COMMUNITY-BASED PHYSICIAN ASSISTANT CLINICAL EDUCATION: A CASE

STUDY ON MOTIVATIONS, REINFORCEMENT, AND BARRIERS FOR RECRUITING

AND RETENTION

by

Clayton James King

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

Christian Raby, Ed.D, Committee Chair

James Swezey, Ed.D, Committee Member

Abstract

The purpose of this case study was to develop an in-depth understanding of community-based clinical stakeholders experiences with recruiting and retention. The theories guiding this study were B. F. Skinner's operant conditioning and self-determination theory from Deci and Ryan. The methodology for conducting this research was a holistic multiple case study conducted with physician assistant clinical coordinators and community-based preceptors across the United States. Participants contributed to the research through interviews, providing relevant documentation, and in a focus group with clinical coordinators and community-based preceptors. Analysis of the data started with developing concept and pattern codes intra-case with the interviews, focus group and provided documentation. After the cases were complete cross-case synthesis compared the cases by cross-referencing these themes to all interviews, focus groups, documents, and reviewed literature.

Keywords: community-based preceptors, physician assistant, clinical coordinator, clinical learning, recruit, retain

Dedication

I dedicate this work to the wonderful women in my life.

To my wife, thank you for not allowing me to quit despite my best efforts.

To my mother, thank you for believing in me and encouraging me to continue.

I don't believe either of you understand how important you were in this journey.

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List of Abbreviations

Advanced Practice Provider (APP)

Community-based Preceptor (CBP)

Clinical Coordinator (CC)

Clinical Preceptor (CP)

Medical Teaching Institution (MTI)

Nurse Practitioner (NP)

Physician Assistant (PA)

CHAPTER ONE: INTRODUCTION

Overview

Clinical education is the most critical aspect when developing clinical competence for medical providers (Paul et al., 2020; Wimmers, Schmidt, & Splinter, 2006). Researchers of medical and educational literature broadly reviewed residency and clinical training (Wimmers, Schmidt, & Splinter, 2006). Medical teaching institutions (MTI) provide various methods that integrate clinical education as part of their complete patient care model, clinical education, and business (Regenstein et al., 2016). Traditionally, medical doctors and physician assistants trained within MTIs (PAEA, 2019; Chen et al., 2017). However, most physician assistants (PAs) trained outside of these institutions, and the growing ranks of the PA profession are even more dependent on resources outside MTIs (PAEA, 2019). PA programs rely on community-based clinical preceptors (CBP) to accept students into their everyday practice (PAEA, 2019). Chapter one included background information through various contexts. The purpose statement is concise guidance on the direct purpose of this research. I described the significance of the study, research questions, and important definitions.

Background

Community-based preceptors have a critical role in educating medical providers (Christner et al., 2016). Christner et al. (2016) noted that while the number of students relying on CBPs increases, the amount of CBPs is decreasing. Further exacerbating this problem was a shortage of primary care physicians (Woodall et al., 2018). Other contributing factors included students from different health professions in direct competition for community-based preceptors (Christner et al., 2016; Forsberg et al., 2015). The deficiency in CBPs contributed to fewer preceptors and difficulties with access to clinical experiences (Woodall et al., 2018). Researching the phenomenon of educator precepting included reviewing motivations, institutional support,

and barriers for stakeholders in community-based clinical education to gain insights into the recruiting and retention phenomenon (Minor et al., 2019). With these insights, PA programs could be more successful in developing strategies to gain or maintain CBPs. Greater understanding could lead to a more consistent, higher-quality clinical education for PA students.

Historical Context

The physician assistant profession began with one program at Duke University with three graduates in 1967 (AAPA, 2021). In 2019, over 242 programs graduated over 9,000 PAs (PAEA, 2019). U.S. News and World Report (2021) ranked the PA profession as the number one job in America for 2021. The growth of the PA profession was projected as the seventh fastest-growing job at 31% between 2018 and 2028 (AAPA, 2021). However, healthcare providers' rapid growth was not limited to the PA profession and corroborates the increasing demand for quality clinical rotations. Nurse practitioners (NP) and PAs were comparable in the jobs they perform, but NP schools numbered around 400, with over 27,000 graduates a year (AANP, 2021; Salsburg, 2018). All health care programs relied on community-based preceptors (CBPs). As these professions grow, the reliance on CBPs continued to grow as well (PAEA, 2019).

Christner et al. (2016) noted that participation in community-based education was waning, and without clinical sites, some medical schools will lack CBPs for students. The PA programs, preceptors, students, and ultimately patients could benefit from addressing community-based clinical learning sites' support. Many articles listed methods to improve residency and preceptorships, while others focused on barriers CBPs face regarding accepting and training students (Brown & Sivahop, 2017). The proposed research aimed to thoroughly review motivations, support services, and barriers that clinical coordinators and community-based preceptors faced regarding recruiting and retention. The intent was to understand the

phenomenon through a variety of information and methods for supporting community-based preceptors for clinical training through both the clinical coordinators' and preceptors' perspectives. In this way, CCs could develop strategies for identifying and analyzing motivations and support to CBPs.

Advanced practice providers consisted of physician assistants (PA) and nurse practitioners (Smith, Hampton, & Brandon, 2018). Researchers generally referred to these professions as advanced practice providers, physician extenders, mid-level providers, and advanced practitioners (Smith, Hampton, & Brandon, 2018). While the two professions had different clinical education requirements, both share a similar detail often overlooked, the reliance on collaboration with CBPs (Christner et al., 2016). The growth of the PA profession and reliance on CBPs was unlikely to change (PAEA, 2019). While APP programs provided quality training to their national certifying bodies' standards, individual programs could do more to improve clinical education (Brown & Sivahop, 2017).

Community-based preceptors faced several problematic barriers to accept a student (Snyder et al., 2010; Brown & Sivahop, 2017). The number of willing preceptors has decreased and will continue to decrease over the next few years (Brown & Sivahop, 2017). The decrease in community-based preceptors was a complex problem. Clinical preceptors had numerous barriers to accepting students in a community-based setting. The barriers included the lack of support from staff, institutions, and colleagues, as a few primary concerns (Brown & Sivahop, 2017). Preceptors also viewed time as a critical barrier (Drowos et al., 2017; Waters, Lo, & Maloney, 2018; Beck Dallaghan et al., 2017). Time concerns included teaching and being fiscally efficient in the business aspect of medicine. Electronic medical records and medical billing practices were regulatory burdens that CBPs often did not have the support staff to assist with, unlike preceptors

at MTIs (Paul et al., 2020). The regulatory obligations were a significant time constraint that affects the community-based preceptor's business and hinders the acceptance of students (Paul et al., 2020).

Social Context

The shortage of doctors and predicted continued shortage, especially in primary care, led to an increase in the demand for advanced practice providers (APPs) to fill critical gaps (Smith, Hampton, & Brandon, 2018; Dover et al., 2019). Patrick Boyle (2020) found the shortage had many causes but was primarily due to a disproportionate number of people over the age of 65. Individuals above 65 years old were more complicated and often required specialty care. Furthermore, many physicians were also reaching the traditional retirement age with the disproportionate aging population (Boyle, 2020). The shortage of physicians created a gap in healthcare for citizens, leading to a decline in access. The CDC (2019) noted that 8.3% of adult Americans did not seek treatment due to the high cost of health care and insurance in 2019. The CDC (2019) predicted difficulties in accessing health care to worsen. The potential first step to fixing a provider shortage involves retaining and recruiting providers in community-based practices and supporting them to create an efficient and improved clinical education (Brown & Sivahop, 2017). Clinical coordinators acted on behalf of their program to ensure this happens.

Theoretical Context

From a theoretical standpoint, this research was between two distinct theories representing each perspective, CBP and CC. Skinner's (1938) theory of operant conditioning applied to the position of CCs. Gaining and maintaining community-based clinical preceptors was a behavioral modification. Institutions that provided incentives through CCs were the construct of reinforcement, and a withdrawal of this support represented punishment (Ray &

Kilburn, 1970). Reinforcement included continuing medical education, professional development, and other services that CBPs received from the PA program. Several studies focused on incentives such a direct monetary payment, faculty development, and compensation packages (Paul et al., 2020; Begley, 2018). Incentives and support were reinforcements for the desired behavior of continuing to accept students into the community-based practice. While if a community-based preceptor did not continue, the removal of incentives was punishment.

Reinforcement in operant conditioning was positive or negative with the outcome of repeating a desired behavior. Positive reinforcement added an incentive that the other party wanted, which increased the chances of a behavior happening again. Negative reinforcement removed items that would increase a specific behavior, such as eliminating extra work. Punishment in operant conditioning was negative and positive as well in an attempt to decrease unwanted behaviors. Positive punishment was adding an undesirable task or item to an individual, such as extra work. Negative punishment removed a desired item from an individual, such as support or incentives for CBPs (Skinner, 1938; Ray & Kilburn, 1970).

Self-determination theory (SDT) was the framework to best describe why preceptors continue to take students with or without support being provided (Minor et al., 2019). Deci (1971) initially described the innate psychological needs to be met for motivational purposes. Ryan and Deci (2000) furthered SDT in a way that might explain the preceptor's continuance with taking students better than operant conditioning from the preceptor's perspective. SDT involved motivation, intrinsic and extrinsic, and inner resources for behavioral self-regulation, including the need for competence, relatedness, and autonomy (Ryan & Deci, 2000). Intrinsic motivation was the internal drive to accomplish a task (Ryan & Deci, 2000). CBPs were intrinsically motivated to participate with precepting, and SDT explained why community-based

educators take students without support for the institutions (Minor et al., 2019). In comparison, extrinsic motivation was an external factor that affects preceptors to accept students and was likely the reason to continue preceptorship with support from institutions.

Problem Statement

The problem is retention of community-based clinical educators is declining (Christner et al., 2016). Clinical education is critical in developing clinical competence, but the availability of resources outside major teaching institutions was limited and declining (Brown & Sivahop, 2017; Woodall et al., 2018). Preceptors faced significant burdens to provide clinical education to students outside of MTIs (Brown & Sivahop, 2017). The majority of PA programs had students rotating outside such institutions (PAEA, 2019). The rapidly growing PA field created swift growth of these programs requiring more preceptors and clinical rotation sites. Predictive modeling estimated an over 70% growth rate of PA careers expected from 2010 to 2025 (Hooker, Cawley, & Everett, 2011). The PA profession's growth continued to exceed the vast majority of other professions (US Bureau of Labor and Statistics, 2020). With the growth and expected continued growth, two options were available when utilizing community-based preceptors. The first was recruitment of new preceptors. The second option was to retain and increase the number of students per community-based preceptor. CBPs required a comprehensive support strategy for recruitment and retention efforts to maintain or generate quality clinical rotations and mitigate preceptor burn-out (Brown & Sivahop, 2017; Woodall et al., 2018).

Researchers focused on the shortage of preceptors, barriers to precepting, and difficulties APP programs have with recruiting preceptors (Brown & Sivahop, 2017). However, the researchers largely ignored the connection of any preceptor motivations and support that the PA program could offer other than financial incentives (Begley, 2018). Another gap was that

researchers almost solely concentrate on physicians' clinical education and specific specialties, such as pediatrics and obstetrics/gynecology (Paul et al., 2020; Beck Dallaghan et al., 2017). A robust community-based preceptor support system could determine needs, enhance recruitment and retention, and supply preceptors with the tools necessary to deliver a quality clinical rotation (Brown & Sivahop, 2017). CCs were the individuals to make these systems work through research, utilization, and persistence (Snyder et al., 2010). Researching currently employed, practical, and productive supporting methods as determined by CCs and CBPs could provide a greater understanding of recruitment and retention methods and further analysis to find best practices and possible gaps for the future development of tools or services.

Purpose Statement

The purpose of this case study was to understand the experience of clinical education stakeholders, clinical coordinators and community-based clinical preceptors, regarding recruitment and retention efforts at their respective institutions. Support was a method by which CCs recruit and retain CBPs. Support was generally defined as services, communication, or guidance available from the institution, through the CC, that advanced the ability of a CBP to provide quality clinical training (Minor et al., 2019). However, most CBPs were internally motivated to accept students, and a lack of understanding on how support, motivations, and other barriers affected recruiting and retention (Minor et al., 2019).

Significance of the Study

The significance of the study was multifaceted. The primary contribution was the potential improvement of retention and recruitment of community-based clinical preceptors. The second significant potential outcome was improved access to care through increasing the quality and throughput of students in clinical rotations. Other considerable results were improvements in

clinical education based on available support to preceptors, enhancing clinical learning. The combination of these results would likely provide a better quality of clinical education and better quality of patient care.

Current practices focus on adding educational elements to didactic training (Fakhouri & Nunes, 2019; Smirnova et al., 2019). Few programs were advocating for changes in the clinical education setting (PAEA, 2019). The more common findings related to clinical education improvement were testing and measuring clinical skills after completing specific rotations or training (Fakhouri & Nunes, 2019; Smirnova et al., 2019). While these strategies were important to check on learning, clinical experience was critical for developing competency (Wimmers, Schmidt, & Splinter, 2006). Furthermore, PA programs tended to support community-based clinical preceptors through direct financial payments, which many authors and research participants described as inadequate (Begley, 2018; Woodall et al., 2018). Various PA programs offered many forms of support and considered the potentially best method as adding the CBP as adjunct faculty (Snyder et al., 2010; Paul et al., 2020). But perspective was lacking from the connection of both the institution and the preceptor.

The theoretical significance of the research was to further the current theories of operant conditioning and self-determination theory. The research did not intend to compare one theory to the other in usefulness. The study demonstrated the use of behavioral modification techniques from two different perspectives, the institution and the CBP. Each perspective required each theories' unique underpinnings to describe and understand the rationale for motivations and support effectiveness or to conduct clinical training without support. Behavioral modification furthered operant conditioning by demonstrating changes based on incentives offered by CCs to

CBPs. In contrast, intrinsic motivations in SDT indicated the reasons CBPs would take on students with little or no support offered.

Research Questions

The central research question guided the focus of this study. The broad question allowed for sub-questions to narrow in on critical aspects of educators' experiences with recruiting and retention. The central question demonstrated the theoretical underpinnings of SDT and OC as motivations, reinforcements, and punishments that all led to participation in community-based education (Skinner, 1938; Ryan & Deci, 2000). The sub-questions addressed the individual factors pertinent for these educators' recruitment or retention. Minor et al. (2019) found intrinsic motivations were critical for persistence, but extrinsic motivators could enhance participation as well. Reinforcement and support were extrinsic motivators that assist with recruiting and retention as well (Beck Dallaghan et al., 2017). Paul et al. (2020) and Minor et al. (2019) found significant barriers to recruiting and retention community-based preceptors. Each of these factors combined to form the central research question.

Central Research Question

What factors did PA clinical educator stakeholders experience that affect recruiting and retention of community-based preceptors?

Sub-Question One

What forms of motivation, intrinsic or extrinsic, existed that encourage recruiting and retention?

Sub-Question Two

What support or reinforcements were effective to encourage recruitment or retention in community-based clinical training?

Sub-Question Three

What were the most significant barriers to recruiting and retention in community-based clinical education?

Definitions

1. *Community-Based Preceptor* – A medical clinician, such as a physician, nurse practitioner, or physician assistant, located within the community and physically separate from MTIs that teaches in a clinical setting and facilitates "the development of practical skills, professional socialization, report and documentation, prioritization, communication, and planning of daily activities" (McClure & Black, 2013, p. 337).

2. *Clinical Coordinator* – PA program faculty responsible for recruiting and maintaining clinical education sites, "faculty development for preceptors, monitoring clinical phase data, creating clinical syllabi and learning outcomes, administering end-of-rotation exams," and "creating remediation plans for struggling students" (Brown & Sivahop, 2017, p. S30).

3. *Advanced Practice Provider* – May also be found as a physician extender, includes PAs and NPs, which are "licensed health care professionals with differing scopes of practice, levels of education, and requirements for clinical licensure" (Smith, Hampton, & Brandon, 2018, p. 531).

4. *Support* – Incentives, services, communication, assistance, and guidance provided from the PA program through the CC to CBPs that enhance recruiting, retention, or the quality of education (Snyder et al., 2010; Brown & Sivahop, 2017)

5. *Reinforcement* – Reinforcement is a consequence of positive or wanted behavior and increases the probability the individual repeats the behavior under similar circumstances (Ray & Kilburn, 1970).

6. *Punishment* – Punishment is a consequence of negative or unwanted behavior and decreases the probability that the individual repeats the behavior under similar circumstances (Ray & Kilburn, 1970).

7. *Motivation* – Motivation contains "all aspects of activation and intention" with relation to "energy, direction, persistence, and equifinality" (Ryan & Deci, 2000, p. 69). Motivation can be intrinsic or the "inherent tendency to seek out novelty and challenges" (Ryan & Deci, 2000, p. 70). Motivation can also be extrinsic or "the performance of an activity to attain some separable outcome" (Ryan & Deci, 2000, p. 71).

8. *Competence* – Competence is self-efficacy or the ability to accomplish a task with proficiency and demonstrate the task to others (Ryan & Deci, 2000).

9. *Relatedness* – "The need to feel belongingness and connectedness with others" (Ryan & Deci, 2000, p. 73).

10. *Autonomy* – "Autonomy refers not to being independent, detached, or selfish but rather to the feeling of volition that can accompany any act, whether dependent or independent, collectivist or individualist" (Ryan & Deci, 2000, p. 74).

Summary

The problem was the lack of understanding of the motivations, support, and barriers that affected the recruiting and retention of CBPs. The CCs' and CBPs' perception of these factors' usefulness and current utilization was essential for this research. This research included clinical coordinators because of their overall knowledge of the institutional support available and the

connection to CBPs. The purpose of this research was to provide a thorough understanding of the phenomenon of recruiting and retention of CBP by CCs. Motivations, support, and barriers varied from preceptor to region to site, but analyzing and understanding these factors could provide realistic practices for PA programs to consider. CCs that recruited and maintained quality community-based clinical sites could produce a better educational experience, decrease time identifying sites, and possibly improve patient outcomes through better community-based educational experiences.

CHAPTER TWO: LITERATURE REVIEW

Overview

The literature review is the foundation of available knowledge to construct research (Creswell & Poth, 2018). The available literature established the current understanding of the phenomenon of persistence in physician assistant community-based clinical training. This chapter is a review of the existing literature related to the recruitment and retention of community-based preceptors by clinical coordinators. Physician assistant programs relied on community-based preceptors to provide clinical education, but their motivations and support systems were largely unknown from the perspectives of preceptors and programs (PAEA, 2019). The theories reviewed in the first section were relevant to preceptors and institutions, operant conditioning, and self-determination theory. Operant conditioning was the institution's perspective, while self-determination theory more accurately depicted the preceptor's perceptions. A synthesis of recent literature was the next section which considered motivations and barriers for recruiting and retaining community-based preceptors. Finally, the significant gap in the literature was explained which led to this research.

Theoretical Framework

Theoretical framework in qualitative inquiry was the first significant step when looking at this research. The theoretical framework was the connection between actions observed and their relation to an explanation (Gall, Gall, & Borg, 2007). This literature review examined the frameworks and applications of operant conditioning (OC) and self-determination theory (SDT). The program's perception of support was more closely related to OC, while the preceptor's motivations and perception of support related to SDT. Identifying differences in the theories and their practical application is vital for determining the implementation of initiatives to recruit and retain CBPs.

Operant Conditioning Theory

B. F. Skinner, one of the most renowned behavioral theorists, developed operant

conditioning in the mid-1930s United States (Skinner, 1938; Cooper, Heron, & Heward, 2019).

Skinner believed that observing behavior was a better method of measuring learning because

cognitive means were, in his opinion, inaccurate measurements of learning (Smith, 2019). By

studying behavior and utilizing operant conditioning, Skinner demonstrated behavior changes in

response to stimuli, which was an observable measurement of learning (Cooper, Heron, &

Heward, 2019). Operant conditioning was the theoretical framework that best explains how

reinforcements were implemented to alter community-based preceptors' behavior, mainly in the

direction of recruitment and retention.

In OC, the primary constructs that defined this framework were reinforcement and

punishment (Skinner, 1938). Reinforcement was a reward to continue wanted behaviors,

whereas punishment was a change to decrease unwanted behaviors (Skinner, 1938; Cooper,

Heron, & Heward, 2019). Reinforcement and punishment could either add a stimulus or remove

a stimulus to achieve a desired behavioral change (Cooper, Heron, & Heward, 2019). Adding a

stimulus was a positive change and removing a stimulus was a negative change. An example of

positive reinforcement was adding financial incentives for CBPs to take students. In contrast,

negative reinforcement was the process of removing extra work that would normally inhibit the

acceptance of students.

Self-Determination Theory

Ryan and Deci (1971; 2017) developed SDT, which filled the theoretical gap in this study

from OC by providing the preceptor's perspective and motivations. Self-determination theory

started in the United States around the early 1970s by differentiating intrinsic and extrinsic

motivation and human behavior (Ryan & Deci, 2000). Based on the growing body of literature from several researchers focused on motivation and its role in behavior, Deci (1971) initially constructed self-determination theory. Deci, Ryan, and others continually refined and added to SDT for the next three decades (Ryan & Deci, 2000). The primary constructs within SDT's theoretical framework were autonomy, relatedness, competence, and motivation (Ryan & Deci, 2000). The framework SDT encompasses was more appropriate for demonstrating the reasons for the preceptor's continued participation even in situations where the student's program offers no support.

Autonomy, in SDT, was controlling one's life and actions but did not directly mean independence from others (Ryan & Deci, 2000). A preceptor's autonomy decreased when accepting a student because of the constraints inherent in the task. Relatedness was the willingness to interact and connect with others (Ryan & Deci, 2000). Preceptors provided clinical rotations for students to connect with that person, profession, and possibly the student's program (Minor et al., 2019). Competence was mastering one's craft or possibly controlling an outcome (Ryan & Deci, 2000). Connecting to this research, Minor et al. (2019) noted many preceptors gained or maintained competence because of their drive to provide an education for clinical students. The preceptors were both facilitators of knowledge and gained or updated medical knowledge from students as well (Minor et al., 2019).

The last construct for SDT is motivation, which is intrinsic and extrinsic. Intrinsic motivations were an individual's internal goals or drives (Ryan & Deci, 2000). Extrinsic motivations were stimuli from an external source that the individual deemed valuable (Ryan & Deci, 2000). The point where the two frameworks meet was extrinsic motivation and positive reinforcement. OC pertained to the student's program or clinical coordinator's perspective, which

provided incentives or removed them relating to positive reinforcement or negative punishment, respectively. The constructs of SDT demonstrated the CBP's motivations on intrinsic and extrinsic factors that enhance recruitment or retention. Specific to self-determination theory was the CBP's internal motivations and how the CBP perceived extrinsic reinforcement.

The problems with implementing a combined theory approach were numerous. However, the benefit was the ability to explore actions and reasonings from both perspectives. Neither entity, preceptor or program, worked in a vacuum. The ability to review which incentives or reinforcements influenced preceptors' behavior through OC provides the CC's perspective. Moreover, studying this perspective helped understand the CC's possible limitations, both in knowledge and resources. The preceptors' motivations that influence them to continue teaching students were intrinsic motivations and extrinsic motivations, and this research explored both.

<div align="center">**Related Literature**</div>

The literature divided into three common themes motivations, barriers, and strategies to assist CCs in recruiting and retaining CBPs. The understand key roles section clarified roles and provided an understanding of the general duties and terms from the literature. The preceptor's perspective was a combination of intrinsic motivations and barriers to precept clinical students. The institution's perspective was the use of extrinsic motivators and their perceived importance. Institutions faced barriers as well when recruiting and retaining preceptors. This study's focus was understanding community-based clinical educators' experience with recruiting and retention through multiple methods with consideration of preceptor and institutional perspectives.

Understanding Key Roles

The roles important in the reviewed literature were community-based preceptors, clinical coordinators, and clinical students. The professions for consideration that were also critical to

this research were physicians, physician assistants, and nurse practitioners. Identifying and defining these roles was essential due to the confusion that existed when discussing clinical education (Snyder et al., 2010). Several authors referred to clinical training in various ways: clerkship, clinical training, experiential training, residency, and clinical rotations (Snyder et al., 2010; Minor et al., 2019). Each of these terms was roughly equivalent with minor caveats. For example, the term residency generally only applied to physician-based, post-medical school training (Kowarski, 2018). Whereas clinical rotations typically applied to physician assistants, nurse practitioners, and medical school students (PAEA, 2019).

Physicians

Physicians were the most qualified of the medically trained professions (Mowery, 2015). Physicians trained to meet rigorous education requirements with over a decade of studying, including undergraduate, medical school, residency, and, if desired, fellowships (Mowery, 2015). The curriculum for medical education was typically two years of pre-clinical studies and then two years of clinical rotations (Mowery, 2015). The core clinical rotations consisted of internal medicine, pediatrics, surgery, obstetrics and gynecology, family medicine, and psychiatry (AAMC, 2021). Various medical schools required other rotations such as emergency medicine, neurology, and radiology.

After medical school rotations, students completed a residency program in their selected specialty (Mowery, 2015). Residencies could take three to seven years to complete depending on the specialty (Mowery, 2015). Residencies were specific to the student's chosen medical field. Fellowships were subspecialty residencies with a focus on one particular area. Medical schools relied on CBPs in both clinical rotations and residency (Christner et al., 2016). Medical schools

strongly relied on specialties such as pediatrics in the community-based setting (Beck Dallaghan et al., 2017).

Physician Assistants

PAs were highly-trained medical providers that practice in conjunction with a physician (NCCPA, 2021). Physician assistants completed an undergraduate degree, generally in a science-related course, then trained in the medical model similar to physicians with pre-clinical training then clinical experience (PAEA, 2019). The pre-clinical didactic training was generally a year to sixteen months. PA's clinical education was shorter than physicians, increasing the need for rotations to sufficiently prepare medical professionals for clinical practice (PAEA, 2019; Kowarski, 2018). PA clinical rotations included a core of specific specialties: family medicine, emergency medicine, internal medicine, surgery, pediatrics, obstetrics and gynecology, and behavioral or mental health (NCCPA, 2021). PA clinical rotations were one year or longer, where students gain patient care experience (PAEA, 2019). PAs could participate in post-graduate residency and fellowship programs, but these programs were limited in number and likely did not rely significantly on CBPs (Pasquini, 2019).

Nurse Practitioners

Nurse practitioners were competent providers trained in advanced nursing (AANP, 2021). Depending on state law, NPs could have complete autonomy or practice with a physician (AANP, 2021). The pathway for becoming a nurse practitioner typically required a student to have a bachelor's in nursing and then pursue an advanced nursing degree, such as a master's or doctorate (Monti, 2021). At the beginning of their training, NP students choose a population focus that can be broad or specific, like family medicine or neonatology (Monti, 2021). NP students completed didactic training concurrently with clinical training (AANP, 2021). Many

programs offered distance learning with online training coinciding with local clinical experience (Monti, 2021). Clinical rotations vary based on the student's chosen specialty, but the clinical curriculum encompassed several of the same classes as physicians and PAs. NPs also heavily relied on CBPs for clinical experience (Christner et al., 2016).

Community-Based Preceptors

Community-based preceptors were medical professionals that provided clinical learning experiences within a community setting (Christner et al., 2016). The learning experience involved teaching clinically relevant findings and clinical decision-making. Community-based preceptors were typically not connected to large academic centers or medical teaching institutions and were conscientious about maintaining a business in addition to teaching (Snyder et al., 2010). CBPs were from any medical field and specialty but commonly consisted of physicians (MD and DO), physician assistants (PA), and nurse practitioners (NP). However, preceptors were not limited to these fields. Pharmacists, nurses, and other healthcare professionals relied on community-based preceptors as well (Christner et al., 2016).

Competition was also a factor for CBPs because several health professions or programs within the same professions competed for the preceptor's time and availability. Community-based preceptors could contract with a program to teach a certain number of students for more or better benefits (Minor et al., 2019). Furthermore, many preceptors only allowed students of the same profession to follow them (Christner et al., 2016). The number of community-based preceptors was declining due to the complexity of practicing medicine, educating students, and maintaining a profitable business (Christner et al., 2016).

Clinical Coordinators

Clinical coordinators were individuals responsible for identifying and maintaining

preceptors and clinical sites (Snyder et al., 2010). For PA programs, clinical coordinators were primarily responsible for finding and providing clinical practice experiences. CCs' have many responsibilities for clinical learning that included recruiting and retaining clinical sites, faculty development for preceptors, monitoring clinical data, syllabi and learning outcome creation, and end-of rotation exam administration (Brown & Sivahop, 2017). The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) upholds clinical training standards for PA programs. CCs had to ensure each rotation meets these standards for students (Brown & Sivahop, 2017).

The clinical coordinator had multiple roles that differ from each PA program but commonly include visiting clinical sites, coordinating end-of-rotation seminars or exams, scheduling clinical assignments, orienting students to the clinical year, and addressing feedback from preceptors (Snyder et al., 2010). While the clinical coordinator is not a complete representation of the institution, they had intimate knowledge of the procedures, incentives, and other insights to recruit and retain preceptors from their respective programs. For PA programs, the clinical coordinator was typically a physician assistant and part of the didactic faculty (Snyder et al., 2010).

Clinical coordinators' relationship and ability to support CBP offered a route to maintain quality clinical educators. However, clinical coordinators faced significant barriers when approaching CBPs, including the added time to the preceptor's workday, increased work, and concerns about teaching (Beck Dallaghan et al., 2017). Clinical coordinators and their institutions could improve the recruitment and retention of CBPs with a well-developed and research-supported strategy. When CCs retained quality educators with incentives from

institutions, clinical learning and PA students' competence could increase. A significant gap exists in the literature on the support given to CBPs by PA programs.

Clinical Students

Clinical training was the time where students acquired competencies and met program expectations (Snyder et al., 2010). Community-based preceptors typically connected with PA programs through a clinical coordinator or the clinical team. Medical providers across the United States had clinical residencies or experiential time to gain clinical competence (PAEA, 2019; Kowarski, 2018; AAFP, 2017). Clinical students ranged from medical students, M.D. and D.O., to nurses and patient care technicians. The students were from all forms of medical training and learned through modeling and performing during their rotations (Christner et al., 2016). PAs and other professions, such as physicians and nurse practitioners, taught PA students in community-based settings (Snyder et al., 2010). Physician assistant students were required to receive training that meets accrediting guidelines set forth by an independent accrediting body known as the Accreditation Review Commission on Education for the Physician Assistant (Accreditation Standards for Physician Assistant Education, 2020).

Medical Teaching Institution

Medical providers most commonly completed clinical education in academic health centers (PAEA, 2019; AAHC, 2021). The Association of Academic Health Centers (AAHC, 2021) defined an academic health center as encompassing "all the health-related components of universities, including their health professions schools, patient care operations, and research enterprise" (paras. 1). The definition was specific, and a requirement for inclusion was the institution must perform research, among other conditions. Most PA training occurred outside academic health centers, with 171 programs outside this definition and 64 programs training

within academic health centers. However, the definition of an academic health center was too broad and did not accurately depict the reliance on CBPs for training. For instance, the American Hospital Association (2021) numbers over 1,000 academic medical centers or teaching hospitals, and the AAHC (2021) only lists 74 schools within the United States.

Medical teaching institution was a term that encompasses a medical care environment where multiple specialties and support services were available to a provider and the student. The advisory committee on Interdisciplinary, Community-Based Linkages (2018) reported that community-based clinics were outside the hospital setting. PAEA (2019) data lacked the ability to differentiate between hospital settings and community-based settings as some hospitals were classified as community-based as well (PAEA, 2019). For the definition of CBP, the consensus through the research was a stand-alone clinic performing one specialty with possible laboratory or radiologic support services (Minor et al., 2019; Beck Dallaghan et al., 2017). A building may house these clinics and other medical services without a connection between them and still provided the distinction of CBP.

Medical teaching institution was a term derived from the literature that excluded community-based preceptors (PAEA, 2019; AAHC, 2021). The literature generally acknowledged the definition of a community-based preceptor without specifically detailing the term, leading to the need to differentiate between CBPs and MTIs (Minor et al., 2019; Beck Dallaghan et al., 2017). Medical teaching institutions encompassed academic health centers, hospitals, and multi-specialty groups (AAHC, 2021; AHA, 2021). MTIs had multiple interconnected specialties and support services, including learning that takes place in a hospital setting (Minor et al., 2019; Beck Dallaghan et al., 2017).

Preceptor Motivations for Teaching

Community-based preceptors had many different motivations for teaching (Paul et al., 2020; Minor et al., 2019). Ryan and Deci (2000) divided motivations into intrinsic and extrinsic due to the inherent desires versus the external incentives. Ryan and Deci (2000) noted, "intrinsic motivation describes this natural inclination toward assimilation, mastery, spontaneous interest, and exploration that is so essential to cognitive and social development and that represents a principal source of enjoyment and vitality throughout life" (p. 70). Intrinsic motivations were mainly unseen from the institution as there was a notable lack of communication throughout the literature between the academic institution and the community-based preceptors (Beck Dallaghan et al., 2017; DeWolfe, Laschinger, & Perkins, 2010; Paul et al., 2020; Hudak, Stouder, & Everett, 2018). Intrinsic motivations were often better drivers for influencing behaviors but required "maintenance and enhancement" (Ryan & Deci, 2000, p. 70). CBPs likely started teaching due to intrinsic motivation, but these educators also required various extrinsic motivations to continue the desired behavior (Minor et al., 2019).

Extrinsic motivations were external "to the individual and refers to the performance of an activity in order to attain some separable outcome" (Ryan & Deci, 2000, p. 71). Institutions offered extrinsic motivators to recruit and retain CBPs (Beck Dallaghan et al., 2017; Minor et al., 2019). The CCs had intimate knowledge of the processes and methods for providing these incentives (Snyder et al., 2010). Operant conditioning was the framework to connect reinforcement supplied from the institution as an extrinsic motivator to the preceptor because a stimulus encouraged behavior (Skinner, 1938). The two theories of SDT and OC converge in extrinsic motivation and reinforcement but from the different perspectives of CCs and CBPs.

Intrinsic Motivation

The governing constructs of SDT for intrinsic motivation were autonomy, competence, and relatedness (Ryan & Deci, 2000). CBPs often started teaching due to an innate motivation to teach others, contribute to medicine, and gain professional relationships with students and institutions (Minor et al., 2019). The critical aspect of recruiting was CBPs' acceptance of students that generally starts with intrinsic motivation (Minor et al., 2019). The key to gaining the initial participation of CBPs appeared to be the availability and continuity of communication by CCs in reaching out (Paul et al., 2020). CCs had little input into this area but could ensure that when CBPs were willing and able to take students, they were available. CCs understood that the possible intrinsic motivations assisted in forming extrinsic motivators.

A gap in the literature existed due to the lack of focus on intrinsic motivators for recruitment or retention (Waters, Lo, and Maloney, 2018). The gap was wider due to the limited view and difficulty in generalizations, such as researchers only targeting recruiting and retaining pediatric preceptors for medical schools (Beck Dallaghan et al., 2017; Paul et al., 2020). The reason researchers focused on the relatively small specialty was the substantial reliance on community preceptors to accept students (Beck Dallaghan et al., 2017). Much of the research only considered medical students and their physician preceptors as participants (Beck Dallaghan et al., 2017; Waters, Lo, & Maloney, 2018; Paul et al., 2020; Minor et al., 2019). However, the researchers had similar findings regarding intrinsic motivations for precepting students (Beck Dallaghan et al., 2017; Waters, Lo, & Maloney, 2018; Paul et al., 2020).

Autonomy. Community-based preceptors enjoyed the low-pressure situation of taking students or not (Paul et al., 2020). In Minor et al.'s (2019) research, the participant CBPs understood their significance in taking students but had schedules and other events that interfered

with precepting. CBPs cited issues with schedules such as vacations or computer upgrades that they considered when taking on students (Minor et al., 2019). Furthermore, depending on specialty, productivity was a concern (Minor et al., 2019). CBPs noted students would not receive a sufficient rotation to meet educational standards during periods of lower patient volumes (Minor et al., 2019). The autonomy in accepting students on the preceptor's schedule was a largely positive intrinsic motivator (Paul et al., 2020).

Student placement was the process in which the program placed students with CBPs. The majority of preceptors agreed that when students were present, practicing medicine and teaching created enjoyment (Beck Dallaghan et al., 2017; Minor et al., 2019). Preceptors expressed concerns with student placement due to students being "ambivalent" or "disinterested" (Beck Dallaghan et al., 2017, p. 1170). Programs required students to train in various disciplines to add to general knowledge, but a minority of students were not interested in gaining experience in that specialty (Beck Dallaghan et al., 2017). Waters, Lo, and Maloney (2018) found the process of allowing the student and preceptor to choose each other led to the preceptor being "more enthusiastic" about practicing medicine (p. 618). Wheat et al. (2019) found preceptors preferred enthusiastic students with a similar background or interest in their specialty. The mutual selection process added a layer of autonomy linking to SDT.

After students were accepted and placed, CBPs were responsible for teaching the curriculum in their specialty based on the patients seen with students (Minor et al., 2019). The flexibility in curriculum added a layer of autonomy for CBPs (Minor et al., 2019). The fine line between curricular flexibility and rigidness was a difficult task in which CCs needed to ensure they met accrediting requirements without forcing CPBs to teach a strict regimen (Wheat et al., 2019). Many CBPs expressed enthusiasm for flexibility, but in the shadow of educational

reforms, many medical schools were implementing a more rigid curricular schedule (Minor et al., 2019). Many CBPs faced shortened rotation schedules with students, which potentially strained the educational experience (Minor et al., 2019).

Autonomy continued as a key intrinsic motivator in the curriculum with the ability of CBPs to determine the scope of practice of students within the rotation (Minor et al., 2019). Depending on provider and rotation, the students performed more examinations and various skills and procedures (Minor et al., 2019). Minor et al. (2019) noted institutional restrictions decreased the autonomy of preceptors. Still, due to the location and type of practice, most CBPs provided a flexible opportunity for students to practice medicine. Ross, Cameron, and Greenwood (2019) found students valued formative clinical experiences that happened in rural practices due to the opportunity to apply their knowledge in a practical setting.

With curricular flexibility and autonomy, preceptors used creative means for students to assist in their practice and interact with patients (Beck Dallaghan et al., 2017). Preceptors often structured a student's interactions with patients to assist with examinations and documentation (Beck Dallaghan et al., 2017). While examining patients, students also shared newer procedures and techniques with preceptors, increasing autonomy and competence (Minor et al., 2019). Students were also receptive to being taught new procedures and performing them within the rotation (Minor et al., 2019). The ability to rely on students for assistance within the clinic created a sense of autonomy for both the preceptor and student (Minor et al., 2019).

An engaging intrinsic motivator specific to community-based practice was the lack of access to consultants and newer technology. CBPs exhibited pride by showing students the different ways to practice medicine by revealing them to their world. The lack of resources created unique situation that students do not face in MTIs. MTIs had a significant number of

resources that providers and students had at their disposal, whereas many CBPs lacked resources. The strategies for succeeding in these situations demonstrated the autonomy CBPs possess to ensure successful patient care (Beck Dallaghan et al., 2017).

     Competence. The enjoyment of teaching was one of the primary reasons found for accepting students (Waters, Lo, and Maloney, 2018; Minor et al., 2019; Paul et al., 2020). In a twenty-eight-paper literature review, the common theme of enjoying student placement and teaching emerged (Waters, Lo, & Maloney, 2018). Preceptors reported enjoyment from teaching and visualizing what students learned through procedures and discussions (Waters, Lo, & Maloney, 2018). DeWolfe, Laschinger, and Perkins (2010) connected this theme to nursing preceptors with a well-designed survey and focus group triangulation method. The enjoyment of teaching directly correlated to competence in SDT, with the preceptor being confident in their teaching ability and medical acumen (Minor et al., 2019).

     Another highly reported intrinsic motivator of preceptors was the ability to solidify knowledge (Waters, Lo, & Maloney, 2018; Minor et al., 2019; Paul et al., 2020). Minor et al. (2019) interviewed twenty-six family physician CBPs in focus groups in a robust qualitative study that found students help increase the preceptor's knowledge base. Beck Dallaghan et al. (2017) reiterated this finding in fifty-one semistructured interviews with community-based pediatricians. Waters, Lo, and Maloney (2018) conducted a literature review across multiple health disciplines that generalized knowledge building between student and preceptor. The majority of preceptors reported spending more time reviewing basic medical principles when precepting students (Waters, Lo, & Maloney, 2018).

     Preceptors tended to seek knowledge to ensure currency and proficiency in medical diagnostic and treatment plans more often with students (Waters, Lo, & Maloney, 2018).

Preceptors were also able to identify gaps in both the students' and preceptor's knowledge base, leading to more research and understanding of the subject (Minor et al., 2019). Furthermore, preceptors acquired knowledge through reciprocal learning or when the student becomes the teacher, such as when a newer technique was known to the student but not the preceptor (Waters, Lo, & Maloney, 2018). CBPs experienced a disconnect from MTIs, which caused delays in newer techniques reaching these practitioners. Students were taught more contemporary medical procedures and practices and brought them to CBPs when they rotated through (Waters, Lo, & Maloney, 2018).

DeWolfe, Laschinger, and Perkins (2010) conducted surveys and focus groups with nursing preceptors and students. One of the primary benefits that preceptors reported was helping students learn (DeWolfe, Laschinger, & Perkins, 2010). Minor et al. (2019) also found that physician CBPs reported increased competency when learning and using new techniques with students. One interesting feature of precepting students and evaluating the learning process was the discussion of examination findings and treatment options in front of patients (Waters, Lo, & Maloney, 2018). Patients received an in-depth observation of providers' thought processes when determining their care through the conversations with preceptor and student (Waters, Lo, & Maloney, 2018). These conversations assisted in patient care and student learning while demonstrating competency in both preceptor and student (Waters, Lo, & Maloney, 2018).

Community-based preceptors described a source of pride as a motivator in teaching students in a community setting because of the limited resources available compared to MTIs (Beck Dallaghan et al., 2017; Paul et al., 2020). The community-based environment presented a whole new set of challenges with resources, population, and other considerations not applicable at academic centers (Beck Dallaghan et al., 2017). While practicing in a community-based

setting was already connected to SDT through the construct of autonomy, these providers had to be competent to face the unique challenges that occurred in this setting (Beck Dallaghan et al., 2017). A sense of competency was a theme for CBPs and preceptors in rural practices (Beck Dallaghan et al., 2017; Ross, Cameron, and Greenwood, 2019).

Relatedness. One of the more common physician intrinsic motivators was the need to give back to their profession. Beck Dallaghan et al. (2017) conducted an interesting study in the specialty of pediatrics with a primary finding that continued the theme of giving back or a personal responsibility to continue to train their profession. Minor et al. (2019) reported that "Precepting allowed physicians to give back to their home institution and mentor students throughout their training. Serving as a preceptor satisfied a personal sense of obligation to give back to the medical profession" (p. 393).

Preceptors noted mentoring students as an intrinsic motivator (Minor et al., 2019). Preceptors mentored students within their rotation and specialty through the passing of knowledge and skill. Many of the participants in Minor et al.'s (2019) research noted they enjoyed one-on-one time and the relatedness with the students. Preceptors often formed personal relationships with students and followed them throughout the rest of their careers. Preceptors noted students stayed in contact and informed the preceptors of different rotations and even which residency selected them. A few preceptors kept notes of students highly interested in their specialty and continued to call them for recruitment purposes. Preceptors noted mentoring and personal relationships were a way to connect with the students and future peers (Minor et al., 2019).

The final intrinsic motivator in the relatedness category was the connection to the institution (Minor et al., 2019). Ryan et al. (2018) recognized many extrinsic motivators that

demonstrated a relationship between the preceptor and the teaching institution, such as a plaque

or appointment as an adjunct professor at the institution. These extrinsic motivators illustrate the

relationship between the preceptor and the institution (Minor et al., 2019). However, the

connection to the school also provided an avenue for intrinsically motivating these preceptors to

continue to teach (Minor et al., 2019).

Extrinsic Motivation

Extrinsic motivators divided into several categories and were often manifestations of

intrinsic motivators. The four categories of extrinsic motivators were financial, conveying

appreciation, university benefits, and credential management. Across the literature, these

motivations were often ranked from most to least desired (Ryan et al., 2018). However, most

research did not include and rank the same incentives (Snyder et al., 2010). Furthermore, the

extrinsic motivators differed depending on the preceptor's specialty, location, and other unique

factors that created different needs. Most interestingly, Snyder et al.'s (2010) findings

demonstrated that approximately 26% of clinical coordinators did not provide any incentives in

PA community-based clinical education. These programs also had a significant reliance on

CBPs. The PAEA (2019) confirmed this percentage in a more recent assessment of PA

education, indicating extrinsic motivators were not likely the essential aspect to CBPs. Extrinsic

motivators theoretically demonstrated reinforcement in OC (Skinner, 1938).

Financial. Across the literature, the most discussed item was direct payment to

preceptors for accepting students. Despite an excess of discussion on direct financial payment,

researchers noted mixed results (Begley, 2018; Beck Dallaghan et al., 2017; Brown & Sivahop,

2017; Paul et al., 2020). Beck Dallaghan et al. (2017) reported that payment for rotation sites

continued to increase as a practice even though many preceptors identified payment as a

secondary source of their motivation. Minor et al. (2019) raised the concern that payment may attract preceptors not primarily interested in teaching or not experienced enough in their field of practice to take on a student. Begley (2018) wrote a dissertation on whether or not CCs should directly pay CBPs. Begley (2018) described difficulties and inconsistencies in implementing payments, payment arrangements, and differences in the amount to specialties.

Paul et al. (2020) evaluated the CBPs' perception of incentives and found a financial stipend was not high on the list of incentives. However, Ryan et al. (2018) found a financial stipend ranked highly on preceptors' lists. Beck Dallaghan et al. (2017) explored direct payments and discovered that monetary support was important but less than other extrinsic motivators. Drowos et al. (2017) evaluated a Council of Academic Family Medicine's Education Research Alliance cross-sectional survey of 112 clerkship directors in which only a small minority received direct payment. Begley (2018) conducted a qualitative dissertation and found that paid rotations were of less quality than non-paid rotations. Begley's (2018) findings added support for the concern set forth by Minor et al. (2019) about the quality of preceptors with paid rotations. While direct payments were one form of financial benefit, the universities could provide financial incentives through other potentially better methods for both groups.

On-campus, tuition costs increased rapidly from 1980 to 2004 and continue to rise greater than the average American wage growth (Bundick & Pollard, 2018; DeSilver, 2018). For CBPs, appointment as adjunct faculty could provide a process to obtain discounted or no tuition at the PA program's university. A participant in Paul et al.'s (2020) research explained they had a contract with the stipulation of continued student acceptance, which granted a tuition-free incentive for direct family members. Discounted tuition had limited discussion throughout the

literature (Paul et al., 2020; Snyder et al., 2010). Despite the potential for this powerful extrinsic motivator, discounting tuition was considered a rare practice.

In the same vein as indirect financial support, tax credits and deductions were additional potent incentives (Woodall et al., 2018). Unfortunately, only eleven states had or were attempting to have tax credits for CBPs. While there was progress in tax deductions, acquiring this incentive required a significant amount of work. Researchers reviewed the trends specific to tax deductions in South Carolina and extended the study to find and compare states with current and proposed tax credit legislation. Woodall et al. (2018) noted competition, compensation, and additional financial barriers continued to challenge CCs' recruitment and retention efforts for CBPs. However, beneficial state government legislation and continued proposed and modified legislation could provide an effective extrinsic motivator (Woodall et al., 2018).

Acts of Appreciation. Communication was a common theme throughout the literature that demonstrated the institution's appreciation of CBPs (Minor et al., 2019; Beck Dallaghan et al., 2017; Water, Lo, & Maloney, 2018). Communication forms included emails, phone calls, site visits, certificates of appreciation, and teaching awards (Minor et al., 2019; Beck Dallaghan et al., 2017). Hudak, Stouder, and Everett (2018) provided one of the few studies concerning PA clinical education in which they focus on communication. Hudak, Stouder, and Everett (2018) surveyed eighty-eight CBPs and used mixed-method analysis to determine CBP satisfaction with the amount and frequency of communication between CCs and CBPs. Preceptors reported satisfaction with the amount of communication and conveyed that the most convenient communication method was email (Hudak, Stouder, & Everett, 2018). Hudak, Stouder, and Everett's (2018) study was not a robust form of research due to a lack of internal validity and

triangulation of results. Still, the data offered critical insights into communication specific to PA education.

Despite Hudak, Stouder, and Everett's (2018) promising analysis on communication, most researchers noted a significant deficiency in communication between CCs and CBPs (Paul et al., 2020). Minor et al.'s (2019) focus groups wanted but never received regular communication and feedback from the institutions. Moreover, preceptors reported uncertainty of expected learning outcomes or even how the clinical rotation would fit into the curriculum due to the lack of communication (Minor et al., 2019).

Ryan et al. (2018) assessed the value of incentives according to ninety-two pediatric department chairs. A personal visit from the clinical coordinator ranked as the highest form of communicative appreciation. Aquila and Lie (2015) conducted a single institution survey of PA preceptors and found that a site visit was a desired and effective form of communication. The authors noted CCs or program directors conducted site visits which consisted of reviews and discussions about the practice and the student's accessibility with the CBPs (Ryan et al., 2018; Paul et al., 2020). Unfortunately, many authors noted the lack of communication and site visits which was generalized throughout medical training with numerous studies (Minor et al., 2019; Beck Dallaghan et al., 2017; Paul et al., 2020; DeWolfe, Laschinger, & Perkins, 2010).

Physician assistant program CCs noted the most common extrinsic motivator given was a certificate of appreciation (Snyder et al., 2010). Snyder et al. (2010) surveyed fifty-one PA program CCs about incentives their institution offered. The clinical coordinators perceived the most effective incentives as "relatively inexpensive to the program" (Snyder et al., 2010, p. 28). CCs applied for educational awards at the university, state, and national level for CBPs to demonstrate their appreciation as well (Snyder et al., 2010). Several programs provided

certificates of appreciation to preceptors after students complete a rotation with them (Snyder et al., 2010).

Handwritten notes were a common form of communicative appreciation that students and faculty provided to preceptors (Snyder et al., 2010). Researchers lacked the ability to determine the effectiveness of handwritten notes on motivation for teaching. However, preceptors noted students often submit feedback of the rotation, and the rotation's preceptor found this information helpful, in one instance, more useful than anything the institution previously provided (Paul et al., 2020). Rotational feedback was considered beneficial for preceptors who continuously accept students, but the motivational aspect was questionable (Paul et al., 2020).

Multiple researchers discussed appreciation events throughout the literature, but these events did not appear to be routinely administered (Minor et al., 2019; Ryan et al., 2018). Participants in Ryan et al.'s (2018) research noted an annual appreciation event would motivate preceptors and create a sense of relatedness. In Minor et al.'s (2019) research, participants reported a lack of encounters between preceptors and the medical college's faculty. Participants recommended lunch or a meeting to connect with the university's faculty (Minor et al., 2019). This type of extrinsic motivation linked to the intrinsic motivation of relatedness. However, appreciation events were more likely to continue the acceptance of students than entice new preceptors.

University. Appointment as adjunct faculty offered several incentives (Paul et al., 2020; Minor et al., 2019). The financial incentive of reduced tuition was a potent factor reviewed previously (Paul et al., 2020). Participants in several studies discussed academic titles and campus privileges, including library access and bookstore vouchers or discounts (Paul et al., 2020; Minor et al., 2019; Ryan et al., 2018; Woodall et al., 2018). Ryan et al. (2018) reached out

to pediatric department chairs in a survey to quantify the reliance on CBPs and the incentives the chairs offered. One of the most typical incentives was access to the university library. A few participants noted that academic titles were motivators but had no real-world significance (Paul et al., 2020). Bookstore vouchers and discounts offered CBPs an avenue to purchase materials for keeping current with medical practice (Snyder et al., 2010).

Snyder et al. (2010) researched PA programs' incentives and found a significant number offered preceptors to come in and participate in didactic classes. Furthermore, many programs sent invitations to preceptors to attend graduations and other events (Snyder et al., 2010). Another offer from PA programs was to allow the preceptor to sit on a school advisory board or focus group responsible for changes to the local educational requirements (Snyder et al., 2010). Each of these incentives provided an opportunity for preceptors to connect with the institution, increasing their relatedness and allowing these preceptors to help shape curricular requirements.

Bringing preceptors onto campus also paved the way for faculty development. Ryan et al. (2018) found that preceptors wanted faculty development and prefer that it occurred face-to-face. The faculty development included educational and teaching activities to increase the preceptors' competence with students (Minor et al., 2019). Participants in Paul et al.'s (2020) research wanted updates on new teaching methods and how to teach more effectively. Beck Dallaghan (2017) suggested exploring a faculty development program that connects more seasoned preceptors with newer ones to assist with competency. Ryan et al. (2018) further supported the findings that faculty development would help recruit and retain preceptors. Faculty development could support both competence and relatedness.

Credential Management. Several studies indicated the ability to provide continuing medical education units (CMEs) as a potent extrinsic motivator (Ryan et al., 2018; Snyder et al.,

2010; Paul et al., 2020; Minor et al., 2019). Continuing medical education was an educational activity that increases medical knowledge and skills (NIH, 2017). Furthermore, certifying bodies and state regulations required CME to maintain medical licenses, both of which could cost a significant amount of time and money (NIH, 2017; NCCPA, 2020). Minor et al. (2019) noted physician CBPs valued CME given for teaching. In Ryan et al.'s (2018) research, pediatric chairs reported CME and maintenance of certification as two common incentives. Snyder et al. (2010) noted PA program CCs utilized CMEs for recruiting and retention purposes. Brown and Sivahop (2017) found the primary extrinsic motivation for PAs to accept students was the ability to earn CME.

The maintenance of certifications and credentials was an extrinsic motivator, especially important to physicians (Ryan et al., 2018). CME was a part of maintaining licenses and credentials; however, maintenance consisted of several other aspects (Ryan et al., 2018). Maintenance of certification (MOC) for physicians was a four-part process that included possessing an unrestricted medical license, engaging in lifelong learning, assessments of knowledge, and improving medical practice (Ibrahim, 2018). MOC for physicians was different and significantly more costly than maintaining certification and licensing for PAs (Ibrahim, 2018; NCCPA, 2020). PAs required 100 hours of CME every two years and testing to assess knowledge every ten years. Fifty hours of their CME activity was required as category one which consisted of face-to-face classes, precepting students, and approved online training (NCCPA, 2020). The remaining fifty hours are category two, which could consisted of items such as reading articles and self-structured development (NCCPA, 2020). PAs recertified by testing every ten years, similar to the MOC model of physicians (NCCPA, 2020; Ibrahim, 2018). MOC

was a potent extrinsic motivator to keep preceptor's skills current and continued acceptance of students (Ryan et al., 2018).

Barriers for Recruiting and Retaining Community-Based Preceptors

The barriers to retention and recruitment were numerous and provided unique complications for community-based preceptors' persistence. Unfortunately, a few barriers were inherent and inevitable while teaching students in a clinical setting. The most extensive themes appearing in the literature involved the evolution of healthcare, personal barriers, and institutional limitations (Minor et al., 2019). These barriers caused decreased intrinsic motivation related to SDT through autonomy, competence, and relatedness (Minor et al., 2019). A few barriers fit the construct of punishment under operant conditioning (Skinner, 1938). Barriers also existed that were specific to the institution, not readily visualized from the field.

Minor et al. (2019) conducted focus group interviews with family medicine physicians precepting medical students underpinned by the theoretical framework of SDT. The SDT framework provided the basis for assessing the effects on the motivation of preceptors to start or continue to precept students (Minor et al., 2019). The motivators related to autonomy were teaching, solidifying knowledge, and flexibility of instruction (Minor et al., 2019). However, time, technology, and administrative barriers inhibited autonomy (Minor et al., 2019). Analyzing competence as a motivation, Minor et al. (2019) noted confidence and ability to practice and teach as positives with stress and uncertainty in teaching skills, decreasing the likelihood of continued teaching. Relatedness was mainly a decreasing extrinsic motivation due to the institution's lack of communication leading to a reduced connection between institution and preceptor (Minor et al., 2019). However, most preceptors noted positive personal relationships with the students (Minor et al., 2019).

Minor et al. (2019) only considered medical students in their research, limiting the utility because medical schools conducted most rotations within medical centers. Advanced Practice Provider, PAs and NPs, programs had a greater reliance on community precepting (PAEA, 2019; AANP 2021). Furthermore, Minor et al. (2019) noted that very few physician preceptors they interviewed supported other professions, PAs and NPs, in clinical training. The small sample size, differences in occupations, and family practice specialty complicated generalizing this research to the current topic. However, the similarities of the theoretical framework for this research and problems espoused by participants directly correlated to additional literature, which provided greater confidence in utilizing this research (Paul et al., 2020; Minor et al., 2019; Snyder et al., 2010).

The precepting barriers were similar to Minor et al. (2019) and Brown's and Sivahop's (2017) data. Authors generalized the findings into three primary themes to describe challenges preceptors face: evolution of health care, personal barriers, and the educational system (Paul et al., 2020). Time limits persisted in two of the three themes, a similar finding from Minor et al. (2019; Paul et al., 2020). Paul et al. (2020) found a disconnect from the larger academic institution and inadequate compensation in the educational institution theme. Communication and clear expectations were common issues with preceptors and the institution (Paul et al., 2020).

Paul et al.'s (2020) qualitative work provided excellent insights into the phenomenon of teaching in a community setting. However, like Minor et al. (2019), the research participants were physicians, and in the specialty of pediatrics (Paul et al., 2020). The narrow specialty recruited for participation had unique problems based on their specific situations, which could lead to a lack of generalizability. While the researchers interviewed pediatricians across a large

geographical area, the issues they faced were efficiently coded and categorized, which increased the credibility of the research (Paul et al., 2020). Furthermore, several studies, including multiple other medical specialties, found identical problems (Paul et al., 2020; Minor et al., 2019; Snyder et al., 2010).

Autonomy Barriers

Most researchers found overall autonomy decreased for preceptors with students (Minor et al., 2019; Paul et al., 2020; Beck Dallaghan et al., 2017). Preceptors reported autonomy as mainly decreased due to challenges with time, productivity, and consequences of teaching and practicing medicine (Minor et al., 2019). CBPs expressed an increase in autonomy with the curriculum (Minor et al., 2019). However, Paul et al. (2020) noted a lack of communications or expectations about the curriculum. Brown and Sivahop (2017) established multiple perspectives through a literature review, clearly defining stakeholders' challenges with physician assistant clinical precepting. The barriers of autonomy found by Brown and Sivahop (2017) generally consisted of the amount of time tasks take when teaching and practicing medicine were combined (Minor et al., 2019; Brown & Sivahop, 2017).

Krehnbrink et al.'s (2020) research indicated that students negatively affected the flow of patients. Unfortunately, CBPs faced high productivity demands (Beck Dallaghan, 2017). Disruptions in workflow tended to slow down a preceptor and either create a stressful working environment to catch up or decreased the number of patients seen (Krehnbrink et al., 2020). Physicians noted pressure to generate revenue and relative value units (RVUs) due to time constraints and student teaching (Paul et al., 2020). RVUs determined payment amounts for providers based on documentation, physical exams, and procedures performed (Evans et al., 2018). Evans et al. (2018) conducted a pilot study on PA student effects on preceptor

productivity and noted no significant difference in RVUs when precepting PA students versus without PA students. The pilot study was anecdotal evidence, at best, and insufficient to generalize this finding (Evans et al., 2018).

Preceptors with students still had to complete all their required work. A substantial portion of work preceptors noted difficulty finishing was charting (Minor et al., 2019). The preceptors could not afford decreased productivity, creating an unprofitable practice (Brown & Sivahop, 2017). A participant in Paul et al.'s (2020) interviews noted the requirements for documentation and EMR processes had only increased. Preceptors reported increased time teaching through discussing cases instead of spending that time charting (Minor et al., 2019). Paul et al. (2020) found that preceptors often spent time at the end of the day to finish charting, to the extent of three to four hours. Beck Dallghan et al. (2017) found that difficulties with charting software, such as outages and lack of access for students, often added to this burden.

The primary reason for having students was to learn (Minor et al., 2019). Teaching between patients, charting, and other work demands added time to the preceptor's day (Krehnbrink et al., 2020). Enjoyment from teaching was a significant theme found across the literature, but the act of teaching during the workday came at a considerable price of time (Water, Lo, & Maloney, 2018). Waters, Lo, and Maloney's (2018) literature review found that the practitioner's workload increased due to the clinical educator role. Supervising and teaching clinical students added a considerable challenge to balancing additional work with students and the everyday tasks that preceptors have to complete (Waters, Lo, & Maloney, 2018).

Paul et al. (2020) noted an increase in work and stress. Pediatricians participating in Beck Dallaghan's (2017) interviews noted that teaching students added time to their workday, decreasing time outside of work. Community-based preceptors reported increased time in patient

rooms and between patient encounters due to discussions and teaching (Beck Dallaghan et al., 2017). Minor et al. (2019) found that preceptors had to manage their time efficiently, but they spent a significant additional amount of time at work with students even then.

At work, the preceptor perceived other staff as unsupportive of training students and negatively affected flow and satisfaction (Paul et al., 2020). The lack of administrative support at work was a significant barrier for CBPs, considering the potential loss of revenue and many other difficulties encountered when accepting students (Paul et al., 2020). PA preceptors reported a lack of support from supervising physicians for accepting students (Brown & Sivahop, 2017). Throughout the literature, there was a concern about support from the administrative staff when precepting students (Brown & Sivahop, 2017; Paul et al., 2020). The concern existed from a business perspective and the supportive staff, such as nursing, and their interactions or willingness to assist with the precepting of students (Brown & Sivahop, 2017).

The last theme detracting from preceptor autonomy was institutional requirements. Curricular requirements were either unclear or vague to nonexistent or extremely specific and challenging to accomplish (Minor et al., 2019). Preceptors in Minor et al.'s (2019) research expressed concerns with curriculum changes and difficulty understanding which parts they needed to teach in the clinical setting. Curriculum reforms decreased the amount of time students spend in certain specialties (Paul et al., 2020). In semistructured interviews with pediatric preceptors, Paul et al. (2020) found that a preceptor ceased accepting students due to a reduction in the rotation timeframe to only two weeks. The preceptor did not believe two weeks was sufficient to give the students all the information and experience in their specialty (Paul et al., 2020).

Competence Barriers

The most common personal competence barriers were the lack of formal training and concern over medical and teaching skills (Minor et al., 2019). The majority of CBPs interviewed by Beck Dallaghan et al. (2017) identified role models, CME events, or specific teaching classes they attended that increased their effectiveness as preceptors. However, Drowos et al. (2017) found many barriers to all types of faculty development. Furthermore, Minor et al. (2019) noted teaching as stressful and challenging for CBPs. CBPs were uncertain about combining medical and teaching skills, especially when taking their first student (Minor et al., 2019; Paul et al., 2020). The majority of community-based faculty received informal or no training for teaching clinical students (Beck Dallaghan et al., 2017; Drowos et al., 2017).

The implementation of electronic medical records (EMRs) was integral in the medical industry (White et al., 2017). Paul et al. (2020) described the evolution of health care and the adoption of EMRs as a significant barrier. Manca (2015), through a focused literature review, noted EMRs increased the quality of care, access to records, and ability to document medical encounters effectively. However, EMR systems were a great hindrance to CBPs and students (White et al., 2017). The primary reasons were the variation of EMR programs in community clinics and acquiring student access (White et al., 2017). Individual CBPs had differing EMR software and often lack internal technical support to provide students with access (White et al., 2017). Furthermore, students became a hindrance when unable to assist with EMR inputs and created a strain on the preceptor's available time (White et al., 2017; Paul et al., 2020).

Faculty development was a barrier for community-based preceptors, while the institutions reported many difficulties in providing any training (Paul et al., 2020; Drowos et al., 2017). Faculty development was a common theme across the literature to increase competence

when practicing medicine and teaching (Paul et al., 2020; Drowos et al., 2017; Minor et al., 2019). Preceptor availability and geographic locations were common barriers institutions cited for not providing training (Drowos et al., 2017). However, financial strain, competition, and comfort with web-based technology also presented as issues for supplying faculty development (Drowos et al., 2017). Under the theme of faculty development, preceptors reported several difficulties grading students (Beck Dallaghan et al., 2017). Preceptors also expressed concerns about filling out evaluations of both the students and the institution (Minor et al., 2019).

Relatedness Barriers

Participants widely reported communication barriers which involved a lack of adequate information about the student and curriculum to a lack of feedback and appreciation for CBPs (Minor et al., 2019; Beck Dallaghan et al., 2017). Many physicians experienced a disconnect from the institution due to a lack of communication and recognition for their efforts (Minor et al., 2019). Paul et al. (2020) found that the academic institutions disconnect was due to a less formal relationship and the detachment preceptors felt from the university community due to being in a community setting. Similarly, Beck Dallaghan et al. (2017) found preceptors wanted increased communication from the institution. While Ryan et al. (2018) concluded the most desirable form of contact was a personal site visit.

Hudak, Stouder, and Everett (2018) reported institutional communication strategies to include site visits, introduction and appreciation letters, and emails to discuss rotations and schedules. However, preceptors expressed concerns about the infrequent nature of communication (Hudak, Stouder, & Everett, 2018). The lack of communication was significant across the literature (Paul et al., 2020). Beck Dallaghan et al. (2017) noted some preceptors were unable to provide timely feedback to the student's program and often unable to alert the

institution when a student was performing poorly. Preceptors participating in interviews with Minor et al. (2019) felt like they were "babysitting" a minority of students for the institution (p. 395). Another phrase from Minor et al.'s (2019) interviews indicated the preceptors were not receiving simple thank letters for taking on these students.

Another issue associated with relatedness was the lack of a personal connection with students (Paul et al., 2020). Preceptors described some students as ambivalent or disinterested (Beck Dallaghan, 2017). Preceptors in Paul et al.'s (2020) research noted disengaged medical students were not enjoyable to teach. One preceptor gave an example of a disengaged student as an unfortunate incident when a student fell asleep in an exam room with patients (Paul et al., 2020).

Operant Conditioning Punishment

Paul et al. (2020) noted when participants received direct financial compensation, the amount was not adequate for reimbursement based on their RVU generation without a student. Moreover, Paul et al. (2020) and Krehnbrink et al. (2020) noted financial loss as a barrier to accepting students. Krehnbrink et al. (2020) surveyed 129 physician CBPs in multiple subspecialties that only accepted medical students. Krehnbrink et al.'s (2020) research derived from an even more extensive study that generalized these findings. Minor et al. (2019) and Paul et al. (2020) noted that direct financial incentives were the least successful recruiting and retention methods. Begley's (2018) dissertation was congruent with findings indicating the ineffectiveness of direct payments.

Time applied to multiple categories and was presented at length previously within this literature review. Removing time categorized into the construct of negative punishment under operant conditioning (Skinner, 1938). Negative punishment was also in the form of withdrawing

benefits if a preceptor accepted fewer students. Student placement was the overarching theme in the positive punishment category (Skinner, 1938). Student placement consisted of many challenges that preceptors must navigate to succeed, also described previously in this literature review. However, one aspect of student placement not previously described was patients' satisfaction with students in the exam room (Wheat et al., 2019). Most preceptors found ways to avert this challenge through creative scheduling and familiarity with patients that were agreeable with students being in the room or performing physical exams (Minor et al., 2019).

Institution Specific Barriers

Institution-specific barriers included items to be considered for the constructs of OC. Financial resources were one such resource that institutions considered. The majority of extrinsic motivators or reinforcements were only possible if the institution was willing to spend money on preceptors or the programs that support them (Drowos et al., 2017). Many PA schools had limits on available financial resources based on their budget (PAEA, 2019). Another institution-specific resource was the current number of preceptors. Preceptors can "burnout" from taking students (Brown & Sivahop, 2017, p. S30). Institutions attempted to ensure that preceptors were adequately cared for and had sufficient time between students and support so they do not burnout from taking more (Minor et al., 2019).

PA programs experienced difficulties when attempting to identify new CBPs (Graziano et al., 2018). Snyder et al. (2010) reported that CCs spend a significant amount of time creating or maintaining sites for rotations in PA programs. However, most preceptors described a disconnect between the institution and themselves (Paul et al., 2020; Minor et al., 2019). Multiple clinical programs directly competed for CBPs and clinical training sites (Paul et al., 2020; Drowos et al., 2017). Competition for CBPs continued to increase in the last decade from every clinical

provider producing program, including physicians, PAs, and NPs (Christner et al., 2016). The competition had only increased the strain on the already small number of CPBs that accepted students (Christner et al., 2016). Graziano et al. (2018) reported communication methods were primarily to blame for the lack of recruitment and retention.

Preceptors requesting faculty development were common throughout the literature (Minor et al., 2019; Paul et al., 2020; Ryan et al., 2017). Drowos et al. (2017) surveyed medical schools and found that schools providing faculty development faced significant challenges. Time, availability, geographic location, and financial resources were the most common barriers listed (Drowos et al., 2017). One interesting point of the research found a significant number of CBPs were uncomfortable with web-based technology, further exacerbating the difficulties of attending faculty development with an online platform (Drowos et al., 2017).

The Literary Gap

The overwhelming majority of research was not about physician assistants but directed at physicians (Beck Dallagan et al., 2017; Christner et al., 2016; Drowos et al., 2017; Krehnbrink et al., 2020; Minor et al., 2020; Paul et al., 2020; Ryan et al., 2018). Moreover, a large percentage of the research was about a small subset of the CBP population, specifically pediatrics (Beck Dallagan et al., 2017; Paul et al., 2020; Ryan et al., 2018). Only a few researchers specifically focused on PAs and clinical education (Begley, 2018; Brown & Sivahop, 2017; Dover et al., 2019; Evans et al., 2018; Hudak et al., 2018; Snyder et al., 2010). Researchers studying PA education and PA clinical coordinators' perspective were even fewer (Brown & Sivahop, 2017; Snyder et al., 2010). The majority of assertions in this area were generalizations from physician-based research. A gap existed in understanding the phenomenon of recruiting and retention in community-based clinical training through CCs to CBPs.

PA-specific research was often survey data for the Physician Assistant Education Association (PAEA) and its associated quarterly journal (Brown & Sivahop, 2017; PAEA, 2019; Snyder et al., 2010). The surveys and research in PA literature matched findings for physician-based training, but generalization of the two was challenging (Brown & Sivahop, 2017; Minor et al., 2020; Paul et al., 2020; Snyder et al., 2010). This survey data was not the same as robust research (Yin, 2016). For these reasons, there was a significant gap in robust research methods on this topic.

Researching the experiences of both the PA CC and the CBP within one study provided critical insights from both parties. The two insights were necessary as both participants interact to produce the final outcome. Clinical coordinators had all the forms of support and could provide individualized support to each community-based preceptor (Snyder et al., 2010). Whereas CBPs had intrinsic motivations for accepting PA students, CCs were likely not considering (Brown & Sivahop, 2017). The insights could assist with recruiting and retention efforts for PA programs. Students and CCs could benefit from CCs understanding effective support strategies, motivations, and barriers that CBPs face.

<div align="center">**Summary**</div>

This literature review was an in-depth depiction of the current knowledge of the community-preceptor problem of recruitment and retainment. The challenges presented in recruiting and retaining community-based preceptors were numerous. Community-based preceptors continued to leave due to difficulties teaching in a clinical setting (Chirstner et al., 2016). The limited resources of the teaching institutions complicated giving support (Snyder et al., 2010). However, several of the most effective means of support were not resource-intensive (Snyder et al., 2010).

Institutions did not regularly consider preceptors' motivations for delivering clinical education (Minor et al., 2019). Institutions and CCs suffer from a lack of communication with CBPs to address needs and wants (Minor et al., 2019). Moreover, the incentives that institutions provided and the motivations community-based preceptors had, were not congruent (Brown & Sivahop, 2017). Research that contributed to determining the barriers for community-based providers assisted with producing viable solutions. The easy but financially exhaustive solutions might not be the best support for community-based preceptors. Examining both institutions and preceptors provided further knowledge for this phenomenon. Finally, numerous solutions were available, but the best practices were different for each institution as well as each preceptor. Recruiting and retaining community-based preceptors for PA programs required both the educator's and the institution's perspectives. Understanding their experiences of the recruitment and retention phenomenon provided vital insights into this problem.

CHAPTER THREE: METHODS

Overview

The purpose of this case study was to understand the clinical education stakeholders' experience with the phenomenon of recruitment and retention. The intent was to understand these factors from a comprehensive perspective of the primary stakeholders of clinical coordinators and community-based preceptors. In this chapter, I presented the study's design and how it related to the research questions. The chapter contained information on participants, settings, and the sampling process. This chapter listed the study procedures, research design, and protocols for analysis in sufficient detail to allow replication of this study. This chapter consisted of the procedures in sufficient detail to demonstrate the research's integrity, trustworthiness, and ethical considerations.

Research Design

Qualitative research was the best method of exploring the perceptions of clinical coordinators and preceptors' experiences with recruiting and retention (Creswell & Poth, 2018). A case study design was the most appropriate research method to develop an in-depth understanding of the factors affecting recruiting and retention of CBPs (Yin, 2018). This case study contained elements of a specific case for description and analysis. The case was bounded, to understand the problem, and generate data to develop themes that ended with an assertion (Yin, 2018). Robert Yin (2018) noted case study research should occur in bounded systems, limiting the research to time, place, and activity. The rationale for implementing this design was to provide a complete understanding of preceptors' and clinical coordinators' perspectives on recruiting and retention phenomena.

Researchers traced case study origins to the early nineteenth century as biographic research on historical figures (Harrison et al., 2017). Historically, case studies were a method of

researching a topic. However, the modern form of case study evolved to a research design to appreciate complex issues of a contemporary phenomenon in psychology, education, medicine, law, and political science (Creswell & Poth, 2018). The most significant recent contributors to the development of case study research were Stake, Merriam, and Yin. Each contributor added philosophical variations to case study research, furthering this form of qualitative inquiry (Harrison et al., 2017).

The case of the participants experience was the object of this study. For this research, the case was the stakeholders in community-based PA clinical education that experience efforts of recruiting and retention. The key stakeholders were the clinical coordinators and community-based preceptors. The inclusion of these groups of PA educators was critical to provide the entire context and spectrum for the phenomenon. The cases divided into each clinical coordinator and their corresponding community-based preceptors. The cases were bounded in time by the CCs' and CBPs' experience with recruitment and retention for community-based clinical education. Furthermore, this research bounded the system by place to the universities, clinics, and other sites used in these recruiting and retention efforts. Bounding the system offered the ability to manage contextual variables (Harrison et al., 2017).

With the case defined and bounded, an essential aspect of case study research was investigating a contemporary phenomenon within its context. The phenomena were ongoing to differentiate case study from historical study. Context was significant to distinguish case study research from other forms of inquiry (Harrison et al., 2017). For context, the natural setting and contextual variables such as economic, social, historical, and organizational factors were significant for the individuals experiencing recruiting and retention efforts.

The multiple case study design was the research method to understand each clinical educator groups' experience with factors affecting recruiting and retention at their respective institution thoroughly. The multiple case study consisted of more than one case. It offered a literal repetition of several sites, clinical coordinators, their support to preceptors, and insights CBPs provided, such as motivations. Yin (2018) encouraged the use of multiple case study, citing that "even a "two-case" case study" (p. 61) was better because of direct replication and the enhancement of analytic conclusions. While each case provided different reinforcements and extrinsic motivations, the logic of replication produced a more comprehensive insight into these factors and increased this research's construct validity (Yin, 2018). The design was appropriate because clinical education stakeholders' perceptions provided insights into the motivations, reinforcement of behaviors, and available resources from the clinical coordinator to the preceptors directly affecting recruiting and retention in a community-based training environment. Case study research allowed for an in-depth understanding and analysis of recruitment and retention experiences (Yin, 2018).

Within the multiple case study design, this research was holistic. Holistic multiple case research allowed each case to be encompassed by its context while maintaining the same collection and analysis methods for each case (Yin, 2018). The holistic approach allowed a global view of CCs' and CBPs' experience with recruiting and retention. The holistic design included utilizing multiple sources of evidence such as interviews, focus groups, and relevant documentation. The data collected assisted in exploring and explaining the community-based clinical educator recruiting and retention phenomenon. A description of the data collection was in the case study protocol section.

Research Questions

Central Research Question

What factors did PA clinical educator stakeholders experience that affect recruiting and retention of community-based preceptors?

Sub-Question One

What forms of motivation, intrinsic or extrinsic, existed that encourage recruiting and retention?

Sub-Question Two

What support or reinforcements were effective to encourage recruitment or retention in community-based clinical training?

Sub-Question Three

What were the most significant barriers to recruiting and retention in community-based clinical education?

Setting and Participants

The settings for this research included several different locations scattered across the United States primarily mid to east coast. These locations included the university where the PA program recruited and retained CBPs and the CBPs' sites where recruiting and retention efforts took place. The participants were community-based clinical education stakeholders, including both CCs and CBPs. The participants were medical and educational professionals that educate PA students and experienced the phenomenon of recruiting and retention in a community-based setting.

Setting

The criteria for the exploratory survey determined the sites for this study. The sites

contained clinical coordinators and a minimum of one of their willing community-based

preceptors. Geographically diverse locations provided a greater understanding of differences in

support from various schools that did not compete or use the same clinical sites or preceptors.

The sites were universities with PA programs across the United States and their network of

preceptors. The networks consisted of CBP not teaching in major teaching institutions. The

preceptors' sites were their office or workplace where they precept students and experience

recruiting and retention factors. The selection of sites was dependent on responses from clinical

coordinators and chosen participants. After obtaining sufficient sites, universities, clinical

coordinators, and preceptors, additional sites were withheld based on lacking or overly redundant

support systems. The clinical preceptors eligible for the study participated after returning the

informed consent document.

Participants

Participants of this research were PA educators that experienced recruiting and retention

in a community-based environment. The participants were medical and educational

professionals. The number of participants was 14 and would only have exceeded 15 participants

if needed to complete a case. For participant selection, purposeful convenience sampling was the

method for this research based on the responses to the initial exploratory survey for clinical

coordinators. Removing redundant support systems and local sites utilizing the same preceptor

ensured a diversity of participation and experiences. The sampling methods were purposeful

utilization-focused sampling for CCs and respondent-driven sampling for CBPs. Utilization-

focused sampling was the sampling method that ensured each participant was credible and

relevant to this research (Patton, 2015). Respondent-driven sampling was the sampling method to

find community-based preceptors from clinical coordinators (Patton, 2015). Respondent-driven

sampling was the network-based strategy that allowed the initial participants to recruit new

contacts (Patton, 2015). CCs maintained networks of preceptors, and the ability to contact these

preceptors was from this relationship (Snyder et al., 2010). The population of clinical

coordinators for the initial exploratory survey was large, approximately 300 individuals.

The exploratory survey contained easy to answer questions for clinical coordinators. The

intent of the survey was to gain an overview of the clinical coordination program and support for

its preceptors while also identifying coordinators for participation in the study. The sample size

for clinical coordinator interviews was five, and the sample size for preceptors was five. Each

case consisted of one CC and a minimum of one CBP. The single focus group case's sample size

was four. Demographic information was published based on gender, professional background,

and current precepting information. The limited published demographic information was

intended to decrease the ability of universities, clinical coordinators, and preceptors to identify

each other in this study and enhanced the chances of anonymity.

Exploratory Survey

A survey that consisted of simple questions to answer to collect the appropriate data and

rapidly analyze for further research was an exploratory survey (Babbie, 1973; Hackett, 1981).

The survey was mostly yes or no questions to choose multiple forms of support provided to

clinical preceptors from the institution. I generated the exploratory survey to locate potential

participants and remove redundant support systems. I obtained informed consent with or before

the participants returned the survey. The informed consent document included the right to

voluntary withdrawal, the purpose of the study and procedures used in data collection, protection

of confidentiality; known risks with participation; expected benefits, and the signature of the participant and researcher (Creswell & Poth, 2018). The questions were:

1. Are you willing to conduct an approximately 45-minute interview on incentives and support given to community-based preceptors by your program that enhance recruiting or retention?

2. Does your program provide incentives or support to community-based preceptors to maintain the acceptance of students?

3. Is your program considering any new forms of benefits or support for community-based preceptors?

4. Are you willing to provide information for two or more community-based preceptors from your current roster for a researcher to conduct an approximately forty-five-minute interview? (Please reach out to these preceptors to determine if they are agreeable.)

   a. If so, how many would you see potentially participating?

5. What, if any, forms of incentives or support have your program provided:

   a. Direct Payment

   b. University/College Privileges

   c. Continuing education courses/credit

   d. Preceptor training workshops

   e. Honoring through meals, certificates, or personal letters

   f. Other

   g. None

6. What forms of documentation can you provide about incentives and support your programs provide to community-based preceptors?

All possible participants for interviews and focus groups received informed consent forms with the exploratory survey. Once clinical coordinators returned the survey, I examined the answers to determine suitable sites for study based on utilization-focused sampling (Patton, 2015). The criteria for selecting a PA program as a suitable site consisted of having CBPs, institutions offering incentives or support to preceptors, agreement of the CCs to participate, and CCs providing contact information for CBPs. The exploratory survey questions ensured CCs had contact information for the minimum number of CBPs that could potentially participate in the study. I interviewed five CCs and obtained the contact information of the CBPs that were likely to agree to participate in the research. The CCs encouraged their CBPs to participate before my initial contact which assisted in establishing rapport and enhancing participation chances.

Fowler (2009) noted that the primary purpose of collecting a survey was for the survey's quantitative data, and a researcher could analyze it. However, the exploratory survey assisted with purposeful utilization-focused sampling and identifying sites acceptable for research (Patton, 2015). Fowler (2009) also noted participation as a significant problem for surveys. I emailed the program administrator, clinical coordinator, and any other faculty listed with responsibilities in the clinical realm to increase participation. I sent emails with a preformatted message to the individual programs rather than a mass of multiple programs asking for participants.

Researcher Positionality

The motivation for researching this subject was the personal experience of providing family medicine community-based clinical education for multiple PA students. Upon accepting

students, the institution's only communication was basic demographic information about the PA

students and the timeframe for their rotation. While I gained much of the pertinent educational

information after the student arrived, communication from the institution and CC was mostly

absent. Furthermore, gaining an understanding of each student's strengths and weaknesses took

time. Information or support from the PA program could have provided a better continuity of

education. The lack of incentives and support did not prevent the acceptance of new students.

However, the PA program did not communicate, provide support, or acknowledge that I would

receive anything for precepting students. At the end of the student's rotation, I received a hand-

written thank you note, and the institution provided continuing medical education (CME) credit.

Further support and incentives from the PA program could increase the number of

students accepted or the continued acceptance of PA students. However, these extrinsic factors

were not the only reasons for taking PA students. Due to personal experience as a CBP, biases

could exist. I was cognizant of these issues and attempted to eliminate any bias or other adverse

effects of my experience in this research. Participants' lived experiences assisted in creating an

accurate and purposeful study.

Interpretive Framework

The paradigm of post-positivism guided the study. Post-positivism employed a social

science theoretical lens with elements of logic, empiric, and cause-and-effect oriented theories.

The post-positivist noted a probability in the cause-in-effect phenomenon but not every cause

produced the effect. Researchers used the post-positivism interpretive framework that often

viewed a study as logically related events from multiple perspectives and participants (Creswell

& Poth, 2018). Post-positivism aligned with the multiple case study design as there were several

perspectives and attempts to understand the cause and effects of recruiting and retention efforts.

Philosophical Assumptions

The philosophical assumptions were important to consider to understand the researcher's lens and view of the world and approach to this research. Articulating these assumptions assisted in demonstrating the researcher's assumptions to the reader. The three philosophical assumptions to be addressed were ontological, epistemological, and axiological.

Ontological Assumption

The ontological assumption involved the researcher's beliefs on the nature of reality (Creswell & Poth, 2018). I believe there was one reality. However, this reality was seen at the same time differently by separate individuals. The ontological assumption allowed for multiple perspectives to be collected but ensured that these perspectives were within the singular reality. My ontological assumption aligned with the current research design as the several different participants offered data on a single and in individual cases a shared phenomenon.

Epistemological Assumption

The epistemological assumption dealt with knowledge, precisely what is knowledge, how to verify knowledge, and the researched-researcher relationship (Creswell & Poth, 2018). Qualitative research was less objective and more subjective as researchers typically derive data from the individuals' experiences. In this research, the epistemological assumption was that the information derived from the experience was the best recollection of knowledge the participant had at that point in time. Triangulation of data was in the form of multiple interviews, a focus group, and document collection to verify knowledge. I defined the researcher-researched relationship in the researcher positionality section.

Axiological Assumption

The axiological assumption allowed the reader to understand the values known and

brought to the study by the researcher (Creswell & Poth, 2018). I rejected the idea that researchers did not bring values or bias to research. For this research, I noted that my previous employment as a CBP for a local PA program. The apparent bias that I alluded to was the lack of substantial and meaningful initial support from PA programs and that CBPs acted primarily on internal motivations. I transitioned to a position where I can no longer take PA students but would gladly continue if and when I am able. However, I placed this bias aside and allowed the data to guide the findings of this research.

Researcher's Role

The qualitative researcher was the main instrument for data collection and analysis. The researcher facilitated data as a human instrument rather than through surveys, questionnaires, or machines. The researcher's role as the human instrument was to be unbiased and place previous assumptions aside to gather accurate data. The relationships with participants were strictly professional and not based on previous experiences with these programs or individuals. Settings and sites were selected based on the study's established criteria. As a PA and previous CBP, I had assumptions about PA programs' support effectiveness. The assumptions I brought to this study were that most programs offer little to no support or incentives for CBP. Furthermore, the majority of CBP continued teaching despite significant barriers due to intrinsic motivations. However, I intended to find facts about the phenomenon of recruiting and retention and reported them accurately. The objective truth was paramount in this research.

<div align="center">

Procedures

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This section outlined the steps for conducting the study with the intent to provide a blueprint that allows others to replicate this research from these descriptions. In this section a description of site permissions required, IRB approval, and recruiting participants was presented.

Furthermore, I explained the data collection and analysis procedures and how the data triangulated to offer a more rigorous study.

Permissions

The procedures to conduct the study included seeking Institutional Review Board (IRB) approval, finding appropriate candidates for research, and conducting the research. After a successful proposal defense and in agreement with my committee chair, I submitted the prospectus. Once the IRB reviewed and approved the proposed study, data collection procedures began (see Appendix A). Other forms of approval from sites or participants were not required to conduct research at the PA programs.

Recruitment Plan

The PAEA and ARC-PA program directories (2020) were essential to reach out to program administrators and clinical coordinators. The directories contained contact information on all active PA programs. I accessed these directories and contacted each program through a preformatted email message that included the research details (see Appendix B), informed consent (see Appendix C), and access to the exploratory survey (See Appendix D). Email communication was the primary method for eliciting participation in the initial exploratory survey. When not enough responses return, I contacted individual programs directly. Upon receiving the exploratory surveys from the participants, the exploratory survey underwent comparison to the current selection criteria for inclusion or exclusion. Once sites were selected, the researcher recruited potential CC participants through purposeful utilization-focused sampling after gaining permissions to conduct the research at each institution with the selected individuals (Patton, 2015).

The selection process for the CBP interviews occurred through the respondent-driven sampling utilizing the CCs to recruit CBPs (Patton, 2015). I contacted the CBPs based on the CC's information and obtained informed consent for the study. When a CBP did not agree or failed to respond to participate, I selected another CBP to join until meeting the case minimum of one CBP per CC. I set up locations and times agreeable to all the participants. For interviews and focus groups, the participants had the choice of meeting in person, if feasible, or over a web-based platform, Skype. Participants were hesitant to meet in person given the COVID-19 pandemic and geographical diversity made web-based platforms the primary method for conducting interviews and focus groups.

The procedures for gathering participants for focus groups were the same as those listed for the interviews. The focus groups had a minimum of two clinical coordinators and two community-based preceptors.

Data Collection Plan

After site selection, I conducted interviews with clinical coordinators via Skype (see Appendix E) to ascertain perceptions affecting recruiting and retention efforts of community-based clinical educators. I contacted CBPs to conduct interviews to complete the case (see Appendix F). Once whole cases were completed with a minimum of ten interviews, the data collection method changed to the focus group and was conducted with the remaining selected sites (see Appendix G). For the final data collection method, I collected documents from both the CCs and CBPs based on support given or received about recruitment or retention of CBPs.

The first data collection method was multiple in-depth interviews with clinical coordinators and community-based preceptors. Yin (2018) noted interviews are one of the most important sources of evidence for case studies. The case study interviews for this research were

shorter and more focused than typically prolonged case study interviews. The shorter interviews were appropriate when determining the interviewee's sense of reality and meaning (Yin, 2018). The interviews included five clinical coordinators and five community-based preceptors. I completed the interviews by each case with a minimum of ten participants but could exceed this amount to include the entirety of the last case's participants (see Appendix H).

Documentation was "likely to be relevant to every case study topic" (Yin, 2018, p. 113). Documents such as emails, calendars, notes, agendas, meeting reports, legal forms, and many others were potentially available for collection (Yin, 2018). Documentation was valid but not acceptable as literal recordings of events. Documentation was primarily for corroborating and augmenting other forms of data (Patton, 2015; Yin, 2018; see Appendix I). Yin (2018) cautioned that documentation is possibly challenging to find, unknowingly biased, or withheld from the researcher.

Robert Yin (2018) listed four principles to follow for data collection: gathering multiple forms of data, creating a case study database, and maintaining a chain of evidence. The last principle, which did not apply to this research, was being cautious when obtaining information from social media. This research design accomplished the principle of collecting multiple forms through numerous interviews, a focus group, and documentation. A case study database was a separate compilation of all the data from the study stored for easy tracking and retrieval (Yin, 2018). I kept all materials in a folder with multiple subfolders for the separate data collection forms, cases, and other information pertinent to the research. The researcher placed any data or researcher-created relevant documents in the database, such as notes, documents, and tabular materials. The purpose of the database was for easy retrieval and use of data (Yin, 2018).

An adequately maintained chain of evidence was imperative within the database and throughout the research to connect data to other data, themes, and concepts. The research design accomplished this principle by notating and relating findings to the items in the case study database and evidentiary sources to the corresponding protocol and questions. The chain of evidence could allow other interested parties to follow the evidence to research questions and the conclusions. An audit trail or chain of evidence increased construct validity (Yin, 2018).

Individual Interviews

Interviews were among the most important types of data sources in case study research (Yin, 2018). The interview type was semistructured using the questions below and advancing only if the topic was adequately described based on knowledge of the literature and expectations from the previously conducted exploratory surveys (Merriam & Tisdell, 2016). A semistructured interview reviewed a specific topic with a limited number of prepared questions and impromptu follow-up questions (Rubin & Rubin, 2013). The researcher asked straightforward, open-ended questions relevant to the study and wrote relevant notes (Patton, 2015). Follow-up questions gained depth, detail, and nuance to assure thoroughness and credibility (Rubin & Rubin, 2013). Furthermore, I used probes to manage the conversation by keeping the interview on target, asking for clarification, and identifying bias (Rubin & Rubin, 2013). The semistructured interview was appropriate for this research because case study interviews should resemble guided conversations rather than structured queries (Yin, 2018).

The design of the two separate semistructured protocols was to capture the full spectrum of factors affecting recruiting and retention. The first protocol was for clinical coordinator interviews, while the second protocol was for community-based preceptors. The selection of participants and separate interview protocols allowed for a comprehensive and in-depth

investigation into motivations, reinforcements, and barriers encountered by each group concerning community-based clinical training.

The logistics of the interview process included meeting interviewees with an acceptable mutual time and date agreement. Meeting with participants was not financially feasible due to the distribution geographically of participants, I conducted the interview virtually via Skype. The participants had a quiet place, free of interruptions, to complete the interview. I recorded data through audio and visual means as all the participant were agreeable. I obtained informed consent before the interview took place, and the informed consent document consisted of: the right for voluntary withdrawal, the purpose of the study and procedures used in data collection, protection of confidentiality, known risks with participation, expected benefits, and the signature of the participant (Creswell & Poth, 2018). The interviews mostly took 30-45 minutes with a one extending to an hour, I asked all the research questions in the order of the respective protocol.

Standardized Semistructured Interview Questions for Clinical Coordinators

1. Please introduce yourself to me, as if we just met.

2. Provide the responsibilities of your position within the PA program. CRQ

3. How many students are you responsible for placing in clinical rotations per year? CRQ

4. How many rotations do students attend in a community-based setting? CRQ

5. Describe your procedures for recruiting new community-based sites or community-based preceptors. CRQ

6. Describe your procedures for maintaining current community-based sites or community-based preceptors. CRQ

7. Describe any intrinsic or internal motivations community-based have expressed to you for accepting PA students. SQ1

8. How would you describe issues you face with placing students with community-based preceptors? SQ2 and SQ3

9. Describe barriers you face with recruiting and retention, specifically from the university or PA program. SQ3

10. Describe the incentives your program offers for community-based preceptors to join or continue taking students. SQ2

11. What, if any, incentives have your program withdrawn from community-based preceptors? SQ2 and SQ3

12. What incentives do you perceive as most beneficial in recruiting and retention of community sites and community-based preceptors? CRQ

Questions one through six were knowledge questions (Patton, 2015). The design provided insight into the average day for clinical coordinators, established rapport, provided follow-up material, and considered the program comprehensively in the semistructured interview (Patton, 2015). Questions four and five included information on the scope of the CCs school and duties that I considered in future interviews or to answer questions further. Question six was a theoretical connection to Skinner's (1938) operant conditioning. Snyder et al. (2010) compiled a list of support that PA programs used, and the answer reflected this data.

Question seven aimed to produce data on the first SQ1 of motivations for recruiting and retention in teaching community-based clinical education. While the clinical coordinators did not typically experience these motivations, CBPs reported their experience and illuminated these

motivations to the CCs. Motivations, both intrinsic and extrinsic, were theoretical connections to SDT and this research (Ryan & Deci, 2000).

Questions eight and nine demonstrated the barriers clinical coordinators faced and established the difficulties from the institution's perspective. The questions' designs offered insights into the external and internal barriers that affected recruiting and retention. The intent of the question was to comprehensively view the phenomenon and the institution's capabilities, limitations, and other unknown factors affecting recruiting and retention. The questions connected theoretically to operant conditioning and, in practice, to the forms of support as the findings indicated the finite resources available (Skinner, 1938; Snyder et al., 2010).

Questions ten and eleven aimed to link the theoretical framework of operant conditioning to the research questions (Skinner, 1938). Rewards or incentives were reinforcements, and removing or not providing these were punishments (Skinner, 1938). The CC's use of incentives encouraged preceptors to accept more students or begin to take students. The questions explored the study's theoretical underpinnings and connected forms of support provided to the PA program. Moreover, the question design intended to answer the SQ2 and often SQ3.

Question twelve's design offered insights into the clinical coordinator's perception of preceptors' desire for recruiting and retention in community-based clinical rotations. Begley (2018) and Minor et al. (2019) noted that perceptions are often not reality as incentives are not always practical or wanted. This format attempted to demonstrate the gap between reinforcements versus motivations. The question's design included insights into the CRQ.

Standardized Semistructured Interview Questions for Community-Based Preceptors

1. Please introduce yourself to me, as if we just met.

2. How many students do you typically precept in a year? CRQ

3. How many students could you reasonably precept in a year? CRQ

4. Under what circumstances do you take students for clinical rotations? CRQ

5. Initially, what motivated you to accept students? SQ1

6. What motivates you to continue to accept students? SQ1

7. How would you describe your interactions with the clinical coordinator from the programs you precept for? SQ2

8. Describe incentives or support the PA program provides that encourages you to continue teaching. SQ2

9. Describe the incentives that have been or are most beneficial to you. SQ2

10. How does precepting a student affect your work? SQ3

11. Describe the barriers that prevent you from accepting students. SQ3

12. Describe any incentives or support a PA program could provide to increase the number of students you precept per year. CRQ

Questions one through four were knowledge questions designed to provide an overview of responsibilities and the baseline number of students the preceptor accepts each year (Patton, 2015). The information was vital in consideration of how many students a preceptor could take every year. The circumstances for accepting students were contingent on schedule conflicts, vacations, holidays, burnout, or busy seasonal offices (Brown & Sivahop, 2017). These circumstances connected to barriers faced when accepting students, which theoretically connected to OC as a punishment and possibly a barrier to the constructs of SDT such as autonomy (Skinner, 1938; Ryan & Deci, 2000).

Questions five and six intended to demonstrate the intrinsic motivations for CBPs to start or maintain educating students in a clinical setting. These questions were critical for answering

SQ1. Furthermore, the design connected theoretically to SDT in consideration of intrinsic motivations. The answers also provided insights into the constructs of extrinsic motivations and possibly reinforcements of operant conditioning (Ryan & Deci, 2000; Skinner, 1938).

Question seven demonstrated the preceptor's relationship with the institution and the clinical coordinator. The preceptor's perception offered insights into how the institution best supports preceptors and was comparable to similar research (Minor et al., 2019). Throughout the related literature, relatedness was a significant theme that CCs consistently view as adequate, but CBPs consistently noted a lack of communication and connection (Minor et al., 2019; Paul et al., 2020). The question primarily applied to self-determination theory in the form of relatedness (Ryan & Deci, 2000). The question applied theoretically to operant conditioning as these relationships were the basis for providing support that encourages retention (Skinner, 1938). Moreover, the design of the question was to connect to SQ2 directly.

The intent of question eight was to view the extrinsic and possibly intrinsic motivations for teaching, which connected to SDT (Ryan & Deci, 2000). The question also allowed insights into reinforcements that CCs provided to increase recruitment and retention, relating to operant conditioning (Skinner, 1938). Many variations of incentives existed throughout the related literature, but data was lacking on which incentives encourage recruiting and retention (Minor et al., 2019; Paul et al., 2020). The question was directly related to SQ2.

Question nine was a theoretical connection to self-determination theory as this related to the CBP's motivations for precepting students without the extrinsic motivations or incentives (Ryan & Deci, 2000). The question's design attempted to disregard operant conditioning as a theoretical framework as the answer was not a form of behavioral modification from external

forces (Skinner, 1938). Minor et al. (2019) found intrinsic motivators as more potent than extrinsic motivations.

The design for questions ten and eleven extended into barriers that affected intrinsic and extrinsic motivations and provided positive or negative punishment for the CBPs (Skinner, 1938; Ryan & Deci, 2000). Brown and Sivahop (2017) noted several different clinical education challenges that cause preceptors to discontinue teaching in a community-based clinical setting. Minor et al. (2019) used SDT as a theoretical backing to discover the problems responsible for preceptors no longer taking students. Furthermore, these questions connected to SQ3.

Question twelve established the CBP's thought process on ideas outside of regular operations to assist recruiting and retention. Minor et al. (2019) noted preceptors often valued incentives that were not expensive or difficult to implement. The design connected to the primary research question when considering the reinforcement framework through support that programs offered. Furthermore, the question allowed for connections between perceptions, data, operant conditioning, and self-determination theory (Skinner, 1938; Ryan & Deci, 2000).

Individual Interview Data Analysis Plan

The analytic strategy for interview data was to work from the "ground up" (Yin, 2018, p. 169). The intra-case transcriptions of the interviews were initially analyzed using concept coding for first cycle coding (Saldaña, 2016). "Concept Codes assign meso or macro levels of meaning to data or data analytic work in progress" (Saldaña, 2016, p. 119). Concept coding allowed analysis to take place inductively from the data. The researcher used concept coding primarily to identify macro levels of meaning to the data. Once all interviews were complete with initial analysis, I used pattern coding as second cycle coding for each case (Saldaña, 2016). Pattern coding pulled "together a lot of material from first cycle coding into more meaningful and

parsimonious units of analysis" (Saldaña, 2016, p. 236). Once the data was pattern coded, I analyzed the codes for patterns from each intra-case transcription and document for explanation building purposes (Yin, 2018; Saldaña, 2016).

Focus Groups

Focus groups were a form of interviewing a group of people that know about this research topic (Merriam & Tisdell, 2016; Yin, 2018). The characteristics of this focus group were: to involve participants, have a focused discussion, and gather data (Krueger & Casey, 2015). The focus group's purpose was not to come to an agreement but for participants to detail their experiences with the phenomenon of recruiting and retention of community-based educators (Patton, 2015). Focus groups were appropriate for collecting data on concerns and issues and were a method for participants to offer points of view or perceptions without the pressure to take a vote or reach a consensus (Krueger & Casey, 2015).

The focus group participants followed the cases and included two clinical coordinators and two community-based preceptors. A minimum of one focus group was necessary, with a maximum of three for this research. The purpose of the focus group interview was to determine perceptions of factors affecting recruiting and retention from all stakeholders. When conducting a focus group, Krueger and Casey (2015) advocated listening to the target audience, developing a written plan, and anticipating data collection problems. With the participants consent, I observed, listened, and wrote notes as a solo, outside researcher while recording the focus group through audio and visual means. (Patton, 2015).

A mutually agreeable date and time was scheduled for the focus group to take place. The meeting with participants in person was not feasible, I conducted the focus group via Skype. The participants required a quiet place, free of interruptions, to contribute to the focus group. I

collected the informed consent of the participants before the focus group took place. The informed consent document consisted of: the right for voluntary withdrawal, the purpose of the study, and procedures used in data collection, protection of confidentiality, known risks with participation, expected benefits, and the signature of the participant (Creswell & Poth, 2018). The focus group lasted approximately an hour, and the research questions were asked in order of the protocol below.

The focus group was a semistructured group discussion. A semistructured focus group concerned a specific topic with a limited number of prepared questions that evoked conversation and impromptu follow-up questions (Rubin & Rubin 2013; Krueger & Casey, 2015). I asked follow-up questions to gain depth, detail, and nuance to assure thoroughness and credibility (Rubin & Rubin, 2013). Furthermore, I used probes to manage the conversation by keeping the interview on target, asking for clarification, and identifying bias (Rubin & Rubin, 2013).

Standardized Semistructured Focus Group Questions

1. Starting from left to right, please introduce yourselves to the group, as if we just met.
2. How many students do community-based preceptors typically take in a year?
3. Describe the motivations community-based preceptors have to participate in clinical education. SQ1
4. Describe incentives that are provided or received from the PA program for participating in clinical education. SQ2
5. How do these incentives impact recruiting and retention of community-based preceptors in PA education? SQ2
6. Describe barriers to accepting students in a community-based setting. SQ3

Questions one and two were knowledge questions designed to provide an overview of responsibilities and the baseline number of students the preceptor accepts each year (Patton, 2015). The information was vital in consideration of how many students a preceptor could take every year. The circumstances for accepting students were contingent on schedule conflicts, vacations, holidays, burnout, or busy seasonal offices. Many CBP's in the literature noted difficulties accepting too many students (Brown & Sivahop, 2017).

Question three demonstrated a theoretical connection to self-determination theory as this relates specifically to CBP's motivations for precepting PA students (Ryan & Deci, 2000). The motivations could be intrinsic or extrinsic based on the answers from participants. I considered probes specific to this question into intrinsic motivations related to SDT's constructs of autonomy, relatedness, and competence (Ryan & Deci, 2000). The question's design attempted to disregard operant conditioning as a theoretical framework as the answer was not a form of behavioral modification from external forces (Skinner, 1938). Minor et al. (2019) found intrinsic motivators as more potent than extrinsic motivations.

The fourth and fifth questions offered insights into extrinsic motivations and reinforcements reflecting on SDT and OC (Ryan & Deci; Skinner, 1938). Question four applied broadly to which extrinsic motivators CCs and CBPs were aware of and potentially receiving, which related more to SDT. While question five considered the effectiveness of these reinforcements and encompassed both SDT and OC. The probes I considered for complete coverage of extrinsic motivations included financial incentives, acts of appreciation, university privileges, and credentialing management. Furthermore, these questions offered insights into SQ2.

The final question was related to barriers. These barriers inhibited the constructs of SDT, such as autonomy, competence, and relatedness (Ryan & Deci, 2000). Furthermore, barriers were positive and negative punishment under OC (Skinner, 1938). Probes I used for the focus group include the categories of SDT and institution-specific barriers. The question's design was directly related to SQ3.

Focus Group Data Analysis Plan

Data analysis for focus group case proceeded in the same manner as the interview data analysis protocol. The focus group printed transcripts were manually concept coded then pattern coded. Once pattern coding was complete, the intra-case analysis explanation building occurred in the same method as the interview data analysis plan, which relied on pattern coding. I compared both the case explanation and the pattern codes cross-cases to the other case data sets after documents were reviewed with their respective cases.

Document Analysis

In the exploratory survey, interview, and focus groups, I requested any documents or communications that CCs utilized to recruit, retain, or support CBPs. From CCs, pertinent documentation was about site visits, meetings concerning CBP support, and other relevant information to this research. From the CBPs, the relevant documentation was any communication or documents about accepting students and incentives or support from the CCs. The documents could include legal documents, contracts, meeting minutes, calendars, emails, text messages, and any other type of medium that CCs and CBPs used to communicate about recruiting or retention in a community-based clinical setting.

An important document to this study was legal contracts between programs and community-based preceptors. Contracts were binding agreements between a CBP and PA

program to ensure a certain number of students receive training from the CBP. Emails and other forms of communication were essential for understanding the relationship and framework that CCs use to recruit and retain CBPs. Emails and other forms of communication were also an inroad to understanding the limitations of the PA program on the incentives that CBPs receive. Meeting minutes and calendars were forms of tracking when and what discussions or site visits took place. I analyzed the documents after their respective case analysis.

I collected PA program documents through email only. After selecting PA programs and cases, multiple requests for documents were made and offered the most potential for finding relevant data. CCs and CBPs selected for the study will provided documents through electronic copies of documents. I added the documents to the case study database through electronically saving and scanning after the coding process.

Document Analysis Data Analysis Plan

The analysis plan for the documents was to review the documents with their respective case, and I explored the raw data after completion of the case. Documentation findings were primarily used to corroborate or augment the interview or focus group data (Patton, 2015; Yin, 2018). I manually concept coded on a minority of a printed copy of the documents. Concept coding was not always required due to the document's headings and seriation which inherently provided the larger data section. Pattern coding identified the themes derived from the data on the same printed copies. I included these themes into the individual case's analysis and explanation building.

Data Synthesis

The researcher manually coded the data and accomplished concept coding with writing on transcription print-outs. A word or short phrase represented broader meanings of the analyzed

data. The initial analytic process was "lumping" data together by bracketing data sections and gave meaning through the respective code (Saldaña, 2016, p. 120). The analysis was interpretive, relying on the researcher as the human instrument. Once individual transcripts were concept coded, I entered the codes in a codebook. The second coding cycle was pattern coding which divided the larger concept-coded data into smaller analytic units. These smaller analytical units developed major themes from the data and built the themes for cross-case analysis. Pattern codes identified themes based on the data and the researcher's interpretation. The researcher produced a few codes that did not make the final list of case themes due to a lack of support within the data (Saldaña, 2016). Furthermore, redundant codes were combined once the cases were completed. I placed all the codes in the codebook, regardless of use within the study (see Appendix J).

The codebook was a list of codes that emerged within the data and analysis process. The codebook contained each code with a brief description of the code. Furthermore, the inclusion and exclusion criteria were within the codebook to ensure internal validity and reliability. The last item contained within each code and its description was an exemplifying quote from each case that epitomized the findings in the data. All created codes were in the codebook and linked through the audit trail to the appropriate raw data in the respective transcript (Saldaña, 2016).

The primary method for intra-case analysis once the coding was complete was explanation building. Explanation building was a method of analysis to build an explanation about a case (Yin, 2018). The researcher used an iterative analysis process by making an initial proposition then comparing the data-supported explanation against the initial proposition. After each comparison, I revised the explanatory statement with the new cases data.

Cross-case synthesis was the final method of analysis. Cross-case synthesis was an inter-case method of analysis that increased the integrity of the entire research (Yin, 2018). The cross-

case analysis compared each completed case to another case within a multiple-case research design. I compared the explanatory statements from each case to the next case. In addition, the researcher used the themes that create the explanatory statement for analysis. Cross-case synthesis was challenging due to the reliance on "argumentative interpretation" (Yin, 2018, p. 196). The researcher considered this type of interpretation when there were difficulties matching concepts from one case to another. To increase the validity of any interpretations, "strong, plausible, and fair arguments," supported by data, were made in defense of any significant discrepancies between cases (Yin, 2018, p. 196). The researcher completed the cross-case synthesis once all the case coding and explanation building was finished.

The initial proposition was: Community-based preceptors take students based primarily on intrinsic motivations while clinical coordinator's extrinsic incentives and reinforcement are helpful; these methods do not significantly alter recruitment and retention.

Trustworthiness

A robust data collection method, protocols, and well-structured analysis created trust in this research (Patton, 2015). The three forms of data collection ensured corroboration between a wide array of themes and patterns and added construct validity. The detailed analysis methods increased internal validity and reliability through qualitative sources and theory. Lauckner et al. (2012) noted trustworthiness was an accurate depiction and description of the phenomenon. Coding, explanation building, and cross-case synthesis were the analysis methods that presented an examination of the multiple cases and the phenomenon, increasing the trustworthiness.

Credibility

In qualitative research, credibility was dependent on four areas: fieldwork, analysis of data, inquirer credibility, and the audience's belief in the value of qualitative research (Patton,

2015). Fieldwork was conducted systematically and yielded high-quality data through interviews and focus groups. A systematic and conscientious analysis of the data was performed to ensure no issues of credibility existed. I analyzed alternative reasons and disconfirming evidence to enhance credibility. Triangulation was a method of collecting multiple forms of data to increase credibility (Patton, 2015). The triangulation method utilized in this research was multiple data sources: interviews, focus groups, and documents (Patton, 2015). Capturing the full spectrum of perspectives from stakeholders, CCs and CBPs, further increased credibility (Patton, 2015). I also used triangulation in analysis with two distinct case study analysis methods. The final form of triangulation was theory triangulation with the two distinct theories of operant conditioning and self-determination theory (Patton, 2015).

Transferability

Transferability was the ability to apply the research's findings to other contexts (Byrne, 2001). Richly described data and purposive sampling were the methods for increasing transferability (Byrne, 2001). Furthermore, the data was presented with sufficient information for individuals to judge themes, categories, and constructs to determine transferability. I combined sampling procedures to generate participants that generally described CBPs. The detailed methods for sampling further increased transferability.

Dependability

Dependability of research referred to the data to remain consistent over time and in various conditions (Ellis, 2019). Dependability included the quality of collection and review of data (Ellis, 2019). I coded the data and made the raw materials and case database available for participant checking to improve dependability. Furthermore, research methods could change in an adaptive design. I did not have a change in this research design.

Confirmability

Confirmability was the ability to confirm the conclusions based on the same data and analysis processes (Ellis, 2019). The initial enhancer of external validity was the use of replication logic in the multiple-case study. A robust case study protocol enhanced reliability and confirmability. The research used a well-established protocol to increase the confirmability of the findings. An audit trail was another means for demonstrating the collection of data and interpretations. The audit trail or chain of evidence and case study database were places where another researcher could confirm the conclusions found from the research. Furthermore, the coding process was similar to an audit trail and assisted with confirmability.

Ethical Considerations

Several ethical concerns were prominent within this study. The use of data storage could be compromised, eliminating the possibility of anonymity. Clinical coordinators potentially gave information that could directly link to themselves or preceptors. This could in-turn cause issues with their employer. Preceptors could provide information detrimental to a PA program or clinical coordinator that might affect further precepting, job opportunities, and professional stewardship.

I managed the ethical implications by maintaining participant confidentiality, properly securing information, and omitting specific information using generalized themes. I secured paper notes in a locked container when not in use and electronic information through password protection and encryption. Anonymity was challenging as clinical coordinators were familiar with both their program's services and the preceptors. I created site and participant pseudonyms with a single master list secured separately from the other research materials.

Summary

This qualitative research required an in-depth data collection and analysis. The collection and analysis of a case study were critical to the trustworthiness of the research. This chapter aimed to establish protocols to make the study successful while providing a roadmap for other researchers. Purposeful sampling with detailed procedures demonstrated that the exploratory survey was the best method to gather appropriate CCs and CBPs. The procedures listed the robust methods and step-by-step actions for collecting data. Clinical coordinator and community-based preceptor interviews, focus groups, and documents were potent methods for gathering data about their experiences with recruiting and retention in community-based settings. The data collection methods were critical for maintaining construct validity. The forms of analysis were coding, explanation building, and cross-case synthesis. The analysis methods were essential for building trustworthiness and internal validity. Trustworthiness and ethical considerations were important concepts, and attention to detail protected the participants and research integrity.

CHAPTER FOUR: FINDINGS

Overview

The data analysis findings were the focus of this chapter. The purpose of the study was to find factors that PA clinical educator stakeholders experience that affect recruiting and retention of community-based preceptors. The first section reviewed the research participants and their professional experience. In the results section, I presented the data by the generated themes from the cases with highlighted examples of individual case theme development listed in tables throughout this section. Also within the results section was the research question responses in which the themes and subthemes answer the research questions from the theme development section. The last section of this chapter was the summary of the findings of this research.

Participants

The participants in this research were all physician assistants. The preceptors encompassed a broad range of specialties, from family medicine to dermatology. The clinical coordinators also had a significant range of clinical experience before moving into academia. A few participants were pursuing or acquired advanced degrees such as the Doctorate of Medical Science (DMS) that are in their respective descriptions. The final number of participants was 14 individuals. Two individuals, a clinical coordinator and a community-based preceptor, per case, participated in a total of five cases. A separate case of four individuals participated in the focus group. Table one summarizes the individual's clinical and academic experience and the number of students they are typically responsible for or precept. The years of experience overlapped as the CC continues to practice medicine part-time in a few cases.

Table 1

Participant Professional Experience

Participant	Position	Experience	Years of Experience	Number of Students
Alyssa	Clinical Coordinator	Family Medicine Clinical Coordinator	27 3	24/yr
Kathy	Preceptor	Family Medicine	27	3-4/yr
Bill	Clinical Director	Occupational Medicine Emergency Medicine Primary Care Clinical Director	2 14 3 4	35/yr
Pam	Preceptor	Family Medicine	8	2 Total
James	Clinical Director	Emergency Room Orthopedics PA Program Faculty	5 12 8	27/yr
Denise	Preceptor	Internal Medicine Dermatology	2 3	6-8/yr
Mary	Clinical Director	Family Medicine PA Program Faculty	4 10	32/yr
Carol	Preceptor	Dermatology	15	4/yr
Lily	Program Director	Family Practice PA Program Faculty	8 7	40/yr
Ashley	Preceptor	Internal Medicine Family Medicine	3 12	2-3/yr
Olivia	Clinical Director	Urgent Care PA Program Faculty	8 8	60/yr
Sarah	Clinical Director	Obstetrics/Gynecology Emergency Medicine PA Program Faculty	5 10 5	35/yr
Leo	Preceptor	Family Medicine Hospitalist/Nursing Home Family Medicine	2 8 11	4-5yr
Jason	Preceptor	Emergency Room	31	4-6/yr

Note. Participant experience in descending order. Years of experience does not correlate with the amount of time precepting.

Table 1 lists the participants descending by their case, with their previous to most current experience or field of practice listed in descending order. The recorded years of experience did not correlate with how many years the preceptor accepted students. The number of students varied greatly from year to year for certain participants; however, the participants estimated the total number of students they precepted and the number of students they will precept the year they participated in interviews. The last four individuals listed in Table 1, Olivia, Sarah, Leo, and Jason, participated in the focus group. I conducted and recorded the focus group and interviews via Skype.

Alyssa

Alyssa is the clinical coordinator for her PA program. She has over 27 years of experience in family medicine and is responsible for placing 24 students a year into eight rotations that each last for eight weeks. The student cohort will increase to 28, with the goal to have 32 students within the next few years. She continues to practice one day a week and works full-time as the clinical coordinator.

Kathy

Kathy is a family medicine PA and preceptor. She practices family medicine and has done so her entire career of 27 years. She has deep professional ties to the state PA organization and many personal relationships with PAs and clinical coordinators in her state. Kathy began precepting PA students in 1999 and averaged 3-4 students a year.

Bill

Bill is the clinical education director of a PA program that places 35 students a year into nine, four-week-long rotations. He works with an established program that primarily retains

preceptors but will recruit new preceptors through mainly networking as needed. He has over 19 years of clinical experience in several specialties.

Pam

Pam is a family medicine PA of 8 years. She has only taken two students total but would take more. The two students she did take were due to connections with her alma mater and as a personal favor. However, her husband moves frequently for work which complicates accepting students. She noted that starting a family and frequently moving have prevented her from taking more students, but she also has difficulties connecting to programs once she is settled and established.

James

James is the director of clinical education at a new PA program. He is responsible for placing 27 students in eight rotations throughout the clinical year. Although the PA program is new, James was clinical education faculty for the last eight years. His insights revolved around recruiting efforts and his previous experience with retention. He still practices in orthopedics and works as the clinical education director full-time.

Denise

Denise is a dermatology PA of three years. Previous to that, she worked in internal medicine for two years with a total of five years as a PA. She precepts six to eight students a year, including medical, PA, and NP students. Denise also allows premedical and pre-PA students to shadow her.

Mary

Mary is the director of clinical education at an established PA program. She began as a family medicine PA in 2009 and moved into academia four years later. Mary is responsible for

placing 32 students a year into eleven clinical rotations that last four weeks. She has strong

professional relationships with her preceptors that previously made graduating on-time possible

despite COVID restrictions.

Carol

Carol is a dermatology PA and has been for her entire 15-year career. She started

accepting students around ten years ago and tries to take four students a year. Due to

dermatology being an elective rotation, there are variations in how many students the program

sends for rotations. For example, in 2021, she did not have any students despite her willingness

to accept them.

Lily

Lily is the PA program director for her well-established PA school. The school has been

producing quality PAs for 25 years. She initially worked as a family medicine PA in 2007 and

then transitioned to academia in 2015. Lily moved from director of clinical education to program

director in 2020. The clinical faculty are responsible for placing 40 PA students into eight five-

week rotations for clinical training. With an established program, the clinical faculty tend to

focus on alumni to train PA students.

Ashley

Ashley is a family medicine PA of 12 years. Previous to family medicine, she worked in

hospital medicine for three years. Ashley is furthering her education by pursuing a doctorate of

medical science currently. She has accepted students for around 13 years and typically takes two

to four students per year.

Olivia

Olivia became the clinical coordinator for her PA program about eight years ago. Before academia she worked in urgent care as a PA starting in 2006. She currently places 60 students over the 16-month didactic phase. She recently completed a doctorate of medical science. Olivia recruits and retains preceptors across a large geographical area.

Sarah

Sarah is one of two clinical coordinators responsible for placing 35 students in 10 five-week rotations. She started her 19 years as a PA in obstetrics/gynecology for her first five years, then moved to emergency medicine and participated in medical mission trips worldwide. Finally, she worked in pediatrics before moving into the role of academic coordinator at the PA program for two and a half years, then to the clinical coordinator position for the last three.

Leo

Leo is a PA of 21 years who started in family medicine and transitioned to a nursing home and hospitalist work before returning to family medicine for the past 11 years. He averages about 4-5 PA students a year. He also has precepted NP students as well. Leo typically has to seek out programs to get PA students.

Jason

Jason is an emergency medicine PA and has practiced in that setting for his 31-year career. He rotates in three emergency departments, with two of them freestanding. Jason accepted students throughout most of his career. He generally takes four to six students per year. Jason has difficulty with communication from the program he precepts for but continues to accept students.

Results

The raw data from the interviews, focus group, and document analysis created concept and pattern codes. Pattern codes provided the analytical process for building themes and subthemes. In the theme development section, I demonstrated how the pattern codes generate the themes and subthemes to provide raw data examples of the underlying pattern code. A minority of pattern codes developed unexpectedly and did not relate or specifically contribute to the emergent themes. The codes are listed and discussed further in the theme development section. The second section is research question correlation. I will demonstrate how the pattern codes and themes answer the research questions in that section.

Theme development occurred by analyzing the raw data first with concept codes and then pattern codes. The concept codes broke a large amount of raw data into smaller generalized portions that included background information, program information, incentives, motivations, relatedness, and barriers. Concept coding was not required in all instances and especially during document analysis. Documents were already divided into smaller more focused portions and segments which led to pattern coding being primary coding method. The pattern codes divided these portions into more meaningful and useful data portions. The pattern codes coalesced to develop subthemes. Pattern codes varied from specific data to a group of data. For example, the university privileges code included parking, library access, and other benefits.

Table 2

Case One Theme and Subtheme Development

Themes	Subthemes	Corresponding Research Question	Supporting Data
Methods	Recruiting	Central Research Question	"I will try to call for the office manager, ask about a particular provider if they're interested to work with students and if they are, I send them information in that regard."
	Retention	Central Research Question	"In a lot of times, they end up staying on board and continue to take students even after they take that one."
Motivation	Intrinsic	Sub Question 1	"The majority of reasons are because they like to teach. They enjoy teaching. That is really the main motivation."
	Extrinsic	Sub Question 2	"We now offer a PA category one CME."
	CBP Employer	Sub Questions 1 and 2	[To achieve an annual bonus there are] "extra activities that we do and teaching is one of them."
Program Barriers	Internal	Sub Question 3	"We do not pay our preceptors as a rule for our program."
	External	Sub Question 3	"And then it really is just the lack of sites and lack of preceptors."
Preceptor Barriers	Clinic	Sub Question 3	"I was scheduled to have two students … when my company made the decision to just not take any during COVID."
	Personal	Sub Question 3	"I'm not going to take a student if I know I'm going to be gone for a week."
Relatedness	CC-CBP	Sub Question 2	"I'm actually personal friends. You know, so I mean, I talked to them for reasons other than the fact that I'm taking a student."
	Network	Sub Question 2	"A lot of our newer preceptors, I get through the students themselves…"
Uncategorized	Potential Incentive	Central Research Question	"The university is entertaining or at least looking at the possibility of offering preceptors tuition discounts for their children."
	Professional Preference	Central Research Question	"…a lot of times when they ask me to take nurse practitioner students, which I don't. But if I did, I would almost find it a little bit easier."

Note. Quotes from interviews with Alyssa and Kathy.

Methods

All participants discussed recruiting and retention methods, but typically the clinical

coordinators offered the most data on this theme. This theme's pattern codes included recruiting

methods, student networking, retention networking, PAs networking, and site visits. The theme

of methods was important in considering the central research question to ensure an

encompassing of CCs efforts and to gain perspective of how and why preceptors started or

continued to take students. The methods of recruiting and retention were not directly found in the

reviewed literature, but incentives and motivations were (Minor et al., 2019; Snyder et al., 2010).

Relatedness was a theme that consistently appeared in the methods section.

Recruiting

Kathy noted that her PA network was critical in starting precepting when recruited to

precept students. She reported, "One of my former classmates was the clinic education or the

education coordinator that arranged the preceptorships. And she called and asked me if I would

take a student." James noted that "cold calls" and driving to find clinics were methods for

recruiting that he used and provided a recruiting email template that listed the benefits offered

from the program.

Retention

All participants discussed the multiple factors related to retention. Sarah, a CC in the

focus group, emphasized the ability to establish a relationship was "paramount" but further

commented that she "established relationships with most of not just the preceptors, but the

administrators, the people that onboard our students." Alyssa provided an example of using the

student's network and then retaining the preceptor, "they end up staying on board and continue

to take students even after they take that one." The provided documents listed both intrinsic and

extrinsic incentives for precepting students. These documents included preceptor handbooks,

brochures, site visit forms, preceptor assistance forms, emails, and appreciation letters.

Table 3

Case Two Theme and Subtheme Development

Themes	Subthemes	Corresponding Research Question	Supporting Data
Methods	Recruiting	Central Research Question	"Looking for new sites is usually more based on students saying, "Oh, I have a cousin, a friend of somebody who works at such and such a place. Can I do a rotation out there?" And so then usually we would reach out to the location there."
	Retention	Central Research Question	"There's not a lot of active recruitment that we do… they're established and [we] have a good base to work with."
Motivation	Intrinsic	Sub Question 1	"But I think it's important because like, we need preceptors, you know, because otherwise, how are students going to learn? And so, I feel called to do that."
	Extrinsic	Sub Question 2	"We provide a monetary stipend."
Program Barriers	External	Sub Question 3	"I'm not going to have the time to be able to see a student or teach a student properly. We have so many people coming in that I'm not to be able to take the time out of out of the day to educate somebody."
Preceptor Barriers	Personal	Sub Question 3	"When we moved here, I was getting settled into my new job… we were adjusting to a new EMR."
	Program	Sub Question 3	"It would be nice just potentially to have some more information on kind of what they're looking for and what they want."
Relatedness	Network	Sub Question 2	"But if we have difficulties finding women's health. We said, OK, let's everybody go out and talk to your gynecologists, will they take students?"
	Alumni	Sub Question 2	"The first student I had was actually part of the program that I came from…"
	CBP-Student	Sub Question 2	"[I] actually still having contact with [the PA student], we message back and forth."

Note. Quotes from interviews with Bill and Pam.

Motivation

The clinical coordinators discussed the motivations of the many preceptors they knew who accepted students, while community-based preceptors noted their motivations throughout the interviews and focus groups. Similar to the findings from Minor et al. (2019) motivations were intrinsic and extrinsic. Paul et al. (2020) also found intrinsic and extrinsic motivations similar to the findings in this research. For the first case, a specific CBP employer subtheme emerged that was important to consider despite containing both intrinsic and extrinsic motivations. The analyzed documents, specifically marketing brochures, assistance forms, and appreciation notes, frequently itemized both subthemes of motivations directly and indirectly.

Intrinsic

The participants discussed several intrinsic motivations for accepting students in a clinical setting. The most common intrinsic motivation preceptors expressed to Alyssa was that they "enjoy teaching." Kathy noted reciprocal learning was another intrinsic motivation, explaining that students keep her "sharper." In the focus group the subtheme of giving back emerged from Leo's comment, "…giving back and making sure that they get a good experience and learning how to learn out here is one of the biggest reasons why I participate." A marketing brochure from Alyssa reinforced these findings by noting the ability to teach, mentor, and give back to the PA profession and motivation to precept students (see Appendix I).

Extrinsic/Reinforcement

Extrinsic motivations, in self-determination theory or reinforcement from operant conditioning, were the external benefits provided to the preceptor to accept students. Direct payment was a controversial topic between cases and how it was offered which is discussed in-depth in Chapter five. In several cases, programs were, as exemplified by Alyssa, able to "offer a

PA category one CME," and she "was able to implement a courtesy appointment to the university as adjunct faculty." These findings were similar to Minor et al.'s (2019) focus groups and Brown and Sivahop's (2017) literature review. In the focus group, Jason, a CBP, furthered the subtheme of direct payment by commenting, "I tried to get a, some type of reimbursement from the schools. I know it's a sensitive issue, but I think it's important." In a recruitment email presented by James, his program offered a stipend and other extrinsic motivators such as category 1 CME to preceptors which reinforced this finding.

CBP Employer

A specific finding in the first and second case related to the employer contributing to recruiting and retention efforts, intrinsically and extrinsically. Kathy's employer created a culture of accepting students, exemplified by the statement, "I work for a company that values education." Kathy's employer's extrinsic motivation or reinforcement stemmed from the ability to earn an annual bonus by participating in "extra activities that we do, and teaching is one of them." Bill assisted in the emergence of this subtheme by reporting that "[Preceptors] are expected to teach as part of their position in the teaching hospitals." While not specifically targeting CBPs the subtheme emerged in the first case and confirmed more broadly in the second case. Minor et al. (2019) found that several preceptors were required to precept for their employment but lacked data on compensation. Documents were not presented to reinforce this finding.

Table 4

Case Three Theme and Subtheme Development

Themes	Subthemes	Corresponding Research Question	Supporting Data
Methods	Recruiting	Central Research Question	"I'm in a new program now, and my plan is to make them love me and my students."
Motivation	Intrinsic	Sub Question 1	"I think that it's a great way to give back to the PA profession as a whole."
	Extrinsic	Sub Question 2	"I now have $500 per rotation to offer to clinical sites."
Program Barriers	Internal	Sub Question 3	"There's just me right now for this role, and I think we would have more success if there were more personnel dedicated to this effort."
	External	Sub Question 3	"Step one is asking anyone and everyone if they'd be open to or interested in working with PA students. And so that then cuts out the first 80% of people that I talked to."
Preceptor Barriers	Clinic	Sub Question 3	"I'm going to be seeing the same amount of patients as regular, which in general was on average five an hour."
	Personal	Sub Question 3	I'm going to have to stay late to chart and do other things and teach students."
	Program	Sub Question 3	"If they would let me prescreen the students that may allow me to take more because then I know, I could pick which ones I wanted… See their resumes, things like that. That would be beneficial."
Relatedness	CC-CBP	Central Research Question	"I have found when I have lost clinical sites, those are the sites where I haven't been stopping by as frequently. I haven't had as solid a relationship with the preceptors or the site, or there had been logistical complications that made my program and my students not easy for the site to work with."
	Alumni	Sub Question 2	"They [the CBP's PA program] had to find and a lot of them are with alumni."

Note. Quotes from interviews with James and Denise

Program Barriers

Clinical coordinators faced numerous barriers to recruiting and retention. Almost all the research in the literature review neglected to investigate the clinical coordinator's role in recruiting and retention efforts. Brown and Sivahop (2017) used data from a 2013 survey conducted by the American Medical Association and a 2011 PAEA survey that demonstrated similar challenges found in this research. Snyder et al. (2010) conducted a survey with physician assistant CCs and found incentives and CC employment characteristics that substantiates this research. The challenges programs and clinical coordinators encountered tended to be internal or external to the program as the primary etiology. Internal program barriers included budgetary, workforce/time, and expansion of the PA program. External program barriers consisted of participation shortages, competition, and COVID. Program barriers were not explicitly found in the document analysis.

Internal

PA programs' have limited resources including the time and workforce of the clinical coordination faculty. The subtheme of internal barriers offered insights into the challenges of the institution and CC. The more significant internal barriers involved budget, costs, and workforce or time constraints. Brown and Sivahop (2017) broadly noted communication, recruitment challenges, and vetting sites as barriers that would be classified as internal within this research. Alyssa noted a considerable barrier that emerged as budgetary "We do not pay our preceptors as a rule for our program." Lily stated she did not have significant budgetary barriers but reported not being able to get into a "bidding war with some of the other schools" over preceptors or sites. Communication, as a barrier, was only noted by James from the CCs aspect because he was having difficulty recruiting a specific preceptor.

External

Clinical coordinators faced external barriers as well. These barriers prohibited recruiting and retention efforts of the CC directly, but PA programs could not significantly influence these barriers. Participation shortages, scheduling, and competition were a few pattern codes that developed into the subtheme of external program barriers. Brown and Sivahop (2017) found site shortages and clinical administrative barriers were common. Minor et al (2019) noted competition as a significant difficulty, but this finding was in relation to CBPs receiving requests, not CCs. CBPs reported most scheduling conflicts as vacations, training, or education. However, most participants did not emphasize scheduling as a significant barrier. Alyssa noted a "lack of sites and lack of preceptors" as a significant barrier complicated by the program being in an area that she reported as "very congested right now with PA programs."

Table 5

Case Four Theme and Subtheme Development

Themes	Subthemes	Corresponding Research Question	Supporting Data
Methods	Recruiting	Central Research Question	"Sometimes I have to go hunting for preceptors, so I usually contact them through email is usually the best way for me to get a hold of them. Just ask if there's interest."
	Retention	Central Research Question	"During COVID I wasn't allowed to do site visits…I got some, it was light-hearted hassling from my preceptors… But I think that's what builds a relationship because I can come to them."
Motivation	Intrinsic	Sub Question 1	"I think the greatest benefit is the ability to teach students, enrich their education."
	Extrinsic	Sub Question 2	"A couple of years ago, we made plaques… we sent them out to all of our preceptors that they kept hanging on the wall."
Program Barriers	Internal	Sub Question 3	"I am by myself. Which means that we can never go above 32 students is what I'm telling them unless they want to hire another me."
	External	Sub Question 3	"The shortages that they're having right now in behavioral medicine has impacted clinical site placements."
Preceptor Barriers	Personal	Sub Question 3	"I would say the only barrier is if I like, for example, I'm going to be gone in March for a week for spring break."
Relatedness	CC-CBP	Sub Question 2	"And so that in-person, just even though it's like five or ten minutes, I think makes a huge difference in the beginning of the relationship."
	Network	Sub Question 2	"So, I'm on-site and every now and then, a preceptor, "Hey, my buddy down the road saw me having a student, and he wants one too"."

Note. Quotes from interviews with Mary and Carol.

Preceptor Barriers

Participants reported several barriers to accepting students. The theme of preceptor

barriers emerged from the subthemes of clinic, personal, program, student competence, and

communication barriers. The pattern codes included COVID, clinic policy, the time required to

teach, and precepting limits. Preceptor barriers were a common focus in the reviewed literature

that reinforced the findings of this research (Paul et al., 2020; Graziano et al., 2018; Minor et al.,

2019; Snyder et al., 2010). Preceptor barriers were in the document analysis either directly noted

or indirectly as precepting assistance for common issues such as time required for teaching in the

clinic, scheduling, and methods to streamline precepting in the clinic (see Appendix I).

Clinic

In the clinic, preceptors faced barriers when accepting a student and practicing medicine.

These barriers included clinic policies, staff issues, workflow barriers, and patients. Many of

these findings were similar to Ryan et al.'s (2018) survey of department chairs reliant on

community pediatric preceptors. A specific clinic policy concerning COVID was a barrier that

Kathy noted, "For a couple of years during COVID, we weren't able to [take students]." For

Ashley, clinic staffing was an issue. She said, "we've been very short-staffed with medical

assistants; it makes my own schedule difficult to stay on time." Clinical site challenges

correlated to Minor et al.'s (2019) findings.

Personal

The next subtheme for preceptor barriers was personal barriers. These barriers included

scheduling, burnout, and competence. Paul et al. (2020) had a similar finding of burnout whereas

Minor et al. (2019) posited that precepting may prevent or cause burnout. Several participants

mentioned burnout as a reason to not take additional students. On the subtheme of competence,

Kathy did not feel competent enough to take a student and practice medicine when she first

started as a PA. Still, other providers in her clinic accepted students, and occasionally she would:

allow them to work with me too, you know, starting from when I very first graduated and

started working, but I didn't really feel like I had enough knowledge base of my own to

take my own students.

Program

PA programs created barriers for preceptors. Most of the program barriers were

paperwork or evaluations in the literature, but the participants noted other obstacles such as the

rotation lengths or wanting more data about the student (Paul et al., 2020). Multiple participants

commented on rotation length and not being able to take students back-to-back, which could

create preceptor burnout. Rotation length varied from each program, but Denise noted that "if the

rotations were shorter," she would be able to take more students. However, participants in Paul et

al.'s (2020) research noted that they quit precepting because of decreased rotation lengths.

Preceptors also mentioned curricular support and a student handoff as potentially

beneficial items. Pam noted, "It would be nice just potentially to have some more information on

kind of what they're looking for and what they want." While on the student handoff side, Denise

stated, "if they would let me prescreen the students, that may allow me to take more."

Student Competence

Overwhelmingly the preceptors noted students as competent. However, a minority of

issues arose with the students and their competence. These issues were also identified in Paul et

al.'s research as unenthusiastic and unappreciative students. Denise experienced difficulties

performing procedures where she "had them turn green and I just tell them to get out of my OR

or sit down." Or, as Jason noted of the early clinical learners:

The students that I've taken that that was their first rotation or second rotation. I felt like

they didn't get enough…maybe they should have gotten in one, two, three, four rotations

and get familiarity. I don't mind taking them, but I just think the student doesn't get the

full benefit of the ER.

Communication

The interviews and focus group reported communication was a barrier to accepting

students. In the literature review, communication was a significant barrier (Minor et al., 2019;

Paul et al., 2020). Leo reported, "I'll have a clinical coordinator call me at one month and want

me to, she wants me to take on a student, and I'm cool with it and then won't call me back."

Jason reported a lack of "circular feedback," but he continued to take students despite this

challenge. James noted communication with a specific office over the last month. He sent an

email, gave the front desk staff a message, and may have to show up at the preceptor's office to

discuss taking students.

Table 6

Case Five Theme and Subtheme Development

Themes	Subthemes	Corresponding Research Question	Supporting Data
Methods	Recruiting	Central Research Question	"Historically, we kind of reached out to preceptors or individuals, practitioners that were familiar to some of the faculty."
	Retention	Central Research Question	"We've just had longtime, longstanding relationships with health systems and preceptors and tried to maintain those."
Motivation	Intrinsic	Sub Question 1	"I just felt like it was just part of what we should do as providers and as educators to continue helping new PAs."
	Extrinsic	Sub Question 2	"We do offer our all of our preceptors, the ability to become an adjunct faculty."
Program Barriers	Internal	Sub Question 3	"But our clinical placement coordinator, the one who does all of the organizing, she's very personable. We had someone in that position previously and met a lot of closed doors."
	External	Sub Question 3	"There's now 11 schools in our state. And so, there's probably more people taking students than not."
Preceptor Barriers	Clinic	Sub Question 3	"And also, we have other medical students in our office that rotate with the physicians and then it just gets very crowded in our office."
	Personal	Sub Question 3	"It took me about three months after I returned from leave to feel like, okay, I'm ready to have a student again"
	Program	Sub Question 3	"It's hard to continually have a student without a break."
Relatedness	Alumni	Sub Question 2	"We've been reaching out to alumni in areas where we're looking for preceptors…"
	Network	Sub Question 2	"Every time that I've been involved in an out of state, it's a student who has a significant other who's moving, lives in another area or family in another area."
Uncategorized	Didactic Training Confidence	Central Research Question	"I feel like every PA school has regulations, they're accredited, they have a curriculum, they have very clear-cut guidelines."
	Potential Incentives	Central Research Question	"We're actually looking at…what can we as a college put together to offer and be an attractive offer for our preceptors."

Note. Quotes from interviews with Lily and Ashley.

Relatedness

Initially and corresponding with the literature review, relatedness was a subtheme under intrinsic motivation (Minor et al., 2019). However, relatedness developed into a theme based on the emerging pattern codes and subthemes from the interviews and focus group. Relatedness was a part of every case that participants mentioned in several unique subthemes, including networks, alumni, and professional relationships between students and faculty. Relatedness was part of the reviewed literature in the aspect of a lack of communication or clear guidance and for recommendations to improve recruiting and retention through communication (Minor et al., 2019; Paul et al., 2020; Beck Dallaghan et al., 2017).

In the documents provided by the participants, analysis manifested relatedness through site visit forms, preceptor assistance documents, and various correspondence. Site visit forms demonstrated relatedness as a documented direct interaction with the preceptor and clinical coordinator which corroborated the interview findings of the description of site visits. Assistance documentation and handbooks outlined the expected relationships between preceptors, CCs, and students. Emails and appreciative letters provided insights into the relationships between preceptors and programs.

Networks

Networks emerged as a subtheme of multiple different networking approaches which did not appear in the literature review for recruiting purposes. Students often requested to conduct a clinical rotation with a preceptor they knew. Mary noted students requested preceptors they "used to work with or that my mom and dad know or somebody and they'll say, could I have a rotation with them?" Additional networks included preceptors referring other medical providers or connecting with PAs that were classmates or through other professional means.

Alumni

The alumni relatedness subtheme developed from both preceptors and clinical coordinators but was also missing from the reviewed literature. Alumni preceptors shared a relatedness with their programs, and clinical coordinators asked if these PAs would precept students. Pam noted her first student "was actually part of the program that I came from." Many clinical coordinators seek out alumni such as Lily when she noted "We've been reaching out to alumni in areas where we're looking for preceptors."

CBP-Student

A professional relationship between the community-based preceptors and students occurred while the student was training and often extended into the students' careers. Beck Dallaghan et al. (2017) found long standing relationships between preceptors and students. However, Paul et al. (2020) and Minor et al. (2019) found difficulties with these relationships that created a barrier for their participants. For this subtheme development, Lily noted many preceptors were "references for jobs." While Pam noted a positive relationship where she maintains "contact with [her last PA student], we message back and forth." In the focus group, both preceptors found students helpful and created joy in their working environment.

The received documents such as brochures and preceptor handbooks confirmed these findings by directly noting the mentorship and professional relationships built between the student and preceptor.

CC-CBP

The final subtheme in the relatedness category was the relationship between the clinical coordinators and the community-based preceptors. The preceptors and clinical coordinators noted these relationships as professional and personal. In the literature review preceptors from

Ryan et al.'s (2018) surveys noted the importance of site visits and building CC-CBP

relationships. Throughout this research many of these relationships exceeded the findings in the

reviewed literature (Paul et al., 2020; Minor et al., 2019). For example, Kathy stated, "I'm

actually personal friends. I talked to them for reasons other than the fact that I'm taking a

student." Mary furthered this subtheme:

> I think it's the in-person thing, in-person to make those relationships. I know some of the
>
> other PA programs make fun of me because I do so many site visits, and they're like, how
>
> do you have the time? Like, you know? During COVID, all my preceptors were willing
>
> to take students at the last minute, and I was able to graduate all my students on time. I
>
> think it has to do with those relationships that I had with the preceptors. They've bent
>
> over backwards for us.

From the focus group, the preceptors appeared to have little to no interaction with their

respective clinical coordinators, but Sarah noted, "Relationships are paramount. So, I have

established relationships with not just the preceptors, but the administrators, the people that

onboard our students." These findings support the development of the CC-CBP relationship as an

important factor for continued acceptance of students.

Table 7

Focus Group Theme and Subtheme Development

Themes	Subthemes	Corresponding Research Question	Supporting Data
Motivation	Intrinsic	Sub Question 1	"It works out really well for me because then I get to enjoy teaching them and teaching them in a fashion that I was taught."
	Extrinsic	Sub Question 2	"The university provides them with UpToDate and that provides free Category one CME."
Program Barriers	Internal	Sub Question 3	"We have I think we have one of the, the cheapest tuitions in the country… it would take us two years to increase tuition, which then is going to create all sorts of problems."
	External	Sub Question 3	"We have a lot of preceptors willing to precept and the administration won't allow them because they want money."
Preceptor Barriers	Clinic	Sub Question 3	"A lot of organizations will not allow students with anybody."
	Personal	Sub Question 3	"I average about 4 to 5 students a year, usually just because of time constraints."
	Student Competence	Sub Question 3	"Maybe they should have gotten in one, two, three, four rotations and get familiarity. I just think the student doesn't get the full benefit of the ER."
	Communication	Sub Question 3	"I actually go seeking to be a preceptor because sometimes they just forget that I'm out here."
Relatedness	CC-CBP	Sub Question 2	"Relationships are paramount. So, I have established relationships with not just the preceptors, but the administrators, the people that onboard our students."
	Network	Sub Question 2	"I just happened to have known the prior director there at this particular program."
	CBP-Student	Sub Question 2	"They [the students] do develop relationships with their preceptors."

Note. Quotes from the focus group with Olivia, Sarah, Leo, and Jason.

Outlier Data and Findings

I placed unexpected subthemes that did not directly correlate with the main themes or research questions in the uncategorized section. These subthemes indirectly related to the research questions but did not fit well within the developed themes. The subthemes included potential incentives, professional preferences, PA training confidence, and lost preceptors.

Potential Incentive

Both groups mentioned potential incentives throughout the cases. In the first case, Alyssa said her college was considering "the possibility of offering preceptors tuition discounts for their children." Snyder et al (2010) found tuition vouchers for preceptors and their families in a small number of surveyed PA programs. Similarly, Lily noted a combined effort for their health professions school to have incentives to "offer and be an attractive offer for our preceptors."

Preceptors contributed to the potential incentive subtheme as well. Denise reported "tax benefits by certain states for taking students." The focus of Woodall et al.'s (2018) research was tax deductions and incentives but only found a small percentage of states passing legislation. While most cases noted current practices of submitting a student handoff or biography to the CBP, Pam would have preferred the program "give me their background of like the student." Waters, Lo, and Maloney (2018) found that a student handoff or placement was beneficial for preceptors.

Professional Preference

Several preceptors noted a preference for PA students or even medical students in one case. Preceptors noted difficulties with taking NP students specifically. Denise reported that she "won't take NPs anymore unless it's a personal favor to someone." Alyssa reported professional

preferences from the universities because they "are limiting our placements because [the universities] have nurses doing their nurse practitioner training."

Didactic Training Confidence

Didactic training confidence manifested in two ways, student competence and program standardization. Several preceptors reported student competence as helpful during rotations. Carol noted:

> The students are at such a high level academically, and it gets to a point where I can really teach them. They really have the ability to go in and see the patients like I'll go in and check the patients also. But then they can finish up with the patient.

Ashley reported, "I feel like every PA school has regulations, they're accredited, they have a curriculum, they have very clear-cut guidelines. And they're very comparable across the nation." A centralized accrediting committee and program standardization contributed to this subtheme.

Table 8

Document Subtheme and Theme Development

Documents	Corresponding Research Question	Corresponding Subthemes	Corresponding Themes
Marketing Brochure Emails/Templates	Central Research Question	Recruiting	Methods
Marketing Brochure Emails/Templates Payment Form Appreciation Form	Central Research Question	Retention	
Marketing Brochure Preceptor Handbook Appreciation Form	Sub Question 1	Intrinsic	Motivation
Marketing Brochure Emails/Templates Preceptor Assistance Forms Payment Form Appreciation Form	Sub Question 2	Extrinsic	
Preceptor Assistance Forms Preceptor Handbook	Sub Question 3	Clinic	Preceptor Barriers
Preceptor Handbook Preceptor Assistance Forms	Sub Question 3	Personal	
Marketing Brochure Preceptor Handbook Emails/Templates Site Visit Form Appreciation Form	Sub Question 2	CC-CBP	Relatedness
Marketing Brochure Preceptor Handbook Appreciation Form	Sub Question 2	CBP-Student	

Note. Pattern codes through manual coding led to subtheme development in these documents. Samples of the documents are available in Appendix I.

Research Question Responses

This section correlated the research questions with the themes, subthemes, and codes found in the interviews, focus group, and documents. The central research question delegated most aspects of recruiting and retention experiences to each sub-question. The developed themes and subthemes correlated to each of the research sub-questions. However, a few themes did not appropriately fit within the sub-questions but were pertinent to the research. The themes and subthemes correlated best to the central research question in these instances.

Central Research Question

What factors do PA clinical educator stakeholders experience that affect recruiting and retention of community-based preceptors? Themes emerged that affected recruiting and retention through various methods. The majority of themes were appropriate for the sub-questions which answer the central research question. However, themes and several subthemes developed that contributed to answering the central research question without a direct correlation with the sub-questions. Recruiting and retention methods and relatedness were the two primary themes attributed to the central research question. Recruiting and retention methods were similar throughout the cases but generally involved cold calls, driving to clinics, and site visits. Relatedness was one subtheme initially developed under the intrinsic motivation theme from the literature review (Minor et al., 2019). However, relatedness extended into every aspect of recruiting and retention, which led to this theme's creation. Didactic training confidence, potential incentives, and professional preference were sub-themes in several cases primarily relating to the central research question.

Sub-Question One

What forms of motivation, intrinsic or extrinsic, exist that encourage recruiting and retention? Similar to the literature review, motivations developed into intrinsic and extrinsic subthemes from the cases (Paul et al., 2020; Minor et al., 2019). Each case varied on extrinsic motivations. In contrast, the intrinsic motivations remained constant across the cases. The variability of the extrinsic motivations was not only in what CCs offered but also in the extrinsic motivator content. Intrinsic motivations appeared to be the primary initial consideration for taking students and were reasonably consistent case to case for each group. The most common intrinsic motivator was the ability to teach students in the clinical setting. Carol reported "I enjoy teaching, and the PA program asked me if I was willing to take students and so I started taking students." Participants also noted working with competent and enthusiastic students was an important intrinsic motivation. The extrinsic motivations included direct payment, adjunct faculty status, university privileges, CMEs, and employer compensation.

Relatedness was another theme that contributed to the existing motivations. Initially, relatedness was a subtheme of intrinsic motivation. However, the pattern codes and subthemes continued to develop under relatedness and elevated this subtheme into a theme. Relatedness emerged from site visits, networking, alumni, CBP-student relationship, and CC-CBP relationship subthemes and pattern codes. Several networking paths existed throughout the data, including PA professional groups, student networks, and personal networks.

Sub-Question Two

What support or reinforcements are effective to encourage recruitment or retention in community-based clinical training? Reinforcements were given from clinical coordinators to community-based preceptors to encourage recruiting and retention. The effectiveness of

reinforcements was the primary consideration for this sub-question. Direct payment was one of the primary reinforcements. Other reinforcements noted throughout the data and documents were adjunct faculty status, small gifts, CMEs, university privileges, and site visits. For the effectiveness of the reinforcements, many community-based preceptors did not appear primarily motivated by these items to accept students.

While the reinforcements potentially assisted recruiting and retention, all the preceptors reported initially accepting students was primarily an internal motivation. Many clinical coordinators noted participation was intrinsic to the preceptor and highlighted the relatedness theme as helpful. Mary's comment about conducting site visits because of the need to be "in person to make those relationships" was exemplary of this finding. James noted adverse outcomes when he did not have "as solid a relationship with the preceptors or the site."

Sub-Question Three

What are the most significant barriers to recruiting and retention in community-based clinical education? From the PA program perspective, barriers were internal and external. Preceptors faced barriers at their clinic, personally, and from the PA program. In a minority of cases, preceptors had difficulties with student competence and communication. Internal program barriers revolved around workforce or time deficits, university support, budgetary concerns, and proximity to clinical sites. External program barriers included precepting limitations, workforce shortages, lack of direct payment, competition, student effects on the preceptor's workflow, and COVID. External barriers also included communication difficulties, recruitment apathy, student competence, and clinic policies.

The barriers preceptors experienced included clinic policies, clinical staff, patients, rotation lengths, communication, and student competence. Preceptors also noted barriers of

additional workload and factors affecting teaching a student in the clinic, such as additional educational time. Preceptors also had personal barriers such as competency and scheduling considerations such as moving, vacation, or pregnancy. Under the theme of preceptor barriers, the final category consisted of difficulties with the PA program.

The barriers, similar to extrinsic motivations or reinforcements, varied across cases. Several barriers were the same between cases, but a single instance of these barriers did not emerge as more significant in every case. Each case had a unique set of barriers with pattern codes and subthemes translating to the other cases. However, none of the barriers proved to be more significant in every case.

Summary

The participants had a wide range of medical and teaching experience. Many community-based preceptors accepted multiple students over many years. The clinical coordinators also had a depth of medical experience and several responsibilities for working with students attending their PA programs. The subthemes and themes developed similarly across all the cases and supported with the provided documentation that included marketing material, preceptor handbooks, emails and templates, preceptor assistance forms, and appreciation notes. A minority of outliers appeared in the cases that helped understand these participants experience further without specifically linking to the central or sub-research questions. Methods, motivations, program barriers, preceptor barriers and relatedness were the main themes generated from this analysis and relevant subthemes. These themes and subthemes emerged and offered critical insights into the research questions on the experiences of stakeholders of community-based clinical education.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of the study was to understand the experience of clinical education stakeholders regarding recruiting and retention efforts. This chapter offers the author's interpretations and ideas. The discussion section highlights the findings of the study through the developed themes. The subsections include an interpretation of the findings, implications for policy or practice, theoretical and empirical implications, limitations and delimitations, and recommendations for further research.

Discussion

This section presents the findings from the interviews, focus group, and document analysis of this study through the developed themes and subthemes. The results were examined from the author's perspective. The interpretations are supported by empirical and theoretical sources and data. The topics of the discussion section include an interpretation of the findings, policy and practice implications, theoretical and empirical implications, limitations and delimitations, and recommendations for future research.

Interpretation of Findings

The interpretation of findings derives from the interviews, focus group, and document data which developed and reinforced themes. The thematic findings, theoretical considerations, and literature review are vital for interpreting the data from the developed themes. The thematic findings were methods, motivations, program barriers, preceptor barriers, and relatedness. The method theme developed in consideration of how and what methods were effective to recruit and retain preceptors. In this study, intrinsic and extrinsic motivations developed from the internal desire and external rewards for precepting. The barrier themes formed from the many challenges the participants experienced with recruiting and retention. In the literature review relatedness

existed as primarily an intrinsic motivation and was confirmed with this research (Minor et al., 2019). However, relatedness extended into every aspect of recruiting and retention and emerged as a significant theme.

Summary of Thematic Findings

The thematic findings were methods, motivations, program barriers, preceptor barriers, relatedness, and outlying data from the interviews, focus group, and documents. A minority of subthemes varied throughout the cases, but many were the same. The subthemes of intrinsic and extrinsic motivation are important for consideration of the initial interpretation. The consideration of preceptor and program barriers are factors for the second interpretation. The development of the theme of relatedness is the focus of the third thematic finding. The final thematic finding is direct payment.

Intrinsic versus Extrinsic Motivations. Each participant had a variety of intrinsic motivations for the initial acceptance of students. None of the preceptors noted extrinsic motivation as their primary reason for seeking PA students. However, participants were aware and appreciative of extrinsic motivators as Denise noted "I know one thing that I have seen by other people, like other PAs, they talk about tax benefits by certain states for taking students." Clinical coordinators offered a variety of extrinsic motivators, and even in cases where participants did not receive a specific reinforcement, they were aware these reinforcements existed. Kathy noted, "I don't know that they necessarily do anything in particular that affects my choice [to continue accepting students]." A minority of participants stated they would potentially take students from a different program if offered more financial incentives. Denise noted, "if there's a program that is offering me money versus one that's not, I'm more likely to take the one that is going to give me some stipend." Even in these cases, the participants noted the potential

harm this would cause students financially. Denise commented, "more money is always nice. But then where is that money coming from? … then you're just raising the tuition on PA students, and PA programs are expensive enough."

The literature review corroborated these findings and generally found that preceptors typically take students due to intrinsic motivation but may require extrinsic reinforcement to continue (Minor et al., 2019; Paul et al., 2020). In the discussion of findings, Minor et al. (2019) noted in their analysis and from previous research that preceptors accepted student primarily due to internal motivation and extrinsic motivators should still be considered to assist with recruiting and retaining preceptors. Many participants precepted solely for their intrinsic motivations. Pam explained, "that's not why I did it, not for the money." All the preceptors receiving direct payment noted the feeling of appreciation or an additional bonus to work they were already willing to perform, such as Denise's comment on direct payment "It doesn't really make up for the extra time, but it makes it easier to handle."

Theoretically, self-determination theory provides the most appropriate theoretical underpinning for the actions of the preceptors. SDT offers the theoretical framework to include autonomy, relatedness, competence, and motivation (Ryan & Deci, 2000). A minority of cases more closely align with operant conditioning in this aspect with reinforcements or extrinsic motivators encouraging desired behaviors (Cooper, Heron, & Heward, 2019). The difficulty from a recruiting and retention perspective was establishing which preceptors were intrinsically motivated versus those that require more extrinsic motivation to accept students. Interestingly, despite all the challenges with precepting, many of the participants noted they could take even more PA students if asked or required. These findings add to the validity of SDT as a theory for researching preceptors experiences with recruiting and retention.

Barriers. Barriers were a common finding in the literature review and included items such as clinical, administrative, and increased work (Waters, Lo, & Maloney, 2018). A unique but not unexpected barrier emerged from challenges associated with COVID. The interesting finding with barriers, especially in the clinical setting, was that the preceptors were often able to navigate these issues easily. Initially, they either established a method to navigate the issue or discovered the methods primarily through experience. The barriers preceptors faced were reasonably easy to mitigate or manage compared to clinical coordinators. Unfortunately, clinical coordinators met many difficult-to-navigate barriers complicated by a small workforce for recruiting and retention and a decline in preceptors. Lily discussed a shortage in preceptors by commenting, "I think in general, there are some areas right now that there's just a lack of preceptors."

Relatedness. Relatedness was a finding in the literature review but was not of the extent and depth discovered for this research (Minor et al., 2019). Participants in Minor et al.'s (2019) focus groups agreed that mentoring and relationships with students increased motivations to teach. Relatedness was part of the primary framework in SDT and mentioned in the reviewed literature (Ryan & Deci, 2000; Minor et al., 2019; Paul et al., 2020). Intrinsically, clinical coordinators used relatedness for recruiting and retention, for example, alumni or student networks, as noted by Lily "We've been reaching out to alumni in areas where we're looking for preceptors."

Extrinsically relatedness could be seen on resumes, plaques, appreciation letters, and various small gifts similar to the findings in Snyder et al.'s research (2010). Participants in the focus group noted handwritten appreciation notes from students after their rotation was a common occurrence and motivated them to continue precepting. An appreciation letter from a

program in the interviews, while not handwritten, expressed appreciation and provided a

summary of benefits for the preceptors and procedures for claiming these benefits. However,

throughout this research, programs attempted to recruit through alumni, professional networks,

and even their students' networks. Relatedness offers a viable option for what James noted as a

"warm handoff" for recruiting purposes. Even in retention efforts, relatedness was a key finding,

as Mary stated:

> I think most of that is my in-person site visits. During COVID, I wasn't allowed to do site
>
> visits in 2020 and the end of 2019. And I got some. It was light-hearted hassling for my
>
> preceptors. Hey, you haven't been here. I haven't seen you. Why haven't you been here?
>
> You know, kind of, They're kind of fun. But I think that's what builds a relationship
>
> because I can come to them.

Theoretically, relatedness is a not a direct factor in the framework of operant

conditioning. However, the professional relationships, interactions, and extrinsic relatedness

items could act as reinforcement to encourage continued acceptance of students (Cooper, Heron,

& Heward, 2019). Relatedness is foundational in the framework of self-determination theory.

Both theories demonstrate validity for this research. The need or want to be related to someone

or something offered vital insights into the ability to recruit and retain and furthered the validity

of these theories for this type of research (Ryan & Deci, 2000).

Direct Payment. Direct financial incentives proved a contentious motivator across the

literature review and this research (Paul et al., 2020; Begley. 2018). Clinical coordinators whose

programs provided a stipend noted support for direct payments and the usefulness of this

incentive. Bill noted, "It definitely is helpful, especially in the community-based ones where if

productivity goes down a little bit, at least they're getting a little bit something back." CCs fell

into two categories when their program did not provide direct payment: wholly opposed and likely will implement in the future. The completely opposed noted direct payment would create financial difficulties, as exemplified by Sarah

When the cost of tuition goes up, their loans go up. So, it's going to end up coming to bite the institutions that hired them because then they're going to want higher salaries because it's all a domino effect.

The CCs in the future implementation category noted the necessity secondary to the lack of available preceptors and competition from the physician, NP, and other PA schools. A critical aspect of direct payment is that adding students increases costs exponentially. This finding is different than most other professional schools. One student requires eight to eleven preceptors to receive compensation for their individual clinical experience based on the data from this research.

Theoretically and throughout the literature review, direct financial payments were primarily seen as a reinforcement of OC (Cooper, Heron, & Heward, 2019). However, almost all preceptors noted accepting students before receiving this benefit. Sarah reported about the direct payment that "I was taking students prior to them doing that, and it didn't change anything.". Preceptors that lacked this benefit were more difficult to directly correlate to the OC framework. The majority of the participants were more closely aligned with SDT framework when considering all the factors. Self-determination theory offered a superior framework for this research (Ryan & Deci, 2000).

Implications for Policy and Practice

The implications for policy and practice offer the author's specific recommendations for the various stakeholders. The implications range from the policy level at the accrediting body to

the individual clinical coordinators and preceptors. The policy implications include accrediting body changes, state-level lobbying or changes, and program implications. The practice level changes include exploring other extrinsic benefits, understanding preceptors, networking practices, contracting, and rotation length.

Implications for Policy

The accrediting body of PA programs, the Accreditation Review Commission of Education on Physician Assistants (ARC-PA), could stipulate limits of competition between PA programs. In this research, clinical coordinators noted competition from physicians, nurse practitioners, and other PA programs. Lily indicated that established preceptors could not continue precepting for them because of administrative contracts. Lily reported that the preceptors notifying the placement coordinator stated that "management made the change in all the cases." The method of exclusion by competing PA programs was likely not necessary. The vast majority of preceptors noted they would be willing to take more students. Contractually obligating precepting could harm one PA program while helping another, but a contract of exclusion may not have been necessary.

Tax deductions offer a reprieve from the school's budget while still offering a financial benefit. Denise reported "I know one thing that I have seen by other people, like other PAs, they talk about tax benefits by certain states for taking students." Several states provided state tax deductions for precepting medical students in the literature review. This practice is not applicable everywhere and would be challenging to implement without the dedication of high-level college and local PA organizations. Still, it could offer another potentially potent financial motivator.

A list of preceptors could be compiled and accessible to select individuals. AAPA has a list of preceptors that CCs can submit to, but this is a members' only list (AAPA, 2022). PA

schools could share the essential information and request students to attend these rotations through their respective CCs. The challenges exist with creating, maintaining, and utilization of this list.

Implications for Practice

This research developed two distinct implications for extrinsic motivations: find effective extrinsic motivations and structure these benefits appropriately. The clinical coordinators should open a dialogue with preceptors to discuss currently available options and potential future options. CCs should inquire about the CBPs opinion and offer boundaries and difficulties with implementing discussed benefits. Programs should consider structuring benefits to encourage more participation, especially where direct financial payment is available. Increasing benefits or payments per the number of students accepted by preceptors could assist in challenging recruiting and retention of specific medical specialties.

If competition and direct payment continue to be a concern for PA programs, establishing an agreement with the preceptor or the clinical administration could be necessary. In one interview, the PA program lost sites to another PA program. The sites contracted with the competing PA program through the clinic's administration to exclude precepting from other programs despite an association with that program. If ARC-PA or other policymakers do not encourage cooperation between PA programs or competition continues to be an issue, contractual methods could be necessary to ensure established preceptors will continue to accept PA students.

The literature review found appreciation events such as lunches or dinners, but challenges arose in hosting and logistics for the preceptors (Snyder et al., 2010). Several preceptors discussed attending CME courses and large professional conferences in this research. With an

open dialogue with the preceptors, CCs would be able to host appreciation events at a location

the preceptors are already visiting in mass such as the CME conferences. CCs would need to

target specific events and ensure preceptors would be there. With sufficient planning, this would

be an opportunity to demonstrate to potential preceptors a commitment and provide tools and

mentorship from current preceptors. Another implication in this area would be to host a CME

event for preceptors and potential preceptors. While hosting an event is complicated, the possible

return on investment in recruiting and retention could be invaluable.

Theoretical and Empirical Implications

The theories of operant conditioning and self-determination theory guided this research.

A comparative approach allowed for a thorough review of how each theory could better serve as

a model for future research. Given the amount of research discussing direct payment and other

extrinsic rewards, operant conditioning appeared as an important theory for recruiting and

retention in the literature review (Begley, 2018; Snyder et al., 2010; Beck Dallaghan et al., 2017;

Ryan et al., 2018). A few studies offered insights into internal and external influences about

recruiting and retention that self-determination theory could match (Minor et al., 2019; Paul et

al., 2020). Their respective frameworks offered insights to provide a more accurate theoretical

match. The research more clearly matched self-determination theory than operant conditioning,

that motivations and innate needs were more significant than solely external reinforcements in

this research.

The primary theoretical implication was that self-determination theory was better suited

for understanding and researching this phenomenon. Motivations focused on autonomy,

competence, and relatedness in self-determination theory matched the findings of this research

better than the reinforcement and punishment model of operant conditioning (Ryan and Deci,

2000; Skinner, 1938). Intrinsic motivation, not the external reward or reinforcement, drove preceptors' acceptance of students, negating a significant portion of operant conditioning's framework that requires behavioral modification through reinforcement (Cooper, Heron, & Heward, 2019). However, operant conditioning was applicable to several findings. A few participants expressed further interest in either switching programs or taking more students secondary to incentives or increased incentives that programs offer. This finding confirms previous research conducted by Minor et al. (2019) in which SDT was used and found effective for similar research.

Another theoretical implication for self-determination theory was the advancement of internally motivated persons initial participation with encouragement from extrinsic factors required to support participation. Ryan and Deci (2000) noted

Yet, despite the fact that humans are liberally endowed with intrinsic motivational tendencies, the evidence is now clear that the maintenance and enhancement of this inherent propensity requires supportive conditions, as it can be fairly readily disrupted by various nonsupportive conditions.

And this implication was exemplified by Pam when she noted

But then they ended up giving that [stipend] which, I'm not going to lie, that helps motivate. Then, it's like, well, at least you get something more out of it, you know, and it makes a little bit better. But yeah, I mean, that's not why I did it, not for the money.

Empirical implications involved the primary findings of this research in the discussion section. Intrinsic motivation was the primary driver to compel preceptors to accept PA students in a clinical setting. Extrinsic motivations assisted with increasing the intrinsic desire to continue precepting. Furthermore, intrinsic motivation transcended the significant barriers preceptors

faced. These assertations corroborated the findings of the reviewed literature with minor caveats (Paul et al., 2020; Minor et al., 2019).

The novel additions to this research and the literature were the importance of relatedness and the predictable barrier of COVID. The emergence of relatedness in all aspects of recruiting and retention was one of the more prominent empirical implications. Minor et al. (2019) and Paul et al. (2020) had similar findings but were not able to illuminate this aspect from CBPs and CCs. The additional understanding of the participants' experience with direct financial payment also offers practical application methods for this incentive.

Identifying and gaining participants was a difficult task and an important empirical finding during this research. This empirical finding was also noted by Minor et al. (2019) in which the researchers had difficulties with participation but reasoned these challenges were specific to their narrow scope and participants. Difficulties in recruiting participants was not limited to finding community-based preceptors but clinical coordinators willing to ask preceptors for participation as well which was a new finding from this research. From the methods standpoint a more narrow or closely acquainted group of participants may assist in completing further research similar to this.

Limitations and Delimitations

Limitations of this study were primarily from participation. As noted in other research, there was little interest in participation throughout the community (Minor et al., 2019). An extremely small population responded to the requests to participate. Over 700 emails, 100 phone calls, and several posts on PA social media websites produced less than 20 participants. All of the participants were PAs despite interest from three or four physicians. Physician participation

could have added to the validity of the training and competence of the PA students as incentives to precept.

A potential limitation of the research was the lack of discussion on lost preceptors or sites. A few clinical coordinators noted lost sites secondary to competition or lack of relatedness. Future research could focus on this area and interview these lost sites to understand further why these individuals are no longer accepting students.

The first chapter presented the delimitations of the study as a bounded case. The rationale behind these delimitations was to focus the research appropriately. The research participants were the stakeholders of community-based clinical education. The bounded timeframe only included the participants' experience with recruiting and retention efforts. The bounded sites were places where the recruiting and retention efforts took place such as the universities, clinics, and other sites used for recruiting and retention purposes. The participants were PA program faculty and community-based providers that have experience with placement and precepting PA students.

Recommendations for Future Research

The initial recommendation for future research in this area is quantifying the research with more participants and data to ensure applicability across the field. Future research could focus on finding a practical method to determine which providers are intrinsically motivated to precept to facilitate recruiting. Interviewing PA students could provide insights based on the preceptor's access to benefits or end-of-rotation evaluations reviewed to determine if the quality of rotations differed based on an extrinsically motivated group versus a non-extrinsically motivated group. Another recommendation for future research is exploring further or new extrinsic motivators with preceptors and non-preceptors to determine interests in precepting. The

last recommendation is to interview lost sites or preceptors to determine the cause for not accepting PA students from a specific program or entirely.

Conclusion

This study added to the current literature about recruiting and retaining community-based preceptors. The specific focus on physician assistant community-based precepting offers an in-depth understanding of the stakeholders' experiences. This research is one of the few studies focused on PA clinical education. Self-determination theory contained the most appropriate framework to apply in this research. The primary implications of this research consisted of three findings. Intrinsic motivation contributed more to recruiting and retention than extrinsic motivation. The direct payment of preceptors is a controversial extrinsic motivator but will likely become necessary in some form in the near future, secondary to competition. Finally, the participants' intrinsic motivation exceeded the many barriers encountered while precepting students but may prohibit the recruitment of less intrinsically motivated clinical educators. There are numerous possibilities for further research on this subject and several practical implications to assist in recruiting and retention efforts.

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Appendix A

IRB Approval

IRB #: IRB-FY21-22-250
Title: Community-based Physician Assistant Clinical Education: A case study on motivations, reinforcement, and barriers for recruiting and retention
Creation Date: 9-16-2021
End Date:
Status: Approved
Principal Investigator: Clayton King
Review Board: Research Ethics Office
Sponsor:

Study History

Submission Type	Initial	Review Type	Limited	Decision	Exempt - Limited IRB

Key Study Contacts

Member		Role		Contact	
Member	Christian Raby	Role	Co-Principal Investigator	Contact	▮▮▮▮▮
Member	Clayton King	Role	Principal Investigator	Contact	▮▮▮▮▮
Member	Clayton King	Role	Primary Contact	Contact	▮▮▮▮▮

Appendix B

Consent Form

Title of the Project: Community-based Physician Assistant Clinical Education: A case study on motivations, reinforcement, and barriers for recruiting and retention
Principal Investigator: Clayton King, MPAS, Ph.D. Candidate

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be a physician clinical coordinator or a community-based clinical preceptor. Each group requires community-based educators, support or incentives offered to these educators, agreement for participation in this research. Participants must be in the role of clinical coordinator, or similar job responsibilities and the role of community-based clinical educator. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the case study is to understand physician assistant clinical education stakeholders' experience with recruiting and retention at their institutions.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:
1. Clinical coordinators will complete a survey that will take approximately 10 minutes to finish and return.
2. Interviews or focus groups that will take approximately 45 minutes and will be audio and video.
3. Find and send relevant documentation about community-based clinical education recruiting and retention efforts.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include improvement of retention and recruitment of community-based clinical educators, improved clinical education, and potentioally increasing the quality of patient care.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential through the use of pseudonyms. Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.
- Interviews and focus groups will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher will have access to these recordings.
- Confidentiality cannot be guaranteed in focus group settings. While discouraged, other members of the focus group may share what was discussed with persons outside of the group.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Clayton King. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at ███████████ and/or ████████████████. You may also contact the researcher's faculty sponsor, Dr. Christian Raby, at ████████████████

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to video-record me as part of my participation in this study.

_____

Printed Subject Name

_____

Signature & Date

Appendix C

Participant Recruitment Emails

Dear PA Program Faculty:

As a graduate student in the School of Education at Liberty University, I am conducting research to better understand community-based preceptor recruitment and retention. The purpose of my research is to understand factors affecting the recruitment and retention of community-based preceptors such as motivations, incentives, support, and barriers. I am writing to invite eligible participants to join my study.

Participants must be physician assistant program faculty who enlist community-based preceptors to teach clinical education to their students. Other participants include community-based preceptors recommended by you. Participants will be asked to participate in an in-person or online interview or a focus group, which will each take approximately 45 to 60 minutes. Both procedures will be audio and video recorded. After their completion, I will provide the transcripts for your review. You will also be asked to provide contact information for community-based preceptors and any relevant documentation that applies to recruiting or retaining community-based preceptors. Relevant documentation includes but is not limited to legal documents such as contracts, meeting information, calendars, emails, and text messages that pertain to recruiting and retention efforts. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please complete the attached survey and return it by emailing it to me at █████████████████. For more information, feel free to contact me at xxx-xxx-xxxx.

A consent document is attached to this email. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me via email or in-person prior to your participation in an interview or focus group.

Sincerely,

Clayton King
MPAS, Ph.D. Candidate

Dear PA Program Faculty:

As a graduate student in the School of Education at Liberty University, I am conducting research to better understand community-based preceptor recruitment and retention. The purpose of my research is to understand factors affecting the recruitment and retention of community-based preceptors such as motivations, incentives, support, and barriers. I am writing to invite eligible participants to join my study.

Participants must be physician assistant program faculty who enlist community-based preceptors to teach clinical education to their students. Other participants include community-based preceptors recommended by you. Participants will be asked to participate in an in-person or online interview or a focus group, which will each take approximately 45 to 60 minutes. Both procedures will be audio and video recorded. After their completion, I will provide the transcripts for your review. You will also be asked to provide contact information for community-based preceptors and any relevant documentation that applies to recruiting or retaining community-based preceptors. Relevant documentation includes but is not limited to legal documents such as contracts, meeting information, calendars, emails, and text messages that pertain to recruiting and retention efforts. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

To participate, please complete the attached survey and return it by emailing it to me at ██████████████. For more information, feel free to contact me at xxx-xxx-xxxx.

A consent document is attached to this email. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me via email or in-person prior to your participation in an interview or focus group.

Sincerely,

Clayton King
MPAS, Ph.D. Candidate

Appendix D

Exploratory Survey for Recruitment

1. Are you willing to conduct an approximately 45-minute interview or focus group on

    factors that affect recruiting and retention of community-based preceptors?

    ☐ Yes   ☐ No

2. Does your program provide incentives or support to community-based preceptors to

    maintain the acceptance of students?

    ☐ Yes   ☐ No

3. Is your program considering any new forms of benefits or support for community-

    based preceptors?

    ☐ Yes   ☐ No

4. Are you willing to provide information for two or more community-based preceptors

    from your current roster for a researcher to conduct an approximately forty-five-

    minute interview? (Please reach out to these preceptors to determine if they are

    agreeable.)

    ☐ Yes   ☐ No

    a. If so, how many would you see potentially participating?

5. What, if any, forms of incentives or support have your program provided:

    ☐Direct Payment

    ☐University/College Privileges

    ☐Continuing education courses/credit

    ☐Preceptor training workshops

    ☐Honoring through meals, certificates, or personal letters

☐Other:

☐None

6. What forms of documentation can you provide about incentives and support your

   program provides to community-based preceptors?

Appendix E

Clinical Coordinator Interview Questions

1. Please introduce yourself to me, as if we just met.

2. Provide the responsibilities of your position within the PA program.

3. How many students are you responsible for placing in clinical rotations per year?

4. How many rotations do students attend in a community-based setting?

5. Describe your procedures for recruiting new community-based sites or community-based preceptors.

6. Describe your procedures for maintaining current community-based sites or community-based preceptors.

7. Describe any intrinsic or internal motivations community-based have expressed to you for accepting PA students.

8. How would you describe issues you face with placing students with community-based preceptors?

9. Describe barriers you face with recruiting and retention, specifically from the university or PA program.

10. Describe the incentives your program offers for community-based preceptors to join or continue taking students.

11. What, if any, incentives have your program withdrawn from community-based preceptors?

12. What incentives do you perceive as most beneficial in recruiting and retention of community sites and community-based preceptors?

Appendix F

Community-Based Preceptor Interview Questions

1. Please introduce yourself to me, as if we just met.

2. How many students do you typically precept in a year?

3. How many students could you reasonably precept in a year?

4. Under what circumstances do you take students for clinical rotations?

5. Initially, what motivated you to accept students?

6. What motivates you to continue to accept students?

7. How would you describe your interactions with the clinical coordinator from the programs you precept for?

8. Describe incentives or support the PA program provides that encourages you to continue teaching.

9. Describe the incentives or support that you have received.

10. How does precepting a student affect your work?

11. Describe any barriers that prevent you from accepting students.

12. Describe any incentives or support a PA program could provide to increase the number of students you precept per year.

Appendix G

Focus Group Questions

1. Starting from left to right, please introduce yourselves to the group, as if we just met.

2. How many students do community-based preceptors typically take in a year?

3. What motivates community-based preceptors to participate in clinical education?

4. Describe incentives that are provided or received from the PA program for participating in clinical education.

5. How do these incentives impact persistence of community-based preceptors in PA education?

6. Describe barriers to accepting students in a community-based setting.

Appendix H

Transcript Sample

Carol: I've always enjoyed teaching ever since I was really young, I did tutoring. I TA'd all through college I'm actively involved in high school science Olympiad, so I teach high school students and then encourage learning through that for anatomy, physiology at the state and local level. So I love educating and giving back. It's something that I enjoy. So for me, taking PA students is just easy and it makes sense.

Clayton: All right. Good. Now you did talk about the stipend. Does that help? Help make that easier.

Carol: It helps make it easier because. When you have a student with you. No matter what, it's going to slow you down for probably 30 minutes of the day, at least. And then, the stipend doesn't add up to being an extra 30 minutes of my time.

Clayton: Right.

Carol: But it at least is something. To kind of offset that.

Clayton: OK. And would you say that your enjoyment of teaching is kind of why you continue to take students?

Carol: Yeah, that's why I continue to take students. It's not for the money it's but if there's a program that is offering me money versus one that's not, I'm more likely to take the one that is going to give me some stipend.

Clayton: OK. Switching gears, how would you describe your interactions with the clinical coordinators that you've worked with?

Carol: So some are very on top of it. And then some have been slow to respond to emails, and not as coordinated, I guess, in what they're trying to say. I've had some that they've changed the dates, I've had some that they've changed how many students they want me to take things like that.

Clayton: Yeah. Now when you say they changed that, they did that before asking you or?

Carol: So, they tell me when I'd probably start having students and then they'd change it and say, actually, because of COVID and these are other outside circumstances that everything's off by two weeks and then those two weeks when I agree to take a student, then I didn't schedule my vacation. And now you're going to have me, I'm away for a week on vacation when I'm supposed to have a student.

Appendix I

Document Sample

The following samples are various documents used in recruiting and retention efforts in the following order: a preceptor brochure, a preceptor role form, and a site visit form.

Preceptor involvement in providing these clinical rotation opportunities is vitally important to the success of students. The clinical setting is where synthesis of concepts learned in the curriculum and application of principles for quality health care occur. You are the key to these successful learning opportunities in the clinical setting. The physician assistant student will work closely with you, learning by example and advice. Through your mentorship, the student will develop and refine skills and clinical judgement.

To develop highly-skilled primary care physician assistants who are prepared using an interdisciplinary approach and who:

1. demonstrate the medical knowledge to provide optimal patient care
2. regularly assess, evaluate and improve their patient care practices
3. demonstrate interpersonal and communication skills that result in effective information exchange with culturally diverse patients and families, professional associates, and a diverse health care system

Preceptor Benefits

- AAPA Category 1 CME for PAs
- Letter of Clinical Participation for CME for Physicians
- Adjunct appointment to _____ as a Clinical Professor
- Discounted prices to campus restaurants, stores, and activities
- Access to _____ gym facilities
- Access to _____ Research Library

Preceptor Expectations

- Hold the appropriate certifications and licensures
- Have an interest in mentoring and teaching
- Be committed to working with a student
- Provide specified supervision
- Provide ongoing feedback to the student
- Complete student evaluations

Clinical Rotations

The Clinical Education Process

The preceptor should become familiar with the individual abilities of the PA student, some students may be more clinically prepared than others due to student's background, previous clinical rotations, previous work experiences.

Save Time Precepting Students:

There are many tips and resources to help preceptors save time while having a student in the office. Efficient and effective ambulatory care teaching requires that both the student and preceptor accept the limitations of the outpatient setting. Extensive discussions of differential diagnosis, pathophysiology and psychosocial problems are not possible nor necessarily desirable. The one-minute preceptor is a tool used by many preceptors to help them manage time and effectively teach. When a student presents a patient to the preceptor (usually 2-3 minutes), then the preceptor has one minute for a teaching opportunity.

One Minute Preceptor:
- Get a commitment (Ask the student what they think is going on)
- Probe for supporting evidence
- Teach general rules
- Feedback: Reinforce what was right
- Feedback: Correct mistakes

Other options to help save time:
- Orient the student to the office. This can be done by staff, handouts, you, etc
- Determine the schedule of the student. The student DOES NOT need to see every patient. Sometimes a 1 in 3 schedule can be effective (preceptor and student both see a patient, preceptor then reviews student's patient and sees, preceptor sees another patient while student educates, charts, runs tests, etc on their patient). Preceptor may choose in advance what patients the student sees.

SITE EVALUATION:

Student has access to facilities:	YES	NO	
Student has access to patients:	YES	NO	
Student documents somehow for practice:	YES	NO	How do they document?
Area is safe for students:	YES	NO	
Student has their own area to work:	YES	NO	
Staff interacts with students:	YES	NO	
Preceptor sees every patient after student:	YES	NO	
Student level of autonomy:			

PRECEPTOR EVALUATION:

Physician understands PA role:	YES	NO
Preceptor vocalizes enthusiasm for having students:	YES	NO
Preceptor states he/she provides teaching moments:	YES	NO
Preceptor is professional in manner:	YES	NO
Preceptor is a good communicator:	YES	NO
Preceptor is licensed with no red flags:	YES	NO
Any professional affiliations:	YES	NO
Any concerns preceptor has about the program:	YES	NO
If yes, what are they?		

Appendix J

Codebook with Audit Trail Sample

    FGP1PG3: "The university provides them with UpToDate and that provides free Category one CME."

11. University Privileges – Privileges given to the preceptors that allow them to use university facilities, discounts for various university activities, and other privileges typically reserved for university staff. Does not include direct financial payments.

    C1P1PG2: "…they are also have access to our research library to have access to our gym. They get discounts at our restaurants, you know, on campus cafeterias."

    C2P1PG3: "The college does allow our preceptors to have full access to our academic library… They also did have access to free tickets to any sporting events. As well as the use of our gym and exercise equipment on campus…"

    C5P1PG2: "…they just have access to our medical library…"

    FGP2PG4: "some perks about, you know, the library that we have."

12. Potential Incentives – Ideas from participants that could benefit recruiting and retention efforts or to accept students from different schools.

    C1P1PG2: "The university is entertaining or at least looking at the possibility of offering preceptors and tuition discounts for their children. So I'm really pushing for that."

    C2P1PG3: "We are also working to adding an academic title for our preceptors, so that would be adjunct clinical instructor…"