when any data was obtained. Also, since all responses were coded blindly the researcher could not identify which applicants or students gave which response. Therefore, some confidentiality was maintained until the coded coordinates were assigned to each individual on a document separately. Another source of bias could have been some positivity bias since all responses were given within a formal interview context, but the researcher justified that there is less pressure during the written portion than during the verbal portion of the interview. The next limitation was that motivation can be difficult to measure based on self-disclosed, written information (Cook & Artino, 2016). This was controlled for by using working definitions based on a variety of literature and theoretical context. Further, this study only used two themes to measure self-efficacy (goal utility and motivation regulation). Based on theoretical support, however, the researcher was able to justify only incorporating these two primary measurements.

Another limitation was that there were multiple interviewers (11 total) that were responsible for providing an overall interview score for each respondent, so variance between scoring was most likely present. Finally, while the study relied on previously defined instrumentality dimensions from the seminal study, the researcher created a semantic differential scale through which to code and assign value to each response. While it is suggested to have at least 5 points of measurement across a semantic differential scale, during initial response coding the researcher noticed that only 3 points were needed to accurately reflect the coordinates that
were emerging and that maintaining 5 points was not necessary. While some of these limitations could not be controlled for and/or justified, they were nonetheless important in shaping the recommendations for future research and areas of exploration that will be discussed in the next section.

**Recommendations**

As addressed in the previous section, a significant limitation of this study was that it was only able to focus on one program at a single institution. Since both programs and respective institutions can vary so drastically, further comparison of these different contexts would be beneficial to the topic. For example, would a similar approach potentially yield statistically significant results for a DPT program housed within a large, public university? In addition, because programs can vary so significantly, so too can their application processes. The program specific to this study extended interviewed applicants based predominantly on GPA and extended admission offers based predominantly on interview score. Would inclusion of different factors utilized by other programs, such as age or race, yield different results?

Since programs vary so distinctly across admission process and inclusion of admission variables, they also have many differences relative to their interview formats. Perhaps other interview formats would yield different results, such as individual interviews, or interviews with a panel of interviewers in which each response receives multiples scores. With regard to interviewers, it is encourage to perform a study through which the interviewers were controlled since variance in scoring was considered a limitation for this study. While it would not have been feasible for this program to have the same individual interview all 341 respondents, possible consideration for a smaller sample size and one individual interviewer is warranted to control for any scoring variance.
Another limitation of this study was that it was specific to one year, so a longitudinal study that incorporates comparison of multiple cycles is strongly encouraged. Most importantly, how else can nontraditional admission variables like emotional intelligence be measured during application processes? This study focused specifically on one construct of EI (self-efficacy) using only two measures, but further exploration and identification of alternative themes and measures is pivotal in shaping admissions and enrollment management, particularly for competitive application processes. A significant obstacle associated with this study was a lack of previous research directly related to measuring nontraditional variables in admissions, and even more limited for the field of physical therapy. Additional research both within and outside this discipline on a variety of themes and measurements would be helpful for practitioners in a variety of post-secondary contexts.

**Conclusion**

Despite an absence of significant data within this study, conclusions that can be drawn from the findings are not lost. The most important finding is that there is still a significant need for further exploration of effective measurements of emotional intelligence and high efficacious development. While the data specific to this study were not directly contributive, the conclusions that can be drawn as a result remain important in informing both the field of physical therapy and the topic of alternative admission variables nonetheless. Further, it is the researcher’s hope that this study will encourage exploration of nontraditional admission measures across other disciplines as well.

The recommendations provided will hopefully provide a platform for future research consideration. The conclusions drawn from this study will be used to shape discussions at the researcher’s institution and will help to guide application review and interview processes going
forward. Finally, it was the researcher’s initial intent that this study provides two key takeaways to every reader. The first takeaway is that higher education practitioners should avoid complacency by always being proactive about alternative practices regardless of tradition or perceived institutional constraints. The second takeaway is that it would be remiss to assume that perception of an individual’s full academic and professional potential be limited to a culturally-defined singular numeric value.
REFERENCES


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APPENDICES

Appendix A

Written Interview Questions

Name: ____________________________
Date: ____________________________

Written Questions

Thank you for providing some information that will enable us to know you better.
You will have 15 minutes to complete the following questions (front and back).

1. Identify your exposure to healthcare/physical therapy and the length of time?
   - [ ] if yes
   - Length of Time

   | ☐ | Already a licensed Health Care Professional |
   | ☐ | Paid position as a rehab aide/tech assisting with patient care |
   | ☐ | Non-paid position as a rehab aide/tech assisting with patient care |
   | ☐ | Certified nursing assistant or home health aide |
   | ☐ | Certified athletic trainer or a certified personal trainer |
   | ☐ | Observed a physical therapist or other healthcare professionals working with patients |
   | ☐ | Self or family member received physical therapy |
   | ☐ | Worked in a healthcare setting that does not involve patient care |
   | ☐ | Volunteer in a healthcare setting that does not involve patient care |
   | ☐ | Other: ____________________________ |

2. What efforts have you taken to become familiar with our DPT program?
   - [ ] if yes

   | ☐ | Internet search/Website |
   | ☐ | Made a visit to the department |
   | ☐ | Observed in a service learning clinic |
   | ☐ | Attended an open house |
   | ☐ | Personal communication (circle all that apply) |
   | ☐ | Email |
   | ☐ | Call |
   | ☐ | Face-to-face |
   | ☐ | Faculty |
   | ☐ | Staff |
   | ☐ | Current Student |
   | ☐ | Alumni |
   | ☐ | Grad Admissions |
   | ☐ | Other: ____________________________ |
Please write your responses to the following questions in the boxed space provided.

3. What characteristic(s) of the Bellarmine DPT program stand out to you?

4. Why should Bellarmine DPT invite you to be a student in this program and a future member of this profession?
Appendix B

**Group Discussion Questions**

***All candidates should be asked the same questions except where noted***

**Introduction of Faculty and Candidates** (5 minutes)

**Provide Written Questions** (15 minutes)

**The Required 4 Questions** (45 minutes)

1. What other health professions have you considered and why not go that route, as opposed to physical therapy?
2. Ask one (1) of the following questions: a. How did you go about working through a challenging time in life? b. How did you handle a situation in which you had a disagreement with a person in a position of power?
3. Beyond helping people improve function, what qualities are foundational for being a professional and how has a service or work experience helped you create that foundation?
4. What questions do you have for us?

**Wrap –up** (5 minutes)

- Thank you for considering Bellarmine. Feel free to ask the student guides questions during the tour.
- *Collect their essential functions signature sheets and written responses.

IF TIME PERMITS, Flex questions can be asked.

Flex questions are questions faculty can ask an individual candidate, or several candidates, to give them a better sense of who the candidates are.
APPENDIX C

IRB Approval

From: Hutchins, Francis T.
Sent: Tuesday, February 27, 2018 12:08 PM
To: Smith, Grant S.
Cc: Smith, Connie R.
Subject: IRB #651

2/27/18
Dr. Grant Smith
School of Education, Bellarmine University
IRB #651, "Assessment of Motivational Factors Associated with Interview Scores and Admission Yield to the DPT Program"

Dr. Smith,

The IRB has received your application for the project entitled “Assessment of Motivational Factors Associated with Interview Scores and Admission Yield to the DPT Program.” The project has been designated protocol #651. Your project is exempt. As always, the IRB expects full compliance with relevant policies and procedures inclusive of informed consent. If any issues emerge that may alter the protocol and/or an adverse event occurs, you are required to contact the IRB chair as soon as possible. If you have any questions, please feel free to contact me. We wish you the best with your project.

Regards,

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