THE MAKING OF A PRACTITIONER: UNDERSTANDING THE LIVED EXPERIENCE OF DEVELOPING PROFESSIONAL IDENTITY IN DIDACTIC PHYSICIAN ASSISTANT STUDENTS

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Abstract

Developing professional identity is an important process that all students of medicine undergo as they begin their transformation from layperson to practitioner. Physician assistant (PA) students undergo this transformation, however little is known about their experience, especially within the didactic phase of their education. This qualitative study employed an interpretative phenomenological analysis (IPA) to further understand how PA students in the didactic phase of their education explained and made sense of their developing professional identities as medical practitioners. Three major findings emerged from the analysis of the data including 1) Relationship to Self, 2) Relationship to Others, and 3) Relationship to Process. The findings provided insight into the experience of PA students in the phenomenon of professional identity development and further illuminated the complex transformation that takes place within the didactic phase of their education. The study provided a foundation on which to consider future recommendations for practice and areas for further research.
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Dedication

For Michael

Your love inspires me.
Every day.
Chapter 1: Introduction to the Study

Developing professional identity is a process that all students of medicine undergo as they begin their transformation from layperson to practitioner. The process is complex and iterative, and is dependent on and influenced by a range of factors that impact how it transforms (Black et al., 2010; Mann, 2011; Monrouxe, 2010; Wong & Trollope-Kumar, 2014). The purpose of this study was to investigate experiences of physician assistant (PA) students in the didactic year of education to explore how they explained and made sense of their developing identities as medical practitioners. This study utilized Irby’s (2011) definition of the process of developing professional identity: the multidimensional and complex process in which a student gains a better understanding of the commitments of the profession by deepening their own knowledge and engaging with others. The knowledge generated from this study is expected to inform the instruction of PAs in the early stages of their professional education and training when experiences known to further professional identity most significantly, such as clinical interactions, (Burford et al., 2013) are limited. This study employed interpretative phenomenological analysis to illuminate how the selected PA students explained and made sense of developing professional identity.

This chapter begins with a brief overview of the research related to professional identity development providing context and background to the study. The rationale and significance of the study is discussed thereafter, with connections drawn to potential beneficiaries of the work. The problem statement and research questions, which are presented to focus and ground the study, are presented next. Finally, the theoretical framework that serves as a lens for the study is introduced and explained.
Context and Background

Medical education can be thought of as a transformative process that involves learning material and socializing into an established culture and profession (Mann, 2011). Professional identity is one of the aspects of this process and is often overlooked, especially so in the didactic phase (Finn, Garner, & Sawdon, 2010). The term “identification” is what Monrouxe (2010) coins as the formal process of developing professional identity. She notes that identification is central to medical education and the individual, interactional, and institutional influences of the process should be included in medical educational programming (Monrouxe, 2010). Understanding more about this process is necessary for PA educators to be able to address professional identity development in their own education programs.

The process of identification is complex and is influenced by many factors unique to an individual. Personal beliefs and attitudes that individuals bring with them at the very start of the process are already established and will continue to change and become more sophisticated as a student progresses through their learning and professional training (Hilton & Slotnick, 2005; Wong, Trollope-Kumar, 2014). These prior beliefs, attitudes, and experiences are greatly influenced by a person’s emotions (Black et al., 2010; Helmich, Bolhuis, Dornan, Laan, Koopmans, 2012), which adds an additional layer of complexity.

Social aspects of the identification process are important to understand when examining the complexities of professional identity and its development (Monrouxe, 2010; Perry, 2012; Thistlethwaite, 2014). Research confirms that humans learn from their social situations (Beckett & Gough, 2004; Burford et al., 2013). The social components to the process are often emphasized in clinical phase education, but can be incorporated into didactic settings by putting students in situations designed for social engagement. By creating opportunities for situated
learning, developing learning communities, or providing professional socialization, professional identity can develop within an appropriate context and culture (Beckett & Gough, 2004; Mann, 2011; Perry, 2012; Shiner & Howe, 2013). Role-modeling and mentoring have a significant effect on identity development and can influence a student in both positive and negative ways (Finn et al., 2010; Gingsburg & Lingard, 2011; Thistlethwaite, 2014). The social aspects of the professional identity process can become problematic when students feel as if they do not have role-models or feel as if they do not fit in, and this occurs more so in the early stages of their education. Because this may translate to lower levels of confidence (Johnson, Cowin, Wilson, & Young, 2012) it is imperative to address these issues in the didactic phase.

The PA profession is a relatively new career in medicine; one that began in the 1960s in response to the growing need for healthcare providers in the United States (Cawley, Jones, Miller, & Orcutt, 2016; Jones, 2007). The PA education model was constructed by combining elements of the medical model, a framework used in physician education, within a condensed timeframe to allow for an efficient transition to practice (Jones, 2007). Because PAs are required to work collaboratively with physician partners, their education model is purposefully structured to align with and compliment physician practice. This traditional medical model, although condensed, teaches the basic foundations of medicine in the classroom followed by practical application in a clinical setting (Jones, 2007).

**Rationale and Significance**

Because PA educators have the responsibility for helping students develop their professional identities, it is imperative they have a good understanding of how students make sense of their experience and process. The actual process of developing professional identity has been widely studied and occurs in a scaffolded or stage-type process (Beckett & Gough, 2004;
Black et al., 2010; Ginsburg & Lingard, 2011; Monrouxe, 2010; Wong & Trollope-Kumar, 2014). The stages of development are fluid, not lock-step, but they are context dependent. The way in which an individual student progresses in their own identity is dependent on their prior experiences and their individual situations (Ginsburg & Lingard, 2011; Monrouxe, 2010); it requires that students use their prior experience onto which they scaffold and build throughout their training. There is less understanding, however, of how professional identity is developed in the didactic phase of medical education and very little research specific to PA students.

The current medical education climate seeks to reform the education system in ways that will benefit students as they transition to practitioners. Professional identity is a vital component of this transition and is influenced by experiences before and during medical training in a constant negotiation between prior established identities and new emerging ones (Thistlethwaite, 2014). Factors such as technology, age, and individual experience influence how identity is developed (Johnson et al., 2012) and should be reexamined as they advance within society. Because identity is conceived at a personal level, dissonance in the process can occur with some potentially significant consequences (Finn, et al., 2010; Gingsburg & Lingard, 2011; Monrouxe, 2010). Educators must keep these considerations in mind as they incorporate professional identity into academic programming. Future modifications in PA education could be informed by a better understanding of how PA students conceptualize and experience their professional identity development in their didactic year.

**Research Problem and Research Question**

Developing professional identity is an important aspect of the process that educators need to understand in order to shape educational programs that provide students with the most current and comprehensive skills needed to be successful throughout their rigorous academic programs.
and in real-life practice. Because there is scant research in PA education that explores professional identity in the didactic year, this study sought to expand the current body of research by gaining an understanding of how PA students make sense of their process. By adding to the research, PA educators will have a better understanding of why implementing aspects of didactic teaching that are purposefully directed toward developing professional identity are important and how to create those experiences in the classroom.

There is currently no mandate to formally include professional identity development in PA education (ARC-PA, 2016) and it is often not typically addressed, even informally, in the curriculum especially so in the didactic phase. Yet, the current medical education climate is one of seeking reform from the teaching philosophies still in place from the past 100 years (Irby, 2011). It is not surprising that in 2010, The Carnegie Foundation for the Advancement of Teaching recommended in its report of medical education that reform “explicitly cultivate the formation of professional identity” (Irby, 2011, p. 547). One the four recommendations from that report noted, “…the professional identity formation of physicians—meaning the development of their professional values, actions, and aspirations—should be a major focus of medical education” (Irby et al., 2010, p. 226). If professional identity is a priority in the reform of physician education, then PA educators should consider the value of professional identity development in their own teaching philosophies. Taken a step further, if medical schools have the responsibility to educate students to help establish their professional identity (Korkmaz & Senol, 2014) then PA programs should follow suit.

This qualitative study was based on in-depth interviews with didactic PA students and was guided by the following overarching question:
How do physician assistant students in the didactic phase of education explain and make sense of their developing professional identities as medical practitioners?

In reality, professional identity is present, in some form, when students arrive for their first day of coursework in any medical educational program. Medical educators, including those in PA programs, have the responsibility to understand how students navigate the process early on in their didactic learning because of the implications and the importance of professional identity in future academic and clinical success.

Definition of Key Terminology

Physician assistant- “Health professionals licensed or, in the case of those employed by the federal government, credentialed to practice medicine in association with designated collaborating physicians. PAs are qualified by graduation from an accredited PA educational program and/or certification by the National Commission on Certification of Physician Assistants. Within the physician-PA relationship, PAs provide patient-centered medical care services as a member of a healthcare team. PAs practice with defined levels of autonomy and exercise independent medical decision making within their scope of practice” (AAPA, 2014).

Medical education- The overarching term for the teaching and learning of medical professionals. Medical education programs include but are not limited to medical schools, PA programs, and programs for other allied health professionals.

PA education- The term for the teaching and learning specific to PA students. PA programs typically last 24-26 months and consist of a didactic phase followed by a clinical phase.

Didactic phase education: The phase of medical education programming that traditionally occurs before the clinical phase, which serves to build scientific and medical knowledge,
introduce students to critical thinking and problem solving in a medical context, and to provide a basic foundation in which clinical experience and experiential learning in the clinical phase can be established. The didactic phase, also known as “pre-clinical phase” traditionally involves intensive classroom time with some skill development and simulation. In PA education, this typically lasts for 12-18 months per cohort and is taught by PA faculty, the majority of whom are licensed PAs.

Clinical phase education- The phase of medical education programming that occurs after the didactic phase and is characterized by hands-on, patient care experience. In PA education, this occurs under the supervision of preceptors who are typically practicing physicians or PAs, and students rotate through different practice locations for one year gaining experience and mentoring in different areas of medical practice.

Theoretical Framework

Self-efficacy theory provided the underpinnings for this study and the lens through which the data was interpreted. Self-efficacy theory, although rooted in aspects of cognitive and social psychology, has broad application in areas outside of psychology and has more recently been applied to behavior and experiences in education and even more specifically, medical education (Artino, 2012; Artino et al., 2012; Sobral, 1998; Zimmerman, 2000; Zimmerman & Bandura, 1994). This section outlines the fundamental aspects of self-efficacy theory, its implications on behavior, its application to the education environment, and its relevance to medical education. It then provides critiques of the theory and concludes by summarizing specific links to the process of developing professional identity, the main phenomenon of this study.

Bandura (1977, 1986) first described self-efficacy theory in the late 1970s, defining the theory as the capability of an individual to behave to attain a certain type of outcome. An
individual’s self-efficacy, Bandura (1977) explains, is developed and influenced by experiences in four different categories: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Each of these aspects is described below.

The first influential component of self-efficacy theory described by Bandura (1977), performance accomplishments, is based on the idea that an individual mastering a certain experience and behavior will lead to an increase in an expectation of themselves, and the opposite being true, that experiencing failure at a certain behavior will decrease their expectation. He notes this is especially significant if the failure occurs early in a process (Bandura, 1977). Furthermore, Bandura (1977) found that after mastery successes were established and strong, the effect of the subsequent failures were reduced. Improvement in self-efficacy through accomplishments in one specific area also transfers to other areas (Bandura, 1977). This highlights the importance of building self-efficacy in individuals early on, as they embark on any experience that may influence by their beliefs. Self-efficacy can be strengthened in this way by what he calls “modes of induction”, one of which is participant modeling, a way in which individuals simulate behaviors that encourage success when applied to other situations (Bandura, 1997; 1982). He also identifies other modes of induction for performance accomplishments in the process of performance desensitization, performance exposure, and self-instructed performance (Bandura, 1997; 1982).

Vicarious experiences, the second major influence on self-efficacy, is based on the idea that in order to build self-efficacy, individuals should see others doing the same behavior without consequence. By doing this, they will then start to develop their own sense of expectations regarding that activity (Bandura, 1977). Although Bandura (1977) notes this influence is not as strong as accomplishment from one’s own behavior, he does point to the value of a person
witnessing another being successful and how it encourages them to be successful in the same behavior. This can be accomplished by observing both live modeling and symbolic modeling of behaviors (Bandura, 1977).

The third source of self-efficacy is verbal persuasion, the premise that an individual’s beliefs can be influenced positively by the very act of someone telling them so (Bandura, 1977). Bandura (1977) notes this, like vicarious experiences, is not as strong an influence as personal accomplishments because it is not lived by the individual itself, but over time, in conjunction with other support, it can enhance self-efficacy. He did find that those individuals who received encouragement in a task over time were more likely to put forth more effort than those who did not (Bandura, 1977). Within verbal persuasion, he identifies the modes of suggestion, exhortation, self-instruction, and interpretive treatments.

The final source of influence on self-efficacy is emotional arousal. Specifically, Bandura (1977) revealed that high stress and high anxiety can be detrimental to success and can actually inhibit the development of coping skills, which then leads to real deficits in competency. By avoiding experiences that cause stress, students may actually be hurting their coping abilities. In developing self-efficacy, the goal is to reduce this emotional arousal and encourage individuals to confront difficult situations. Work in reinforcing an individual’s belief that they can succeed beyond these emotionally stressing influences will work over time (Bandura, 1977). He notes the inverse relationship of performance accomplishments and emotional arousal explaining that the “higher the induced level of self-efficacy, the higher the performance accomplishments, and the lower the emotional arousal” (Bandura, 1982, p. 122). Bandura describes attribution, relaxation and biofeedback, symbolic desensitization and symbolic exposure as modes of induction for this source (Bandura, 1977).
Although there are some specific features of self-efficacy that are more relevant in social psychology settings (desensitization and interpretive treatments for example), self-efficacy has been found to have a broad application in educational settings and has more recently been described as an important factor medical education (Artino, 2012; Artino, et al., 2012; Artino, La Rochelle, & Durning, 2010; Cleland, Knight, Rees, Tracey, & Bond, 2008; Sobral, 1998). The theoretical underpinnings of Bandura’s theory have direct implications to the qualities that relate to developing professional identity, and the following sections will further explore these connections.

**The Relationship of Self-Efficacy and Behavior**

The following section provides data that connects self-efficacy theory and behavior to this research. Developing professional identity, the phenomenon in this study, is a complex process that is influenced by behavior (Monrouxe, 2010). Furthermore, self-efficacy influences behavior and is also influenced by behavior; the following section explores that complex relationship.

Self-efficacy influences an individual’s choice in activity, affects their ability to cope, guides their level of effort in their actions, and contributes to persistence in a certain behavior (Bandura, 1977). It influences behavior broadly through thoughts, actions, emotional stress, coping behavior, stress reactions, self-regulation, resignation, despondency, and even career pursuits (Bandura, 1982). Persistence itself, for instance, increases the likelihood that a person will succeed and there are established links between higher levels of self-efficacy and persistence (Bandura & Schunk, 1981). These influences can also further direct an individual in their career, their motivation, their performance, and their confidence (Bandura, 1982; Bandura, 1997; Bandura & Locke, 2003). Although this study explores aspects of professional identity
development in students who have already chosen a career, the way in which they make sense of that choice and how they experience the process is particularly relevant.

Bandura also notes self-efficacy is regulated through processes that involve cognitive, motivational, affective, and decisional thinking (Bandura, 1997). These processes influence how an individual thinks about himself or herself in self-enhancing or self-debilitating ways, how motivated they are, or how well they might persevere in the face of difficult challenges (Bandura & Locke, 2003). They also influence the emotional wellbeing of an individual and their vulnerability to stress and depression (Bandura 1997; Bandura & Locke, 2003). People choose to perform with confidence the tasks they feel they are capable to accomplish and avoid the tasks they feel exceed their capabilities (Bandura, 1982).

Self-efficacy also influences behavior through its relationship to beliefs. Bandura states that beliefs regulate the normal process of human functioning several different ways (1997), helping to shape events across all aspects of an individual’s life (Bandura, 1982). Self-efficacy developed in an individual as a result of a cognitive process requires an individual to absorb and process their experiences; it is better developed through authentic experiences rather than symbolic or simulated ones (Bandura, 1977). Witnessing a personal model a certain behavior develops self-efficacy by illuminating skills in coping that may not be yet developed (Bandura, 1977). In studies with children, the self-efficacy gained from these types of experiences was dependent on the children’s perception of their experiences and depended on the amount of personal and situational meaning they experienced as a result (Bandura & Schunk, 1981); assigning meaning to experiences is an important part of the process. Goals also have an important role in how self-efficacy is developed. Bandura describes “proximal goals” - goals that allow the person to build satisfaction with the meeting of each subgoal, and these, he states,
promote higher levels of self-efficacy (Bandura, 1982). Subgoals then encourage more self-directed learning, which in turn, circle back to contribute to a better sense of self-efficacy (Bandura, 1982).

Self-efficacy itself is influenced by several factors as well. Success with minimal effort builds more self-efficacy than success with a larger effort (Bandura, 1977). Authentic experiences requiring a larger effort have the potential to build confidence but not necessarily self-efficacy because individuals often credit their success to factors other than their own belief in their own abilities (Bandura, 1977). Additionally, there are certain predictors for success in the ability to change behavior. One of these predictors is that self-efficacy outweighs past performance, and that partial mastery of a behavior or skill that stems from self-efficacy is able to predict future success in a task not previously attempted (Bandura, 1977). Bandura also notes that as a person advances in their mastery of a skill, their self-efficacy increases (1982). Because individuals are influenced more by their perception of experience rather than their actual experience, self-efficacy was a high predictor of success rather than a previous success in the same task (Bandura, 1982). This implies that it is not enough just to have the skills and the knowledge to complete a task, but that one must have the belief that they can accomplish it – under both typical and difficult circumstances (Artino et al., 2012).

High or low levels of self-efficacy can influence behavior in different ways. In studies with children, those with goals that were attainable had higher levels of interest, self-direction, and interest (Bandura & Schunk, 1981). Low self-efficacy can encourage certain behaviors because being uncertain about a task or activity actually helps one to prepare for it (Bandura, 1982). The best combination of high and low self-efficacy, it seems, is when one possesses a
healthy dose of uncertainty to promote preparation in knowledge and skill but with a strong sense of self-efficacy that helps to protect against failure (Bandura, 1982).

Individuals themselves perceive their own sense of how self-efficacious they happen to be in regards to certain behaviors. Perceived self-efficacy, what Bandura (1982) describes as how well “one can execute courses of action required to deal with prospective situations” (p. 122) requires the ability to manage changing circumstances. One’s perception of self-efficacy affects how well an individual may execute a task, and how their misconceptions of self-efficacy could produce adverse circumstances (Bandura, 1982). Therefore, it is important to have an accurate perception of one’s own self-efficacy. Bandura (1982) finds that children’s perception of high self-efficacy in a learning environment leads to higher levels of learning and better cognitive effort in material they perceived as difficult. For material determined is easy, however, higher levels of self-efficacy lead to less investment and poor learning. Interestingly, individuals may experience contradictions between their own experience and their perception of self-efficacy. This is due to the fact that little change in behavior occurs because this mismatch leads them to discount the value of their experience (Bandura, 1977). Self-efficacy does not always align with one’s actual ability and can produce an overestimation of true ability.

A person can benefit from experiences that utilize self-efficacy to build skills and mastery. Bandura describe this process as “using powerful induction procedure initially to develop capabilities then removing external aids to verify personal efficacy then finally using self-directed mastery to strengthen and generalize expectation of personal efficacy” (1977, p. 202).

Finally, it is worthwhile to note how self-efficacy differs from self-esteem because of its relationship to context. Self-efficacy has a contextual component that connects a person to their
environment whereas self-esteem does not (Artino et al., 2012). In this study investigating a process that is context dependent such as professional identity, this distinction is important to make.

**Academic Self-Efficacy**

In order to best understand self-efficacy, Bandura (1977) notes that it must to considered in some context, where expectations and circumstances are well-defined. Kitsantas and Zimmerman (2009) illustrate how self-efficacy in the academic context aligns well with the social and intellectual elements of Vygotsky’s well-established work in educational theory. They have studied academic self-efficacy’s influence on a student perceptions of responsibilities tied to being a learner and described this “academic self-efficacy” as an individual’s “capacity to self-regulate various forms of academic learning, such as studying and test preparation.” (Kitsantas & Zimmerman, 2009, p. 97-98).

Self-efficacy has an influence on overall ability (Schunk, 1989); in the academic context, ability typically refers to academic achievement. In studies of children regarding their basic academic abilities, children with stronger beliefs in their abilities (high self-efficacy) set higher goals, applied themselves in academic tasks, showed more persistence in difficult tasks, had better control over their work time, were flexible in their ability to problem solve, and scored higher in academic activities than those with lower self-efficacy (Bouffard-Bouchard, Parent, & Larivee, 1991; Schunk, 1984; Zimmerman & Bandura, 1994). Academic self-efficacy has been shown in various academic settings to predict student engagement in cognitive activities and can predict overall achievement because self-efficacy impacts academic functioning. Furthermore, in higher education, higher self-efficacy affects the ability of a student to prepare for the career they
choose (Schunk, 1984) and should be considered when examining how a student progresses in their professional identity development.

Self-efficacy also influences the ability of an individual to develop skills that are integral in the academic environment. The perception of self-efficacy, for example, impacts a student’s goals in regards to the specific skill of writing (Zimmerman & Bandura, 1994). Self-efficacy is identified as one of the major constructs in the process of self-regulation (Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011) and students who do better at self-regulation do better academically than those with poor self-regulation skills (Zimmerman & Bandura, 1994). The degree to which students take responsibility and have an active role in their learning influences how they set goals, self-monitor, and self-evaluate; these can be predictive of their academic achievement in school and on standardized tests (Kitsantas & Zimmerman, 2009).

The effects of low and high levels of self-efficacy in the academic environment are important to note. Poor self-efficacy negatively influences a student in an academic environment; it can undermine motivation and dismantle self-regulation, an essential skill in the learning process (Bandura, 1997; Pajares, 1996; Zimmerman, 2002). Poor self-efficacy can also lead students to devalue a task, which also undermines their learning (Bandura, 1997; Pajares, 1996). It can lead to the breakdown of their ability to self-regulate, which influences their ability to concentrate in the classroom, prepare for exams, or even attend school in the first place (Zimmerman, 2002). Students with lower levels of self-efficacy have been found to cling to fears and avoid situations that may benefit them academically (Bandura, 1977) and in the higher education context, this can produce disastrous results. Higher self-efficacy in students helps protect them against “feelings of futility and despondency” (Bandura, et al, 1996, p. 1217). In one study, students with higher self-efficacy were found to have higher grade-point averages
Students with higher levels of self-efficacy were also found to be more engaged in certain activities and able to persist in their effort for longer in challenging situations (Bandura, 1977; Bandura & Schunk, 1981). There are correlations between high self-efficacy and a better ability to achieve deep learning (Sobral, 1997), an important concept in professional training.

There is evidence that incorporating efforts to improve self-efficacy into academic settings is worthwhile. Cleary and Zimmerman make the case for using self-efficacy in schools to encourage student empowerment (2004). There has been a call for educators to help their students develop their own self-efficacy (Artino et al., 2012). Because self-efficacy affects academic achievement, engagement, and function in an academic environment, it is thought that better the self-efficacy a student develops, the better they will be prepared for their future careers (Bandura, et al., 1996). Some teaching strategies serve to promote self-efficacy in the classroom. Problem-based learning is one such strategy that improves self-efficacy because of the way it develops autonomy, responsibility, and self-awareness (Bédard, Lison, Dalle, Côté, & Boutin, 2012). Assignments tailored to the student’s interests and level of achievement may also help to encourage motivation and success (Bembenutty, 2009) as they indirectly improve self-efficacy.

**Critiques of Self-Efficacy Theory**

Although self-efficacy theory has been widely applied in a variety of settings, the theory is not without its critics. The main critiques of self-efficacy are focused on its lack of emphasis on the role the environment can play in certain behaviors and the importance of separating the expectation and perceptions of behavior by an individual. Some critics feel that variables like environment should be shifted back more into focus when studying learning behaviors (Kirsch, 1980; Kirsch & Wickless, 1983).
Biglan (1987) provides a critique of Bandura’s self-efficacy theory based on the idea that it “deemphasizes the role of the environment in determining behavior” (p. 1). He approaches his differing points from a behavioral-analytic approach, and at the time of his writings, refers most difficulties using self-efficacy theory to treat psychological behaviors. He continues his critique by citing areas in which he believes the environment plays a more significant role in behavior than can be attributed to self-efficacy alone, and he asserts that behaviors that result from self-efficacy are not as strong as have been said (Biglan, 1987). He references several studies that provide evidence that this behavior is not as strongly linked (Kirsch 1980; Kirsch & Wickless, 1983). Lane and Borkovec (1984) note that higher self-efficacy may decrease self-reported anxiety but in the treatment context, actually did less to influence behavior. Tryon’s (1981) critique of self-efficacy theory emphasizes a lack of exploration, on Bandura’s part, into alternative explanations for changes in behavior. He, too, questioned the effects of context on the ability of the person to perform the behavior (Tryon, 1981). More recently, Shapiro, Schwartz, & Astin (1996) note that in their examination of the ability of people to take control of their behavior, they found that a person’s strong sense of self-efficacy might be detrimental when presented with elements beyond their control.

Interestingly, there are fewer critiques of Bandura’s theory in more recent literature and there is strong support for the applications of self-efficacy theory in contexts outside of the psychological realm, such as education (Kitsantas & Zimmerman, 2009; Schunck, 1984; Schunk, 1989).

**Rationale**

As a theoretical lens, self-efficacy theory provides a useful and powerful way to view a PA student’s sense of developing professional identity. Because high levels of self-efficacy
encourage certain behaviors and low level discourage others, it was not known to what extent self-efficacy affects the development of professional identity in PA students and vice versa. Qualities of experience that related to professional identity, such as motivation, performance, and confidence, when viewed through the lens of self-efficacy theory within an interpretative phenomenological analysis approach, further illuminated how PA students made sense of their process.

The following section describes the application of self-efficacy theory and its influence on behavior, in the academic environment, and in the medical educational context by exploring connections to professional identity in current literature.

Chapter Two: Literature Review

This study examined how didactic PA students explained and made sense of their experiences that influenced the process of professional identity development. Professional identity naturally develops in all students of medicine as learn; they transform from novices to experienced students and eventually, to practitioners. Development of professional identity in the didactic phase of medical education is found to influence academic success and allow for better transitions to the clinical phase and professional practice (Finn et al., 2010). Currently, there is no mandate for teaching professional identity, however the implications for students as future healthcare providers are significant. This literature review will examine studies on physician assistant education in the context of medical education, self-efficacy, and professional identity development.

**Physician Assistant Education in the Context of Medical Education**

The physician assistant (PA) profession is a relatively new career in medicine that began in the 1960s to respond to the growing need for healthcare providers in the United States (Jones
& Cawley, 1994; Nassar & Bethel, 2009; Weiler, 1975). Modeled from the military, the profession was originally designed to give medical corpsmen returning from Vietnam a job when they returned home (Jones & Cawley, 1994; Jones, 2007). The profession was created with the vision to work with physicians and nurses to fill a gap that existed for primary care practice and increasing access to basic medical services, geographic gaps, and health care costs (Jones & Cawley, 1994). The following section describes the reasons for situating PA education within the medical model and the philosophies that have shaped teaching and learning in this medical education context.

**Physician Assistant Education and the Medical Model**

Physician assistant education provides medical education and skilled training in a condensed curriculum distributed in the medical model (Jones & Cawley, 1994; Legler, Cawley, & Fenn, 2007; Weiler, 1975). Because PAs are trained to practice alongside physicians, their education is structured in the same fashion (Jones, 2007). The original foundations of educational requirements for the PA profession were drafted in 1971 in a joint effort of the American Medical Association, the American Academy of Family Physicians, the American College of Physicians, and the American Academy of Pediatrics, and the American Society of Internal Medicine in 1971 (Jones & Cawley, 1994). The education requirements were revised and are now managed by the Accreditation and Review Commission for the Education of the Physician Assistant. Since then, the profession has grown in response to educational initiatives from the government based on the healthcare needs of the country. Physician assistant programs have become well recognized and are described as progressive and innovative due to their model of teaching and learning (Legler, et al., 2007). As of 2017, there are 209 accredited programs (PAEA, 2017).
The traditional medical model, although condensed in PA education, teaches the basic foundations of medicine in a classroom followed by practical application in a practice settings and clinical rotations (Jones & Cawley, 1994; Ruckert et al., 2014) and was established in medical school settings in the wake of the Flexner report of 1910 (Whitehead, 1948). Very little has truly changed in the structure of medical education since the Flexner report. The creation of the PA profession, however, was supported by reports that some aspects of physician and nursing education did not seem to meet the needs of the healthcare community (Weiler, 1975).

The basic education process for PAs includes both didactic and clinical phases. This dual-phase PA educational structure is designed to prepare practitioners efficiently and produce working professionals in about two years (PAEA, 2017). The didactic or pre-clinical phase serves to strengthen scientific and medical knowledge, introduces students to critical thinking and problem solving in a medical context, and provides a basic foundation in which clinical experience and experiential learning in the clinical phase can be established (Jones & Cawley, 1994; Ruckert et al., 2014). The didactic phase traditionally involves intensive classroom time with a small focus on development of basic medical skills and simulation experiences. The clinical phase is characterized by hands-on patient care under the supervision of preceptors who are current practitioners in different fields of medicine. Students in the clinical phase rotate through different medical disciplines for approximately one year gaining practice experience and mentoring in a many of aspects of medical practice.

Over time, there has been a call to reexamine aspects of the didactic phase of medical education to address changes and innovations in medical education. There is a desire to move away from lecture-based instruction, incorporating small group and case-based learning to make didactic instruction more efficient, to be more meaningful to the students, and emphasize student
well-being in curriculum (DeZee, Artino, Elnicki, Hemmer, & Durning, 2012). There is also a
desire to initiate student-patient contact earlier in educational experiences with the hope of
making learning more efficient and to help students discover the relevancy of the material they
are learning to practice (DeZee, et al., 2012). It remains to be seen that changes to the current
system may actually result in better patient care by the graduates (DeZee, et al., 2012), and this
remains a topic of discussion for educators in medicine.

Medical Education

Traditional medical education philosophies employ the scaffolding approach, beginning
with skill competency and knowledge building, followed by practical application (Beckett &
Gough, 2004; Bowe, Ross, & Aretz, 2009). Educational literature describes the didactic phase as
primarily for the purposes of knowledge building in a more passive learning context (Ruckert et
al., 2014) and has long touted the benefit of the clinical phase for establishing higher level skills
such as problem-solving, decision-making, critical thinking, application of learning and
professional identity development (Beckett & Gough, 2004; Finn et al., 2010; Ruckert et al.,
2014). Recent research reveals, however, that many of the more complex skills needed in
medical practice should be taught and developed early in the didactic phase so that students can
transition more easily in the clinical phase and so that new practitioners can better meet the
changing demands of medicine (Finn et al., 2010; Ginsburg & Lingard, 2011; Irby, 2011;
Monrouxe, 2011; Shiner & Howe, 2013).

Medical education, in general, can be thought of as a transformative process that involves
learning material and socializing into an established culture and profession (Mann, 2011). Within
this process of establishing culture and socialization lies professional identity (Mann, 2011) and
professional identity is one of the aspect of development of a practitioner that is often
overlooked, especially so in the didactic phase (Finn et al., 2010). Ginsburg & Lingard (2011) note that students enter their medical education programs with formed ideas on humanism and professional responsibility before they even begin to care to real patients, but what they don’t know is how they are going to apply those ideas in their learning or future practice. The term “identification” is what Monrouxe (2010) coins as the process of professional identity development and also identifies it as something that an individual does, not that an individual inherently possesses (Monrouxe, 2010). She notes that identification is central to medical education and that there are three major themes: individual, interactional, and institutional (Monrouxe, 2010).

Conclusion. Because the PA profession is the relative newcomer in an established system, PA education literature has generally been focused on clinical aspects of the profession and its position in the medical community. Physician assistant educators, however, are beginning to study PA education as its own process. The academic demands of PA students are very similar to medical students training to be physicians, and PA students are found to suffer similar stressors that affect performance, attitudes, and the ability to cope (Kuhn, Kranz, Koo, Cossio, & Lund, 2005). The dearth in PA education literature, however, is one of the main motivations of this study.

Self-Efficacy and Medical Education

Self-efficacy and self-efficacy theory have broad applications to the medical education context (Artino, 2012; Artino, et al., 2010; Artino, et al., 2012; Cleland, Knight, Rees, Tracey, & Bond, 2008; Sobral, 1998). Self-efficacy influences the process of learning within the medical education structure and is also influenced by a variety of factors. The following section describes
how self-efficacy influences the process of learning within the medical education context and how certain factors, in turn, influence self-efficacy.

**Self-Efficacy and the Medical Education Process**

Although self-efficacy theory was first described by the 1970s by Bandura for use in the field of social psychology, its application to education followed and became known as academic self-efficacy (Kitsantas and Zimmerman, 2009; Artino, 2012). Medical education researchers then utilized academic self-efficacy to study how medical students experienced their studies and found to broad significance of self-efficacy to this specialized type of teaching and learning (Artino, et al., 2012).

**Achievement.** In medical education, the higher the student’s self-efficacy, the higher the chances for his/her success (Artino, et al., 2012). Standardized tests and clinical outcomes are often the main measures of student success in medical education even though they only measure the cognitive realm and aspects of academic success (Artino, et al., 2010). In medical education, there is less attention placed on non-academic factors such as motivation; these factors, however, can have a significant impact on student success (Artino, et al., 2012). Self-efficacy, one aspect that affects motivation, has been shown to directly influence student success (Artino, et al., 2010; Plant, Schaik, Sliwka, Boscardin, & Sullivan, 2011; Artino, Hemmer, & Durning, 2011).

Motivation itself can be thought of as having several components- perceived value of a task, perception of self-efficacy, and belief about control of the learning itself (Sobral, 2004). This supports the premise in a medical learner that the higher the self-efficacy, the higher the internal motivation student may have. Therefore, to consider motivation as a key element of learning as the literature supports (Pelaccia, et al, 2009), one must consider self-efficacy as key component. There is also an interesting relationship between self-efficacy and competence; there is no
guarantee of correct application of knowledge and skill simply because a student has learned the material (Artino, et al., 2012). Artino et al. (2012) call for the need of both “the skill and the will” (p. 38).

**Didactic and clinical phase education.** There are differences in how self-efficacy is developed and shaped in the different learning phases within the typical medical education structure. It is known that clinical (or non-didactic) interactions have the ability to further the development of self-efficacy in students; this phase provides experiences that empower students as they learn to develop meaningful relationships with preceptors, attendings, and patients (Hauer, et al, 2012). It is also known that the higher the student’s self-efficacy, the more likely they are to persist in a clinical rotation (Hauer, et al, 2012). In studying self-efficacy in the clinical environment, Raat, Schönrock-Adema, van Hell, Kuks, and Cohen-Schotanus (2013) found that clinical settings provided important social aspects of the profession, which in turn influenced self-efficacy. In a study that tested two specific types of self-efficacy, knowledge self-efficacy and skill self-efficacy, the authors found that by having a preclinical experience that tied together evidence from the classroom, both types of self-efficacy increased in students (Johnston, O’Carroll, Hart, & Mcgee, 2004). It is unknown if this increase in self-efficacy would have lasting effects (Johnston et al., 2004).

**Teaching strategies that influence self-efficacy.** Some teaching strategies have been identified as ways to measure and build self-efficacy. Validated tools can measure a medical student’s self-efficacy and are often linked to basic programmatic or professional competencies (Artino, et al., 2012). These tools could be used to encourage more self-efficacy in students (Artino, et al., 2012) and to help them develop strong mentoring and advising relationships. Paige et al. (2011) found that in surgical learning environments, all types of learning increased
self-efficacy; there was no one specific type that increased it more than another. Additionally, simulation activities increased self-efficacy as well as confidence (Paskins, & Peile, 2010). Findings such as these suggest that aspects of hands-on or practical teaching and learning encourage self-efficacy that is absent in the traditional classroom/lecture setting. Outside of the lecture environment, tutoring and providing feedback that provides defined areas of improvement and goals for future progress have also been found to increase self-efficacy (Hopstock, 2008). By using specific strategies during the didactic phase, medical educators could promote self-efficacy in the classroom.

**Faculty influence on self-efficacy.** Faculty play an integral role in developing self-efficacy in medical students. The self-efficacy of the faculty can influence their ability to give feedback to students, which has been established as an important component in the process of building self-efficacy in students (Hopstock, 2008; Feldman, Arean, Marshall, Lovett, & O’Sullivan, 2010). Through formal mentoring relationships with faculty or peers, students can develop better self-efficacy (Feldman et al, 2010). Some researchers even find that students with higher self-efficacy gained through mentoring have better research skills and leadership skills, which helps in their academic achievement and increased program persistence (Feldman et al, 2010). Students can attribute their failures to internal factors; this, in turn, can reduced their self-efficacy (Cohen & Dennick, 2009). Mentoring relationships that guide students to examine external and modifiable factors would likely benefit their self-efficacy development.

**Individual Factors that Influence Self-Efficacy**

Self-efficacy is also influence by a variety of characteristics unique to individual learners including those ingrained in aspects of personality, emotional expression and gender. Although
the expression of these factors depends on each individual student, it is important to explore these findings and how they are situated in the literature.

**Achieving a balance of perceived self-efficacy.** Bandura (1977) describes that when individuals overestimate their self-efficacy, they may be better able to overcome situations that are difficult. In medical education, however, this must be considered carefully. An overestimation of self-efficacy in a medical student could potentially lead to considering more dangerous patient outcomes and an underestimation could lead to decreased confidence and inability to persevere in their studies (Artino, et al., 2012). This emphasizes the need to incorporate aspects of self-efficacy in the educational process. Educators should seek ways to encourage the positive effects of self-efficacy on drive and achievement while discouraging self-efficacy that could make for poor and disastrous patient outcomes.

**Emotions and self-efficacy.** A medical student’s emotions have an interesting influence on self-efficacy. Medical students with higher levels of self-efficacy in learning material are less likely to have anxiety (Artino, et al., 2010). Considering, however, there is a level of stress and anxiety that is beneficial to the decision-making process that medical students are learning to develop (DeMaria et al., 2010), there must be an effort by educators to ensure stress and anxiety does not detrimentally affect self-efficacy. This balance, however, may be difficult to achieve. Some researchers say that resiliency rather than self-efficacy should be the focus in medical education because of how it works to discourage burnout and stress (Dyrbye & Shanafelt, 2012). The complex interplay of emotions and learning behavior, however, is beyond the scope of this study.

**Gender and self-efficacy.** Another interesting aspect of self-efficacy in medical students is the way in which it manifests in genders (Moulton, Seemann, & Webster, 2013). The
differences in self-efficacy of men and women are seen especially in scientific, mathematical, and technical professions (Zeldin & Pajares, 2000). Women have been found to be more uncertain, while men more confident (Pajares, 2002). Again, the gender differences in the literature are generalizations and not necessarily applicable to all students who identify with a specific gender. Gender considerations are especially important in PA education; the most recent publication on student demographics reported that 72% of PA students identify as female (PAEA, 2017).

In the medical education setting, researchers have found that males perform better on examinations in environments that lead to some level of anxiety whereas females perform worse in environments of anxiety (Chaput de Saintounge & Dunn, 2001). Women attribute their success more to self-efficacy, and when they do experience failure, they attribute it more to a personal responsibility rather than poor performance (Chaput de Saintounge & Dunn, 2001). Women connect self-efficacy to their perceptions of their learning environment, while men do not (Chaput de Saintounge & Dunn, 2001). Women with low self-efficacy become overwhelmed and underachieve; in contrast, women with high self-efficacy attribute aspects of their surrounding environment to the source of success (Chaput de Saintounge & Dunn, 2001). Men seem to do better in competitive situations in medical education than women, but women seem to outperform men in situations that require cooperation (Chaput de Saintounge & Dunn, 2001). Men have been found develop self-efficacy from internal sources, while women look to their learning environment; this reliance on the environment, especially if appearing unsupportive, may potentially affect their performance more than the men (Chaput de Saintounge & Dunn, 2001). Interestingly, negative experiences that occur in real situations to high-achieving women guide them to reexamine their self-efficacy and focus on more realistic goals because it
convinces them that their self-efficacy is exaggerated. Those women who are low-achieving, however, are not found to have the same response, and instead of reevaluating their goals to something more realistic, they will continue to attempt to achieve and outcome that, for them, is likely unachievable (Chaput de Saintounge & Dunn, 2001).

Because of some of the gender differences in self-efficacy, the internal and external requirements for students to be successful may differ depending on gender. Male learners may need goals that can be internalized and may need to participate in setting these goals themselves to be the most effective (Chaput de Saintounge & Dunn, 2001). If assessments are aligned with these goals, poor performance may point to a mismatch in goals rather than lack of learning (Chaput de Saintounge & Dunn, 2001). There may also be benefit from men comparing their own achievement against the goals they set for themselves because some of the anxiety this process creates encourages better success and performance (Chaput de Saintounge & Dunn, 2001). Female learners, on the other hand, are more responsive to their environment and may accept more responsibility for “the integrity of the learning environment” (Chaput de Saintounge, 2001, p. 1032). They may respond more positivity to feedback on their performance from outside sources, and may have a higher tolerance for a negative environment than men (Chaput de Saintounge & Dunn, 2001). Anxiety in women leads to worse outcomes on assessments, in contrast to men, and poor performance may be an indication of a perception of poor learning environment, rather than poor learning (Chaput de Saintounge & Dunn, 2001). Women then, may be more sensitive to levels of expectations from teachers, the curriculum, and parts of their learning environment that are not under their control (Chaput de Saintounge & Dunn, 2001).
Conclusion. Self-efficacy theory is integrated in literature that examines how a medical student progresses through each phase of their education (Artino, et al., 2010; Artino, et al., 2012). It also has implications in how students learn to build communication skills that affect their ability to communicate with colleagues and patients (Cohen & Dennick, 2009). This may be the most important reason for examining self-efficacy in the medical education and PA context. There are fewer opportunities for building self-efficacy in the didactic phase because of the limitations to classroom-based teaching and learning, however, through deliberate programmatic design and faculty involvement, the classroom could become a place for meaningful work building self-efficacy for students. Medical educators should take into considering the possible aspects of personality or characteristics of individual learners and seek to find ways to encourage success through self-efficacy and work to avoid the interactions that may break down the process. The aim for all medical education programs is to graduate competent and skilled caregivers and professionals. Because self-efficacy influences how a student will succeed, it should be taken into consideration when examining the medical student’s educational experience.

Professional Identity

Developing professional identity is an important step in the complex process of gaining the right knowledge and skills to become a health care professional. The process of developing professional identity, or identification, is multifactorial and iterative (Black et al., 2010; Monrouxe, 2010; Wong, Trollope-Kumar, 2014, Mann, 2011). It is influenced by aspects unique to a person, the environment in which they are placed, and the structure of the process in which they are placed. The following section explores each of these aspects in detail.

Personal Aspects of Developing Professional Identity
The process of identification itself is complex and is influenced by many factors unique to an individual. There are many ways to define the entire process of professional identity development, and Irby (2011) combines several into his own definition: “identity formation that involves the process of becoming a professional through expanding one’s knowledge understanding and skillful performance, through engagement with other members of the profession and by deepening one’s commitment to the values disposition and aspirations of the profession into habits of the mind and heart” (p. 549). The process is complex, multi-dimensional process and iterative (Black et al., 2010; Wong & Trollope-Kumar, 2014) and there are aspects of established beliefs and attitudes that individual bring with them at the very start of the process. Hilton and Slotnick (2005) describe the proto-professional phase describing pre-clinical students, in which professional identity is being established early on in medical education. These prior beliefs attitudes, and experiences are also greatly influenced by an individual’s emotions (Black et al., 2010; Helmich, et al., 2012). Wong and Trollope-Kumar (2014) describe the process similarly as dynamic, discursive, iterative, and note that students build on what they have already learned as they go through “increasingly sophisticated understandings” (p. 500) of their identity. Goldie (2012) describes the formation of identity in medical education as “multiple, dynamic, relational, situated, embedded in relations of power, negotiable” (p. e641). The importance of the process during a student’s journey in education and professional training is easily justified.

The process of developing professional identity. The process of developing professional identity has been widely studied and occurs in a scaffolded or stage-type process. (Beckett & Gough, 2004; Black et al., 2010; Ginsburg & Lingard, 2011; Wong & Trollope-Kumar, 2014; Monrouxe, 2010). In physical therapy students, one study found that by gradually
introducing students to the aspects of a real practice community, the students gained confidence and trust in their own knowledge and abilities (Black et al., 2010), which in turn influenced their identity development.

The stages of development are fluid, not lock-step, but they are context dependent; the way in which an individual student progresses in their own identity is dependent on their prior experiences and their individual situations (Ginsburg & Lingard, 2011) and require that students use their prior experience on which they scaffold and build throughout their training. Shiner and Howe (2013) describe the transition from medical trainee to practitioner and identify professional identity as an important factor in how students learn to thrive as an “expert learner”, an attribute they need in future practice in medicine. Professional identity is influenced by experiences before and during medical training, and there is constant negotiation between prior established identities and new emerging ones (Thistlethwaite, 2014).

Previously established identities or “primary identifications” that are present in each individual before they enter medical education such as gender, ethnicity, and social class will also influence how an individual student creates their own professional identity (Monrouxe, 2010). Changes in technology, age, individual experience also influence how identity is developed (Johnson et al., 2012) and are considerations that educators must keep in mind as they think about professional identity in the future.

**Emotion.** Emotions have a significant role in the process of establishing professional identity. In a study where students identified experiences in which they applied a new professional identity, they described a significant emotional effect (Helmich et al., 2012). Early on in training, they also felt insecure (Helmich et al., 2012). They shared that once in professional programs, the emotions they attributed positively to choosing their profession were
soon perceived as barriers to progressing (Helmich et al., 2012). Students often describe that feeling or displaying their emotions is counter to what they are being taught as professional practitioners (Helmich et al., 2012). They are required to socialize but withhold their emotions and they learn to minimize the impact of their emotions, internalize them, and avoid discussing them in their educational environment (Helmich et al., 2012). Practicing medicine has emotional consequences and traditionally, students are taught at the very beginning of medical training that their own emotions have little place in caring for patients. Knowing the significance of emotional aspects of a student’s experience tied to the process of developing professional identity can help to illuminate the complexities that may be causing confusion and frustration in students.

Identity dissonance. Monrouxe (2010) introduces the idea that integrating a new professional identity is easier for students who have already established identities that are congruent with their professional career choice. For those students who do not, however, it can be a difficult and even traumatic experience to approach a new career that carries a different set of values, a different perspective on work ethic, and a different orientation with emotion (Monrouxe, 2010). This difference can then lead to disruptions in emotions and uncertainties about a professions or course of study. Students can struggle with their separate identities as a learner and as an individual and can be resentful where there is conflict between the two (Finn et al., 2010). Monrouxe describes medical students as people with cultural, personal, and emotional stories that they bring to their education (Monrouxe, 2010). Very soon into their educational process, as students begin to discover the role of a medical practitioner, they are expected to shed those emotions (Ginsburg & Lingard, 2011). It begs the question as to how can they shed those emotions and still be in touch with their professional identities as they develop.
Another cause of dissonance is how students perceive the acceptance of two distinct identities in their communities and social circles - one as a medical provider and one as a their own unique person. There is data to support that this difference in identity leads students to utilize “identity negotiation”; using different identities in different situations such as using different names on social media or using different privacy settings to separate the two (Finn et al., 2010). Students can see that there might be conflicts between their personal rights and beliefs and the ideas of the profession; early on in their education, they lack an understanding of how the two are inextricably linked (Finn et al., 2010). This leads to their perceptions that criticisms of them in professional contexts are directly linked to criticisms of them personally (Finn et al., 2010). In inquiring about perceptions of applying professional standards, students note feeling they have to sacrifice individual freedoms (Finn et al., 2012). This highlights the struggle with navigating established personal identity with emerging professional identity.

When students experience these conflicts and moments of dissonance, there can be consequences to their progression in learning. Monrouxe (2010) describes different ways that students struggling with these conflicts may act out or exhibit maladaptive coping mechanisms: rejecting their profession, dropping out, exhibiting inappropriate interactions, dressing inappropriately to purposefully highlight the areas of conflict, avoiding professional interactions, drinking heavily, and propagating low self-esteem and while raising anxiety. She suggests that females are more likely than males to exhibit these behaviors of concern (Monrouxe, 2010). Medical students know that their behaviors will be scrutinized as they develop professionally, and in those students in whom their identities are misaligned, they may even lose their concepts of identity all together (Finn, et al., 2010).
**Understanding the process.** In order for individual students to be able to navigate the difficult and complex process of identification, they have to be aware of the process and of the multitude of factors that may be influential along the way. Professional identity development requires promoting the concept of being an independent practitioner (Shiner & Howe, 2013). Because it is linked to self-direction and adult learning (Beckett & Gough, 2004) it is valuable to seek more understanding about the complex construction of identity and how it is developed at an individual’s own pace (Perry, 2012; Beckett & Gough, 2004). The social aspects of learning are also very important in the process (Helmich et al., 2012) and creating a learning environment that supports professional identity development is essential. In order for students to begin developing their professional identities, students have to have a realistic understanding of the true aspects of their profession and have to interact with those in the field (Finn et al., 2010; Goldie, 2012). This is difficult in the didactic stage of medical education, when clinical experiences are limited. It is also important to note that changes in technology, age, individual experiences all continuously influence the process (Johnson et al., 2012) and should continue to be studied.

**Interactional Aspect of Developing Professional Identity**

Research confirms that humans learn from their social situations (Beckett & Gough, 2004; Burfor et al., 2013). Social context and the relationship of identification to the environment are important to understand when examining the complexity of professional identity and its development (Thistlethwaite, 2014). Monrouxe (2010) identifies the social aspect of the process of identification and emphasizes the importance of students seeking a place in the world as individuals and members of the professional community. Perry (2012) describes professional identity as “doing professional actions and thinking and relating in professional ways” (p. 56),...
highlighting the important of social aspect of the process. In using concepts of sociology and anthropology, Mann (2011) notes that professional identity development is the combination of individual features but also a social and collaborative process that “includes all the influences and interactions that transpire in the learning environment and occur through the learner’s active engagement” (p. 62). Mann (2011) also notes that the social process cannot be separated from the process of building knowledge and skills and because of that, should be emphasized in context of communities of learning. It is clear that this social interaction is occurring throughout every stage of a student’s medical education and influences how they are developing their identities.

**Social aspects of identification.** The social aspects of the professional identity process can become problematic when students, especially early on in their education, feel as if they do not fit in; they have lower levels of confidence, which inhibit their ability to adjust socially into the process (Johnson et al., 2012).

Shiner and Howe (2013) detail how the process of socialization integrates into the development of professional identity. For adult learners, the transition to professional requires social aspects of support such as inclusion, validation, affirmation, and feedback. The social support, however, must also be balanced by a focus on independent aspects of responsibility that a practitioner must have in the profession (Shiner & Howe, 2013). Social interactions during training affected a student’s ability to feel as if they were an “expert” and increased their confidence in self-direction (Shiner & Howe, 2013). Because of this clear link to the social aspects of identification, there are studies that are now investigating whether or not professional identity can be constructed through online supervising and support, in the absence of more defined social interactions (Perry, 2012). In other studies, when students identified opportunities
when they were included in communities or situated learning, they described positive learning outcomes (Shiner & Howe, 2013). It is known that professional socialization is found to develop in three phases: recruitment, professional preparation, organizational socialization (Finn et al., 2010) and in this process the first two steps are completed without actual interactions with others; and they are usually completed before students enter their medical education programs.

The practice of medicine as a profession can be thought of as a culture. Medical learners are being socialized while they are learning and are experiencing a transformative process in which they are evolving from lay person to professional - and will continue this evolution their entire career (Mann, 2011). Mann (2011) argues that it is not until the transformation has begun that individuals can become full participants and members of their professional communities. This can also be thought of as the process in which an individual learns the roles and responsibilities of a certain profession before assimilating into their professional culture; this occurs early on in education (Finn et al., 2010). There is debate on whether professionalism itself can be learned, but it is known that professional behaviors and attitudes are already established before students enter their programs and they are often confused as to what they should be doing with them (Finn et al., 2010).

Students describe certain social difficulties when it comes to modeling professionalism in social situations. They identify that it is difficult to know when and how a professional atmosphere is appropriate, and that often, although they are aware that professionalism is important, they are unclear as to the related expectations (Finn et al., 2010). They even describe acting professionally to being “like a robot”, that they feel they are being watched and judged, or that it is a burden (Finn et al., 2010). Students are eager to begin to talk in the professional way they have seen demonstrated by their role models and mentors, and even place more importance
on that skill than on mastering the medical content (Gingsburg & Lingard, 2011). Interestingly, there is also a performative aspect of the social development of professional identity. Research suggests that professional identity can be developed even more by storytelling, talking, joking, dressing the part and mimicking (Finn et al., 2010; Monrouxe, 2010).

**Situated learning.** Situated learning, another interactional aspect of education, also has significant impact on professional identity development. Beckett and Gough (2004) describe situated learning as learning that is placed in the appropriate context and culture; this is not congruent with the abstract context and absence of culture that often characterizes didactic phase education.

Situated learning has been shown to develop professional identity in terms of the way in which real situations change perceptions, attitudes, and beliefs of individuals about a profession (Thistlethwaite, 2014). Students have noted that involvement in communities of practice which necessarily include emphasis on social interactions push them further in their beliefs and help them to be more self-directed, self-aware, and also provide them with levels of validation, affirmation, and feedback (Shiner & Howe, 2013). Students have also described that as new practitioners, their inclusion into a community of practice provided a more supportive learning environment and affected their ability to be more self-aware, feel more like “experts”, and be more confident in their self-directed learning (Shiner, & Howe, 2013). Interestingly, a study of clinical students in an online environment found that because of the very complex nature of professional identity development, the process was still occurring, even if not in a traditional situated learning setting (Perry, 2012).

Situated learning opportunities not only provide students more opportunities to apply the medical knowledge they are gaining, but also simulate them to employ learning strategies that
are more helpful to them as adult learners. As students move into a situated community, they become more active and engaged with the culture and start to assume the role of an expert (Beckett & Gough, 2004). In one study of students who were put into environments classified as “situated learning”, it was found that they relied on each other more for understanding of difficult concepts by discussion with groups rather than the traditional didactic way of thinking (Beckett & Gough, 2004). They even pushed each other to discover the multiple perspectives of the group and engaged each other in the possibilities of multiple right answers, not just a single one (Beckett & Gough, 2004).

**Role-modeling.** Role-modeling is another social aspect of learning that contributes to professional identity development. The use of humor influences behavior and beliefs of students and was identified as an indication of acceptance into a practice community by students in clinical settings (Finn et al., 2010).

Researchers identify role-modeling as a fundamental way, if not a primary way, to model professional behavior to students and to be one the best ways to learn professionalism (Finn, et al., 2010). Students imitate the behaviors they see in those they perceive as role-models and they learn how to be clinicians by observing directly the experts or the practitioners that they feel are masters of the material (Finn et al., 2010). It is also important to note that negative role-modeling can just as easily affect a student’s development, but with detrimental results (Finn, et al., 2010; Thistlethwaite, 2104; Gingsburg & Lingard, 2011). Role-models themselves, whether in the classroom or the clinic, should be aware of the responsibilities and power they have over the development of a student or the dynamics of a learning environment (Goldie, 2012). It is important to note that role-modeling and mentoring have not been found to be as effective for minority students because they often do not feel there is a good role-model for them to emulate.
along the way (Goldie, 2012). This should be kept in mind when working with a diverse student body.

**Institutional Aspects of Professional Identity Development**

In PA education, the two institutional components that may impact professional identity in students are the accelerated timeline of the program of study and the limitations of the traditional didactic phase. Research supports the idea that professional identity develops more rapidly in clinical learning, when real patients and social interactions are occurring daily. It also supports that idea that professional identity begins to develop even before the start of schooling and therefore should be addressed early on in the learning process. This next section investigates aspects of professional identity that are influenced by formal curriculum, within the hidden curriculum, and in the didactic phase of education.

**Curriculum factors.** It is essential that curricula facilitate professional identity formation because students who are struggling will have more difficulties with stress and performance (Monrouxe, 2010). Monrouxe (2010) even argues that development of professional identity should be assessed qualitatively during medical education, which it is not commonly done formally in either didactic or clinical phases. In order to formalize development of professional identity, learning environments must promote social situations that maximize student participation, maximize learning from others, build on natural community processes, and minimize barriers to participation (Mann, 2010). Efforts to increase the social aspects of didactic learning employ strategies of problem-based learning, simulation, self-assessment, feedback, longitudinal mentoring, coaching, and role playing to reinforce the knowledge that is being taught (Beckett & Gough, 2004; Irby, 2011). In PA education, these strategies, however, are not
employed in a standardized fashion or typically with the deliberate goal of addressing professional identity.

Students need to have a space to reflect on their identities, mechanisms for recognizing positive contributions and removing disruptive thinking, and to have meaningful conversations about their process with professors (Goldie, 2012; Irby, 2011) to best develop their professional identities. As mentioned earlier, didactic curricula are primarily and traditionally focused on building the foundations of medical knowledge; activities that promote professional identity are not necessarily integrated into this phase. Creating mechanisms for students to learn how to self-monitor, self-assess, self-regulate, and self-direct (Mann, 2011) would allow the space and opportunities for that type of development. As the leaders of the educational community, it is the responsibility of the educators to guide, coach, give feedback and mentor students who are going through the process (Mann, 2011). This presents several challenges. Students have expressed the desired to be self-directed, but early in their education, still want to have guidance and help (Shiner & Howe, 2013). They know they are learning, but are not sure how they will be using or applying their learning (Shiner & Howe, 2013). Often times, professional training is a student’s initial exposure to working under more strict time constraints or having less support than they have had previously (Shiner & Howe, 2013).

Students have commented that teachers who attempt to incorporate non-traditional strategies in the classroom should have more resources to know how to create safe settings for students to share personal reflections, engage fellow students in small groups, and give good feedback (Whiting, Wear, Aultman, & Zupp, 2012). In one study that analyzed student reflections on their “medical school journey”, the authors found students did have insights related to professional identity in analysis of these reflections (Whiting et al., 2012). They found
that role-modeling was very influential on student’s identity development and that students that had a chance to discuss their experiences gave them better insight into themselves. They also found that activities such as weekly discussion groups and reflective writing exercises helped students integrate their experiences and associate formal curriculum into the medical context (Whiting et al., 2012). The study confirmed that faculty have opportunities to create learning environments that students feel are positive and supportive (Whiting et al., 2012).

**The hidden curriculum.** The concept of the hidden curriculum is based on the idea that there are areas of learning that are expected from students, in many different areas, that may not be taught or acknowledged in a formal way. The hidden curriculum, however, has an important role in shaping student perceptions of behavior, their values, the impact of role-modeling, and their insight into how they learn (Finn, et al., 2010). In medical education, the hidden curriculum refers to unwritten rules, attitudes, behavior, use of slang, and expectations of the profession, often relating to the balance of power or issues of ethics that students often have to figure out by trial and error (Thistlethwaite, 2014; Mossop, Dennick, Hammond, & Robbe, 2013). Most medical educators agree that the process of developing of professional identity is emphasized more in the hidden curriculum and often never made explicit to students (Goldie, 2012). The absence of formal acknowledgment of professional identity can undermine the values of professionalism (Irby, 2011) and because these aspects are not formal, they are difficult to assess. Students who received informal feedback regarding professionalism often felt the advice was overly intrusive and was negatively received (Finn, et al., 2010).

Students struggle more when learning expectation are informal (Helmich, et al., 2012), a common criticism of the hidden aspects of curriculum. As Monrouxe (2010) described in the process of identification, interactional components of identity are advanced through activities
and relationships, which, if part of informal curriculum, are then difficult to standardize or assess. She notes the important of giving space for students to talk through situations with others and even practice the ritual-based aspects of thinking and speaking like a doctor. Reflective writing exercises are one of the ways in which students can process this aspect of their education and gain insights and feedback from their teacher, mentors and role-models (Thistlethwaite, 2014) and are often not emphasized in traditional classroom activities.

**Factors specific to didactic phase education.** The traditional structure of the didactic phase of medical education involves mainly lecture, some seminars, and some small group work. Exposure in this phase to real or simulated clinical environments can influence the development of professional identity in positive or even negative ways (Ginsburg, & Lingard, 2011). Because students perceive that professionalism itself is not as important during didactic learning (Finn, et al., 2010) it is challenging to engage them in activities that are focused on professional identity development.

There are features commonly found in the traditional didactic classroom that inherently work against developing a healthy professional identity. Specifically, the traditional didactic classroom does not promote the important social interactions that help students form professional identity. Instead, it places students at the periphery of communities of practice, social interactions, acknowledgments of emotion, and past experience (Finn et al., 2010). Students in the didactic phase are eager to have someone tell them what to do and they prefer a structured learning environment (Ginsburg & Lingard, 2011). Didactic students have lower levels of tolerance for ambiguity or uncertainty (Ginsburg & Lingard, 2011) and student behavior is often determined by pre-set moral and reflective judgments rather than wisdom or experience (Finn, et al., 2010).
Didactic students would benefit from certain structures in their learning environment that support professional identity development in a positive way. In one study, students were able to communicate about their identity process by using metaphors, something which helped them understand the values they brought into their learning (Korkmaz & Senol, 2014). Korkmaz and Senol (2014) also found that pre-clinical students should have a good grasp of their own understanding of their chosen profession so that they can find the areas that will help or hinder their educational process. Others suggest that using reflective writing to enhance students’ self-awareness or to provide faculty members with insights into a student’s development and transition could also be helpful (Thistlethwaite, 2014). There is an increasing effort to incorporate social adult learning experiences (PBL, simulations, roles plays) into this phase but with the goal of adding to and not compromising the knowledge building that needs to take place (Beckett & Gough, 2004). This is not an easy task in PA education; a didactic phase of approximately 12 months does not allow much space in a curriculum for additional material.

**Conclusion.** The process of developing professional identity has complex and significant implications for educators and programs aiming to train future medical professionals. Because the process is influenced by factors that may manifest differently in different individuals, PA and medical educators should be designing teaching and learning experiences that are flexible and nimble to accommodate the wide variety of needs that student may have along the way. Although the unique needs for each student may be different, the structure of a curriculum and learning environment that promotes professional identity should be deliberately integrated into didactic phase learning. Given that students enter professional programs with pre-formed identities, programs and institutions face the opportunity and challenge to provide education that
gently builds on student’s prior experience and creates an accessible path to their developing professional identity.

Summary

Although literature describes findings from other medical professions that can be used as a guide, the experiences of developing professional identity in PA students is less well-understood. In order to understand how PA students make sense of their professional identity, self-efficacy, a known component of success, failure, and motivation in medical education settings, can be used to interpret their experiences. Self-efficacy depends on components that are unique to individual learners. By understanding the experiences of PA students in their process of professional identity development, educators could continue to seek out ways to improve teaching and learning from an informed perspective. The ultimate goal could be to develop a didactic phase that creates the most support for students academically, helps them to be more self-aware of their limitations, and encourages confidence in professional communication.

Chapter Three: Research Design

The aim of research in this doctoral program was to examine a complex problem of practice, generate knowledge from data gathered at the research site, and provide context and strategies for introducing systemic change to help resolve the problem of practice. The purpose of this study was to better understand the process of professional identity development in PA students. The research question was: How do physician assistant students in the didactic phase of education explain and make sense of their developing professional identities as medical practitioners?

This chapter outlines the research design of this study, providing details regarding the strategy of interpretative phenomenological analysis that were used, explains the participants and
procedures employed throughout the study, and concludes with a discussion of the measures that were put into place to ensure trustworthiness and mitigate bias and limitations.

**Qualitative Research Approach**

This study employed methods of qualitative research. The following section begins by describing general components of the qualitative approach and justifies the use of that approach. It then describes the more specific strategy of interpretative phenomenological analysis (IPA), exploring the roots of phenomenology, and affirms the alignment of this strategy with the purpose and goals of this study.

**Methodological Overview**

The qualitative research approach, using the constructivist-positivist paradigm, was utilized in this study because of its ability to support the collection of robust data that can then be explored and examined for richness in results. The general purpose of qualitative research is to make meaning (Pietkiewicz & Smith, 2012/2014) and this methodology allows for a robust examination of the realities of different individuals, including the exploration of similarities and variability in their experience (Ryan, Coughlan, & Cornin, 2007). The ability to interpret the data from individuals in a holistic manner is critical to qualitative research (Ryan, Coughlan, & Cornin, 2007); in this study, the holistic approach allowed for a rich analysis of the phenomena, developing professional identity. Understanding how to make sense of the process of developing professional identity is not a simple quest and because the phenomenon itself is complex and multidimensional, a qualitative approach aligns well with the goals of this study.

The research approach in this study was grounded in principles of phenomenology. Phenomenology began as a philosophical concept that evolving from Kant, Hegel, and eventually to Husserl (Dowling, 2007; Wagstaff et al., 2014). Initially, concepts of
phenomenology remained abstract and lacked a concrete application to the research world. When applied to research now, though, the basic concepts of all types of phenomenological research are grounded by the common thread - the study of lived experience (van Manen, 1990; Dowling, 2007). Phenomenology seeks to understand lived experience from the view of the person experiencing the phenomenon and, for example, can be used in healthcare due to its ability to consider the whole person and value their perspective (Connelly, 2010). Phenomenology has been used to study experiences in the medical field to understand patient experience from their own perspective (Greenfield & Jensen, 2010).

Van Manen (1990) carefully describes his view of phenomenology, as developed from the philosophical concepts from Husserl, Merleau-Ponty, and Hiedeggar, and makes the case for using phenomenology to influence education research and practice. Van Manen takes Husserl’s concept of living in the everyday life and applies it to the practice of education and research. Although the use of phenomenology in order to discover the deeper meaning of phenomena as a concept remain the same, van Manen (1990) purposely speaks against keeping this approach in the abstract, philosophy-only world. He proposes that the insights that come from research performed in a phenomenological approach actually connect people to the world (van Manen, 1990). In order to uncover the facts that matter, the first important aspect of this approach is to identify the phenomena (van Manen, 1990). The study of this event or occurrence, understood to be from the conscious experience of an individual that could be real or imagined, leads to results that focus on the essence of the phenomena (van Manen, 1990). It is less about facts and more about the essence of the experience from individuals themselves (van Manen, 1990). By focusing on meanings, rather than opinions, frequencies, and on relationships, the goal of phenomenological research, in van Manen’s (1990) opinion, is fully realized. Van Manen’s
(1990) description of essential elements of phenomenology clarify how it sets itself apart from other methodological approaches - by using a combination of a systemic approach, explicit data, and self-critical and inter-subjective analysis all within the human context.

Moutstakas also uses the philosophies of phenomenology to develop his approach to phenomenological methodology but with a few differences (Creswell, 2013). He focuses on describing the experiences of the individuals in more detail and describes the bracketing of the investigator (Creswell, 2013), which is a descriptive approach to phenomenology. Bracketing is fundamental to phenomenology and provides an opportunity to take researcher out if the research or “bracket” their role (Creswell, 2013; Dowling, 2007; Connelly, 2010). The careful extraction of researcher bias and opinion is necessary in order to ensure that only the experiences of the individuals in the study are revealed in the results.

Because of the process of developing professional identity encompasses so many aspects of a person’s unique experience, the goal of this study was not to generalize the results for a larger population, but to identify how specific students experienced their own process. A qualitative approach was chosen for this research study to reveal the quality of the student’s experience in developing their professional identity.

**Interpretative Phenomenological Analysis**

This study employed the research strategy of interpretative phenomenological analysis (IPA). The IPA strategy is relatively new in the qualitative research world. It was first developed by Smith in the mid 1990s, incorporated into mainstream psychology research, and then refined to a method with the ability to explore many diverse fields of research focused on psychological aspects of human experience (Smith, 1996; Smith, Flowers, & Larkin, 2009). This approach, grounded in phenomenological underpinnings, supports research devoted to making meaning of
lived experience from those considered the experts – the participants themselves (Taylor, 1985) and is now used in fields outside psychology (Pietkiewicz & Smith, 2012/2014). It is known that humans can self-interpret (Taylor, 1985), and the IPA strategy capitalizes on this ability in order to make sense of how individuals make sense of their own experiences. The main goal of the IPA strategy is reveal an understanding a subject’s experience through sense-making (Pietkiewicz & Smith, 2012/2014). Derived from the larger phenomenological approach to research, it, too, seeks to understand the participants’ experiences, but the IPA approach adds the dimension of meaning making. Making sense of student experience in developing professional identity is at the heart of this study. The IPA approach, through the lens of self-efficacy theory, enables this research to provide insight into the lived experience of didactic PA students in their process of professional identity development. A strength of the IPA strategy is to focus on areas of divergence in experience, not just commonalities (Smith, 2009). This allows the research to shed light on the experiences of participants in all of their variations. The adaptive and non-prescriptive approach to meaning making that is fundamental in IPA (Smith, 2009) lends itself well an overarching research goal in this study to make sense of how students are experiencing a complex process such as developing professional identity

Interpretative phenomenological analysis diverges from phenomenology in the importance of the role of researcher (Giorgi, 2012). Phenomenology employed in the study of human sciences, emphasizes that the state of mind of the researcher at the onset of the study must be open to resisting influence of opinions, thoughts about the topic, and even consciousness about the topic (Giorgi, 2012). The IPA approach relies on double hermeneutics (Shaw et al, 2014; Wagstaff et al., 2014), the interpretation of the researcher to make full meaning of the
subjects’ experience. Its idiographic focus provides an opportunity discover how an individual makes sense of a given phenomenon (Cohen, Manion, & Morrison, 2007).

In this study, the researcher’s experience as a former PA student and current PA educator was critical. In chapter two, evidence described the complex process of developing professional identity, a process not specifically known or understood by students but nevertheless, one that can have significant impact on their success. Using the three fundamental principles of IPA, phenomenology, hermeneutics, idiography (Pietkiewicz & Smith, 2012/2014), this study sought to make meaning and to understand the deeper meaning of development professional identity, in an approach that includes in the researcher and the participants in a double hermeneutic approach. The researcher’s experience of living through the process herself, of teaching students in the midst of the process, of seeing the difficulties that result, and her understanding of the steps in the process were used to gain the best and most directed data and interpretation. The critics of the IPA approach cite the interpretative aspect of analysis as counter to the true form of Husserl’s phenomenology (Dowling, 2007), however, the integrated role of the researcher in the approach, working in an iterative process, provides added aspects of the data within the context of the research objectives. Because of this, the results are in-depth, straightforward and idiographic in nature- again aligning with the goals of this study.

The intended outcome of using the IPA research strategy in this study was to gain an understanding of the individual student experience in developing professional identity- not in order to generalize, but to be used as a theoretical-based reference for those in relevant fields. The findings could be applied to the field of PA education directly, but also to inform other studies examining the intersection of the health sciences and education. The theoretical lens helped to uncover intricacies of the complex, covert process that students experienced and helped
to provide a better understanding of the thoughts and feelings of this population. Because individual student experiences are varied, a theoretical understanding of a few students’ experience will allow the reader and researchers to interpret their accounts on an individual basis.

The IPA approach, although born out of the field of psychology, is now consistently utilized in studies investigating experiences of individuals in health science and education fields (Wagstaff et al., 2014). It has been applied in other relevant fields such as master’s level education, higher education, research in healthcare professions, higher education, student experience, and graduate student health research (Cooper, Fleisher, and Cotton, 2012; Nel & Fouche, 2017; Shaw, Burton, Xuereb, Gibson & Lane, 2017; Wagstaff et al., 2014). The topic of this study, which combines fields of health and education, fits naturally into the structure of meaning making that defines the IPA approach. Importantly, interpretative phenomenological analysis is utilized in healthcare research and education research because of the way it aligns with research aiming to understand elements of experience by patients, and other perspectives and seeks to understand the meaning of the participant’s experience (Cobbett, 2016; Nel & Fouche, 2017; Oxley, 2016; Pringle, Drummond, McLafferty, & Hendry, 2011). It allows researchers to interpret beliefs and stories of individual in questioning way (Pringle, et al., 2011) that lends itself to a multitude of applications. Some argue that it is imperative to understand how individuals make sense and attribute their own meaning to experience because modifying and improving health behavior and lifestyle cannot be accomplished unless there is an understanding of the meaning behind it (Munhall, 1994).

The IPA research strategy seeks to discover depth rather than breadth (Pietkiewicz & Smith, 2012/2014); this aligns well to the goals of the study. An additional strength of the IPA
research is its emic perspective (Pietkiewicz & Smith, 2012/2014); in this research, the process of developing professional identity is embedded in the culture of medical education integrating the participant’s words and perspectives. The research question in this study was based on idiographic principles and, in order to obtain rich and detailed description of how the participants made sense of their experience (Pietkiewicz & Smith, 2012/2014). Interpretative phenomenological analysis has been used in other studies to explore identity (Clare, 2003; Pietkiewicz & Smith, 2012/2014).

Because the PA profession is a relative newcomer compared to nursing and physician education, there is little data available on the experiences unique to PA students. The ability of the IPA strategy to allow for flexibility in gathering data and its non-prescriptive approach to gathering data allows for creativity and freedom (Smith, 2009; Willig, 2001). That non-prescriptive approach allowed this research to explore new and developing themes shared by participants and allowed space to explore potentially unforeseen results. Because this research is not seeking one single truth (Pringle, et al., 2011), the IPA strategy seems particularly relevant. By using the IPA methodological approach, the questions asked in this research sought to gain understanding from the three areas that define IPA the phenomenology, the hermeneutics, and the idiography (Wagstaff et al., 2014). Questions were focused on bringing forward the lived experience of PA student in this process of developing professional identity- a process they were likely unaware was even occurring. By gathering in-depth accounts for this process along with the interpretation by the researcher using double hermeneutics, the perspectives of the participants were emphasized. The idiographic influence in the study manifested additionally as the questions and focus of the subsequent interviews centered around their own interpretation of the process of developing professional identity in their own subjective reality. It is important that
this information was contained in their own sense of reality; after all, it is their own experience and accounts that provided the rich data in which to interpret. The use of dynamic interviewing, in several one-hour sessions per individual allowed for in depth discussion and a valuable time to explore the individual’s experience but included the space for back and forth discussion that is important to have in the double hermeneutic approach. The participants in this study are described in the next section.

**Participants**

The population chosen for a study using the IPA approach should be sought out for characteristics that provide the richest data. This study focused on first-year PA students experiencing the phenomenon of developing professional identity while in the early stage of their didactic medical education. Because of the way research in the IPA approach is designed, it was important for participants to understand their role in the research, give consent, and engage openly in interviewing (Reid, Flowers, & Larkin, 2005). The students were willing to share feelings and thoughts about their educational experiences and were willing to give their opinions on what they are experiencing in the early stages of their medical education.

It is essential that data in a study implementing a phenomenological approach be collected from the participants who have lived through the experience or phenomena (Creswell, 2013; Englander, 2012; van Manen, 1990). Although they were not conscious of the fact that they were the process of developing their professional identities, they were indeed experiencing the phenomena, which is an important characteristic for research done using the IPA strategy (Englander, 2012). The participants in this study were selected for characteristics that Englander (2012) collectively described as representativeness. Physician assistant students in their first year
Participants were selected for this study based on the characteristics described above. In research using the IPA strategy, samples are kept small to allow for detailed interviewing, a rich accounting of experience, and in-depth analysis of results (Denovan & Macaskill, 2013; Pietkiewicz & Smith, 2012/2014; Pringle, et al., 2011; Reid, et al., 2005). A smaller group of participants allows for a deeper knowledge and explanation of the data about the phenomenon being studied (Connelly, 2010). The aim of this study was to use in-depth accounts to examine the phenomenon, not generate a theory; this would require more subjects and a larger sample size (Pietkiewicz & Smith, 2012/2014). The suggested number of subjects varies while there is no agreed upon number for a proper sample size (Englander, 2012; Creswell, 2013) but should be sufficient to support the representativeness referred to above. A small sample size can also allow the researcher to determine the depth of analysis, richness of cases, how to compare and contrast cases, and account for the time and access restrictions that are simply a reality of conducting research (Pietkiewicz & Smith, 2012/2104). Englander (2012) supports using at least three subjects, thought suggests that having between five and twenty-five is best subjects is best. Turpin et al. (1997) recommend around 6-8 participants. This study enrolled 7 participants, ensuring a strong opportunity for the gathering of good quality data for high quality analysis. The data gathered from interviewing 7 students, was not overwhelming, but plentiful enough to compare and contrast experience and to allow the researcher to focus on depth rather than breadth (Pietkiewicz & Smith, 2012/2014).

Because the IPA approach seeks to balance the particulars of experience with the shared, the purposeful selection of a homogenous sample of students is appropriate (Reid, et al., 2005;
Denovan & Macaskill, 2013; Pietkiewicz & Smith, 2012/2014). All of the participants were students in the first year of their PA education, and they all came from the same institution. Again, the timing of a shared experience was integral to the study. In this case, having all participants from one institution allowed for investigation of the most homogeneous experience in developing professional identity. Participants followed the same curriculum in the same order with the same institutional culture and expectations. Participants were selected purposively (Pietkiewicz & Smith, 2012/2014) which allowed for this group of participants to be selected based on the relevance of the researched problem to them. The students were recruited from the cohort of first-year PA students at the institution in which the researcher currently worked. The students were asked to participate voluntarily from a pool of students at one institution that were interested and students were made aware of the measures in place to ensure proper ethical measures, which are described below. Initially, this study sought a balance of students identifying as male and female. The reality, however, was that only students who identified as female volunteered for the study. The interview dates and times were decided by the participants to work within their busy academic schedules. Participants were compensated financially for their participation in the form of a $15 gift card from Amazon.

The ensure alignment with IPA research standards, the study took place in a naturalist setting (Pietkiewicz & Smith, 2012/2014). Interviews with participants took place within the institutional in which their PA program was housed, although they were conducted in an office in a different campus location from which their classes occurred, to allow for privacy.

In-depth, semi-structured interviews were employed to collect the data. Semi-structured interviews achieve rich data and allow the researcher to engage with the participants while having space and flexibility to work with unexpected data (Pietkiewicz & Smith, 2012/2014; van
In the IPA approach, specifically, the semi-structured interview allows for flexibility in directing the questions and process in a way that reveals the richest data (Chapman & Clucas, 2013; Pietkiewicz & Smith, 2012/2014; Reid et al., 2005). Interpretative phenomenological analysis highlights idiographic experience as a hallmark (Reid, et al., 2005; Chapman & Clucas, 2013; Denovan & Macaskill, 2013), and the semi-structured interview structure to allow for exploration of data, based on the research question, from each of the participants. The interviews in this study began by building rapport, establishing trust, and the questions and prompts were open-ended and free from judgments and presumptions (Pietkiewicz & Smith, 2012/2014). Moments of silence were used by the researcher to give the participants time and space to consider their experiences and speak. Multiple interviews were collected by the researcher to ensure proper follow up and exploration of unforeseen accounts by participants (Connelly, 2010). In research conducted using the IPA strategy, it is important for the researcher to actively listen, negotiate meanings, clarify, and explore what is being said (Pietkiewicz & Smith, 2012/2014) throughout the interview. Because the role of the researcher is integral to the IPA approach, the semi-structured interview allowed for flexibility in directing the questions and process in a way that the researcher felt ascertained the richest data (Chapman & Clucas, 2013; Reid, et al., 2005).

Following a modified Seidman interview schedule (Seidman, 2006), the first interview focused on explaining the general process and goals of the study, obtaining informed consent, answering participant questions, and collecting basic demographic data. It lasted approximately 45 minutes. The second interview was used to obtain the majority of the data based on 9-13 research questions and prompts to focus the semi-structured interview. It lasted approximately 60-90 minutes. The third and final interview, lasting approximately 45 minutes, was used for
member-checking and clarification. This process, as describe below, was important for ensuring credibility of the data. The data was collected using audio recordings of in-person, one-on-one, semi-structured interviews. The audio recordings were transcribed in preparation for analysis. The procedure for data analysis and establishing and maintaining trustworthiness are described in the next section.

**Procedures**

The first step in collecting data for this study was to obtain approval by the Institutional Review Boards (IRB) of both the two institutions involved in the research. After receiving the proper IRB approvals (Appendix D), the researcher contacted PA students in the didactic phase of their learning at her institution. They were sent a recruitment email (Appendix A) by the director of the PA program, requesting responses and inquiries to be sent via email directly to the researcher.

The five students who responded to the email were invited to have a brief phone conversation to answer any initial questions about the study and to schedule the first interview. They were provided an email confirming the data, time, and location of the interview. At the initial interview of the five students who responded, the researcher encouraged each to reach out to other classmates, in case the email was overlooked by the students. Two more participants contacted the researcher after being encouraged by other classmates and, after a brief phone call, they too were assigned a date, time, and location for the first interview.

All seven potential participants agreed to the terms of the study, completed the consent (Appendix B) and completed all three interview sessions in full (Appendix C). They all received a paper copy of the transcript of their second interview, which they reviewed together with the researcher during the third interaction. All participants were encouraged to reach out to the
researcher with further thoughts about their interviews or with any questions or concerns. The researcher contacted one participant after the data analysis phase to clarify her comfort in including a specific excerpt in the findings, and the participant agreed without hesitation. The researcher did not receive any other emails or phone calls from the participants with questions or concerns.

Data Analysis

The data analysis process in phenomenology consists of reviewing the data collected and finding statements that illustrate meaning or speak to the essence of the lived experience. Both phenomenological and IPA approaches share the iterative process, and it is in these iterations that meanings are revealed. An important component of the IPA approach is the manner in which data collection allows for each participant’s account to be explored fully (Pietkiewicz & Smith, 2012/2014). The data in this study was organized electronically in a password protected folder named by participant (using pseudonym) and labeled with the data, the time, and interview number. The audio files were sent to a transcribing service for transcription, and were reviewed along with audio recordings at the onset of analysis for accuracy. The participants were allowed and encouraged to review the transcripts from their interview and were given a paper copy during the member-checking phase in the third interview.

Using the IPA strategy for data analysis combines several important components to create a process that allows for the richness of the participants’ experience to come through. The original concepts of IPA from Smith et al. (2009) emphasize identifying the lived experience of the participants with the subjective and reflective role of the researcher (Reid, et al., 2005). The IPA approach in this study utilized a general inductive approach with additional aspects that allowed it to explore meaning in a more in-depth way as it relied on interpretation of the insider
perspective of the researcher. Therefore, the analysis and the results were subjective but more straightforward than a general phenomenological approach. The role of the researcher and the focus on the idiographic nature of the participants’ experiences provided added complexity and subjectivity; the results were more about meaning than finding a truth (Reid, et al., 2005). Personal reflexivity was acknowledged throughout the analysis, documented throughout the process in a reflective journal. This journal captured insights and thoughts into how the researcher may have been affecting the relationship of the participants (Pietkiewicz & Smith, 2012/2014). Self-efficacy theory grounded the analysis of the data collected, and the data was analyzed incrementally to allow subsequent interviews to clarify or build in emerging themes.

The researcher sought data that illustrated how the participants made sense of developing professional identity within the framework of self-efficacy theory, and addressed, using double hermeneutics, how the researcher made sense of their accounts of the experience. These notations and comments were all coded by hand. The data was reviewed in separate passes for content, language, context, and participant comments (Pietkiewicz & Smith, 2012/2014), while additional notations were made directly on the paper transcripts.

The six-step approach to data analysis, developed by Smith et al (2009) was used in this study. These steps included reading and re-reading, making initial notations, developing emerging themes, searching for connection across themes, moving to next participant, and looking for patterns across all participants’ accounts. The researcher sought both the emic and etic perspective when making meaning. Data analysis also included the process of identifying verbatim excerpts. These verbatim excerpts were critical in the process because of the way they illustrated the idiographic data, a hallmark of this approach (Connelly, 2010; Pietkiewicz & Smith, 2012/2014). The researcher also looked for insider perspective, an integral component in
the analysis process, by combining interpretative commentary interspersed with the verbatim excerpts to provide an in-depth analysis. As mentioned above, the role of the researcher in providing interpretation is just as important as the context in which the data is situated. The complex coding and process of organizing the data in this manner is time consuming and intense, but important for high quality results. Through an inductive and iterative approach, the data in this study was synthesized into larger themes that supported the research questions. It is in these themes that the researcher focused the discussion and conclusions from the data and formulated a response to the original research question. The results showed not only the commonalities in the experiences of the participants but the variations they encountered. The ability to illustrate the richness of the participant’s experiences in this way was one of the benefits of using this approach.

**Ethical Considerations**

As with any research, important steps must be taken to address ethical considerations and protect participants. The participants were invited to participate in the study on a voluntary basis and were provided with a detailed description of the goals and purpose of the study. The participants gave written consent to participate and were assured that confidentiality in their personal data would be maintained at all times. The researcher monitored the interviews for signs of how the sessions are affecting the participants and paused interviews any time the participants seemed to need a break. All files, notes, and analysis were stored in a password-protected folder on an external hard drive and backed up on an encrypted folder stored in the cloud using Dropbox. Files were labeled using pseudonyms from the start of data collection.

**Trustworthiness**
The purpose of this study was to explore the subjective experiences of PA students in early stages of their medical education and to further understand how they made sense of developing professional identity. In using qualitative research methods, this study employed certain specific steps to ensure the integrity of the work and trustworthiness. Trustworthiness in qualitative research is synonymous with rigor in qualitative studies (Casey & Murphy, 2009; Cope, 2014; Morse, 2015). The criteria for trustworthiness, first explicitly described by Lincoln and Guba (1982), encompass principles of credibility, transferability, dependability, and conformability to culminate in a work that attains the highest standards of results. Each of those criteria are described below along with illustrative examples that demonstrate how overall trustworthiness was achieved throughout this study.

**Credibility.** Credibility, which can be illuminated by showing how conclusions and interpretations are drawn and developed and how they are linked to specific data. How true a representation is attained through a well-established research structure designed to establish prolonged engagement to the participant by the researcher (Cope, 2014; Koch, 2006) and by an important familiarity of the culture of the setting and individuals who are serving as participants (Lincoln, & Guba, 1982; Sandelowski, 1986; Shenton, 2004). Explained a bit differently, credibility can be described as the concept that other individuals experiencing the same phenomena can recognize descriptions by the researcher as similar to their own experience (Cope, 2014). Research design that attains credibility uses aspects such as random sampling, triangulation of data, voluntary participation by participants with the option to discontinue at any time, iterative questioning, frequent debriefing sessions, peer scrutiny, reflective commentary, an experiences investigator, member checking, using rich descriptions, and an in-depth knowledge of similar research (Lincoln, & Guba, 1982; Shenton, 2004). This research was designed to
attain as many of those criteria as possible. The researcher was a faculty member who had taught PA students undergoing their early stages of professional identity, and who had been a PA student years ago, and had experienced the phenomena herself. The study involved voluntary participation, multiple data collection opportunities, frequent opportunities to review the data in an iterative and reflective process, and by incorporated member checking into the interviews with participants and throughout the process. The researcher’s knowledge of similar research is demonstrated in the literature review (Chapter 2). Three sets of interviews allowed time for participants to reflect on the information and provided the researcher with opportunities to reaffirm, revisit, or explore details of the participants’ experience that arose. This approach to multiple interviews was taken from the work of Seidman (2006). Audit trails and meticulous attention to detail, process, and progress build credibility (Sandelowski, 1986); these elements were incorporated in this study by documenting the process and reactions of the researchers in a reflective journal.

Transferability. Transferability is the idea that findings in a study can be transferred to other contexts or individuals (Lincoln & Guba, 1982). Put differently, transferability not only means that study results must have meaning to participants in a study, but also that individuals who are similar to study participants must be able to associate the results of the study to their own experience (Koch, 2006; Shenton, 2004). Transferability in IPA research aligns well with the idiographic nature of the approach. Transferability is enhanced by collecting data from multiple organizations and larger numbers of participants, by consistent methods of data collection and sessions, and by a commitment to the time over which the data is collected (Shenton, 2004). Thick descriptions of phenomena are an important aspect of transferability and help to add context to the data, something which is often difficult to grasp with superficial
descriptions (Morse, 2014; Shenton, 2006; Lincoln, & Guba, 1982). Thick descriptions are determined by an appropriate number of participants from which data is collected and by using semi-structured interviews (Morse, 2014). In this study, the data was collected from seven participants with attention to consistency in interview sessions in the semi-structured format, and by providing ample time to explore and discuss with each participant. The resulting data was rich with examples and detailed descriptions of the thoughts and feelings of each participant. This study utilized the IPA structure in an effort to maximize the quality of results by ensuring appropriate identification of participants, by robust data collection methods, and attend to details in the data collection process. Specifics of the data collection are described above in the “Procedures” section.

**Dependability.** Dependability in a study is achieved when researchers in similar fields are in agreement with decisions and findings (Koch, 2006). It was pursued and achieved in this research, using audit trails to illustrate decisions and interpretations throughout the process, maintaining raw data for reference and use, personal notations on process and personal reflections, and openly to sharing predictions (Lincoln & Guba, 1982). In this study, the operational details of data collection, data analysis process, raw data, and predictions were outlined in detail in the hope that another researcher could come to similar conclusions when reviewing the same raw data.

**Confirmability.** Confirmability seeks to ensure that the results from the process have resulted from the data, not the researcher (Shenton, 2004). Confirmability manifests when can should grasp the essential and authentic components of the participant’s experience by reading the chosen quotes and can clearly see the links to the results from these examples (Koch, 2006). Confirmability is achieved through triangulation of data, collecting ongoing reflective
commentary, and by maintaining a clear audit trail (Baker & Edwards, 2012; Lincoln & Guba, 1982; Morse, 2014; Ryan-Nichols, & Will, 2009; Shenton, 2004). Triangulation of data is achieved by comparing emerging results with what is already known about the phenomenon (Morse, 2014) and by utilizing multiple methods of data collection (Baker & Edwards, 2012; Morse, 2014; Nel & Fouche, 2017; Shenton, 2004). The reflexive journal kept by the researcher documented her emerging understanding of the research methodology, the phenomenon, changes made to process or design, and any small changes to be made in subsequent interviews. It was also the place where the researcher documented opinions, feelings, and thoughts as the researcher. Confirmability was additionally achieved by allowing participants to provide further details or additional comments on certain events during their third interview. The audit trail in this study, recognized as an important aspect of confirmability (Shenton, 2004; Lincoln & Guba, 1982; Morse, 2014), was maintained internally to keep a chain of evidence that was clearly documented so that any other person could follow the steps that were taken along the way. The audit trail described steps, decision, and procedures and including the research question, field notes, the reflective journal, audio recordings, annotated transcripts, tables and graphs of themes, drafts and, of course, the final report.

**Potential Research Bias**

The positionality of any researcher undoubtedly influences their work. By exploring my positionality in my own research, I strove to identify areas of my own experience that could have potential influence on my project, aiming to ensure the best quality of objective research possible.

I completed my PA training in a traditional, two-phase PA program 17 years ago. My formal training included no focus or mention of professional identity, although in retrospect,
some of the difficulties that I faced as a student in the early stages of my education could be attributed to lack of confidence or motivation directly linked to the process of developing professional identity.

Currently, I teach PA students in one problem-solving course in the didactic phase of their program. I previously taught full time in the didactic phase of a PA program for eight years before transitioning to my current role in administration outside the program. While I was teaching full time and even now in the one course that I teach, I see students struggle with motivation and confidence. I see that when students are faced with academic challenges, they often question their ability to succeed. They often placed higher academic expectations on themselves than do the faculty and they seem to have underlying stressors and anxieties that are barriers to positive thinking.

Parsons (2008) promotes the idea that, in regards to positionality, an educator must fully understand the needs of their students and their role in the education process. My role as a teacher and role-model of professional behavior and practice potentially places me in the position of authority among the students. In this study, it was important to pursue a data collection process that kept the effect of that dynamic to a minimum (Briscoe, 2005), and I was glad to work with students from cohort that I did not have a relationship with. I knew their curriculum and their process very well, but had the opportunity to interact with students from a more objective perspective considering my infrequent interactions with the students in my current role working outside the program. One of the participants mentioned she thought the interviews were easier than expected because I was not a core faculty member in her program.

My experiences as a former student, current teacher, and future colleague have lead to biases that have the potential to skew my interpretation of the information gathered during my
research (Briscoe, 2005). As a researcher, it was imperative that I formulate interview questions that were free of bias, were not directed toward a particular result, and that I provided the interviewees with the space to respond honestly and openly. The integrity of the research depended on this from the beginning. Even though the students participating in my research, were students in my own institution, there was a risk that they might be influenced to give certain answers based on my role as a figure of authority. My theoretical frameworks for supporting and applying my research shaped the interview process and helped to mitigate bias. When interpreting the results, I strove to remain neutral, objective, and open to the results, even if not expected. By using the evidence and my theoretical framework as a foundation, the evidence, my positionality, and the results were better able to provide insight into teaching strategies and learning techniques that could foster a different and more positive process of developing professional identity.

**Limitations**

Limitations in any research study are important to acknowledge and discuss fully. In research completed using the IPA strategy, one limitation relates to small sample size. Sample sizes in IPA research are deliberately kept small, in order to gain rich, thick description aimed at the idiographic goals of the study. Although Smith et al. (2009) recommend a small homogeneous sample, this does produce limitations in regards to transferability. As mentioned above, the potential challenge is addressed by the researcher’s employment of sustained engagement and thick descriptions. A more homogeneous sample does allow a researcher to evaluate the transferability at the end of the study, as long as this is acknowledged and clarify (Pringle et al, 2011).
The use of a theoretical framework in analysis and interpretation of data in IPA research is also a limitation. As Braun and Clarke (2006) note, the very fact of using a theoretical framework places constraints on analysis, limiting exploration outside of the designated theory. The use of theory, however, is important to emphasize the fullest extent of understanding and encourages a fuller idiographic analysis an application of the data. This study was also limited by using interviews as the only main data source. Although IPA research encourages flexibility and creativity in methods and types of data collection (Willig, 2001), there are reasonable logistic concerns for both the researcher and the participants. The multiple interviews and thick descriptions generate large amounts of data to analyze by the researcher. In this study, the participants were students in a rigorous and busy education training program. Giving time for interviews was already a challenge; if by adding another data collection method such as a participant journal, there would have been a higher possibility of burning out the participants and/or risking that the data is not as authentic if rushed.

This study is also limited by its setting. All PA programs provide a slightly different sequence and combination of curriculum and learning experiences; for this study, however, it was essential that students come from a shared setting and shared set of experiences. How they explained and made sense of their experiences were unique to each of them. The study is limited in that all of the participants identified as female, and results gained from participants identifying as male might have added a different perspective.

Chapter Four: Findings and Analysis

The purpose of this study was to investigate how PA students in the didactic phase of their education explained and made sense of their developing professional identities. The results of the analysis of the transcripts of the seven participants yielded three superordinate themes,
each with five or six subthemes. The superordinate themes characterized the experiences of the participants and provided insight into how they thought and felt about the process they experienced at this point in their education. The superordinate and sub-themes were 1) Relationship to self, including a) confidence in self and ability, b) personal motivation from experiences that provided professional connection, c) effects of the fear of or perception of failure, d) doubt and stress from internally generated feelings, and the e) effect of stress on self and motivation; 2) Relationship to others including a) awareness of sacrifices affecting others, b) perception of self as different from others, c) provide to others, d) stress from social situations unrelated to learning, e) difficulties achieving balance, and the f) role of others in validation and motivation; 3) Relationship to process, including a) acknowledging realities of process and new skills attained, b) alignment between professional expectations and skill set, c) aspects of process that challenge identity, d) experiences in process that influenced perception of success, and e) perception of knowledge expectations for professional success. Each of the superordinate themes were represented by evidence from all seven participants and sub-themes were shared by at least four of the seven participants. The majority of the subthemes (nine of sixteen) were shared by all seven participants. This chapter will address each superordinate theme followed by evidence for each of the sub-themes. It will end with a conclusion of the themes and justification of validity and trustworthiness.

**Relationship to Self**

All of the participants described, in a variety of ways, how they think about themselves in the process of developing their professional identity. Their remarks on their relationships with themselves varied in ways that expressed the complex feeling and thoughts, often internalized, they experienced in the first year of their PA education. The descriptions of these feelings
illustrate how students had to navigate their own thoughts or established identities while, at the same time, experienced this beginning phase of becoming a professional. It is clear from these descriptions, that the relationship and understanding of self is significant and often something to be drawn upon in times of shaken confidence or doubt in their own abilities. It is also clear that when participants experience events that challenge their established ideas of self, the results could be quite devastating.

**Confidence in Self and Ability**

All seven participants described aspects of themselves or their abilities that contributed to feelings of confidence in starting PA school or in successes they experienced while in the first phase of the program. Their confidence derived from prior aspects of identity or surfaced during experiences they connected with or that invoked professional behavior.

Identity and confidence as a student and learner was one aspect that participants described and to which they attributed some of their current success. When asked to describe aspects of herself she felt she was good at, Victoria shared, “I was good at doing school. I mean, I was just a very good student. I enjoyed studying. So, it just made me good at school.” Before she entered into her PA education, she felt confident in her ability to be a successful student a confidence which seemed to translate easily to her new environment.

Participants also described individual and personal characteristics they felt they possessed and often attributed those characteristics to successes in the studies. Some described themselves as being caring, a good listener, calm, and adaptable. They also described characteristics like being driven, focused, hardworking, dedicated and adaptable. It seemed very easy for participants to name the qualities that aligned with professional expectations. For some, they attributed those qualities to their prior success and they discussed them with much pride.
During the process of learning more about the professional aspects of the role of a PA, the participants also mentioned specific skills they possessed that provided them with confidence in their future ability to successfully carry out the role of a PA. They mentioned skills like working in teams and having the ability to empathize with patients. Although they hadn’t had much interaction with real patients, their ability to see how these skills were important was developing.

Additionally, participants noted aspects about themselves they thought helped them accomplish tasks and meet goals that were expected of them. Denise shared:

I felt that I was good at, if somebody gave me a task, I would complete it. I was good at, Hmm, I think just good at – it was simple. Simple tasks. Like I said, I wasn’t really challenged. […] Looking back then, I was not challenged as much in my everyday life. But very much like, if someone told me to do something, I would do it. Again, very task, see it, complete it, do it. Very regimented. My schedule was very regimented and I was good at keeping that schedule.

Because of her task-oriented approach to things, Denise might not have been prepared for difficulties in her school work that relied on her ability to determine her own needs. This excerpt also introduced the notion that, looking back on that type of work, she acknowledged the desire to be challenged, but also the potential for stress or anxieties her process was not spelled out and regimented. Professional training often requires students to determine their own unique needs rather than following a strict schedule, and the fact that Denise felt good at keeping a schedule prescribed to her, foreshadows possible uncertainties as she progressed through her schooling.

Abby described that element of being challenged as important, and also described her thoughts about the relationship of her productivity in her work to her happiness. This additional
thought gives insight into how she might deal with her professional identity when she is challenged in her learning and achieving. “I’m definitely a thinker. And to me, my happiness comes from being productive and learning things and achieving things.” Then, at times she begins to feel that she isn’t achieving or being productive, it leads to her being very unhappy. For many of the participants, that ability to achieve is linked to an emotion that is quite significant.

Participants described aspects of their personalities in relation to how they identified themselves and in what skills they felt they were successful in achieving. Some related their personalities to new-found professional expectations and their perceptions of the qualities that make a good PA. When Laurie was asked about elements of the profession she thought she would be able to accomplish easily, she talked about her own personality.

My personality actually helps me because I am, I prefer to listen. So, for me, not talking over a patient is easier for me. I would rather just sit back and let them tell me everything.

And because I do, I’m very sympathetic and latching onto those patient relationships really helps me connect with people one-on-one like that.

Interestingly, Laurie described other aspects of her personality that challenged her confidence in other sub-themes below, which begins to show the competing nature of elements she, and the others, experienced.

**Personal Motivation from Experiences that Provided Professional Connection**

All of the participants related experiences that connected them to the profession before starting their education, and they discussed how those experiences helped them to determine that the PA profession was the right career choice for them. The experiences they described provided momentum and motivation to work through the difficulties they encountered as they were becoming PAs. Some participants recalled a PA who had cared for them as a patient or told of
someone close to them who worked in the medical field who had given them some encouragement or inspiration to go into the profession. Some described almost magical moments when they felt and experienced something that excited them in a way they had never felt. Gina described an interaction with a physician who encouraged her because of a trait that physician thought would align with the profession. She described this interaction with the physician:

And she said to me, she’s like, why don’t you do this for a living? And I said, well, I kind of have a career and I’m really happy in it. She was like, but you would be really good. I think you would be really good at this. […] And So, it was one of those things where I sat there and thought about it and I said, you know what, I'll think about it. […] So, I applied and I got accepted and that's kind of how it went from there.

Many participants had experiences seeing others working as PA or physicians, and admiring aspects of their work. The ability to see others doing the things they thought they might be good at doing was a big motivating factor. They noticed intimate moments with patients, they saw healthy PA-physician relationships and they remembered those as ways of being they wanted to emulate in their careers. On the other hand, she some saw elements of an unhealthy practice environment and this had just as much impact.

Marion recalled seeing a PA that she was shadowing behave in a way that confirmed her choice in the profession and further motivated her. She noted how the willingness of that PA to begin to teach her made a significant impact.

And also, how much she was willing to teach me. She was just so happy to have me on board. And she was like, you know, I know you got into PA school and you won't be with me too long but I'd be happy to help teach you up for it.
Regan described the motivation she felt from the process of simply setting a goal to get into PA school and finally being successful. She described how she wanted so badly to get into PA school, and as a result this challenge, came away with a better understanding of the profession as a result.

I think not getting what I wanted immediately. [...] So, when I just kept kind of, failing at getting in and just wasn't really sure what to do or what would make me look good, I ended up respecting this profession So, much more. It completely changed my mind from oh, this seems great, to it being a dream.

Regan also noted that during her pursuit of getting into PA school, she sought out experiences that helped her to understand the profession. By creating those experiences for herself and her perseverance, she became a stronger applicant and when she finally was accepted into a PA program, her perspective had completely changed.

**Effects of the Fear of or Perception of Failure**

As participants shared their feelings and experiences in their first year of PA school, it became obvious that for most participants, failure, whether feared or perceived, had a significant impact on how they approached their work and how they felt about themselves as developing professionals. Each participant conceived failure a bit differently, and many times they still felt the stressors of failing even though they were technically doing just fine academically. The very fear of failure impacted the way in which the participants viewed their successes at this stage in their education.

When asked about things that motivated her to succeed, Denise replied, “I almost want to say the fear of failure. I definitely put a lot of pressure on myself and I have really high expectations of myself.” She talked further about how that fear was directly linked to her
insecurities in her knowledge base, especially with material she deemed simple. She described that fear: “What if something walks in that's so simple that I should know and I can't remember it. [...] The fear of not knowing something potentially so simple and having it, just forgetting it.”

The participants also mentioned experiencing failure when they weren’t earning the highest marks and grades. They framed failure in the context of what was at stake and how much they would lose by not getting top scores. Gina described why her fear of failing related to grades seemed so significant to her.

It's not that I have to have an A because I want an A. It's I want to, I'm afraid of failure. And not that like I haven't failed at things in the past. It's just the stakes are really high with this situation. I think that's, you know, where I'm at with the whole failure thing. I'm fine and you're gonna fail I mean, It's okay. No one likes to. But this, the stakes are really high.

Both Regan and Gina expressed fears that poor academic performance would have resulted in them being removed from the program and a sense of not having options. Gina said, “And it’s the constant fear of if I don’t perform, the I’m out or repeating.”

Additionally, there was a shared sense that failure could mean facing the idea of not achieving their highest potential. For many of the participants, they were used to achieving in the highest tier in their lives or in school. When faced with grades that were not in the highest tier, they felt they had failed. Marion described that feeling.

I don't like failing. I really don't. I think that might be why I struggled so hard during the first module of our learning because I felt like I was giving it everything I had and yet I wasn't—Like, I wanted those As. I really did. And I wasn't getting them.
Marion also shared the sense that her own failures were letting down others in her life and feelings of disappointment for herself. This immense pressure to achieve perfection, even when perfection was not expected, led to a significant amount of energy and distress for the students as they navigated their feelings.

**Doubt and Stress from Internally Generated Feelings**

Most of the participants acknowledged that some stressors and negative feelings were generated by their own self-talk, sometimes completely counter to what others saw in them. These internally generated feelings often worked against them and resulted in feeling as if they were failing at become good PAs.

Abby described feelings of doubt in her value from the very beginning, even before starting her PA schooling. She entered into the process with her own feelings of self-doubt even after having been accepted into a PA program.

Because I was working so hard to get into PA school and then it's like you're here, so, this is it. And if you mess this up, this is what you've kind of been putting all your energy in.

So, I think it was the underlying pressure and like I said, just the unknown of being like, can I actually do it? Is this actually what I want to do? Is this actually something I'm good at?

Denise acknowledged that coming into school, she experienced this negative sense of self. She described herself at that time as having low self-esteem, low confidence, and that she just uncomfortable with herself. Her starting point, coming into a challenging and transformative program, was one that did not set her up for the best transition.
Gina shared how her perception of herself was very different than how others perceived her. She admitted that when classmates told her how they admired her for all she was doing, she had difficulty seeing past her feelings of just surviving.

Regan had a different perspective, possibly because the big roadblock she overcame was just getting into school in the first place. For her, because she persevered and was successful in getting into school after several unsuccessful attempts, she used her internal feelings to help boost her confidence. She described how she felt about her confidence. “I’m very confident now because I never thought I could be, never thought I could really do well.” She also attributed fewer feelings of stress to the fact that she had overcome so much just to get into PA school. She felt grades weren’t as important to her now because she never identified as someone who received the best grades. Laurie noted a similar confidence, surprised that she performed academically much better than she expected from herself. Interestingly, she too, never identified herself as a top student before starting PA school.

Many of the participants acknowledged that they were putting more pressure or higher expectations on themselves than what was expected by the program. The feelings of failure and emotional devastation from these students were real at times. They admitted, however, that the standards they were holding themselves to were unreasonable and, sometimes, impossible.

There was also an interesting perspective that many participants shared when they were successful. They were unable to identify the sources of their success. They described a sense of not knowing from where their success came; it is easy to see how this could work against building confidence.

Many participants discussed how their own negative feelings affected their ability to simply do what they were expected to do. Laurie talked about how she felt when she tried to
overcome her tendency to be quiet and reserved in a group setting—something she very much wanted to change about herself. She described feelings of being embarrassed, of hating being the way she was, and not being able to change. She felt frustrated and knew she was making it worse for herself. The mental barriers students faced on a daily basis were reported as difficult to break and often resulted in poor academic performance although those barriers had very little to do with deficiencies in knowledge. Denise acknowledged that, because of her internal dialogue, there were times when she questioned how she would be able to perform in the profession—and if she could ever be confident.

**Effect of Stress on Self and Motivation**

All participants described one or more ways in which stress effected their lives. They described the different ways they experienced stress and how it influenced their motivation and their physical bodies. They saw both positive and negative effects of stress on their sense of accomplishment and described the different ways that stress encouraged them or distracted them.

Denise talked about how she felt stress helped her advance in maturity.

But I think it also, for me at least, it's made a lot of growth and change happen really fast.

Because of that stress, it has forced me to rise up to the occasion. And I think in a positive way, it has helped me deal with a lot of situations that were intimidating to me at first or like I said, really forced me to mature and take on new things with a level head.

Many participants identified stress as a motivating factor. They relied on stress to drive their day-to-day accomplishments and felt they performed better when under some element of stress. Laurie explained how she used the stress she felt to judge her own knowledge and comfort in specific material, and to reach the academic benchmarks set by the faculty.
It definitely motivates me. You always have that stress of you know, you try to make bench, try to make bench. And so, it's more of like, do I understand this material? And the more I've become stressed out about not knowing it is the more I study it. And so, it, that actually helps me.

Unlike Laurie, other participants framed stress not as a motivating factor, but as a puzzling and bothersome reality, even to the point of having their physical bodies indicate to them that there was a problem. Participants referred to such physical manifestations and somatic complaints as headaches, back and neck pain, and disruptive effects like difficulty sleeping or disabling panic attacks. It was almost as if their stress was not obvious to them until their physical bodies indicated otherwise. Gina for example, described how she had to reconcile the physical consequences of her stress during examination week at the end of a module.

And so, I just push. I find that exam weeks are extremely hard on me because you know, you lead up to it. There's all the studying and the stress of all exam week. And then I'm dead the next week after. Like, I can't function. And then I'm like oh crap, I'm behind. Even after recognizing the physical toll on her body at that moment, she immediately refocused her thoughts on the next unit and her perception of feeling behind.

An additional aspect of the stress that Gina experienced within PA school, was how she felt it both helped and hurt her, at the same time. She pointed out the irony in having physical stressors and a general feeling of unhealthiness in this part of her life. “It does motivate me to stay up and do it. I'll get it done. But at the same time, it makes me feel disenfranchised with the whole thing because I'm torturing myself.” And she went on to point out how she felt frustrated about the irony of learning how to provide and nurture health in future patients, and that what she
was experiencing was extremely unhealthy. There was a disconnect between what she felt she needed for herself and what she needed to do to push herself to be successful.

**Conclusions.** Participants discussed the complex relationship to self that influenced what they experienced in their process of professional development. In some instances, they found that areas of confidence before entering PA school helped them in their process, and in other instances, established personalities and tendencies became a perceived barrier to the process. Within the students themselves, their own thoughts were often the most negative, which created a constant struggle to overcome. The students were influenced by stressors of all varieties, and felt the impact of those stressors personally, both physically and mentally. This theme begins to show the level of complexity that students experienced in the early stages of becoming a PA and the extent to which their own thoughts and feelings about themselves impacted that process.

The next section describes the second superordinate theme and how the participants made sense of their relationship to others.

**Relationship to Others**

All of the participants described aspects of their experience in relation to how they relied on and were influenced by others. Sometimes this led to positive feelings and outcomes, and sometimes it resulted in negative feelings. It is clear from this, however, that interactions with others added complexity to their sense of their professional identity. Interactions with others had the potential to encourage or discourage their confidence, ability, and motivation.

**Awareness of Sacrifices by Others**

The majority of the participants described the sacrifices of others as a significant influence. When examining how the students described their thoughts and motivation by these
sacrifices, it is easy to see how this burden added to the pressure they put on themselves to succeed. Laurie mentioned these sacrifices as she described her drive to succeed.

My parents have supported me through everything I've done. So, for me, my driving factor is definitely to show my parents, everything you've sacrificed for me is worth it. I want to prove to them that I appreciate everything they've done. So, for me, this is paying them back...but I just want to show them that it's worth it.

She talked about her parent’s sacrifice as a way of showing her appreciation for what they have done for her in her life. By linking her success in PA school to her parent’s sacrifice, she very much increased her own pressure to succeed and do well.

Marion, on the other hand, acknowledged the sacrifices of others, but explained it as something that she expected as part of the process. She described her understanding that it was just something that had to be done in order to succeed. Her expectation coming into PA school was that this kind of sacrifice was to be expected, at some level.

Denise became cognizant of the fact that other people were turned down for her spot in the program. During some difficult conversations with faculty when she was considering, even briefly, leaving the program, her understanding of her privileged position convinced her to think about her place and motivation differently.

I didn't necessarily realize this until it was told to me by a faculty member to not drop out. That I took this seat and I should continue and if this is not what I want, I should leave. And so, kind of hearing it bluntly like that, I was like, okay, this is right. And once I heard that, what I did, is I actually hung up my acceptance letter on my whiteboard and I would look at it every day when I would start to feel discouraged or any emotion like
that. I would look at it and remind myself again that not everybody gets this opportunity and I should really try my hardest.

At this point, as she focused on her own struggles and questioned her abilities, her ability to think about others provided her with a different motivation to succeed. It was if, for her, she had to frame her thoughts in regards to their implications on others to be able to feel confident and motivated.

Gina also thought about the impact of her decisions on others when framing her own thinking about her success and her fears of failure. She talked her about how she felt in her decision to pursue a PA career, and how her decision affected her entire family.

And for me, I looked at school as I quit my career; I took on debt, I moved my family, I'm forcing my husband to commute like an hour and a half each way. I checked out mentally from my family. [...] And I did all this because I really wanted to. And while they supported me, I feel like the pressure not to fail is huge. And if I did fail, I missed out.

She described later in the interview how those thoughts have continued to motivated her. “And then the motivation for this has been, I have to do well because I have to pass. If I don't pass, what did I do to my family basically? It's a huge motivation.” She had difficulties rationalizing her decision to become a PA for her own reasons, and for her, the additional pressure of the impact of failure on her family was enormous. She described that moment when she finally allowed herself to believe she would succeed. “So, I think I finally realized, okay- I think I can do this. And I can breathe.”

Perception of Self as Different from Others
Five of the participants described themselves as not only different from other students but as having unique characteristics which they believed were detrimental to their academic success or put them at a disadvantage compared to their peers. That perception of difference from others affected the students and how they felt about their own capabilities and their abilities to succeed in school and sometimes in the profession.

Several participants described how they saw fellow classmates outwardly demonstrate strong knowledge and how it made them feel less smart and question their overall capability. Laurie described that feeling.

There's a lot of smart people in the class that can remember material, they can spit it right back out at you. And comparing myself in that moment, like do I have, am I mentally capable of hanging on and retaining this information? So, again, the self-doubt of I don't know if I can remember all this and I don't know if I can apply it.

Gina discussed how she often felt she didn’t fit in with the class and worried that she would not be successful because of that. She explained that now she is confident in her success, and she feel that her ability to keep up with the “younger” classmates actually gives her confidence. She questioned her fit in the profession because of her perception of being different from the beginning.

Denise shared how she felt inadequate when she saw her classmates doing better at certain tasks than her. She described how she felt she was behind in her knowledge when she witnessed classmates answering questions quickly in class. Other participants mentioned specific characteristics such as a photographic memory as a trait that others possessed making them feel like they had to work harder for the same results. It was as if they believed their classmates had special gifts, and that they themselves were always at a disadvantage.
Many of the participants described themselves as different from their classmates in regards to how others learned material more quickly or that other students seemed to be more experienced and more prepared, somehow. Regan explained this when she compared herself as a learner to others.

I listen to all the lectures. And I'll sit there and I know my time, I'm way slower at—It takes me an entire day to go over a lecture that we've gone in class. So, that's where times is, like I need all my time. […] Then I realize, I'm different. It's been working thus far. God willing, it continues.

She felt that the longer time she had to spend on work compared to other students meant she had different needs than others. Regan was more confident in herself academically and has learned to accept that difference rather than allowing it to discourage her.

Both Abby and Denise thought they had to learn how to be successful from a place of disadvantage, while others just naturally came to the program prepared to succeed. Abby shared that she felt others in her class were more aware of themselves as learners or were more experienced in learning somehow. When asked how she might have felt more prepared for the challenges she would face, she admitted to feeling like she needed her experience to learn what she had, and that she could not have been much better prepared. Denise rationalized that the time she spent studying and preparing was different than others around her. She acknowledged that it might be something that she is fabricating in her mind, but that it still made her feel different from others.

The final element of this sub-theme is illustrated in how Laurie described her feeling as an outsider. She described herself as a quiet person, but because that seemed to be so different from others around her, she began to question her ability to be a good PA.
Again, with the big personalities, they interacted in a group better. So, being an outsider, I was like, I'm not fitting in or I'm not contributing. Can I work in that team dynamic? And am I willing to put myself in a position where I could be wrong? And I guess- what am I able to contribute if my personality does make me like that? And that is just where I had that self-doubt of all these big personalities coming in, they're all contributing, they're all working. And still, I was, you know, the one watching. And I was like, how, as a PA, how would that work for me if I'm not as part of the team?

She questioned if the personalities of others were a better fit for the profession than her own.

From these descriptions, it is easy to see how the participants viewed themselves as different or as having a disadvantage in their abilities and their confidence in the profession. The reality is that a cohort of PA students is comprised of a variety of students, from different stages of life and different experiences, and that variety is important in helping students gain different perspectives in their transformation to a professional. It is also clear, that some participants may have difficulties in mitigating the traits and gifts of others with their own, often difficult for them to see, and thinking about those differences, in terms other than deficiencies on their part.

**Proving to Others**

Most of the participants referenced a sense of motivation or empowerment arising because they were proving themselves in some way to others who were important in their lives. They shared thoughts about wanting to achieve success and prove their value and their worth.

Many participants talked about the importance of proving to their families that their work and sacrifices were valuable. Marion, for example, spoke of her desire to prove “hard work really can pay off and that I can make something of myself and make my mom proud”. Gina talked about her success as something she hoped would motivate her children.
I want to do well because I want to prove to [my kids] that, and myself too, but [my kids] that I'm very much- you have a desire, you have a dream, you go after it. And I want to show them I can succeed at this.

Several of the participants also mentioned the faculty as a group of people they wanted to prove their value to. In some situations, it was because, as Marion said, “These are the people that matter right now in my life that are critiquing me and I don’t want to let them down.” Denise told a powerful story about a conversation with a faculty member that was initially upsetting, but that lead her to work hard, in part, to prove her value to the faculty. She described how she met with a faculty member who questioned her ability to be successful in the program during a period of poor academic performance. After seeking advice from her advisor and being told that other faculty believed in her, she changed her attitude from being upset to one of determination. She describes how she felt when she heard that perspective from her advisor.

So, hearing that from her, she flat out said, I believe that you can do this and this is something you can do. But also hearing that people who potentially hopefully will become my colleagues in the future believe that I'm adequate, that I can do a good job. Hearing that now from them, I kind of was able to take what [the other faculty] had to say and kind of use it to motivate me to do better- and to almost not prove [the faculty member] wrong but you know, kind of very much just try and work harder because I wanted to prove that I could do it.

She ultimately admitted that that experience, although negative at first, made her more determined to prove herself.

**Stress from Social Situations Not Directly Related to Academic Performance**
In addition to the pressure to succeed academically, most participants described elements of stress and difficult situations that were unrelated to their schooling. Some stress stemmed from social interactions not related to school, which added to school-related pressures. When asked to identify the sources of her stress, Gina said, “It’s not just school. It’s everything.” It appears, too, that those additional stressors where often the ones the students didn’t feel prepared in working through, or that took more effort to work through than the academic stressors. They felt academic stressors were identified more easily and were expected, and that they could just power through them, as they had been doing as students for years.

Victoria described a moment when she learned how others contributed to her own stress and how she had to change her habits to cope.

The only thing that stresses me out is when other people are really stressed and anxious and are really vocalizing it, it makes me very uncomfortable and, not even uncomfortable but it makes me very jittery and I guess, stressed. It's a very uncomfortable feeling and very unsettling.

She realized that the stress she heard and felt from others when projected on her, made her question her preparation, which she was fairly confident in from the start. She had to learn to avoid hearing and feeling stress from others to be able to work well herself.

Denise talked about how those additional social stressors, when added to the pressure to perform academically, made her feel. She described the combination of those two elements and the effect of the additional pressure, but also how she felt she learned from that experience.

Regan described those social stressors even more specifically. She recalled a story about her living situation during her first few months of PA school; a situation that produced a significant amount of stress, but also made her question if she had the ability to succeed.
I just learned that I can't let confrontation, the fear of confrontation, affect me so much. Like, it should not lead to me questioning leaving the program. It should never have gotten that far but I think I almost make things up. […] So, I think I'm learning I just need to, I need to talk about it I think. […] I think because I also was just not accustomed to it in life ever.

She realized that she had never been exposed to that type of social situation, and recalled feeling frustrated that it lead her to feel that she couldn’t be a successful PA. Once she got into a different living situation she had very little doubt in her own abilities. The pressure that she felt and doubts in her own ability in professional sense had very little to do with ability and competence at all. It had to do, for her, in how she was dealing with life circumstances as an adult.

Laurie also had an interesting experience in learning how to navigate an unhealthy social situation. She recalled joining a study group at the start of her didactic learning and thinking that, because of her low self-esteem and low confidence in her academics, she would need the group to help her achieve. At that time, she was unsure if she could be successful on her own. She described how, once in that group, she was soon teased and mocked. She described how, at first, she thought it was funny, but then realized that she was really upset by the hurtful way her group members were treating her. She described how once she realized this as detrimental and left the group to study on her own, she changed her way of thinking and her confidence increased.

It was a constant me, trying to keep up. And okay, I can't say this or I can't rattle off all the buzzwords for this. I was constantly at the bottom of that group. […] But that first cardiology unit, I did that unit by myself and I came out of it very happy with my grades.
And I was like, I didn't need that group. And I felt so much better about myself. Because I was like, I'm not having people constantly belittle.

She went on further to say,

And so for me to step out of it and stand on my own two feet and still do okay really showed me that I thought I was hanging onto that group. And as soon as I stepped out of it, I was like, I can still be successful by myself. […] And it really showed me that you can do it.

Her ability to do well on exam material on her own and outside of that group, helped her to realize her own self-worth and ability.

**Difficulties Achieving Balance**

Many participants described their lives in terms a balance with others that had suffered. They had striking ways of describing how an established balance was interrupted and the consequences that imbalance had on relationships with family and friends. Gina noted how she felt she had to come to terms with the “sacrifice on every level” of her life. The experiences that these students had penetrated deeply into all aspects of their lives, and pressures related to their academic and professional accomplishment seemed to carry high stakes as a result. Denise referred to eliminating some of her life’s distractions to focus completely on her studies and, many times, having to put aside relationships that needed attention that she felt she just couldn’t give. Gina acknowledged that although she felt she had gained a lot from her experience so far, there were many consequences.

I would definitely still say that PA school has continued to make me stronger. But in many ways, it has, I feel like I've lost some of, I don't know. Some of the, I don't know what word, maybe… the sparkle that I would put into relationships.
Gina also recounts how she had to make choices in prioritizing relationships, and that this was something that she hadn’t needed to do in the past.

Marion discussed how she felt the program encroached on her life. She acknowledged the lack of balance, and the focus on one thing and one thing only. Marion also described how, after recognizing this disconnect, she figured out a way to create a better balance.

In order to have some sort of essence of me still left, I had to budget my time with school things and there's countless hours of studying I could spend all day long. Because I'm not going to master all this in a year. And I think that's kind of where I had to draw the line of like, okay, I'm not happy. Why am I not happy? It's because I'm not doing me.

It took Marion a while, but she eventually found a way to think about her work and think about herself, too.

Abby shared an interesting story about how she felt about relating to others in her life after being in the school environment for some time.

Abby: I was so used to this environment that I didn't, it got to the point where I didn't know how to not be in this environment anymore. It was kind of like I wasn't there and I didn't know how to go out with friends. I didn't know how to socialize at the dinner table with my family. And I think to them maybe I was doing it and they didn't even notice. But I can say I definitely was not there. I kind of had to relearn…

Interviewer: How to be—

Abby: a…normal.

She noted how she didn’t really realize the effect that her experience was having on her relationships until she was faced with interacting with others outside the program. She almost
had to relearn social cues and etiquette in order to fit in as what she described as a normal person.

**Role of Others in Validation and Motivation**

All of the participants described ways in which their feelings of validation and motivation were impacted by or relied on their interactions with others. Sometimes it was in a positive direction and sometimes it was in a negative direction. It was very clear that all participants cared what others said and did, and that those experiences were quite profound.

Many of the participants described how their classmates played a role in encouraging them, increasing their confidence in certain skills, and how they used low-key or friendly competition among themselves to encourage themselves. Random comments from classmates really made them feel good and encouraged. Marion expounded upon why that encouragement from her classmates was so important to her.

And getting to hear my classmates confirm that… they're like Marion, you're gonna do great. And having the approval of my classmates is also very important. […] Because they’re also going through it and they have their own experiences in the past of what was good and what was not good. Just hearing it from somebody else and not having to self-generate motivation and the you-can-do-it factor. But hearing it from somebody else is always nice.

It’s clear that the opinion of her peers, going through the same experiences at the same time, was really meaningful to Marion.

Gina noted that the opinions from others helped her to see attributes in herself that she could not necessarily see. She described how good it made her feel when a classmate told her she was doing a good job, because she admitted that she was pretty hard on herself the rest of time.
Others shared that hearing classmates praise them for their skills helped them to feel they could be successful in the role of a PA. After so many instances of negative self-talk and unrealistic expectations of their own performance, the role of their classmates was truly inspirational and confirming.

Many of the participants mentioned elements of friendly competition that helped them stay motivated and on track. Because they sensed that they were all collectively going through the same experience, they learned to rely on each other for help and support in many ways. Laurie explained it as follows:

I am a competitive person. So, that's something, not necessarily grades, but keeping up. Like, you know, I'll text my study friend, are you working on the paper? She's working on the paper, so I need to be working on the paper. So, it's more like competitive not like I need to get a hundred percent, an A, but more just like, that helps me keep up with the group. If everyone is moving along, it keeps me moving along.

They also described a competitive edge that helped them think about how to judge their own comfort in material. Denise mentioned how she used this comparison to help her to see where she wasn’t achieving. Regan described the ability to compare herself to others as helpful in determining if her knowledge was in line with that of others. When she described her interaction in a small group problem-based clinical integration (CI) case, she discussed how she used those cases to help her think about the material. She said, “So, I think that's a good part of CI. To be able to know you're kind of aligned with everyone.” Laurie, on the other hand, noted seeing how others were doing in CI case made her question her own ability and made her feel like she was behind. She also described how she was able to learn how to take that feeling and
use it to push herself. “That stress level, as soon as class is done, I'm looking that up. So, that
definitely really helps me push further.”

Some participants told stories of experiences in which they were partnered with a
classmate during an activity and saw their partners do the same task, not necessarily successfully.
This allowed them to recognize the elements of their own work that were good, a recognition
that they then used that as a source of confidence. Victoria recounted a story during a laboratory
experience where she saw her partner struggle with a task.

We would have to switch and my partner, I would kind of watch her struggle and flail
through these situations. Because she was just very uncomfortable and didn’t…. In one
particular situation, she had to deliver bad news about something with diabetes and she
wasn't comfortable in her knowledge of diabetes. So, between that and having to deliver
the bad news, she was just so uncomfortable.

She went on to tell how she realized after watching a fellow student struggle, that her own skills
in dealing with the standardized patient were better than she realized.

In addition to classmates, participants mentioned interactions with faculty during
advising or teaching. The participants noted their respect for the opinions of faculty, in part due
to idea that their faculty are PAs and they know what to look for. Although encouragement from
family was welcomed, their opinions were especially important. Laurie noted how a conversation
with a faculty after CI case one day prompted a pivotal change in how she began to believe in
herself. Other participants discussed incidents where encouraging words from faculty advisors
redirected their negative thoughts and really made them feel as if they could be successful.

On the other hand, some participants had interactions with faculty that made them
question their ability. In particular, Denise described an experience in which she had a
conversation with a faculty member that really affected her personally. As she recalled, the faculty member confronted her during a CI case session about to her contribution to the group. She described how that confrontation made her feel.

It made me feel inadequate. Inadequate, ill prepared, and out of place. I think compared to the rest of my fellow students who either wouldn't have hesitated with their answer or would've been more sure of their answer. I felt very, very, very unsure of not only my position in the class as far as how much I knew or didn't, my knowledge base, but really unsure of the profession, if I was really fit to make decisions regarding people's health. It really made me question a lot because I wasn't able to follow through. […] But [the faulty member] very much made me rethink my whole entire reason for wanting to be here or wanting to continue forward.

In a simulated patient case, the way in which the faculty member confronted Denise’s knowledge, impacted her entire feeling about the profession. This shows how, for these students, the impact of an interpersonal interaction on a student’s motivation and success is significant, in both positive and negative ways.

Marion related a story that highlighted, for her, the importance of her advisor in her motivation and attitude and how she came to rely on that. She added how her advisor not only made her feel better about her academic performance, but how she was able to point out ways she had to care for herself. That relationship with her advisor and the ability to help her gain a different perspective on her experience was really important in that moment.

**Conclusions.** This theme illuminates the extent of the pressure that students felt in being successful in the work they were doing, not just for themselves, but because of the implications of their success on others. They consistently worried about their decisions in regards to others
which increased their pressure to feel as if they were succeeding. They often viewed themselves as different from other students, with each of them citing reasons why they felt they were at a disadvantage, not as an excuse, but as another barrier to their success. The fact that they struggled in social situations and in achieving balance, illustrates the additional layer of development experienced by the students. They craved experiences that made them feel confident and often had to look to others to recognize their own successes. They were, at times, unable to see how successful they were until they compared themselves others. It is easy to conclude, because of this, the importance of others who are supportive in their process.

Relationship to Process

The final superordinate theme illustrates aspects of the participant’s experience developing as a PA as related to the process itself. All participants described elements of every sub-theme in this section. The participants expressed their feeling and thoughts about how they had been experiencing the process of developing as a PA, even in the early didactic phase, and how the process itself had influenced their transformation in many ways.

Acknowledging Realities of the Process and Skills Gained as Result

The participants all mentioned moments in their experience in which they learned to accept the realities of becoming a PA, and highlighted some of the differences they had in expectations. All participants were able to identify ways that they had personally changed, in terms of coping skills, different attitudes, or ways in which they approached their own learning differently. They described themselves in more mature ways than they did before starting PA school, and had a sense they really changed.

The participants mentioned elements of the PA program or the overall process that they didn’t expect or that they realized they had to accept. Marion recalled frustrations with how to
live up to expectations, her desire to work hard, and how she realized she had to learn to let go of control. She described how she felt when the expectations of her performance were unclear.

And after a while, it's like, they told me to jump and I jumped as high as I could and they said it wasn't enough. And you just let it go. Because I put everything out there, I tried my best. You found some fault in it. Cool. I'm going to move on.

She felt frustrated that she was trying to meet the expectations, but that those expectations were somewhat of a moving target.

Gina also shared aspects of the process that made her a little nervous. She expressed how she felt about the next stages of her education, the clinical phase, and how she was really depending on that to achieve learning that she did not feel she had yet achieved in the didactic phase. She recognized her need to apply material to fully understand it, and in a stage of learning more focused on knowledge building rather than application of material, it is not surprising she had difficulty judging her success. Abby identified the way in which the curriculum marches progressively through topics as not challenging her in the ways she felt she needed to cement her knowledge. In order to solidify her learning and be more challenged, she wanted more opportunities to utilize topics previously learned in other modules.

Gina also acknowledged the irony in learning about health and wellness in a situation that she found fraught with anxiety and stress. This feeling of disenfranchisement is important. She came to partially resent the process; although it was preparing her to do something that she admired, she felt like that preparation came at a significant cost.

In thinking about the process, Abby questioned her own role and the insecurities that had risen because of the way she had to be. She described some of her thinking in regards to her approach to studying material for her own understanding, often times at a level more in depth
than the class required. She even wondered if the information she was getting from sources and texts is even accurate or if she was focusing on the right details. It made her wonder if what she was doing was going to be enough.

Victoria expressed similar feelings of frustration at times, but more so because it seemed to devalue her own approach to learning.

I'll go so in depth on something that is way past what we need to know for exams, unless you're going into that specialty. It's just way past what we need to know. But I can't stop, I just keep going. So, I think when someone will ask me a question about it and I'll do that, I'll launch into it, and they just kind of look at me like, we don't need to know that. We don't need to know that for the exam, we don't need to know that for clinic. And I'm just like {makes frustrated noise}, it just, it really frustrates me.

She had been struggling a bit with her decision to choose PA school over medical school, and those feelings did not help to alleviate that struggle.

Abby acknowledged elements of the didactic phase that were simply part of the structure and she accepted that there were elements of her learning that would only come during her clinical experiences. She identified those elements for their potential to build confidence in her knowledge, and that thinking made her more at ease in her career choice. Abby also noted how she felt about the speed of the PA program. She recalled how she had to make a choice in whether to go to PA or to go to medical school, and although she was happy with her decision, she recognized how the structure of PA school, at times, frustrated her.

The participants acknowledged that despite their experiences in PA school, whether positive or negative, they gained new skills as a result. Victoria described her ability to trust herself, rely on herself, and advocate for herself. Regan summarized the scope of what she felt
she had learned in the process as, “I was kind of naive. And then I think coming into it and just learning, I learned a lot more personal things than I did almost—or matched, school and personal things.” She recognized that she has gained an understanding of both the skills she needs for the medical aspect of a job, but also in her own life.

Several participants mentioned aspects of developing confidence in themselves and as a person. That confidence came in a variety of forms, from recognizing their value as a person to gaining the ability to advocate for themselves. They also mentioned the ability to confront situations that were uncomfortable, and how they learned life skills they did not necessarily have before.

Many participants mentioned how the process they had experience so far had helped them to be adaptable, flexible, and feel as if they did not always have to be in control. In a very powerful statement, Denise confirmed that her sense of self-value had changed: “I kind of realized that okay, what I have to say is just as important as anybody else.” Their value, self-worth, and understanding of their own capability changed significantly and most of the participants recognized this as a huge transformation.

Alignment Between Professional Expectation and Skill Set

The next sub-theme focuses on how participants described the alignment of what they felt they loved, were passionate about, were good at doing, and the importance of those attributes in the PA profession. They described the experiences that helped them recognize those attributes and helped to confirm their understanding of fit with profession.

Most of the participants mentioned an interest in medical material, often since childhood, and a love of learning as essential attributes that confirmed the PA profession was a good fit. The mentioned their love of science, medicine, that alignment in the content they were learning.
Many mentioned specific skills that they felt aligned with the profession including being a good listener, being empathetic, and being good at problem-solving. Marion described feeling affirmed in her career choice when she was able to demonstrate some of the skills she felt were important in healthcare during an activity in a laboratory course.

And kind of remembering that there's still this aspect of medicine that I love so much is the patient interaction and how do I make these people feel good about themselves even when society may not make them feel food. Because I guess I'm kind of a friend but in a different way to them. Or at least that's what I want to be.

Denise described a moment in which she began to see herself doing the things that she felt she was good at and that she had learned were important in a PA career.

Denise: But I think it was now since I had a taste of it, because this was fall semester, I was like wow, this is really cool, I want to keep going, keep trying. Even though, yes, it's hard.

Interviewer: A taste of what?

Denise: A taste of just the curriculum, the career, what it could be, and everything. And kind of more, finding out more about what I would get to be doing and what I would see and what I would, what things I would get to do. So, I think then at that point, I liked it enough that it was worth pushing forward.

It was clearly a motivating experience for her to feel as if she was experiencing part of the profession and starting to embody its values.

Laurie described experiencing this alignment as a source of motivation for her. She shared how she felt after completing an activity in her physical exam class that gave her the opportunity to tell standardized patients bad news.
It sounds silly because it was breaking bad news but it made me excited. Because that's what I wanted to do. It made me hungry for more patient interaction. Not necessarily the bad news but that was, I think that was one of our first times actually talking with a standardized patient. So, for me, it was like, this is what the end goal is and it really kind of inspired me to keep going as far as this is what you're working for.

Her use of the word “hungry” illustrates how that moment of alignment really influenced how she would think about her future and her desire and motivation to keep going.

**Aspects of the Process that Challenged Identity**

All of the participants mentioned experiences that challenged their sense of identity. Both Abby and Victoria identified the disconnect between how they approached learning and how they were being taught. That disconnect challenged the way they thought about themselves and what they had to do to be good PAs.

Both Laurie and Regan explained how they felt when it seemed that certain aspects of their personalities were working against them, and not just in their ability to complete certain tasks, but in thinking about professional expectations. They described a sense of worry and concern for not being able to perform well in the profession and they worried about how they would be able to approach changing inherent aspects of their personalities. Regan said when she was describing those feelings, “It just made me feel, like, how am I going to change a literal part of my personality?” Laurie explained how she felt about her personality and the profession when she was in small group cases with other students working through a patient case.

But leading up to that moment, when I saw myself struggling in CI, there's so many big, especially in health care, there's so many big personalities. And there's so many people that can walk into a room and light it up with confidence. They're go-getters and they're
confident and they don't even care if they're right or wrong but they're going to tell you how they feel. And sitting in a room with eight other of those personalities really was like, so, you have the- should you have been a nurse?

Laurie continues to explain the moment she realized this and felt she did have to do something so she would be successful in her professional career. She described using that feeling to motivate herself to change how she approached her small group cases, and how she consequently had different interactions that her peers and faculty noticed and praised her for.

Gina, who had come to the PA profession as a second career, started to see how entering into the new profession made her feel loss for her established identity.

I felt like I lost my identity. I had been a scientist, I had been a professor, I had been all of these things and now I was a student and now I wasn't anything. [Emotional] That's how I felt. […] I define myself as a woman and a professional. And so, I felt like I lost that part of myself. And so then, I was trying to fill a void that I wasn't really good at.

Although she was struggling at this time with losing her previous identities, she also reflected that she was learning how to take what she learned in the classroom and apply it to real patient scenarios, and was now starting to think of herself as a clinician.

Denise and Abby both mentioned the loss of their identity and the sense that their friends did not know them any longer. They felt they had changed, at least in that moment, into someone who couldn’t related to the friends they’d had for so long. Both Abby and Marion also talked about how that loss of identity made them feel. Marion said,

I felt like I was working as hard as I possibly could. I wasn't being as successful as I wanted to be in school. And I made so many sacrifices that I wasn't working out. Which is one of those things that helps me decompress. And I wasn't socializing because I
moved across the country and was missing my friends terribly- I feel like I lost all the things I previously identified with to kind of put all my eggs in one basket and that basket had a hole in it.”

**Experiences that Influenced Perception of Success**

The participants all shared thoughts about their experiences, whether in formal instruction, in classroom activities or in interactions, that influenced how they felt about their own success. Some referred to a combination of positive experiences that encouraged them and negative experiences that made them feel as if they weren’t likely to be successful at all.

Naturally, several of the students described grades as a measure of their success in their process of becoming a PA. Getting “good grades” seemed to provide a sense of accomplishment, and motivation for success. Several participants also noted that receiving what they perceived as a “bad grade,” was devastating and a sign of the failure. Marion explained how she felt when she wasn’t getting the grades she wanted.

I felt like I was failing. Which is something that I don't do. I can't like….yeah. That was really hard to get around. Maybe even disappointing. Which is, like right now thinking about it, it seems so silly because I was getting Bs. That's fine. But once you go through your life having a certain standard for yourself, then you come and you put so much work into it and you're not getting what you want, it's difficult.

Denise described how the grades she received made her doubt her place in the program. Gina admitted to thinking that after repeatedly getting grades that were satisfactory, she finally started to believe that, unless something drastic changed, she actually would be successful.

Other participants had a different outlook on grades and relied on other measures to help them judge their success. Victoria talked about her perception of understanding material, rather
than a grade, that allowed her to feel successful. Understanding material carried a significant personal burden and put the onus on the student to determine their level of success.

Most of the participants mentioned moments when they had a chance to practice their skills with standardized patients as a significant triumph in the way they perceived their success. Of the five participants that did mention this, all mentioned the same activity: breaking bad news to standardized patients during their physical examination laboratory class. This activity allowed the participant to practice skills of communication with mock patients, and in the process provided them with feedback about their skills. Marion noted how the feedback she got from these activities made her feel good about being a PA. She said, “I just, in my mind, I’m like, I think I’m gonna be a good PA. I think it’s gonna be good.” Abby shared how the good feedback received from the standardized patient made her feel. “To have her hear me, have her say that to me, that I did a really good job with that, it made me feel really, really good. That I was like okay, I can do this.” Abby also said, “It made me feel I think confident in a way too. As well as just confident and capable of how far I've come compared to where I started.”

Participants identified CI case as a learning activity that confirmed their success and made them feel confident. Because of the group interaction and the application of material that occurred, these cases allowed the students to evaluate their own understanding of material and build skills in communication and problem solving. Laurie described how the social aspects of those cases made her feel.

And you know with the social aspect and learning and pushing myself, I've learned that I can do this, I don't need the safety railings anymore. I can stand on my own two feet at this point in the game. And it's really been a huge reflecting year as far as like I said my
personality, as far as confidence. It's really boosted that. Not confidence as in I know all
the answers. But as far as I don't need to lean on anyone else.

Some students also mentioned their practical examinations at the end of every semester
as an activity that was helpful in illuminating their success. These exams, observed structured
clinical experiences (OSCEs), assess students in a variety of simulated clinical scenarios with
standardized patients. Gina tells a story about heading into a high stakes exam and experiencing
a scenario that, because of some similarities to a medical challenge was facing in her own life,
affecting her personally. She shared that she was always concerned with how she might do in a
professional setting when situation did affect her personally. For her, the ability to do well in a
situation that she feared was a very big moment, and gave her a sense of pride.

In a different situation, Marion revealed a similar sense of relief. She said, “I’m very
thankful for having gone through that situation in practice.” Regan described how the good
feedback she got from her physical exam checkoffs made her feel about the future. “So it gave
me confidence to, just the same thing. It proved that I can do it and so for future, I can.”

In addition to activities related to classwork and material, the participants noted several
interpersonal moments that either encouraged their feelings of success or contributed to further
doubt. Regan described some of the benefits of her relationship with her peer mentor, a student
from the class ahead of her that she was paired with at the beginning of her program. She had a
very good relationship with her peer mentor and really came to relying on her to help her stay
grounded and positive. She talked about how her mentor motivated her. She also described how
her mentor made her feel “like I’m not dumb” and how she really desired to develop a
relationship with her future mentee that was also full of support and encouragement.
Abby shared that when a professor asked a question that forced her to recall prior information, and she remembered that information, she felt that her approach to learning was successful. Gina experienced a similarly boost when she got her first request from a neighbor to look in her child’s ear, a simple moment that changed the way she started to view herself professionally. She shared, “so, it's been that point when I started to see myself a little more as a clinician.”

Denise talked about how some of the interpersonal interactions she had with faculty were initially quite devastating and how some conversations that she thought were meant to motivate her left her asking more questions about her ability to succeed. Because of her relationship with her advisor, however, she was able to reframe the situation and think positively about her progress. She told an emotional story about how that confrontation with the faculty member made her feel.

And she very much questioned me and was-[…] And she started kind of questioning my decision making or my clinical judgment that I felt like I was still developing and will continue to develop. And she very much put me in that situation of okay, well, if this was your job, you would be failing right now. Was kind of the interpretation I took from it. So, at that moment, I was incredibly pulled, taken aback and had a nice emotional cry afterwards. […] I did feel very unsure and I thought okay, if she's forcing me in this position, I'm not ready, I don't think I can make that choice for that patient. Her story illustrated that she wasn’t ready to made the decision the faculty wanted her to make, and although it was just in a discussion of a patient case, Denise took that responsibility seriously, and interpreted the scolding she received as an indication she had failed.

**Perception of Knowledge Expectations for Professional Success**
When discussing their experiences, all of the participants mentioned perceived expectations and needs of the profession. The students were thinking about their future patients, their future profession, and their future responsibilities even from the beginning stages of their education. This way of thinking added an addition layer of complexity and responsibility to every aspect of their success.

All participants mentioned that how they approached PA school was influenced by how they would approach patient care. Laurie shared how she thought about that aspect of patient responsibility in relation to the way she approached her understanding of material. Victoria noted how she thought about this in relation to what material she herself sought to learn, whether in a class or on her own.

Because I don't care if it's on the exam, you need to know it for practice. So, that's kind of, it goes along with the way I approach studying. I don't study for a test, I study to be a good clinician.

Regan discussed this motivation in relation to how she thought about material that she may not know, and being afraid to make mistakes. She explained that she considered this when thinking about how to take advantage of her time in PA school. Others thought about how their mistake could negatively impact future and real patients or how they thought about their simulated patients as real patients, daughters, mothers, children of others. This way of thinking assigned significant and real responsibility to learning, and when in the early stages of their education, created a huge amount of pressure to succeed.

Most of the participants also acknowledged they had come to terms with the fact that they were not always going to know everything, and that this was something that was expected in the profession. Many of them discussed in other parts of the interviews about how they were driven
by the idea of knowing it all. At some point, each of them had to reconcile their desire to want to know it all with the fact that knowing everything was not only impossible, but not expected. Regan shared her thinking behind that pressure to know it all. “I think because it's someone's life and I want to a hundred percent be sure I've got it right.” Abby shared how she had learned to think about it. “So, I'm comfortable and confident in how I'll be as a PA because I know that if I don't know something, I've shown that I can get through it and figure it out.”

Laurie shared how she had to think about the academic benchmarks she was expected to achieve and her realization of what she felt she needed to know in practice. She also articulated a constant internal conflict she experienced in her identities as a student and as a clinician. She shared:

It's constantly battling between seeing a patient and being legit, being a provider for them, and trying not to worry about the grade and am I getting all my checkmarks. So, that's constantly a battle of being a PA and forgetting about the grade part.

This point was made even more powerful by Denise’s reflection about the ultimate goal of the work she is doing right now: how it is about others, not herself. Denise also talked about how the grades she was getting made her think about the patient care aspect of the profession and how, at times, this made her question if she had the ability to be successful as a PA.

Marion shared that she navigated through those feelings by having confidence in her ability to adapt and to work through difficult challenges.

And I think I can work through it. Obviously, it's not going to go swimmingly all the time and every situation is going to be different but I feel like I have enough tools in my box to figure out how to navigate the situation.
She had a realization, through her work around simulate patients, that she is not expected to be robotic and perfect; that it is okay for her to be human. “We're just as vulnerable and just as human as the patient that's sitting across from us”, she shared.

**Conclusions.** Although students felt at times that the structure put in place to help them develop into PAs during the didactic phase of their PA program was frustrating or misaligned, they shared a general sense that they gained insight into themselves as a result. They were able to describe skills they now possessed and skills they knew translated into good practice. They were able to take advantage of the moments when their own unique set of skills were encouraged and supported, especially when linked to successes in the profession. They had positive and negative experiences that challenged their previous identities and their perception of success. Ultimately, students often focused on their ability to be a good PA as a way to judge their performance. Additionally, from a very early stage and in every aspect of their professional development, the students drew on their thoughts and expectations of themselves as future PAs.

**Conclusion**

How do didactic PA students explain and make sense of their developing professional identities? This analysis revealed the complex process of professional identity development in seven participants, and illustrated the transformational experience each had in the first year of their education. That transformation, full of complexity and often fraught with emotion, was an integral aspect of their experience in becoming a PA. These students, whether knowingly or not, merged their previous identities into one of a clinician. That identity provided an entry point into the professional mindset, empowered them to look to each other for motivation and support, and encouraged them to seek advice and guidance from faculty and other professionals throughout the process. That identity also carried with it the pressure to perform, the weight of the
responsibility to others, and the acceptance of their personal challenges and successes within the process.

The findings presented in this chapter emerged from an analytic process where the researcher was engaged with the data directly from the participants in an iterative and prolonged fashion. Although the specific stories of the participants were unique to them, their feelings about certain moments were often common and shared. This leads to the suspicion that many of the experiences shared by these seven individuals would also be found in an exploration of the experience of other students in similar research. Interpretations of the lived experience of these participants were made based on synthesizing data from the transcripts and highlighting each theme and concept with illustrative excerpts.

The following chapter draws connections of the findings to relevant literature and to self-efficacy theory. It concludes with a discussion of future implications for practice.

Chapter Five: Discussion and Implications for Practice

The purpose of this study was to investigate how didactic PA students explained and made sense of their developing professional identities. This attempt to better understand professional identity development was framed within the construct of self-efficacy theory. It employed interpretative phenomenological analysis (IPA), a qualitative research approach, to allow for a deep exploration of how students experienced their process of professional identity development during the earliest phase of their PA education.

While aspects of professional identity development are widely explained in literature (Black, et al., 2010; Hilton & Slotnick, 2005; Irby, 2011; Monrouxe, 2010; Wong & Trollope-Kumar, 2014,) an understanding of the elements of the process that are attributed solely to experiences within the didactic phase of medical (and specifically PA) education is lacking. The
findings in this study provide a deeper understanding of the experiences of PA students as they develop a professional identity, and provide further sense of the transformation that occurs during the didactic phase of their education. The study resulted in the following findings: relationship to self, relationship to others, relationship to process.

This chapter details how the findings are situated within current literature and how they support a deeper understanding of how students make sense of their experience. The chapter concludes with a discussion of implications for practice and recommendations for future research.

**Relationship to Self**

In reflecting on their experiences, students revealed much about their relationship to the self. The described relationship, in fact, aligned with the four influential aspects of self-efficacy theory (Bandura, 1977). First, students felt encouraged when experiencing successes, both large and small. Second, they gathered insight from watching others succeed and fail in professional situations that were real and simulated. Third, they described the personal feelings that shaped how they thought about their success when others expressed belief or doubt in their abilities. Lastly, they revealed intrinsic fears and stressors that when exceeding individual thresholds, decreased their self-efficacy, but when experienced in lower levels, motivated them, relaxed them, and helped them to feel successful. The four elements of self-efficacy theory, performance accomplishment, vicarious experience, verbal persuasion, and emotional arousal were demonstrated in this finding. The findings also supported the assertion that the lower the emotional arousal, the higher the performance resulting in higher self-efficacy and vice versa (Bandura, 1977).
Students discussed the ways their experiences guided them in thinking about their career choice, their performance, and to what extent experiences increased or decreased their confidence. This is supported by the literature that explains how self-efficacy theory influences career motivation, performance, and confidence (Bandura, 1982; Bandura, 1997; Bandura & Locke, 2003).

Self-efficacy is regulated by cognitive, motivational, affective, and decisional thinking process (Bandura, 1977). The students described a constant internal thought process in which they had to navigate feelings of success and failure. That thought process aligns with research that describes the effect of self-efficacy on self-enhancing or self-debilitating thoughts, levels of motivation, or perseverance in the face of challenges (Bandura & Locke, 2003). Bandura (1982) asserts that when individuals feel capable, they will perform a task with confidence. This was illustrated by descriptions students shared regarding confidence in certain skills that led to the desire to demonstrate them more, and avoidance of tasks they felt less capable to achieve.

Students shared how they had to learn to recognize and cope with stressors they experienced, which was consistent with research that links an individual’s vulnerability to stress and the influence on emotional wellbeing (Bandura, 1997; Bandura & Locke, 2003).

Students recalled the benefit of having to reflect on certain experiences as part of their course work. They cited authentic interactions with standardized patients or participating in simulated experiences as transformational experiences. This aligns with other findings that self-efficacy requires an individual to process their experiences, and that authentic experiences create improved self-efficacy better than symbolic ones (Bandura, 1977). Because study participants were in the didactic phase of their PA education, working with standardized patients and in simulated cases were the most “authentic” experience they had. Although they were not
interacting with “real” patients, the impact was significant in those moments. Because this study only involved students in the didactic phase of their PA education, a comparison of impact to genuine patient interactions is not possible. This finding suggested the idea that the value of simulated experiences may be just as dependent on environment, context, and phase in the educational process as much as it is on “authenticity.” Bandura & Schunk (1981) described the importance of assigning meaning to experience. The students in this study described how their experiences, both positive and negative, had very personal meaning and importance.

As a person advances in their mastery, their self-efficacy increases (Bandura, 1982). This research supports that claim and is evidenced by students when, after one year into their schooling, were all able to identify an overall positive feeling about their ability to succeed. Students often described how, after addressing challenges, they were finally in a mindset that allowed them to trust themselves and the process. Perhaps their descriptions point to the moment in which they experienced sufficient “mastery” in being a PA student and the turning point of their self-efficacy during their didactic phase of their education. The premise that self-efficacy is a higher predictor of overall success than previous successes (Bandura, 1982) was illustrated by the students’ inability to use satisfactory grades to enhance their self-efficacy. Students had to get to a point in which they believed they would be successful to be able to accept those grades as successes rather than failures. They had the skills and knowledge to be successful, but they did not necessarily believe in their ability to succeed. It appeared that turning point was defined, for them, by the moment they achieved both the “skills and the will” (Artino, 2012).

The ability to achieve balance between high self-efficacy that encourages an individual to perform and low self-efficacy that helps an individual prepare (Bandura, 1982) was difficult to assess in these findings. The participants discussed individual emotional responses and ways of
making sense of their experiences, and because of that, it was difficult to say which participants had reached that ideal balance. They shared the fears of failure which, in this case, seemed to motivate the students to perform, although the extent to which that fear alone spurred them to prepare was unclear.

Perception of self-efficacy is an important factor in regards to how it influences behavior (Bandura, 1982), and in this study, the findings supported that claim. The participants’ perceptions of their self-efficacy, often skewed toward the negative, clouded their ability to see successes for what they were, and led them to underestimate how their beliefs could impact their academic performance. Students who seemed to have higher levels of perceived self-efficacy at the start compared to others described more frustrations with the process and even more questions regarding the choice of their profession. This was consistent with argument that a mismatch in experience and self-efficacy can lead to discounting the value of experience (Bandura, 1977).

The findings in this study aligned directly with descriptions of academic self-efficacy presented in the literature (Kitsantas & Zimmerman, 2009). Because self-efficacy is a major construct of self-regulation, self-efficacy, in turn, could play a role in how students self-monitor, set goals, self-evaluate (Kitsantas & Zimmerman, 2009). The findings also confirm the importance of self-efficacy because of the its potential influence on overall student success (Artino, et al., 2010; Plant, et al., 2011; Artino, et al., 2011).

Although the task of self-regulation was not specifically evaluated in this study, students described aspects of self-regulation in their motivations to overcome challenges and difficulties. Students spoke of how they harnessed their feelings associated with self-efficacy to monitor their progress and understanding of material, to set achievement goals, and determine their success. It
is arguable, however, how accurate those self-assessments were compared to the standards expected from faculty and classmates.

In this study, the expectations and circumstances relevant to learning how to become a PA were in the forefront of student thinking as they experienced their developing professional identity. They demonstrated the capacity to self-regulate their learning, an integral component of academic self-efficacy (Kitsantas & Zimmerman, 2009), when describing the constant modifications they made to their study approach and preparation.

Motivation was a common end result of many of the experiences that students shared in this study. Sobral (2004) described motivation as having several components: perceived value of a task, perception of self-efficacy, and belief about control of the learner. Students described elements of motivation influenced by each of those, either directly or indirectly. They discussed how the value of their PA education was framed within the context of their role as a future provider, they shared descriptions of stories that influenced their feelings about their own abilities, and they shared moments in which they accepted responsibility for elements that were in their control and let go of elements that were not. As supported by the literature, personal motivation was a key element in their developing identities (Pelaccia et al, 2009).

Over estimation of self-efficacy in a medical setting can produce levels of confidence that can lead novice practitioners to make decisions that may be dangerous to patient care (Artino, et al., 2012). In this study, students did not seem to have inflated perceptions of self-efficacy, in fact, it appeared to be just the opposite. Students often questioned their abilities, even in the sign of what most would agree were successes.

Medical students with higher levels of self-efficacy are found to have less anxiety (Artino, et al., 2010). Although the specific levels of self-efficacy were not evaluated in this
study, students shared how certain levels of stress motivated them, to a point in which it peaked, and they found comfort in that motivation. The findings do not provide insight into the direct effect of self-efficacy on specific levels of anxiety.

These findings both support and contradict elements of what is known about gender and self-efficacy in medical students and the way in which students of different genders experience self-efficacy (Moulton, Seemann, & Webster, 2013). All of the participants in this study identified as female, so the findings represented were examined with that in mind. Women typically attribute lower self-efficacy to personal responsibility rather than poor performance (Chaput de Saintounge & Dunn, 2001). In this study, students frequently cited their own deficiencies and failures in their belief in their abilities, and were often unable to recognize their successes. Women also connect self-efficacy to aspects of their learning environment (Chaput de Sintounge & Dunn, 2001) and these findings suggest environment played a significant role in the experience of female didactic PA students, as well.

An aspect of literature that was clearly not supported by this research is the premise that professional identity is difficult to develop during the didactic stage of medical education. For the students in this study, the early stages of a transformation into clinician occurred within and became a major influence in how they approached the didactic phase of their education. Their experiences fit the definition of professional identity formation perfectly: “identity formation that involves the process of becoming a professional through expanding one’s knowledge and understanding and skillful performance, through engagement with other members of the profession and by deepening one’s own commitment to the values, disposition, and aspirations of the profession into habits of the mind and heart” (Irby, 2011, p.549). Students described their passions and aligned themselves, using their past and present experiences, with what they knew
about the PA profession. They gained confidence as a result of that alignment and took very seriously the responsibilities of the profession from the time they started PA school. They had experiences before starting PA school that influenced their motivation, confidence, and thinking, which highlighted the complex and iterative nature of their developing professional identities (Black, et al., 2010; Hilton & Slotnick, 2005; Wong & Trollope-Kumar, 2014;). Their reflections aligned with findings in research that identify the process of professional identity as a sophisticated understanding of the profession, the dynamics, and influence of power relationships with others (Wong & Trollope-Kumar, 2014; Goldie, 2012). The way students relied on their own understanding of the realities of the profession to guide their approach was consistent with research literature in professional identity (Finn et al., 2010; Goldie, 2010).

Students described the feelings they experienced from situations that challenged their emotions and how they processed those feelings through classmates, faculty, and family support, an important aspect of the process (Helmich et al., 2012). Their experiences aligned with research that described moments of identity dissonance that, when experienced, left them feeling despondent or disenfranchised with the process (Monrouxe, 2010; Finn et al., 2010).

In summary, the first finding reveals how students in this study had to navigate the thoughts and feelings that emerged from within themselves during the process of developing their own professional identities. Those thoughts and feelings, connected to very personal aspects of themselves, were often difficult to overcome without a larger perspective. Their relationship with others often provided that perspective, and is explained below as the second finding.

**Relationship to Others**

The relationship students had with others throughout their process of developing professional identity was integral in providing them with an additional perspective on their self-
efficacy. At times, those interactions provided an additional source of motivation and confidence, and in other cases, interactions with others introduced questions of doubt regarding their ability to succeed. As with the above described findings, their relationship with others aligned with all aspects of self-efficacy, but in a different way. Students compared their own accomplishments to others, saw successes and failures of other professionals and classmates and learned from them, relied on the advice of others, and were deeply affected by advice or disappointments expressed to them by others. These experiences aligned with the performance accomplishments, the vicarious experience, verbal persuasion and the emotional arousal influence of self-efficacy theory (Bandura, 1977).

There is significant link to social aspects of experience within academic self-efficacy (Bandura, et al., 1996), and the findings in this study confirmed that students very much depended on that social structure. In the academic setting, there are known effects of self-efficacy on achievement, application of tasks, persistence, and academic scores (Bouffard-Bouchard, et al., 1991; Schunk, 1984; Zimmerman & Bandura, 1994). This study focused on analyzing the experience of students, a more subjective metric, rather than grades and standardized measures making alignment with more objective metrics of success difficult. This study did not ask participants to directly quantify their self-efficacy, rather it investigated experiences to provide a deeper understanding of self-efficacy; this makes any correlation of self-efficacy to levels of academic achievement impossible and, frankly, not the goal of the study in the first place. It is notable, however, that all students at the time of the interviews were considered by program standards, to be successful in their academic progress.

In medical education, the didactic phase has been traditionally thought as the stage in which knowledge is built for professional preparation, and not a phase in which self-efficacy or
professional identity advances greatly (Finn, et al., 2010; Ginsburg & Lingard, 2011). That premise was not supported by the findings in this study. Although students were limited to interactions with standardized patients, faculty, guest lecturers and not “real” patients, the students identified real feelings that resulted from their interactions and they noted how those learning experiences influenced how they felt about their process of becoming a PA. Clinical settings are known to provide aspects of social comparison and interaction of a practice community that influence self-efficacy (Raat, et al., 2013), but in this case, the findings support a strong sense of community and social engagement even in the didactic phase.

Just as in medical students, PA students found that relationships with faculty were very important to their perceptions of self-efficacy (Hopstock, 2008; Felman et al., 2010). They described how conversations within these mentoring relationships helped them view their own successes more positively and allowed them to modify their behaviors which resulted in increases to their self-efficacy (Cohen & Dennick, 2009).

An interesting aspect of behavior tendencies in women in medical settings is that in performance situations, they are typically more successful in tasks that require cooperation rather than competition (Chaput De Saintounge & Dunn, 2001). Students mentioned elements of competition throughout this study, but mostly in reference to the “friendly” variety, or in describing a sense of competition that focused less on a specific outcome and more on a shared purpose or goal. One even talked about the pact she made with her classmates: they could talk about their successes and failures, but never in reference to actual grades. Although there was not a comparison with male students, it does appear from this study, that female PA students do seem to rely on cooperation, with some competitive edge.
Additionally, female medical students typically respond to feedback in positive ways and have higher tolerance for external changes because of their reliance on environment for influence in self-efficacy (Chaput De Saintounge & Dunn, 2001). The students in this study identified feedback as a very important part of their process in determining their success. They described how they actively sought it out when it wasn’t necessarily a part of the process and how they reflected back on the feedback, whether from faculty, peers, or standardized patients, when seeking confirmation of their own success.

The social elements of professional identity development were also reflected in the findings of this study. Students shared a sense of community, whether with classmates, with other professionals, or with faculty as major influences into how they processed their experiences. Mann (2011) notes that the social aspects of professional identity cannot be separated from other parts of the process, and these findings support that notion. Each participant discussed at length how the social aspects of their experience influenced them in both positive and negative ways.

The cultural aspects of evolution from lay person to professional that Mann (2011) describes were also supported in this study. The students grappled with their sense of fit within the culture, the community, and the responsibilities of a PA from the very beginning; these elements of the identity formation (Finn et al., 2010; Mann, 2011) were at the forefront of their experience.

Students identified role-modeling as an important social factor in their professional identity development and described the significant impact it had in how they thought and felt. This aligned with similar findings in research about the influence of role-modeling on professional identity (Finn, et al., 2010). Students noted that the ability to see others performing
certain skills helped them in their own ability to judge their understanding of material. They also reflected on how negative role-models influenced their thinking (Finn, et al., 2010; Gingsburg & Lingard, 2011; Thistlethwaite, 2014) and helped them identify characteristics they specifically did not want to emulate.

Specific teaching strategies and relationships with mentors are found to influence self-efficacy (Artino, et al., 2012; Paige et al., 2011; Paskins & Peile, 2010), and in this study, the findings supported that notion. Students described interactions with their advisors and mentors, both professionals and peers, that influenced them along the way. They cited feedback from standardized patients, peers, and faculty as very important to their ability to recognized their strengths and successes. This aligns with Hopstock’s (2008) same finding in medical students.

In summary, students’ reflections revealed that their interactions with others influenced their self-efficacy and developing professional identities. That influence spanned from encouragement and motivation from friendly competition and conversations, to feelings of being hurt, demotivated, feeling inadequate, and exhibiting low self-efficacy. They relied, too, on the structure and support of the process to help them make sense of their professional identities, and this is represented in the third and final finding.

**Relationship to Process**

The third and final finding in this study is relationship to process. Students acknowledged that elements of PA school structure and process influenced their experience. The way in which students described their relationship to process also aligned well with the fours elements of self-efficacy theory. Students revealed that curriculum and the structure of PA school in the didactic year provided them with ways to feel successful in skills and tasks, it confirmed their desires to achieve with the role in the clinician in mind, it provided a structure that allowed them to receive
feedback that encouraged them and helped them to feel successful, and it challenged their emotional resolve. This illustrated aspects of performance accomplishment, vicarious experience, verbal persuasion and emotional arousal that strengthened the understanding of how students made sense of their professional identities.

Self-efficacy is influenced by behavior and successes with minimal effort build self-efficacy more than successes with larger effort (Bandura, 1977). In this study, students recounted specific stories of classroom activities or experiences that influenced their self-efficacy. None of the students mentioned successes that might be considered larger elements, such as entire courses or progression to the next semester, for instance. Interestingly, successes with a larger effort build confidence but are often attributed to factors other than a person’s self-efficacy (Bandura, 1977). This finding supported that premise; students often had very little insight into why they were successful, they questioned from where their successes came, and they often had to rely on the words of others to believe in themselves.

Self-efficacy is known to influence the development of skills that are integral in the academic environment (Schunk, 1984; Zimmerman & Bandura, 1994), and in this study, students identified skills they gained as a result of their process. They did not directly link those skills to self-efficacy per se, but they were able to articulate how their experiences in the process contributed to skills they saw as valuable in school and in their future profession.

Students described aspects of their academic environment that helped them feel good about their abilities, or identified aspects that resulted in setbacks in their thinking. Certain types of academic activities have been found to promote self-efficacy (Bédard, et al., 2012), and although this study did not assess levels of self-efficacy, the findings showed that CI case, problem-based learning experiences, activities centered on active learning, low-fidelity case
simulation, and interactions with standardized patients were significantly influential experiences for students. Students discussed how these experiences influenced their thoughts, their behaviors, and their attitudes toward their success, and their perception of self-efficacy. They described assignments and material that aligned with their interests, sometimes interests they maintained since childhood. These descriptors mirrored research that links encouragement and motivation with past interests and passions (Bembenutty, 2009).

Students cited specific elements of the curriculum and classroom activities that influenced their individual experience. Monrouxe (2010) explains that as students struggle and their stress and performance suffer, curriculum designed to facilitate building professional identity has the ability to encourage students in positive ways. The students identified several ways in which the activities that influenced professional identity also encouraged their thinking. Some students mentioned the “Professional Development Reflections” as assignments which helped them recognize their successes differently and that those formal reflective exercises provided an entre for conversations with advisors, a finding supported by the work of Goldie (2012) and Irby (2011).

Students attributed their success to stress and anxiety, and at other times, attributed the process to their success. This finding is in line with what Chaput de Saintounge & Dunn (2001) found in female medical students. Female medical students often look to their learning environment, even rely on it as something that could influence their success (Chaput De Saintounge & Dunn, 2001), and the findings in this study supported that claim. Participants described the all-encompassing events in life, not related to academics at all, that influenced how they thought and felt.
Female medical students have been shown to attribute moments in which they were not successful to a poor learning environment (Chaput De Saintounge & Dunn, 2001), and in this study, the same results were revealed. Students mentioned organization of curriculum, expectations from faculty, and aspects of the curriculum that affected how they felt about their success, and at certain times that they have to relinquish control in order to feel successful.

Students identified elements of their experience that were influenced by the way in which their learning was situated in an authentic medical frame, and described how that framing, in turn influenced their perceptions, attitudes, and beliefs about the profession, and led to development of skills in being more self-directed and more self-aware (Johnson et al., 2012; Shiner & Howe, 2013). By experiencing learning situated in this authentic context, they also came to rely on each other and pushed for their own true understanding of multiple “correct” ways of understanding, rather than just one (Beckett & Gough, 2004).

Elements of the hidden curriculum, areas of learning expected from students not necessarily taught formally, are easily identified in this research. The students understood the expectations of behavior, their values, and ethical implications of being a PA, all components of the hidden curriculum described in the work of Finn, et al. (2010). These elements of informal learning (Helmich, et al., 2012) were often the most frustrating for students in this study; students shared that pressure from academic performance often felt less significant than pressure from unwritten expectations, and more often than not, they felt as if they were failing in achieving them.

Ginsburg and Lingard (2011) argue there are some unique aspects of the didactic phase in medical education that allows for the development in professional identity. Others note that the focus the professional identity becomes even more significant during the clinical phase (Finn, et
al., 2010). As mentioned in the previous finding, this study only focused on students in the didactic phase, and it is very clear that developing professional identity in this phase is significant and important to acknowledge. In relationship to process, Finn et al. (2010) state that didactic phase education does not promote professional identity because students are not in the center of practice communities or social situations that acknowledge the emotional impact of their experience, and that past experiences are not integrated. The findings in this study are to the contrary. Students described all of those elements as integral to the way in which they thought and felt about their experience. It is possible that research comparing aspects of didactic and clinical learning showed a difference in levels of professional identity, but this study was designed to illuminate experience before entering any clinical exposure. The idea that there is no wisdom or experience for students to draw upon, as Finn et al. (2010) claim, is refuted by these findings. Ginsburg and Lingard (2011) state that didactic students have lower levels of tolerance for ambiguity or uncertainty, and although when compared to clinical students this might be true, the results of this study illuminate that students were constantly rationalizing their process in regards to accepting the ambiguity and uncertainty of real medical practice.

In summary, components of the curriculum, the availability of faculty to mentor and role-model, and reflecting on experience are all examples of elements within a didactic learning environment that appear to promote self-efficacy and professional identity. Aspects of the didactic environment can work against improving self-efficacy and professional identity, as well. Ultimately, students in this study overcame their challenges and felt they had generally benefitted from their process, however, at times, at significant cost.

**Conclusion**
The purpose of this study was to investigate how didactic PA students explained and made sense of their developing professional identities. The findings illuminated the complex process of professional identity development and, when viewed through the lens of self-efficacy theory, illustrated the iterative and challenging process students underwent, and the very significant transformation that resulted.

It appeared from this study, factors influencing PA students’ self-efficacy and behavior align with what is known. The elements of their experiences aligned perfectly with the widely-accepted aspects of influence to self-efficacy (Bandura, 1977). Physician assistant education was developed in the medical model and therefore the similarities of the experiences of these PA students in their self-efficacy seemed to align very much with the experiences of medical students.

Viewing this study in the context of professional identity, however, illustrates an alignment with some established ways of viewing the process, but highlights a divergence in others. The complex process of developing professional identity was certainly confirmed; however, the extent to which students experienced that process is more significant than described in current literature. This study deliberately did not compare experiences in the clinical and didactic phases, and that design allowed for a deeper analysis into the ways in which these PA students transformed in the first year of their education. Current research questions the significance that professional identity plays in the didactic phase of students learning. This study, however, reveals a significant impact of professional identity development on students and provides much insight in how the process can affect their self-efficacy, their academic approach, and their feelings of success.

Implications for Practice
Given the findings of this study, it seems logical to recommend that self-efficacy should be built deliberately into the foundations of PA education and based in this study, specifically into the didactic year. The following section outlines recommendations for practice that are based on the results of this study and a brief description of how they could be implemented. The recommendations are organized to address each of the three major findings.

**Recommendations that address relationship to self.** This study highlighted that students’ thoughts and feelings about their success were dependent upon, in part, how they thought about themselves and their experience. Unfortunately, they often lacked insight into themselves while in this process, and were often influenced negatively because of it. Therefore, it would seem valuable for PA faculty to think about ways to encourage students to recognize their place within their process of professional identity development and to work to build self-efficacy as early as possible. As a start, faculty should consider discussing self-efficacy and its impact with students at the start of their education by outlining the process of self-efficacy and aspects of professional identity that students will experience.

Helping students recognize the elements in their environment that impact their self-efficacy would also be beneficial. The students in this study were unable to see how social challenges, living situations, and unhealthy group dynamics affected their self-efficacy. Having peer mentors address those issues specifically, possibly using a standardized list, could better enable students recognize problems early, and initiate changes more quickly. Addressing issues of balance between school and personal life may also help students navigate challenges before they become problematic.

A greater effort by PA faculty to mitigate stress and anxiety would have significant benefit to student’s self-efficacy. The goal is not to eliminate stress, as some stress can be a
source of motivation, but to students with further ways to discuss and address stressors in a healthy way. Most students were not able to recognize stressors until they impacted some part of their experiences, therefore, making an effort to identify stressors and factors impacting them could allow for a healthier way to handle them.

Physician assistant faculty could purposefully seek out moments to allow students to identify their passions, they past experiences, and their wisdoms and apply them to the material they are learning. Because student success in one area builds self-efficacy that transfers to other, allowing students to self-identify these areas and share them with others might help them to feel supported and encouraged in additional ways.

Frank discussions about the emotional impact of PA school should be encouraged. Incorporating avenues for students to express those emotional and feelings in a reflective activity could potentially to allow students to gain much needed insight into themselves and could serve as a launching point for conversations in the future. The emotional impact of identity dissonance could be addressed by using reflective assignments to encourage students to express thoughts and feelings about their current identities and acknowledge the changes they are experiencing.

**Recommendations that address relationship to others.** Because of its significant impact on students’ self-efficacy, it is important for faculty to create a learning environment that encourages mentoring relationships. Including valuable feedback to students after learning activities known to affect professional identity and self-efficacy could also be transformational. The social aspects of learning are an important influence to students, and healthy peer relationships can be great sources of additional support and motivation to students. By formally acknowledging how others may be able to help (and how they may do the opposite), students
may accept more quickly and openly the role others can play in their successes and can actively seek out healthy relationships.

Discussions with faculty advisors are often focused on academic performance. By incorporating elements known to encourage self-efficacy into advising interactions, faculty could encourage and motivate students in more efficient ways. It is important to recognize that changes in student behavior could be an indication of poor self-efficacy. Advising with that in mind could lead to important discussions that address the personal feelings of a student rather than focusing solely on achievement. Peers and faculty should recognize that with every interaction, there are opportunities to encourage or discourage self-efficacy.

**Recommendations that address relationship to process.** The process and structure in which students start their process of becoming a PA has much potential influence on self-efficacy and professional identity. Curriculum that incorporates elements of authentic practice, simulation, application of material, and hands-on, active learning helps to build self-efficacy, even in the didactic phase.

Positioning authentic learning in the context of a safe environment is also very important. Students described in this study how they attributed success and failure in simple classroom exercises to their overall ability and skills as a clinician. By emphasizing a safe place to make mistakes, faculty can help students use those experiences to boost their self-efficacy rather than reinforcing student concerns about being a bad PA.

By incorporating aspects of learning that outwardly address self-efficacy and promote professional identity, it is possible the difficult-to-achieve expectations of the hidden curriculum could be less difficult. It may require ongoing conversations by faculty advisors to help students change their perceptions of their self-efficacy. Curricula that integrates aspects of storytelling,
dressing the part, joking, and mimicking professionals (Finn et al., 2010; Monrouxe, 2010) could help students develop professional identity with less focus on academic achievement.

Recommendations for Future Research

This study provided a basic understanding of how didactic PA students explained and made sense of their developing identities and there are several ways in which future research could add to that understanding. Further research comparing genders experiences in PA students might provide more insight into how genders affects experience. Also, studying didactic PA students and didactic medical students could provide interesting comparisons of the different disciplines.

The students in this study all seemed to suggest there was a point in which they shifted from lower self-efficacy to beginning to believe they could and would be successful. Further study could identify and provide more insight into the support that students need at different stages of their didactic phase, and the differences in their experiences while transitioning through those stages.

This study did not ask students to assess their own self-efficacy and did not correlate findings with true academic achievement; it sought to describe their thoughts and feelings throughout their process. Other studies with a focus on students’ perception of self-efficacy linked to academic achievement may be able to provide a different way to view the process.

A final interesting result of this study was how participants mentioned the same specific moments in their coursework, such as working with standardized patients, situations during CI case, and even moments during their OSCEs, that impacted their self-efficacy and their professional identify development. Additional studies which evaluated those specific experiences could identify the transformational aspects of those moments and could potentially be used to
develop criteria for creating learning experiences that boost self-efficacy or promote professional identity development in PA students in the didactic year.
References

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Appendix A: Recruitment Email

Dear PA Class of 2018,

Consider taking part in this study!

A research study is being conducted to gain insight into how PA students think and feel about becoming PAs during their didactic phase of PA school. This study is being conducted by a doctoral student from Northeastern University.

In order to participate, individuals must be enrolled as a PA student in Shenandoah’s PA program in the didactic phase of study. All qualified individuals are encouraged to apply, regardless of race, ethnicity, class, religion, (dis)ability, or national origin.

The study consists of three in-person interviews. The first interview focuses on collecting demographics, explaining the study, and obtaining informed consent (30-45 minutes). The second interview focuses on questions that describe the experience of becoming a PA at this stage in the education process (60-90 minutes). The final interview will allow the participant to reflect upon the meaning of the experiences (30-45 minutes). All interviews will be conducted in a private location at a date and time convenient for the participants, and will be offered in both Winchester and Leesburg locations. Participants who complete all interviews will receive one $15 gift card to Amazon.

If you would like to participate in this study or learn more, please email schempp.a@husky.neu.edu. Emails sent to any other email address must be deleted with no response per Northeastern University IRB. Selection for the study is not guaranteed, but will be determined after the first interview.

Participation is entirely voluntary. If you do not volunteer for this study, you will not be contacted again regarding this research. Confidentiality of all information gathered in this study is guaranteed, and participants’ names will never be shared with others or used in the published results.

This study is conducted by Anne Schempp, an EdD doctoral candidate at Northeastern University. This study has been approved by Northeastern University’s Institutional Review Board for research ethics (IRB# CPS17-03-10) and Shenandoah University’s Institutional Review Board (IRB# 432).
Appendix B: Consent to Participate

Northeastern University, Department of Education

Name of Investigator(s): Dr. Joseph McNabb (Principal Investigator), Anne Schempp (Student Researcher)

Title of Project: The Making of a Practitioner: Understanding the Lived Experience of Developing Professional Identity in Didactic Physician Assistant Students

Informed Consent to Participate in a Research Study

We are inviting you to take part in a research study. This form will tell you about the study, but the researcher will explain it to you first. You may ask this person any questions that you have. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participation, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?
We are asking you to take part in this study because you are a PA student in the didactic phase of your education.

Why is this research being done?
The purpose of this research is to gain insight into how didactic PA students think and feel about becoming PAs at this stage in their education.

What will I be asked to do?
If you decide to take part in this study, we will ask you to complete three interviews about your experiences as a PA student at this phase of your education. The interviews will be scheduled at dates, times, and locations that are convenient to you.

Where will this take place and how much of my time will it take?
You will be interviewed in either the HPB or Leesburg building, whichever best suits your needs. The first interview will take 30-45 minutes, the second 60-90 minutes, and the third 30-45 minutes, and they will take place within a 2-3 week period.

Will there be any risk or discomfort to me?
There are no foreseeable risks or discomforts to you for taking part in this study.

Will I benefit by being in this research?
There are no direct benefits to you for participating in the study. However, your answers may help us to learn more about the realities associated with being a PA student.

Who will see the information about me?
Your part in this study will be handled in a confidential manner. Only the researchers will see the information about you. No reports or publications will use information that can identify you in any way or any individual as being a part of this project. The information was gathered from the interviews will be recorded via audio file in two ways, and saved on an encrypted, password-
protected file and hard drive and saved using pseudonyms from the beginning of the study. Audio files will be destroyed within a week of the conclusion of the study.

If I do not want to take part in the study, what choices do I have? The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question.

Can I stop my participation in this study? Your participation in this research is completely voluntary. You do not have to participate if you do not want to and you can refuse to answer any question. Even if you begin the study, you may quit at any time. If you do not participate or if you decide to quit, you will not lose any rights, benefits, or services that you would otherwise have.

You will receive a $15 gift certificate to Amazon upon completion of the three interviews.

Who can I contact if I have questions or problems? If you have any questions about this study, please feel free to contact Anne Schempp (Tel: 540-931-5609, Email: Schempp.a@husky.neu.edu), the person mainly responsible for the research. You can also contact Dr. Joseph McNabb (Northeastern University, Boston, MA, Email: j.mcnabb@northeastern.edu the Principal Investigator).

Who can I contact about my rights as a participant? If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, Mail stop 560-177, 360 Huntington Avenue, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: irb@neu.edu. You may call anonymously if you wish.

Will I be paid for my participation? You will receive a $15 gift certificate to Amazon upon completion of the three interviews.

Will it cost me anything to participate? No.

Is there anything else that I need to know? You must be at least 18 years old to participate in this study.

I agree to take part in this research.

___________________________________________  ___________________
Signature of person agreeing to take part       Date

__________________________________________
Printed name of person above
Appendix C: Interview Protocol

Interview #1
Thank you for calling and expressing interest in this study. My name is Anne Schempp, and I am a doctoral student at Northeastern University. This research is being conducted as my doctoral thesis project. The goal of the study is to explore the experience of PA students in their didactic phase of education and to gain further insight into how they think and feel about becoming PAs. There are a few personal reasons I’m interested in this particular topic: As you may know, I’ve taught PA students for the past 8 years and am always searching for ways to better understand the student experience. Second, I hope that by having a better understanding of your experience, PA educators could gain insight into how to provide better teaching and learning. The third reason I’ve chosen this topic is because there have been no previous studies focused this topic for PA students in this phase of their education.

As the Student Researcher, I am also the person who will be conducting the interviews like the one we are doing right now.

Today, I’d like to ask you just a few criteria-based questions, to determine if you qualify as a participant, and if so, I’ll give you a more detailed explanation as to the scope of this project. At that point, if you’re interested in proceeding, we can talk about setting up the interview time. Sound good?

- Are you a currently enrolled in the Shenandoah University PA Program student?
- Are you current in the didactic phase of your education (before clinicals)?
- For reference, would you be willing to state your age?
- It is helpful for this research to know how you identify your gender because some findings in the relevant literature are specific to those male or female students. Do you mind sharing how you identify your gender?
- Thank you. I’m happy to say that you meet all of the criteria in regards to participation in this study. Now I would like to tell you a bit more about the scope of this project.

This is an interpretative phenomenological study. This type of study seeks to make meaning of participant’s experiences using a qualitative research method. That means the data I collect will be from interviews like this one. The main question being asked is: “How to didactic PAs students explain and make sense of their developing professional identities as medical practitioners” The reason I’ve chosen to focus only on didactic phase PA students is because other studies about professional identity have been more focused on the clinical phase, where professional identity is developed in different ways, and in students in medical programs other than PA.

This is a three-interview process. In this first interview, I’ll collect some basic background information, explain the study, and obtaining informed consent. It will last about 30-45 minutes and we’ll schedule the second interview for a date and time that works for each participant. In the second interview, I will ask questions that focus on the how participants think and feel about their experience as a PA student becoming a PA. It will last about 60-90 minutes and we’ll
schedule interview number two at place and time that works for each individual participant. During the third interview, I’ll ask follow-up questions based on information already provided in the second interview, honing in on the how participants make sense of certain things they spoke about. The third interview should last about 30-45 minutes. All responses will be kept anonymous—identifying information would never be published. Participants who complete both interviews will receive a $15 gift card to Amazon.

That is a very brief overview of the study. Do you have any questions in regards to the research itself?

Great. What I’d like to do next is review the informed consent for this study.

(review informed consent)

Interview #2

Part 1: Introductory Protocol

First, do you have any questions about the process or the consent itself?

Great.

You have been selected to speak with me today because you have been identified as someone who has a great deal to share about the experience of being a PA student.

This research project focuses on the experience of PA students in the didactic phase of their education. Through this study, we hope to gain more insight into how students such as you perceive your sense of becoming a PA at this early stage.

Hopefully this study will allow us to better understand and support PA students as they work toward becoming PAs.

Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today. I will also be taking written notes during the interview. Only professional transcriptionist and I will be privy to the audio files. The transcriptionist only be provided with the recording labeled by pseudonym, meaning they will never even know your name, to maintain confidentiality. The audio files will be destroyed within two weeks of the completion of the study. I can assure you that all responses will be confidential and only pseudonyms will be used when quoting from the transcripts. Only your pseudonym will be attached to the transcript.

I would like to begin recording this session now, is that alright with you? OK, the audio recording has begun.

Do you have any additional questions or concerns about the interview process or the consent that you’ve signed?

Great, thank you.
This is the second of three interviews. We have planned for this interview to last between 60-90 minutes. We will then do a follow-up interview in about 2 weeks from now, it will last approximately 30-45 minutes. Today, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

Part 2: Interview Introduction
As I’ve mentioned, the intent of this study is to gain better understanding into the experiences of PAs students in their didactic phase and how they think and feel about becoming PAs. The approach to this qualitative study will be to first explore a participant’s background and experiences prior to PA school, next to examine the participant’s current experience in PA school, and finally to ask the participant to reflect upon the meaning of the experience.

We’ll take a break about halfway through the interview, but please stop me at any time if you want to break sooner. At any time, if you don’t want to answer a question, just let me know and we’ll move on. I’m taking note to make sure I can follow your responses. I’m happy to share these notes with you at any time. They will be destroyed at the end of the study.

Are you ready to begin?

Part 3: Questioning
Perceived Identity Before PA School
I’d like to start out by asking you a few questions about how you think about yourself as a person and explore your identity before starting PA school. This should take about 10-15 minutes.

1. In general, how would you describe yourself and explain who you are to someone who didn’t know you? (What words would you choose that best describe you?)

2. Before starting PA school, how you would you have described yourself and who you were? (Think about who you were, what you did, what you felt you were good at doing).

3. So, you’ve described yourself as (answer to #1) in general, and (answer to #2) before starting PA school. Now that you’ve been in PA for a about a year, how would you describe who you are now? How are these descriptions different? (Would you describe yourself differently before and after starting PA school?)

4. How did your identity or how you think about yourself change in the past year since starting PA school? (What have you or others around you notices about who you are since you started PA school).

Exploring Process of Developing Professional Identity
Great. Now, I’d like to ask you some questions that focus on how you think and feel about becoming a PA at this stage in your education. This should take about 30 minutes.
1. Describe the reasons you felt becoming a PA was a good fit for you? (What personal reasons did you use to choose to become a PA? What did you like to do/learn that seemed to align with the PA profession? Did any event or person guide you in this direction?)

2. Now that you are in PA school, has your sense of fit with the profession changed in any way- in either direction? (Have you realized anything about yourself and your expectations that you weren’t expecting? Have you changed your reasons for wanting to become a PA?)

3. What internal motivating factors do you rely on for success in PA school? (What drives you personally to succeed in PA school? In what ways do you need to motivate yourself during PA school?)

4. Describe how you think the stress of PA school affects you, either positively, negatively or both. (In what ways does the stress of PA motivate or demotivate you? How do you use stress to get things done or how does stress distract you from what you need to do?)

Break? Do you want to take a break for some water or the restroom?

Identifying and Explaining Specific Examples and Experiences
I am now going to ask you questions about specific examples of instances when you may have noticed specific experiences or feelings during your time so far in PA School. This should take about 30 minutes and you may need to think a little before answering. It’s okay to take some time to think before you answer.

1. Can you think of a story about a moment during PA school that made you question your choice to become a PA? (Was there a moment during PA school that made you think you shouldn’t be a PA?)
   a. Why do you think that made you question your choice?
   b. How did it make you feel?

2. Where there any other experience in the classroom, during CI Case, with your classmates, or interactions with your faculty that introduced doubt that this profession was a good fit for you? (Are there people or moments during school that made you think this wasn’t the right decision for you?)

3. Why do you think that made you question your choice?

4. How did it make you feel?

5. On the other hand, can you think of a story about a moment in PA school that reaffirmed your choice to become a PA? (Was there a moment during PA that confirmed you made the right choice to become a PA?)
a. How do you think this encouraged you and reaffirmed your decision to become a PA?
b. How did it make you feel?

6. Are there any other experiences in the classroom, during CI Case, with your classmates or interactions with your faculty that encouraged you in your decision to become a PA?
   a. How do you think this encouraged you and reaffirmed your decision to become a PA?
   b. How did it make you feel?

Describing Attitudes and Behaviors – Self-Efficacy

Finally, the last few questions focus on how you think and feel about your own ability to succeed as a PA. This should take about 20 minutes.

1. In general, how do you feel about your ability to meet the expectations of the profession? (How do you think you will do as a PA in practice?)
   a. What makes you more confident?
   b. What makes you less confident?

2. What are the expectations of the PA (profession) that you feel are easy for you to meet at this point?
   a. Why do those feel easy for you?

3. What are the expectations of the PA (profession) that you feel are difficult or impossible to meet at this point?
   a. Why do those feel difficult or impossible for you?

4. In closing, can you describe in detail what you’ve learned about yourself since starting PA school? (What changes in yourself have occurred since starting PA school?)

Part 4: Wrap-up

That concludes the questions for today’s interview. Before we wrap up, do you have any questions?

Let’s set up a date, time, and location for the final interview: ___

Thank you so much for your participation, and I will see you again on ________.

Interview # 3

Sense Making and Member Checking

Part 1: Introductory Protocol
Today’s interview will allow us to clarify a few areas from our last interview. Since then, our interview has been transcribed and I’ve had a chance to look over and review what you shared. I have a few areas I’d discuss a bit further. Similar to last time, I will be audio recording this interview. This should take about 30-45 minutes. Are you ready to begin?

**Part 2: Clarifications**

1. Will clarify any details, ask for more details, or ask for deeper reflection in areas identified in each participant’s transcripts.

**Part 3: Wrap-up**

*Thank you, that concludes the interview questions for this final interview.*

*If I come across a need to ask any follow-up questions, which would most likely only be the case if I felt clarification was needed in regards to one of your responses, would it be alright for me to contact you? Would you prefer I contact you via email or telephone?*

*Sometime over the next month, I will email you word-for-word transcripts and my initial interpretations of both interviews. If you chose, you can review the information, and you will have one week to provide me with any feedback, alterations, or corrections. Can you please confirm the email address you would like for me to email the transcripts to?*

*Once this thesis study is complete, which will most likely be 3-6 months from now, would you like to receive an electronic copy of the document?*

*Do you have any questions for me? Here’s your gift card.*

*Thank you so much for your participation in this study!*
Appendix D: IRB Approvals

IRB from Northeastern University:

Notification of IRB Action

Date: April 25, 2017
IRB #: CPS17-03-10

Principal Investigator(s):
Joseph McNabb
Anne Schemp

Department:
Doctor of Education Program
College of Professional Studies

Address:
20 Belvidere
Northeastern University

Title of Project:
The Making of a Practitioner: Understanding the Lived Experience of Developing Professional Identity in Didactic Physician Assistant Students

Participating Sites:
Shenandoah University approval pending

DHHS Review Category:
Expedited #6, #7

Informed Consents:
One (1) signed consent form

Monitoring Interval:
12 months

Approval Expiration Date: April 24, 2018

Investigator's Responsibilities:
1. The informed consent form bearing the IRB approval stamp must be used when recruiting participants into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Nan C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630
Appendix A

Call for Participants

Dear PA Class of 2018,

Consider taking part in this study!

A research study is being conducted to gain insight into how PA students think and feel about becoming PAs during their didactic phase of PA school. This study is being conducted by a doctoral student from Northeastern University.

In order to participate, individuals must be enrolled as a PA student in Shenandoah’s PA program in the didactic phase of study. All qualified individuals are encouraged to apply, regardless of race, ethnicity, class, religion, (dis)ability, or national origin.

The study consists of three in-person interviews. The first interview focuses on collecting demographics, explaining the study, and obtaining informed consent (30-45 minutes). The second interview focuses on questions that describe the experience of becoming a PA at this stage in the education process (60-90 minutes). The final interview will allow the participant to reflect upon the meaning of the experiences (30-45 minutes). All interviews will be conducted in a private location at a date and time convenient for the participants, and will be offered in both Winchester and Leesburg locations. Participants who complete all interviews will receive one $15 gift card to Amazon.

If you would like to participate in this study or learn more, please email schempp.a@husky.neu.edu. Emails sent to any other email address must be deleted with no response per Northeastern University IRB. Selection for the study is not guaranteed, but will be determined after the first interview.

Participation is entirely voluntary. If you do not volunteer for this study, you will not be contacted again regarding this research. Confidentiality of all information gathered in this study is guaranteed, and participants’ names will never be shared with others or used in the published results.

This study is conducted by Anne Schempp, an EdD doctoral candidate at Northeastern University. This study has been approved by Northeastern University’s Institutional Review Board for research ethics (IRB#) and Shenandoah University’s Institutional Review Board (IRB#).