



Student Perceptions of Successful Performance in a Physical Therapist Assistant Program

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### Abstract

**Introduction:** To develop retention strategies, it is necessary to understand students' perceptions of successful performance and the factors that affect success. No literature has been found that addresses successful performance in a physical therapist assistant (PTA) program from the student's point of view. **Objective:** This qualitative study examined PTA students' perceptions of success in their PTA program and how that perception may have changed over time. The study investigated how internal factors such as self-efficacy and external factors such as family support and work are perceived by students to affect successful performance. **Method:** Eleven PTA students, who volunteered to participate, were selected from a large metropolitan community college. The purposeful sample was chosen to represent a variety of gender, race, age, family structure, and socioeconomic statuses. To address the primary investigator's bias, interviews were conducted by three research assistants who were in their second year of a Doctor of Physical Therapy (DPT) Program. **Results:** Four major themes emerged that create a picture of student perception of successful performance in a PTA Program: Measures of Success, Facilitators of Success, Barriers to Success, and Program Expectations. Facilitators and barriers to success themes had several overlapping sub-themes which included classmates, family, and mental state. **Discussion and Conclusion:** An understanding of the student perceptions will aid program administrators and faculty in the development of retention strategies which promote a sense of belonging and an atmosphere of positivity that can be beneficial for student persistence.

*Keywords:* student performance, student success, persistence, retention, attrition, self-efficacy

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## Table of Contents

Title Page .....	1
Abstract .....	2
Acknowledgments .....	3
Chapter 1: Introduction .....	6
Problem Statement .....	7
Purpose Statement .....	7
Research Question .....	8
Significance of Study .....	8
Definition of Terms .....	8
Chapter 2: Literature Review .....	9
Student Success .....	10
Attrition, Retention, and Persistence .....	12
Barriers and Facilitators of Success .....	15
Self-efficacy and Student Success .....	17
Success Interventions .....	19
Student Perceptions of Success .....	20
Chapter 3: Method .....	22
Study Design .....	22
Participant .....	23
Setting .....	24
Procedures .....	24
Recruitment.....	25

Informed Consent .....	27
Data Collection Processes .....	28
Data Management and Analysis .....	29
Rigor/Trustworthiness .....	32
Chapter 4: Results .....	33
Theme 1: Measures of Success .....	34
Theme 2: Facilitators of Success .....	36
Theme 3: Barriers to Success .....	38
Theme 4: Program Expectations .....	39
Chapter 5: Discussion & Conclusion .....	41
Study Limitations .....	49
Implications for Future Research .....	51
Conclusion .....	51
References .....	53
Table 1: Participant Demographics .....	63
Table 2: Participant Characteristics .....	64
Figure 1: Visual Representation of Themes .....	66
Appendices .....	67
Appendix A: Study Recruitment Information Form .....	67
Appendix B: Student Demographic Information Form .....	70
Appendix C: Email Notification of Participant Selection .....	72
Appendix D: Consent to Participate in Research .....	73
Appendix E: Interview Questions .....	75

**Student Perceptions of Successful Performance in a Physical Therapist Assistant Program**

Attrition in higher education is of great concern due to the costs to students, educators, institutions, governments, and taxpayers (Foo et al., 2018). Costs include resources such as time, money, effort, and opportunity but can also include the cost to self-worth (Foo et al., 2018; Linderman & Kolenovic, 2013). Studies on student success often focus on success predictors and the educational experience; however, a large percentage of student attrition continues to be unexplained (Bowman et al., 2019). Although institutions develop retention programs to help students succeed, few are built on empirical assessment (Kebaetse et al., 2018). Specifically, there is a gap in the literature regarding the student perspective on how success is defined. This lack of information may impede the success of such retention programs.

Community colleges often face additional challenges regarding student retention due to poorly defined degree pathways, campus culture, low academic preparation of the student, and competing external factors and responsibilities for the student (Linderman & Kolenovic, 2013). Gregor et al. (2020) noted that the graduation rate within six years of matriculation is 57% for full-time community college students and 39% for part-time students. Competitive admission health care programs, such as physical therapist assistant (PTA) programs, are often located in community colleges and struggle with student attrition. For PTA programs to be viable, they are required to meet the benchmarks of their institutions, as well as the requirements of a third-party accreditor. Although institutional benchmarks may differ between colleges, all PTA programs are required to be accredited nationally through the Commission on Accreditation in Physical Therapy Education (CAPTE) (American Physical Therapy Association, n.d.). CAPTE requires a two-year graduation rate of 60 percent for all PTA Programs (CAPTE, 2016). This standard is

higher than the statistics noted by Gregor et al. (2020). Because PTA programs must prioritize accreditation standards, there is a strong focus on retention and student success.

Typically, admission into a PTA program is based on specific predictors of academic success, such as Grade Point Average (GPA) and standardized testing. However, these programs may continue to experience a high rate of attrition and poor student performance (Kabiri et al., 2017). According to Kebaetse et al. (2018), most students who enter a health care education program have the intellect to succeed as reflected by admission criteria; however, many other external factors play a significant role in determining a student's successful performance and goal achievement.

### **Problem Statement**

Academic success, as addressed in the literature, is typically measured in grades, retention, and completion outcomes, which meet the needs of the academic institution. However, the student perspective or definition of successful performance often is overlooked. In recent years, research has examined student self-efficacy and resilience interventions and the effects on student success. Specifically, researchers have found a positive correlation between academic performance and both self-efficacy and resilience in two Doctor of Physical Therapy (DPT) programs. (Mejia-Downs, 2020; Stickley et al., 2019), though no such correlation has been established for students in PTA programs. Some existing studies describe certain aspects of academic success in a PTA program, such as admission criteria (Kabiri et al., 2017); however, no studies appear to exist that explore and identify PTA student perceptions of success. To address attrition and poor performance, educators must recognize and appreciate factors that influence success from the student perspective.

### **Purpose Statement**

The purpose of this basic interpretive qualitative study was to explore student perceptions regarding factors that influence performance in a PTA program.

### **Research Questions**

- How do students perceive successful performance in a physical therapist assistant program?
  - How do physical therapist assistant students perceive the impact of external factors on their performance/success?
  - How do physical therapist assistant students perceive the influence of self-efficacy on their performance/success?
  - How does physical therapist assistant students' perception of success change throughout the program?

### **Significance of the Study**

The potential impact of this qualitative study is to provide a deeper and richer understanding of the student perspective. The results serve to inform the development of strategies and processes that directly address the factors that influence PTA students in their attempts to be successful in the program.

### **Definitions of Terms**

- Physical therapist assistant (PTA) education – Prepares graduates with knowledge and skills to enter the profession. PTAs graduate from a CAPTE-accredited, associate degree PTA program and must pass the National Physical Therapy Examination (APTA, n.d).
- Self-efficacy – A person's belief about their capability to complete a task (Bandura, 1994).

- Student attrition – the percentage of students who leave a program before completion (Foo et al., 2018).
- Attrition – outcome measure calculated as the percentage of matriculated students leaving a program before completion (Beer & Lawson, 2017; Foo et al., 2018).
- Retention – retaining students from semester to semester or year to year during their academic career (York, 2015).
- Persistence - degree completion (York, 2015).

### **Literature Review**

Community college graduates comprise a substantial percentage of health care professionals (Staykova, 2012). These institutions and health care programs have additional challenges that four-year institutions do not face (Staykova, 2012). The community college student population is diverse and may encounter external factors that may inhibit their success (Staykova, 2012). In community college allied health care programs such as physical therapist assistant, dental hygiene, and radiography, the number of applicants can outnumber the program's available seats (Easley, 2016; Ingrassia, 2016). Therefore, it is imperative to have reliable admission criteria. It is equally essential to provide interventions throughout the program to promote student success (Denham et al., 2018; McComb & Lyddon, 2016). According to Mitchell et al. (2021), strong admission requirements cannot stand alone, and programs must also include quality retention strategies. In programs with a clinical application aspect included, such as health science programs, academic success does not always translate to clinical application success, making admission criteria alone challenging to predict success.

When a student is not academically successful, a seat in the program remains empty until the following year, which is a financial burden for the institution (Ingrassia, 2016). The student

also bears the weight of the burden due to educational delay, postponement in possible earnings, and the possibility of adverse psychological effects from failure (Ramirez et al., 2018). Addressing student success from the health care program's perspective provides only a partial view of the problem with student retention. Understanding the student's perceptions of successful performance and the barriers they face can help educators in allied health programs facilitate evidence-based success interventions (Denham et al., 2018).

### **Student Success**

The terms "student academic success", "student success", and "successful student performance" in higher education are often interchangeable in the literature (York et al., 2015). Defining academic success or successful performance is difficult because the perception of that definition will differ depending on the organization or the individual student (Denham et al., 2018; York et al., 2015). Also, the higher education student population has changed in recent years. The non-traditional student is now the majority; therefore, the definition of student success and success outcomes may need to be reconsidered (Branon, 2018). Although the definition of retention, student success, and methodologies for measuring the outcomes differ among higher education institutions, most agree there is a need to address and prioritize student success (Dwyer, 2017).

Student success, especially in allied health programs, notably physical therapist assistant programs, has traditionally been defined in a variety of ways, such as persistence, retention, on-time graduation, program completion, grade point average (GPA), and board examination pass rate (Kabiri et al., 2017; Maring et al., 2013; Wheeler et al., 2018; York et al., 2015). However, these definitions may not always align with students' perceptions of success (Denham et al., 2018). Bowman et al. (2019) argue that non-cognitive factors such as self-efficacy and grit may

also affect persistence and graduation rate above their relationship with GPA. A study by Leiken (2017) found that dental hygiene students in a two-year program were more successful if they already had a higher education degree, were engaged in social activities on campus, and participated in active learning activities. York et al. (2015) conducted a literature review to more accurately define academic success, resulting in the following definition, “inclusive of academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and post-college performance” (p. 5). York et al. (2015) further acknowledged that using academic achievement alone to measure student success does not address individual cognitive abilities and may not be a valid measure due to grading methodology inconsistencies.

Educational programs including those in various health care disciplines, often conduct research on student success to ensure that admitted students have the best chance of a successful outcome (Kabiri et al., 2017; York, 2015). According to Easley (2016), many students in an allied health program in a community college are at high risk for failure due to their non-traditional and low economic status and college readiness. Success in physical therapy programs is assessed using various measurements that include cognitive and non-cognitive factors; however, research on the student perception of how these factors affect success is limited (Cherry and Blackinton, 2017; Cassidy et al., 2020). An abundance of published studies using retrospective data for predictive models for student success exists in the literature for students in nursing programs, medical schools, and physical therapist programs. A review of the *Journal of Physical Therapy Education* (JOPTE) revealed that four studies on student success have been published regarding the prediction of physical therapist assistant (PTA) graduation rate and licensure pass rate. Each of these studies was retrospective and examined variables such as

admission criteria, length of the program, lab experiences, faculty characteristics, the length of clinical education experiences, accreditation status, and a comparison of for-profit and not-for-profit institutions (Demarais et al., 2011; Gresham et al., 2015; Kabiri et al., 2017; Maring et al., 2013). For example, one study found that the GPA of PTA students was the best predictor of licensure pass rate (Demarais et al., 2011). Another determined that overall prerequisite GPA and standardized test scores were predictors of graduation and licensure pass rates (Kabiri et al., 2017). Maring et al. (2013) found that accreditation compliance and meaningful lab experiences were positively correlated with success on the licensure exam. Gresham et al. (2015) found a significant positive correlation between PTA programs with a greater percentage of weeks with full-time clinicals and graduation and licensure pass rates. Although studies of PTA and other health care programs exist using quantifiable retrospective measures, attrition continues to be a concern, and solutions to improve student success appear to be elusive.

### **Attrition, Retention, and Persistence**

Student attrition is calculated as the percentage of matriculated students leaving a program before completion and is challenging to address due to the fluidity of the problem (Beer & Lawson, 2017; Foo et al., 2018). Retention and persistence are used to measure academic outcomes. Retention is defined as retaining students from semester to semester or year to year during their academic career, whereas persistence is defined as degree completion (York et al., 2015). When a student fails to complete a program, there is a negative effect on the student, the institution, the workplace, and society (Cassidy et al., 2020).

In the United States, community colleges enroll half of all undergraduate students, yet in 2012, these institutions had a completion rate of 22% (Linderman & Kolenovic, 2013). Gregor et al. (2020) explained that community colleges tend to enroll a high percentage of students from

marginalized groups in terms of socioeconomic status, race/ethnicity, age, and generational status. These students may encounter many barriers while attending college, such as financial constraints, work obligations, familial responsibilities, and lack of academic preparation, which may affect their ability to succeed (Gregor et al., 2020; Linderman & Kolenovic, 2013).

According to Gregor et al. (2020), the community college student population is under-represented in the literature. There is minimal investigation of their perception of what barriers they face and what could enable their success.

In response to the underserved populations' barriers, President Barack Obama enacted America's College Promise (ACP) to support access to higher education and economic development (Palmadessa, 2017). The ACP was directed at community colleges to increase the number of college graduates and educated workers by offering improved access to higher education to underserved populations through "free tuition for two years for qualifying students" (Palmadessa, 2017, p. 13). Although this legislation may have had a notable impact on the economy and the public, it may have added additional burdens on community colleges (Palmadessa, 2017). Specifically, this policy may have led to the admission of academically unprepared students and the ensuing financial burden to provide additional resources, such as supplemental learning, to meet these students' needs to promote their success (Palmadessa, 2017). In addition to the ACP initiation, the 2015 Complete College America (CCA) agenda called for community colleges to increase degree completion by 50% (Easley, 2016). Unfortunately, noble legislation is only as good as the current political support. If funding is not made available to support the ACP and CCA, community colleges will continue to struggle to improve outcomes and meet the needs of the public (Easley, 2016; Palmadessa, 2017).

Due to legislative agendas, community colleges face a tremendous challenge due to outcome-based funding and continuing high attrition (Easley, 2016). According to the National Center for Education Statistics (2020), of the 52% of undergraduates enrolled in sub-baccalaureate programs, health science programs were the most common field of study. A majority of these programs were located in public two-year institutions with a large proportion of female enrollment, over 25 years old, and black or Hispanic (National Center for Education Statistics, 2020). As mentioned, individuals in these groups typically face additional burdens due to family and work obligations and ethnic minority challenges coming from a historically underserved population (Gregor et al., 2020). Of the 416 accredited and developing PTA programs in the United States, well over 50% are located in community colleges with a wide range of student demographics depending on the program's location (CAPTE, 2020). The mean graduation rate in 2019 for all accredited PTA programs was 85.6%, and the mean first-time licensure pass rate in 2019 was 84.2% (CAPTE, 2020). Although this statistic meets accreditation standards, over 15% of PTA students are not successful, which results in institutional and student burden. For community colleges, specifically PTA programs, to meet the legislative initiatives and required outcomes, a need is present to develop strategies to address these barriers and promote student success (Easley, 2016).

A certain amount of attrition in health care programs is expected due to high levels of skill competency required for public safety and practice standards. However, attrition impacts the workforce, with fewer successful graduates to meet the high demand for health care professionals (Cassidy et al., 2020). Wray et al. (2014) found that almost 50% of United Kingdom university nursing students surveyed considered dropping out of their program at some stage in their educational journey. Although existing literature examines attrition among nursing

and medical students, there is a need to explore further and understand why some students in two-year sub-baccalaureate health care programs, notably PTA programs, succeed when others fail (Cassidy et al., 2020; Kabiri et al., 2017; Kebaetse et al., 2018).

### **Barriers and Facilitators of Success**

Minimal published research has examined the characteristics and perceptions of those students who succeed. Research has mainly focused on barriers to success that students may face and identifying those at greater risk (Wray et al., 2014). Community colleges have a high number of students enrolled who are low-income, ethnic minorities, and first-generation students. As noted above, students in these groups often face numerous barriers to academic achievement and successful performance, yet many do succeed (McFadden, 2016). According to Gregor et al. (2020), students from some racial and ethnic backgrounds may experience barriers due to the expectation that they prioritize family needs over individual aspirations (Gregor et al., 2020). Language can also serve as a barrier, as nursing students for whom English is a second language tend to have a higher attrition rate than other students (Denham et al., 2018). Accordingly, students in health care programs for whom English is not their first language may experience communication challenges during clinical experiences (Wray et al., 2014). In previous literature, Utzman et al. (2007) found student ethnicity to be a significant predictor of academic difficulty in physical therapist education. In contrast, the prediction study cited above on PTA student graduation and licensure success by Kabiri et al. (2017) did not find that ethnicity contributed to their prediction model.

In addition to personal characteristics such as background, students often face other barriers to success, including increased stress and anxiety. According to Gautman et al. (2020), high anxiety, stress, and depression are prevalent problems among college students. Gautman et

al. (2020) explains that the transitional period in college students' lives, the increased academic demands, and balancing a social life places additional strain on the student. Gautam et al. (2020) and Mejia-Downs (2020) agree that health profession students, including physical therapist students, experience an increased stress level compared to other college students of the same age. In addition, they noted that the stress from academic demands was a more significant barrier to success than personal characteristics or financial issues. Additional stress may be added to the student in a two-year health care program due to the curriculum's fast pace, expanding role of professional practice needs, and the high expectation of proving skill competency (Ingrassia, 2016; Staykova, 2012). Gautam et al. (2020) further emphasized that the effects of college-related stress and anxiety may extend beyond the college experience and may lead to future health issues and disabilities.

According to Denham et al. (2018), barriers to success must be addressed, while strategies to facilitate success must be implemented. In their systematic review, Schneider and Preckel (2017) concluded that social interaction and meaningful learning experiences are positively associated with student achievement. However, the authors acknowledge that varying characteristics of the learning experience and the environment make identifying specific facilitators of success challenging. A qualitative study by Wray et al. (2014) found that facilitators of degree completion included healthy family and peer support, clear educational expectations, and a strong desire to become a health care practitioner. Conversely, Hepworth et al. (2018) suggested that the perception of institutional commitment to student success and student social integration into college life were considered secondary factors and not found to be a significant predictor. Facilitating academic preparation was found to be significant in predicting success (Hepworth, 2018).

### **Self-Efficacy and Student Success**

The college experience can be a new adventure into autonomy and result in personal growth. However, it can also be a transition time that results in high anxiety and unhealthy stress, lowering students' belief in their academic and performance abilities (Ramirez et al., 2018). Due to the lack of consensus for an optimal admission process based on cognitive factors that lead to success in DPT programs, non-cognitive factors such as self-efficacy, emotional intelligence, and resilience should be explored to improve student success (Van Veld, 2018). Bowman et al. (2019) agree and found a direct positive relationship between non-cognitive attributes and college GPA. Self-efficacy is defined by Albert Bandura as a person's belief about their capability to perform a specific task at a certain level (Bandura, 1994). Van Veld et al. (2018) defines self-efficacy as the confidence in DPT students' ability to use coping strategies to make a positive change in a stressful situation. When reviewing the relationship between self-efficacy and self-confidence, Blanco et al. (2020) stated that self-efficacy is the interaction between a person and a specific task whereas self-confidence is a personal characteristic. Further, Bandura (1997) defines self-efficacy as a construct within a theoretical system and confidence as a general term without specificity. Blanco et al. (2020) found that undergraduate students who are more self-confident despite facing challenges, such as those experienced during the pandemic, are likely to possess higher self-efficacy compared with students who exhibit less self-confidence. Students' belief in their capabilities, whether it be to perform a specific task or manifested as a general ability to succeed, often determines their ability to succeed (Ouweneel et al., 2013). Many students can persist academically and achieve positive outcomes by completing their programs, yet others fail to complete; this may be due to their actual ability to perform or their overall belief in their ability (Ouweneel et al., 2013).

Students who fail may experience low self-efficacy (Ramirez et al., 2018). Students with high self-efficacy have been observed to look at difficult tasks as a challenge and do not approach challenging tasks as a threat to their success (Bandura 1994; Rowbotham & Schmitz, 2013). According to Gregor et al. (2020), students are more likely to overcome barriers to achieving their goals if they believe they have the capability of succeeding. Stickley et al. (2019) further suggested that people with high self-efficacy are more willing to attempt a task and demonstrate more remarkable persistence to complete the task with a successful outcome. A study conducted by Ouweneel et al. (2013) claimed that in an experimental controlled setting, as the level of self-efficacy changed over time, so did study engagement and task performance. As self-efficacy increased, the students' study engagement and task performance improved (Ouweneel et al., 2013). Self-efficacy depends on the activity of influence, such as a specific test performance; therefore, it cannot be assumed that the level of self-efficacy will remain stable over time (Ouweneel et al., 2013). Van Veld et al. (2018) found that first-year DPT students gained confidence over time in their ability to cope with stress and skill performance. In addition, instructor affirmation interventions can improve the student and teacher relationship, which can be an important driver of success (Smith et al., 2021). If faculty invest consistently in increasing students' self-efficacy through positive reinforcement and short-term goal setting, it may improve student success (Ouweneel et al., 2013).

Similar to the need for high self-efficacy in DPT programs, high self-efficacy may be equally crucial in community college workforce programs such as PTA programs due to the same rigorous expectation of applying learned skills in testing and clinical environments (Easley, 2016; Kabiri, et al., 2017). The academic rigor of a health profession program can be overwhelming for many students. Identifying their level of self-efficacy during the program may

help faculty implement strategies to develop and build self-efficacy to improve successful performance (Rowbotham & Schmitz, 2013; Van Veld et al., 2018; Stickley et al., 2019).

### **Success Interventions**

Interventions are often developed in institutions and programs to improve student success; however, it is common to create such programs without evidence-based program evaluation or fully understanding all aspects involved in program initiatives (McComb & Lyddon, 2016). According to McComb and Lyddon (2016), colleges usually look at lagging indicators such as graduation rates retrospectively without considering leading indicators, such as participation in study groups, class attendance, and task performance. Although lagging indicators, such as completion rates, are essential to assess, the view looks at the past and what has already occurred. Assessing leading indicators for the development of interventions informs educators of what is happening in the present. In addition, leading indicators can serve as a predictor of results likely to occur. Using the formative assessment of leading indicators allows for corrections and adjustments of interventions to positively impact student success (McComb & Lyddon, 2016).

Linderman and Kolenovic (2013) promote the provision of an inclusive environment to accentuate a sense of belonging and a sense of ownership of a specific career. In a qualitative study, Cassidy et al. (2020) found that a positive environment, a sense of belonging, and connection with faculty enhanced success in physiotherapy students. An appreciative inquiry research approach performed in the United Kingdom by Masika and Jones (2016) found similar results of the importance of an inclusive environment. Jacobs et al. (2015) found that a peer mentorship program was beneficial in a two-year nursing program due to the high rigor of health education. Peer-to-peer interaction provided emotional support and educational benefit for both

the mentor and the mentee (Jacobs et al., 2015). The findings demonstrated that the development of an educational community of practice provides sustained engagement between students and faculty and peer to peer, which creates a sense of belonging (Masika & Jones, 2016).

In addition to addressing academic needs in college students, it is vital to promote interventions that attend to this population's mental health and well-being due to adolescence's transitional period to adulthood (Deasy et al., 2014). Bogardus et al. (2021) found increased reported stress and anxiety in first-year DPT students and suggests that physical therapy programs may want to implement strategies to manage factors affecting mental health. Trask-Kerr (2019) suggested using positive psychology interventions (PPI), which focus on nurturing the students' well-being versus only focusing on academic success. The use of PPI focuses on social harmony and builds hope and confidence, which has been found to have a positive correlation with success (Trask-Kerr et al., 2019). Many of today's college students are of the millennial generation. They have been described as being catered to, feeling entitled, having a fear of failure, and being hyper-connected with the world of technology (Ramirez et al., 2018). This generation may benefit from positive psychology as faculty can re-frame failure as a quality learning experience and an opportunity for growth (Ramirez et al., 2018; Trask-Kerr et al., 2019). Faculty are in an excellent position to develop and participate in interventions to address student needs; however, speculating what those needs are without receiving student input results in an ineffective product (Denham et al., 2018).

### **Student Perception of Success**

Although student success has been studied at length, student perceptions of their own success is limited in the literature. York et al. (2015) noted that their definition of academic success excluded the student's perspective and was a limitation of their review. A qualitative

study by Abdulghani et al. (2014) found that undergraduate medical students in Saudi Arabia perceived program success depended on academic strategies, managing external problems, using available resources, and self-motivation. The authors stated that an in-depth analysis of student perception is needed to truly understand the factors that lead to high achieving health care students' success. Goldingay et al. (2014) found that first-year social work students perceived those personal qualities such as determination, work/life balance, and confidence were critical in facilitating success as academic skills. In a qualitative exploration of United Kingdom student physiotherapists' perceptions of success, Cassidy et al. (2020) described looking at student success in the sociocultural realm as a burgeoning concept. The authors found that students' perception of why they achieved success was due to a sense of belonging, positive interactions with faculty and peers, and a healthy self-identity (Cassidy et al., 2020). Looking at students' sociocultural factors in an educational program may decrease marginalization and promote a more culturally aligned environment, resulting in greater student success (Cassidy et al., 2020).

Denham et al. (2018) reported that unless faculty consider student perceptions of success when developing retention interventions, there is a likelihood that outcomes of these interventions will not meet expectations. In addition, faculty need to analyze their perceptions of student failure while better understanding their students' perceptions of success (Ramirez et al., 2018). Many external variables may play a role in a student's ability to succeed. Therefore, there is a need for further investigation to better understand how identified external factors influence student success (Cherry & Blackinton, 2017; Denham et al., 2018).

As community college health care programs struggle with retention, they continue to be relied upon as a significant contributor to the health care workforce (Staykova, 2012). The diverse population of community college health care programs, high academic rigor, clinical

competency expectations, and the unique external factors students face make success a continuous challenge (Ingrassia, 2016; Leiken, 2017). Research on student retention from the institutional perspective has been conducted in two-year, four-year, and graduate school health care programs, yet attrition continues to be a problem. A different research approach is needed to meet the societal demand of the health care workforce and relieve the burden of costs to the student and educational institution. Further investigating the student perception of successful performance will help institutions and educators meet the student's needs.

Understanding student attrition and successful performance are unlikely to be achieved unless the student perspective is considered. It is, therefore, essential to understand the student's view of success in an academic environment. If this understanding is not achieved, it is impossible to align realistic institutional academic expectations with success outcomes (Denham, 2017). To date, no published reports on the PTA student's perception of success have been found. Understanding student perceptions of success will help PTA programs and faculty develop effective resources and strategies to support the students' needs and meet institutional and program required and desired outcomes.

## **Method**

### **Study Design**

This study utilized a qualitative basic interpretive approach. This approach focused on how people perceive and interpret their experiences and the meaning assigned to that interpretation (Merriam, 2002). In this study, the researcher explored the perceptions of successful performance among physical therapist assistant (PTA) students enrolled at a community college and attempted to understand if this perception changed over time during the PTA program. The researcher also explored students' perceptions of how external factors and

self-efficacy affected their performance. Institutional Review Board approval was granted prior to the commencement of any study activities.

### **Participants**

Purposeful sampling was used to recruit participants who represented varying demographics in the Houston Community College (HCC) PTA Program. Purposeful sampling is an intentional strategy to include participants who will best inform the researcher of the phenomenon being investigated (Creswell & Poth, 2018). This approach was appropriate for the study because the researcher was able to select each participant to ensure they had experienced the phenomenon under study and met the inclusion criteria (Creswell & Poth, 2018). To be included in the study, an individual had to be a current HCC PTA Program student enrolled full time (at any level in the program) who had successfully earned a passing grade in all required courses in the first semester in the program. There were no exclusion criteria. Approximately 85 PTA students were informed of the study and opportunity for participation.

Determining an adequate sample size for a robust qualitative study can be challenging. Malterud et al. (2015) recommend the use of information power represented in a five-item model. The model consists of the study aim, sample specificity, use of a theory, quality of dialogue, and analysis strategy. According to Creswell and Poth (2018), generalization is not the goal of qualitative research; rather, the goal is to provide insight into a population's specific experience. This study included 11 participants representing a range of the various student characteristics and demographics found in the HCC PTA Program. Although the study was not grounded in an established theory, the study aim, and specificity were narrow. The study focused on a perception of success and performance experiences from one specific PTA program. The quality of dialog during the interviews was strong because the interviewers had relatable

experiences as students themselves and were mentored in qualitative interviewing. The analysis was an in-depth exploration of the phenomenon of study from deliberately chosen participants that represented various student characteristics of the HCC PTA Program. Using the rationale from Creswell and Poth (2018) and Malterud et al. (2015), the sample size of 11 participants was adequate.

### **Setting**

PTA program students were recruited from HCC, a large urban metropolitan community college located in Houston, Texas. The HCC PTA Program student demographics represent the HCC student body, which has a large international and minority population. The median age of the student population is 27 but ranges from 17–60 years old. Many of the students are raising a family, working, and are first-generation college students (Houston Community College, n.d. “About” section). HCC has 14 Centers of Excellence and over 20 campuses. The PTA program is accredited by the Commission on Accreditation in Physical Therapy Education and is located in the Health Science Center of Excellence on the John B. Coleman Campus. The campus is located in the Texas Medical Center, which is the largest medical center in the world (Houston Community College, n.d. “About” section). The HCC PTA Program is a five-semester program with 66 credits and culminates in an Associate of Applied Science Degree with eligibility to sit for the National Physical Therapy Examination. The PTA program has a selective, competitive admission process. Annually the program has approximately 145 applicants for 52 available seats (Houston Community College n.d. “Physical Therapist Assistant Program” section).

### **Procedures**

#### ***Recruitment***

Recruitment took place at the beginning of the 2021 spring semester. Given this timing, PTA students were in the second or fifth and final semester of the program. The primary researcher, the PTA program director, introduced the research study to the first-year cohort during each of the six sections in a face-to-face laboratory class meeting of PTHA 2301 Data Collections. The second-year cohort was introduced to the study in the two sections of the face-to-face laboratory class meeting of PTHA 2339 Professional Issues. All enrolled PTA students and each course lead instructor were present during the study's introduction and discussion. The lead instructors did not participate in the introduction of the study discussion. The study and opportunity to participate was explained through a verbal discussion and a hard copy of the study recruitment information form (see Appendix A) stating the study purpose, potential participants sought, data collection, and data management processes. During the discussion, the researcher/PTA program director emphasized that participation in the study had no bearing on program status or grades. Students were informed that unique identification numbers and pseudonyms instead of legal given names would be used to identify those who were willing to participate, and those participants selected, respectively. Students were also informed that all contact and the actual interviews would be completed by the research assistants and not the program director. Students were informed that the program director would transcribe the interviews, and that, although pseudonyms were used during the interview, there would be the possibility to determine the identity of the participant during the analysis of the transcript.

The study recruitment information form provided to the students explained the study's purpose and the opportunity to participate. In addition to the study recruitment information form describing the study, the students also received a student demographic information form (see Appendix B) that required the prospective participant to provide contact information and

demographic information. The first question on the student demographic information form asked if the student was willing to participate. The student demographic information form also included age, gender, current semester in the program, ethnicity, marital/partnership status, number of children, employment status, student debt, and housing status. Each student demographic information form included a unique identification number at the top of the page for participant identification purposes. Contact information collected consisted of the prospective participant's cell phone number and preferred email address. The contact information was used for communication purposes by the interviewers and was not used by the primary researcher.

After the study was introduced, the program director left the room and was not present when students expressed interest to avoid pressure to participate. The students and the lead instructors remained until the end of class, at which time the lead instructors reminded the students of the opportunity to participate. All students were asked to submit the student demographic information form in a designated envelope prior to leaving the classroom, regardless of their choice to participate. This process was used to avoid being identified by others in the room as a possible participant. It was explained that this timeframe was the only opportunity provided for the students to express interest in participating in the study. The envelope was secured and only in possession of the lead faculty member of the two courses where the study was introduced and given directly to the research assistants who were present at the end of each class. The research assistants entered the participant information into a password-protected Excel spreadsheet developed by the primary researcher. The research assistants identified the prospective participant using the study identification number on the top of the demographic information form. The completed Excel spreadsheet was emailed by the research assistants to the primary researcher. The primary researcher used the spreadsheet to select 11

participants representing varying characteristics proportional to those commonly found in the HCC PTA Program.

The completed paper demographic information forms were returned to the original envelope and placed in a locked cabinet by one of the research assistants. The envelope remained in the research assistant's possession until given to the primary researcher at the end of the study. All demographic information forms were destroyed at the completion of the study. Within one week of receiving the Excel spreadsheet of the students willing to participate, the primary researcher sent the list of selected participants to the research assistants. The research assistants notified the participants, using their provided email address (see Appendix C), that they were selected to participate in the study. The email explained to the participants that they should expect a phone call from a research assistant to schedule an interview. The research assistants contacted the participants two to four weeks later to schedule the interview.

### ***Informed Consent***

Once the selection process took place, a research assistant contacted the participants by phone to schedule the interview. During the phone conversation, the participants were provided an opportunity to have all of their questions answered, and received a reminder about the study's purpose, benefits, the research/method process, and the time commitment required. Participants were informed that all data collected would be de-identified and remain confidential outside the study's bounds. Before the phone call concluded, the participants were informed of their right to terminate participation anytime during the study, and participants provided verbal consent to schedule an interview. Participants were offered an opportunity to ask questions before the start of the interview. Written consent (see Appendix D) from the participant was emailed to the research assistants conducting the interview prior to the start of the interview. Verbal consent

was then given at the beginning of each interview for participation and audio-recording of the interview.

### ***Data Collection Process***

Data collection consisted of a virtual interview with each individual participant. To avoid bias from the researcher or student fear of retaliation due to the relationship between the primary investigator and the participants, three research assistants unaffiliated with the HCC PTA program performed the interviews. The research assistants (RAs) were second-year Doctor of Physical Therapy (DPT) students from Texas Woman's University (TWU). The RAs were not experienced in qualitative research methods. As part of their DPT independent study research course requirement, instruction and mentoring were provided by the study's primary investigator and a TWU DPT faculty member, who is an experienced qualitative researcher and the RAs research advisor. Mentoring included each RA's requirement to read at least four articles regarding the process of qualitative research, followed by a face-to-face discussion about qualitative methodology. The RAs were also provided additional information on informed consent, confidentiality, sampling, interviewing, and data analysis. Each RA performed two practice interviews using the study interview guide with the primary investigator and TWU advisor.

The primary researcher developed interview questions (see Appendix E) with input from the RAs and the TWU advisor. Each interview was conducted using the same format. All interviews were conducted through video conferencing using Zoom due to COVID-19 restrictions and the need to practice social distancing per guidelines from the Centers for Disease Control and Prevention. Each interview was conducted by two RAs and was audio recorded. Interviews began with an introduction of the RAs and a reminder of the purpose of the study.

Participants were asked to provide a pseudonym for identification purposes that was used during the interview and data analysis. Although written consent was received prior to the start of the interview, verbal consent to participate was re-established, and permission to audio record was received. The participants were informed that the questions would start broad then move to more focused questions to ensure that a thorough picture of their perceptions was collected.

Participants were informed that each interview was expected to last approximately 45-60 minutes and guided by a predetermined open-ended list of questions in a semi-structured format. Probing questions as a step described by Turner (2010) were used to follow up and clarify participants' answers or allow for added breadth and depth to the participants' comments. After all questions were addressed, the interview was concluded by asking the participants for additional comments. After each interview, participants were informed that a follow-up contact by email or phone might be necessary if additional information was gleaned from subsequent interviews during the data collection period. They were also informed that after data analysis, they would receive a copy by email of the conclusions and generated themes to ensure accuracy.

### ***Data Management and Analysis***

The primary investigator downloaded the audio recordings of the interviews to Temi, an advanced speech recognition software. Temi uses TLS 1.2 data encryption and secure servers to protect data (Temi, 2020). Transcriptions were downloaded to Dedoose (version 8.3.35), a computer-assisted qualitative data analysis software (CAQDAS), which was only accessible by the primary researcher. Transcriptions were also available to the research team through a private Google Drive. Audio recordings were deleted from the recording device after transcription to maintain the data's security and confidentiality.

Following transcription, the primary researcher analyzed the data in collaboration with the RAs. The research team used a field journal in Dedoose (version 8.3.35) and Excel from the study conception through completion. As part of the field journal, memoing was used to establish an audit trail throughout data collection and analysis. Memoing provided a method for reflexivity and was used to maintain consistency among the research team (Birks et al., 2008). Memoing was used as part of the inductive process to document patterns identified from the data and determine if there were expected concepts not being seen in the data (Satterlund, n.d.). Memoing was also used in the raw data analysis to open communication and explore similarities and differences among the research team to collaborate on code and statement definitions (Birks et al., 2008). As perspectives changed throughout the research process, the field journal justified when and why the change occurred (Birks et al., 2008). Each member of the research team used Excel to individually perform a first cycle analysis of each transcription using line-by-line coding to identify words and phrases that emerged and were related to the research questions and the overall storyline (Stuckey, 2015). Codes were then assigned to the identified phrases and words. The first cycle resulted in each research team member identifying and documenting conceptual groupings of the codes that reflected commonalities and relationship clusters as described by Marshall and Rossman, 2011. A "lean coding" approach was used in the coding process to ensure only essential relevant codes existed (Creswell & Poth, 2018, p. 190). As suggested by Creswell & Poth (2018), this approach was used by starting the code development small with each research team member, then expanding as the code cycle collaboration progressed. The process was followed by a final review to again reduce the codes to a manageable number for theme development. The primary investigator entered the identified codes into Dedoose (version 8.3.35) and tagged related transcript excerpts. Additionally, a

codebook was developed in Excel to represent the codes' scheme to assist with organization and interpretation (Saldana, 2014; Stuckey, 2015). The codebook consisted of identified codes, code definitions, and where the codes were found. For member checking, the study participants were contacted by email by the RAs and sent an abbreviated summary of their interview. This process helped ensure the credibility of data collected by asking participants for adjustments or corrections to the researcher's understanding of the transcription. The primary investigator collaborated with the RAs for a second cycle coding analysis to check for the need to reconfigure codes, as needed, and add or remove text to existing codes (Saldana, 2014). Following the second cycle of coding, the research team met virtually through Zoom to verify the accuracy of the codes. This process was used to add credibility to the study by triangulating the analysis's outcome within the research team (Carter et al., 2014; Henderson & Rheault, 2004).

A thematic analysis was conducted by the primary researcher to draw out concepts and themes from the coding outcome (Saldana, 2014). The analysis determined the emergence of major themes (Saldana, 2014). Once themes were identified, a visual representation of PTA students' perceptions of successful performance was developed by the primary researcher. This image illustrated connections and synthesized key concepts discovered through data analysis (Verdinelli & Scagnoli, 2013). To ensure understanding of the phenomena under study, the research team performed investigator triangulation to evaluate the developed themes and visual display to secure intercoder reliability. This method added breadth to the study and fostered the credibility of the final data outcome (Carter et al., 2014). Triangulation was performed by each member of the research team reviewing the data and the visual representation in Dedoose (version 8.3.35) and Excel. As a second member checking method to ensure accuracy,

participants were sent a copy of the final thematic analysis by email with an opportunity to provide comments.

An external audit was performed by the RAs' qualitative TWU DPT advisor to reduce researcher bias. The advisor reviewed the data collected to determine if her conclusions were comparable to those of the research team. The advisor provided comments to the research team following the audit. All comments from the participants, the external auditor, and the research team were discussed via a virtual meeting using Zoom following the review. Adjustments to the final data outcome were completed as needed based on feedback from the participants and the research team. The analysis was complete following the final adjustments.

### **Rigor/Trustworthiness**

Guba's Model of Trustworthiness was used to ensure rigor and address the reliability and validity of the data collected and analyzed (Henderson & Rheault, 2004). The model contains the four assessment components: credibility, transferability, dependability, and confirmability (Henderson & Rheault, 2004). Each component was addressed in the proposed study.

The study addressed credibility in multiple ways. The primary researcher participated in reflexivity by using a field journal throughout the research process (Henderson & Rheault, 2004). Student success is a strong focus of the program director's job; therefore, the researcher's perception and beliefs could affect the analysis without the use of reflexivity. Credibility was also addressed through member checking and triangulation. The RAs conducted member checking following transcription and data analysis to ensure the data collected reflected the participant's accurate perceptions of their experience. Triangulation was also used among the research team to enhance the intercoder reliability of the data interpretations after the coding and recoding processes (Carter et al., 2014). To address credibility through structural coherence and

consistency among the research team members, the primary investigator developed a codebook to document emergent definitions to be used during data analysis (Henderson & Rheault, 2004).

The transferability component was addressed through a thorough description of the study sample (Henderson & Rheault, 2004). The primary investigator selected the study participants based on the information they provided during recruitment. The participants were chosen to represent various demographics and attributes often found in PTA students from a program housed in a community college located in a large urban metropolitan area.

The research team consisted of the primary researcher and three research assistants. To demonstrate the dependability of the study and track variability among the researchers, an audit trail of marginal notes and memoing was used during all data collection and analysis. To also address dependability, a code-recode procedure compared the results of the research team (Henderson & Rheault, 2004).

Researcher bias was addressed in this study. To demonstrate the confirmability of the study, triangulation, reflexivity, and an external audit was performed. As described, triangulation was used among the research team members throughout the data analysis, and the primary investigator used a field journal to participate in a reflexive analysis (Henderson & Rheault, 2004).

## **Results**

Participant (N = 11) demographics and characteristics are described in Tables 1 and 2, respectively. Participant numbers and pseudonyms were used to protect participant privacy. All participants were current students in the Houston Community College Physical Therapist Assistant (PTA) Program. Five males and six females were interviewed, with ages ranging from 23 to 43 years old. Ethnic representation of the interviewees consisted of four Caucasians, one

Hispanic, two Asian Americans, two African Americans; and two who self-reported two or more ethnicities. Six participants had been successful in all program courses while five of the participants had experienced a course failure and were required to repeat a course. Each interview was conducted through the Zoom platform and ranged from 43 to 83 minutes.

Four major themes emerged that create a picture of student perception of successful performance in a PTA Program: Measures of Success, Facilitators of Success, Barriers of Success, and Program Expectations. Subthemes further elucidated the students' perceptions.

### **Theme 1: Measures of Success**

Measures of success emerged as an overarching theme with two sub-themes. All 11 participants referred to success in objective measures such as grades or grade point average, completing the program, passing the licensing examination, and obtaining a job as a PTA. In addition, nine of the 11 participants referred to successful performance beyond objective measures that included effective critical thinking and skill application, the ability to provide quality patient care, and intrinsic components, such as how success made them feel. One participant, Jeff, commented, "obviously you need to pass but can you take what you learned and apply it to what you need to do." Another participant, John, stated, "successful performance is to graduate from the program and get a job, but also to feel like you own something."

Earning a grade equivalent to a "C" or better in all courses in the HCC PTA curriculum is required to complete the program. Students who do not earn a "C" or better must repeat the course and are delayed a year or are dismissed from the program. Several students commented on the importance of earning satisfactory grades but indicated a difference in what those grades needed to be. Marie related, "as long as you're above the failing mark you are good" while Jeff said, "a good performance for me is an A that has checked all the boxes." Jennifer commented

on how her view of grades had changed over the course of the program: “I used to think that getting an A was like successful performance, but I would now say a B is successful performance for me.”

Graduation from a CAPTE- accredited program is required for PTA students to sit for the National Physical Therapy Examination (NPTE). Passing the NPTE is required to earn a state licensure/certification which is required in all 50 states to be employed as a physical therapist assistant. John stated, “get a degree, first major thing; pass the boards, second major thing; and being a licensed therapist is success.” George stated, “success to me is to graduate from this program and get a job.”

Beyond the objective measures, participants also identified successful performance in terms of critical thinking and applying skills in lab and clinical environments. Jeff stated, “can we take all the information that we’ve just spent the last few months memorizing and then now can we move it over to apply it?” Jamie commented, “[success in the program] is just knowing everything like, know it and then being able to apply it like when I go to clinicals.”

The ability to provide quality patient care was mentioned by several interviewees as an indicator for successful performance. John stated, “[successful performance is] getting people back to their functional state.” George described “successful performance is to watch them [patients], walk out of the clinic when they are discharged. It’s heartwarming.” Jordan stated, “treating a patient with a T12, spinal cord injury, felt really good. That was one of my high moments in this program.”

The students’ perceptions of successful performance also included intrinsic components that provided inherent satisfaction from their successful performance such as personal positive feelings and achievements versus external grade achievements. Theo commented, “to be

successful in the program to me, is to be successful in my parents' eyes." Rebecca stated, "being able to look back at what you have accomplished and have no regrets." Joe added, "being able to have an intelligent conversation with other medical practitioners and be able to know what you're talking about." John commented "[being able to be successful] in this program has made me a better person in other aspects of my life."

### **Theme 2: Facilitators of Success**

Facilitators of success surfaced as a theme, which resulted in the discovery of several sub-themes that contributed to the students' perception of achieving success. These sub-themes centered around classmates, faculty, mental state, family, and financial stability.

All 11 participants voiced that their classmates were a large contributor to their success. Marie stated, "I found people who I could study with and rely on and we kind of formed this group." Jamie added, "classmates for sure have a big role in my success." Jennifer commented, "classmates help because we are all stressed, and we understand what it's like to be a student."

Faculty were reported to be a facilitator of success by all 11 participants. Stephanie commented, "I don't think I would have been able to make it this far without them telling me I am able to do it, I'm smart enough, and I am not a burden." George stated, "[Faculty] go way beyond the call of duty with the guys who are helping us out." Jennifer added, "when things in life happen, it helps to know that the faculty supports us and don't just see us as students, but as people too."

Mental state emerged as a sub-theme for facilitators of success and included categories such as mental health, work-life balance, and confidence. Nine of the 11 participants commented on the need to improve their mental health by finding balance. The actions mentioned included taking breaks or clearing their mind. Jordan stated, "I spent quality time with my family. I just

decided to slow down my pace because it was overwhelming at the time...screw the books, let's go have fun. It's helped a lot with my mentality." Jeff commented, "so now I know that I need to like sit back and say hey, I need time to myself, to have the best mental health." Joe added, "I came to the conclusion that I do need balance, simply because I knew that it wasn't sustainable." Having self-confidence was mentioned by 10 out of the 11 participants as contributing to their mental state. Theo commented, "you definitely need self-confidence to be successful." George stated, "you've got to first have that mindset to say hey, I gotta be confident. I gotta be confident before I make the first step." Stephanie added, "it starts with believing in yourself. Thinking you are able to achieve this goal and be successful." In relation to confidence towards a specific task, Rebecca stated "being confident going into an exam or a lab practical, doing well and having your grade reflect [the performance] gives you more confidence moving forward."

Family support was also voiced as a contributor to success by 10 of the participants. Jennifer commented, "huge, huge, huge role [in my success]. It's my family, my boyfriend, my friends, and my church family, like they have always encouraged me." Rebecca reported, "[parents] taught us to have the best mindset and make sure we do everything we do, the best we can." George added, "I like family. They look up and expect success. I got a 21-year-old daughter. I gotta try to be on top of my game."

The lack of financial struggles was mentioned by eight of the 11 participants to be a facilitator of successful performance. Joe mentioned, "we do not have to worry about the actual tuition costs and the books 'cause we did preplan for all of this." Stephanie commented, "Luckily I qualify for grants, so I don't have to stress." In addition, John stated, "If I wasn't financially stable, I don't think I would be successful."

Although there was not a specific sub-theme of external activities identified by all participants, seven of the 11 participants mentioned such activities as contributing to their success. Among these were religion (4 interviewees), exercise (3), or experience as a physical therapy technician (2). Jennifer commented, “my spiritual health is very important. If I’m not spending time in my faith, that does impact my self-confidence.” Joe stated, “I started to exercise a little more to take breaks, walk around my neighborhood. That’s been really helpful.” Theo added, “my mentor at work helps me be able to apply skills. You need to separate that tech mind into that PTA mindset. Being told what to do versus doing it and telling the patient what to do.”

### **Theme 3: Barriers to Success**

Interestingly, many of the facilitator sub-themes also surfaced as sub-themes under barriers to successful performance. Mental state with the same categories of mental health, work-life balance, and confidence rose to the top as far as barriers to success. Nine of 11 participants mentioned they struggled with balance and mental health issues that affected their success. Jordan commented, “If I don’t succeed at something it means that I am like nothing. Like I know nothing from the whole program.” Marie described “feeling overwhelmed and I think I am done with this program. It’s time for me to quit.” Stephanie stated, “I was worried. What if I am not good enough? I don’t know what my purpose is.” Jeff added, “There are times where it sucks because it feels like all you do is you live, eat, and breathe this stuff and there are times where you just want to go out and relax and you can’t.”

Each of the study participants were in the PTA Program during the Coronavirus pandemic (COVID). Ten of the 11 participants mentioned that COVID and additional environmental adversities were a barrier to success. Campus closure or limited access due to weather events and COVID were mentioned. Jamie commented, “Darn COVID. If COVID

didn't happen everybody would be more successful." Rebecca stated, "...it affects my confidence when I cannot practice at school but only at home." Stephanie added, "...it is draining looking at a screen all day. I'm tired. You are trapped in your room all day."

Another barrier to success mentioned by seven out of 11 participants was faculty behaviors and grading policies. George stated, "The program doesn't seem like it's student centric." Marie commented, "They have a really high expectation for us, but when they [the faculty] mess up, it's not the same accountability." Stephanie added, "They dock you for things on your lab exams; it's so overwhelming."

Family dynamics, classmates, prior physical therapy technician experience, and financial burdens were mentioned by four participants as a barrier to success. Although not an overall sub-theme these topics were mentioned as significant barriers by the specific participants. Stephanie stated, "...my dad just doesn't care, it was just so toxic with him." Jamie commented, "I was really intimidated by my classmates, and I just felt they were so much better than me when it comes to labs." Theo added, "Where I work as a tech, they don't do it this way [the way they were learning in lab]. This is dumb. Why is the instructor doing it this way? I didn't really want to learn that way." Rebecca stated, "[lack of] finances adds more stress because I have to pay my own bills and after I totaled my car, how am I supposed to buy a new car because that costs money?"

#### **Theme 4: Program Expectations**

Program expectations emerged as an overarching theme with three sub-themes. Participants described both externally and internally driven sources of expectations as well as how they adjusted their expectations and strategies for success after they entered the program and after exam or course failure. Ten of the 11 participants commented that the PTA program

was harder than they expected. External sources included having earned a previous degree, and the fact that the PTA program was provided in a community college, which led them to believe it was not going to be rigorous. Marie stated, “I didn’t think it was going to be hard. I have a degree. This was just going to be like a cool little two-year program.” Stephanie commented, “I didn’t expect it to be so difficult. Ok, it’s just a community college.” George expressed his surprise by stating, “this program is a different ballgame.”

Internally driven expectations stemmed from previous personal successes and self-confidence. John commented, “I knew I was going to do well, but the program is much harder than I expected.”

Marie stated:

I’ve never failed at anything. I have a lot of self-confidence. Self-confidence is a roller coaster in this program, and it depends on the daily. You just kind of celebrate everything because you never know when it could end really in this program and that’s the scary part.

Adjustments to expectations and changing success strategies were mentioned by seven of the 11 participants. Out of the 11 participants, five failed a course and were required to repeat the course the following year. Rebecca stated, “[failure] was a lesson I needed to learn so I could understand the work that I needed to put in to be successful.” Jaime commented, “I feel like I disappointed so many people when I failed, I wanted to succeed so now I spend more time studying and I cut things off with my friends and family to get rid of distractions.” As rigor increased in the program, John stated, “No matter how hard it is going to get, I will put in the work, and I am confident I am going to succeed.” George commented, “I was giving everything up, if I fail, where do I go from there, failing is not an option.” Jennifer expressed, “I realized

that I needed support from others to be successful [in the PTA program], after failing in the DPT program.” After a disappointing exam result, Joe added, “I needed to ask my classmates what they’re doing, because what I was doing was not the right way to go about it.”

In addition, eight of the 11 participants stated their expectations changed over time. Rebecca stated, “I didn’t go into it with the expectation that I would do poorly. I was very confident until I got into the program; then you realize you don’t know as much as you think you did.” Theo commented, “I thought I was gonna do excellent. I took it for granted and underestimated the difficulty. The program got harder and harder when I expected it to get easier.” George reported, “I was confident. I was on top of the world until reality set in.”

Though the participant interviews were conducted one-on-one, the results demonstrated high consistency among the students regarding their perceptions of success, the facilitators and barriers to success that they identified and how their expectations were often different from their actual experiences in the PTA Program. See Figure 1 for a visual representation of identified themes that emerged from the study.

### **Discussion**

This research study aimed to answer four questions. The primary question was to determine how students perceive successful performance in a physical therapist assistant program. Participants referred to success in objective measures such as grades or grade point average, completing the program, passing the licensing examination, and obtaining a job as a PTA. In addition, they also referred to successful performance beyond objective measures that included effective critical thinking and skill application, the ability to provide quality patient care, and intrinsic components, such as how success made them feel.

The second research question was to determine how PTA students perceive the impact of external factors on their performance/success. Financial stability, positive support from classmates, faculty, and family were mentioned as external factors that contributed to successful performance in the PTA Program. Negative faculty behaviors and environmental situations that closed access to the campus such as COVID-19 and weather-related storms were mentioned as barriers to successful performance.

The third research question was to determine how physical therapist assistant students perceive the influence of self-efficacy on their performance/success. As noted, Bandura (1997) defines self-efficacy as a construct within a theoretical system and confidence as a general term without specificity. During the analysis, the researchers applied the term “confidence” to statements made by the participants regarding their beliefs in their general ability to succeed in the program and “self-efficacy” when the participants referred to specific tasks such as taking a lab exam. Having self-confidence was mentioned by participants as contributing to successful performance on specific tasks and general expectations of program success. Participants also mentioned that increased self-confidence improved their overall mental state. Participants stated that when they struggled with work-life balance and mental health issues, such as stress and anxiety, their self-confidence decreased, and this change negatively affected their successful performance on exams.

The fourth research question was to determine how physical therapist assistant students’ perception of success changed throughout the program. Participants commented that they had high expectations of success in the program initially due to their previous educational experience and past achievements. Participants’ expectation of success in the program changed after experiencing the rigorous educational demands found in a two-year PTA program. Although

many of the participants experienced disappointing results in examinations or final course grades, it did not adversely affect their ability to eventually succeed. Several participants commented on their need to adjust their expectations by removing distractions, seeking support, and persevering through adversity.

When a student matriculates into a PTA program, it is common for them to have expectations that are based on such factors as previous work and educational experiences, their level of self-confidence and their support systems and resources. Because of the nature of the curriculum and the level of skill application required, students commonly find the need to adjust their external environment, their study strategies, and their expectations to be successful. It is the responsibility of the institution, program, and faculty to address the different needs and situations of the students in order to promote successful performance. Appropriate retention efforts should be in place to foster intellectual growth and effective coping mechanisms. Although there is no universal solution to ensure student success, an understanding of successful performance through the students' perception will provide insight to inform the development of best practice strategies. The PTA students in this study identified both factors that propelled their success and barriers that inhibited their successful performance in the PTA program. Four themes emerged: measures of success, facilitators of success, barriers to success, and program expectations.

All participants identified objective measures of success such as passing tests, effective lab performance, passing the National Physical Therapy Examination, and getting a job as a licensed physical therapist assistant. This is consistent with previous research that has traditionally defined student success as on-time graduation, program completion and passing the board examination (Kabiri et al., 2017; Maring et al., 2013; Wheeler et al., 2018; York et al., 2015). Similar to Bowman et al.'s findings (2019), many of the participants also reported

measures of success using non-cognitive factors that included positive personal feelings and achievements such as being seen as successful in their parents' eyes or receiving positive affirmation from faculty and patients. In addition, participants identified factors not found in the literature such as skill application, providing quality patient care, and being able to have intelligent conversations with other medical professionals. In light of these findings, PTA programs may benefit from retention interventions that incorporate non-cognitive factors that promote positivity, hope, and confidence such as the positive psychology intervention discussed in the research by Trask-Kerr et al. (2019).

Several sub-themes were identified as facilitators of success by the participants. Classmates and faculty support and positive relationships were mentioned as facilitators by all participants. In agreement with this present study's findings, Jacobs et al. (2015) and Cassidy et al. (2020) found that positive faculty experiences, peer-to-peer emotional support, and a sense of belonging enhanced success in nursing students and United Kingdom student physiotherapists, respectively. As a retention strategy, faculty may consider the development of interventions early in the curriculum that include classroom activities that promote positivity and peer support. Another strategy that could be initiated include faculty coaching on how to deliver feedback that promotes positive emotions. Positive psychology and classroom interventions by Seligman (2009) found that positive interpersonal relationships and positive education experiences contribute to flourishing and improved quality of life. Faculty feedback can play a role in their interpersonal relationships with students. Feedback that builds on skills that are performed well increases self-efficacy and reinforces successful behaviors, while necessary corrective feedback should be centered around specific task performance. Identifying the specific performance correction promotes goal-directed behavior versus emphasizing negative emotions (Scorsolini-

Cormin et al., 2013). In addition to faculty and classmate support, family support was identified by 10 out of 11 participants as playing a role in their success. This finding is consistent with the those of Wray et al. (2014) which concluded that facilitators for nursing degree completion included a healthy family support system. PTA programs may consider improving communication and relationships with the students' families by implementing a "family day" or a "program newsletter" to provide families a glimpse into the lives of PTA program students and suggest ways to support them.

For the purpose of this study, mental state includes mental health, work-life balance, and confidence. Some aspect of mental state was identified by all of the participants as important to successful performance. Many felt that the need to find balance was imperative to improve their mental health, reduce stress, and enhance their focus. Participants reported that improving their mental state resulted in an increase in their overall self-confidence, which was identified as necessary to meet specific performance expectations. These findings agree with the findings authored by Van Veld et al. (2018), that self-efficacy is confidence in first year DPT students' ability to use coping strategies to make a positive change in a stressful situation. A majority of our participants indicated that believing in yourself is the first step toward successful performance. This finding is consistent with Gregor (2020), who found that students in two-year public institutions are more likely to overcome barriers to achieving their goals if they believe they have the capability of succeeding. According to Burt (2021), addressing mental health issues openly by implementing mental health initiatives, which include balance, exercise and wellness, will lower stress and increase educational engagement. PTA programs can benefit by adding in work breaks during the day or classes conducted out of doors to foster a more relaxing and positive environment.

Although many of the identified barriers to success involved the same categories as facilitators of success, the external environment was identified as an outlier by the participants in this study. The Coronavirus pandemic of 2020 (COVID-19) upended the educational system and has affected student opportunity and achievement. According to the Office of Civil Rights' report, *Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Student* (2021), the pandemic has aggravated already pre-existing race- and ethnicity-based inequities in education. This finding is a concern since the majority of PTA programs reside in community colleges and Gregor et al. (2020) noted that community colleges enroll a high percentage of marginalized groups, and these students already face additional barriers to success. Ten out of 11 participants in our study indicated that the pandemic and other environmental events (such as an ice storm) that forced campus closures, negatively impacted their success. Participant comments included the inability to connect with classmates, the struggles with online learning, and the lack of opportunities to practice hands-on skill application, among others. According to the report by the Office for Civil Rights (2021), 80% of college students stated that COVID -19 negatively affected their mental health by increasing their feelings of isolation and anxiety as well as decreasing their confidence in achieving success. Burt (2021) suggests implementing strategies to combat the isolation and anxiety such as creating spaces for students to connect, transparent communication regarding the pandemic, promoting the positive aspects of remote learning, and increasing communication to students through the use of social media.

Mental state was indicated by participants as a significant barrier to success, due to the challenge of maintaining work-life balance, the increased stress as a result of the rigorous coursework, and high program expectations. In related research by Gautman et al. (2020), college students reportedly faced difficulty managing the transition to college, which in turn

increased anxiety. Common comments reported by this study's participants related to self-doubt and poor health effects, such as lack of sleep. These findings are consistent with those of Ramirez et al. (2018) and Ouweneel et al. (2013) who found that high anxiety and decreased belief in university students' ability can be a barrier to successful performance and goal achievement. Implementing mental health initiatives as addressed earlier, at the beginning of the PTA program, may assist students with the transition and may avoid the ill effects of increased stress and anxiety.

An additional barrier to success identified by our participants was faculty behaviors of disrespect and lack of accountability. Comments included lack of student-centric behavior, mistrust of the grading policy, and a disrespectful tone when addressing students. A study by Smith et al. (2021) provides agreement with our participants' comments that negative faculty attitude and behavior may impede success by reducing self-confidence and poorly affecting the student and teacher relationship. Bettencourt et al. (2021) promotes tailoring (individualizing) retention interventions with college students to build trust and that contain a holistic and student-centered approach to enhance student success. Sharing the results of this current study with faculty may initiate conversations of how to embrace a more positive culture and improve interpersonal relationship between faculty and students. PTA program faculty may be able to promote trust in the student-teacher relationship by adding short-term goal setting activities with positive reinforcement. During these activities, faculty should use a respectful and encouraging tone to increase student self-efficacy and enhance their desire to perform successfully.

The final theme centered around student expectations of success in the PTA program. Most PTA students have not experienced a technical educational program prior to matriculating in the PTA program. Expectations were derived from past experiences and inaccurate knowledge

of program rigor. Approximately 65% of Houston Community College PTA students matriculate with an earned bachelor's degree; 9 of 11 of our participants entered the PTA program with a bachelor's degree and one participant had an earned associate degree. Leiken's (2017) research found that dental-hygiene students in a two-year program were more successful with a previous earned degree than those who lacked a previous degree. However, all participants in this study voiced their surprise at the difficulty of the PTA program which is a two-year degree offered at a community college and that the program was much harder than their previous educational experience. Comments centered around the expectation that community college would be less rigorous, especially with their previous educational experience at a four-year institution. PTA programs should consider adding real-life stories of PTA student experiences, challenges and strategies to program information sessions and program orientation.

Other drivers of expectations of success were more internally situated such as perseverance, high self-confidence, and previous successes. Research on self-efficacy has determined that those individuals with high self-efficacy do not look at challenges as a threat (Bandura, 1994; Rowbotham & Schmitz, 2013). Adding a self-efficacy measurement component to program admission criteria as a non-cognitive factor may be beneficial in identifying a future at-risk student. The majority of our participants experienced a change in expectations of their success once they failed an exam or course. This resulted in the need to adjust strategies and expectations to be successful moving forward. This is consistent with literature that documents the importance of the students' ability to use coping strategies to make a positive change in a stressful situation (Van Veld, 2018). Students who fail may experience low self-efficacy which can affect their determination to succeed (Ouweneel et al., 2013; Ramirez, et al., 2018). By communicating program expectations early in the process, providing activities early in the

program that allow for success, and devising interventions that promote persistence and self-efficacy following failure, students may be able to face the rigors of a professional program. In addition, these steps may foster the ability for students to bounce back following adversity.

Previous literature on student success has focused on increased retention challenges in community college students due the high percentage of students who are non-traditional, come from low-economic and marginalized communities (Easley 2016; Gregor 2020). Although the participants from this present study were diverse and represented non-traditional students with financial challenges, student debt, and marginalized groups, no participant reported this as a barrier to their success. In fact, two students stated that being older gave them a better perspective on success and the effort it takes to be successful. In addition, although two participants reported over \$50,000 in student debt, neither participant stated that financial issues were a barrier to their success in the PTA program. One participant commented that her lower income status while she was growing up motivated her to be successful in the PTA program so she would be able to support herself. Four of the 11 participants commented that having to work added stress to their lives and adversely affected their work-life balance but not their overall ability to be successful. Although the participants from this study represented diverse ethnicities, there was no evidence in this population of an increased risk of academic adversity based on race or ethnicity. Of the 11 participants, five experienced an educational delay due to course failure. These five participants included all races represented in the study; Caucasian (1), Hispanic (1), African American (1), and Asian (2). The six participants who experienced on-time graduation included three Caucasians, two African Americans and one student who self-reported being of two or more races.

### **Study Limitations**

This study does contain limitations. The participants were all from one PTA program. The participants represented a diversity of characteristics found in the HCC PTA program; however, most participants were self-proclaimed financially stable. In addition, the external factors experienced by the participants were varied and no one external factor seemed to have a significant effect on successful performance. Selection bias may have affected the results of the study, as students who volunteered to participate in the interviews may have had strong opinions on the subject of student success, as they persevered through course failures and were driven to share their personal experiences, both positive and negative.

Although the research assistants who conducted the interviews were mentored, they did not have previous experience in qualitative interviewing. This lack of experience may have resulted in missed opportunities to develop a richer understanding of the concepts that emerged during the interviews. Although saturation was not anticipated or expected in this study, our inexperienced interviewers may not have provided adequate follow-up questions to support common activities or categories that may have approached saturation. (Creswell & Poth, 2018).

A common limitation and risk in qualitative research, as noted by Henderson & Rheault, (2004), is researcher bias. The primary investigator (PI) was the director in the PTA Program under study. Although the PI did not conduct the interviews, she did perform the data analysis which may have influenced the results. To mitigate researcher bias, analysis was performed in conjunction with the research assistants, and an external audit was performed through the coding and theme development. Because the interviews were conducted virtually via the Zoom platform, this may have reduced the social interaction and visual communication between the participants and the interviewers. It may have been challenging to establish a comfortable environment and for the interviewers to see facial expressions or body language.

### **Implications for Future Research**

This study serves as a foundation for future research on the student perception of successful performance. Future research could include other PTA programs, public, private, and proprietary, in differing regional locations, with different student populations, a different number of faculty, and varying cohort sizes. In addition, future research on this topic could include those students who did not succeed in the program and chose or were unable to continue. Including additional populations would allow a deeper exploration of the phenomenon under study. To develop effective retention strategies, additional research could involve investigating the impact of social interaction among classmates, as well as the effect of faculty behaviors on student success. Although Hepworth et al. (2018) found that social factors were secondary to students' success in comparison to academic preparedness, the results of this current study demonstrate the need to investigate the social and intrinsic aspects of the PTA program experience.

Another suggested area of research is the concept of student expectations of the PTA program experience and their potential for success. All participants in this study acknowledged that the PTA program was harder than they expected; they were not prepared for the speed of content delivery or the rigorous expectations. Additional studies could address unrealistic student expectations.

Lastly, research that includes the student perception should be included in the development of both proactive and remedial retention interventions. As this research demonstrates there are many variables that contribute to student successful performance and varying lenses, including students' perceptions are necessary to develop effective strategies.

### **Conclusion**

The present study summarizes four themes that pertain to perceptions of successful performance in PTA program students. The themes that emerged were measures of success, facilitators of success, barriers to success, and program expectations. The results of this study are consistent with York et al. (2015) definition of success that included academic achievement; however also included skill attainment, satisfaction, persistence, and performance following graduation. The present study results are also similar to the findings of Wray et al. (2014) who noted that facilitators of nursing student degree completion are family and peer support and clear educational expectations.

Community college faculty and leaders are increasingly interested in mechanisms to become student-centered institutions, increase student retention, and improve the student experience. To enhance student success, it is imperative to meet students where they are and that cannot be done unless students are asked and heard (Ericksen, 2020).

This study provides evidence that developing simple retention strategies which promote a sense of belonging and an atmosphere of positivity can be beneficial for student experience and persistence. Strategies should avoid additional burden to the student to avoid increasing mental stress and anxiety. An understanding of these student perceptions will aid program administrators and faculty in developing retention strategies that can effectively address what the students believe to be of primary importance in their ability to persist and successfully graduate in order to begin their professional lives.

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**Table 1***Participant Demographics*

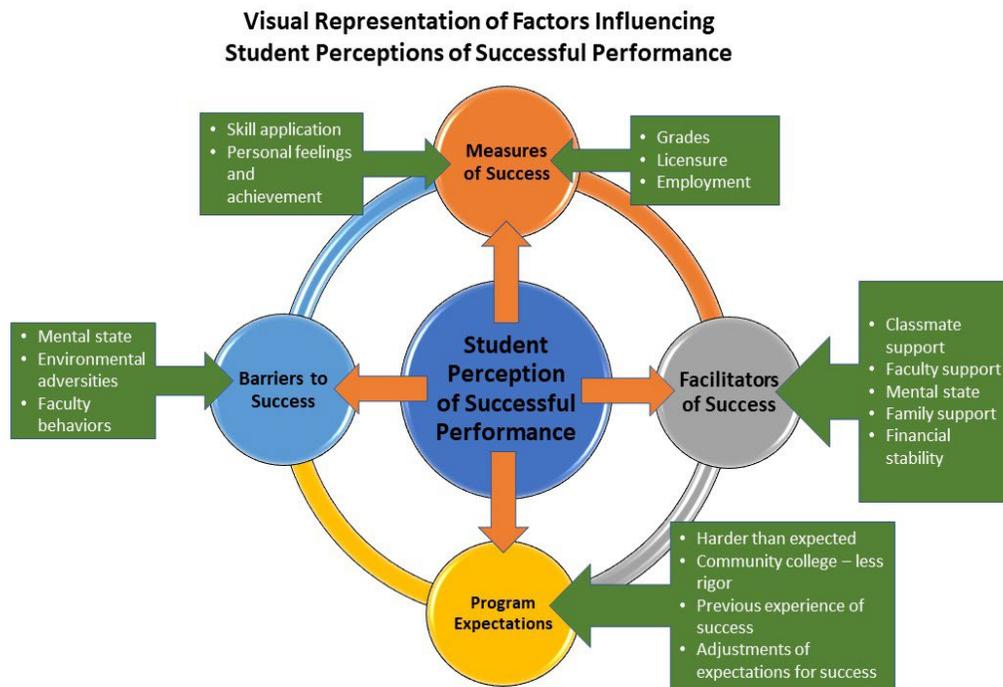
Study Identification Number	Pseudonym Used for Study	Gender	Age	Ethnicity
168	Joe	Male	38	Caucasian
180	Jennifer	Female	24	2 or more races
108	Jeff	Male	24	Caucasian
152	Maria	Female	28	Hispanic
182	Stephanie	Female	24	2 or more races
175	Rebecca	Female	30	Caucasian
162	Jordan	Female	35	Caucasian
114	Jamie	Female	23	Asian
159	John	Male	37	Black
122	George	Male	43	Black

**Table 2***Participant Characteristics*

Pseudonym Used for Study	Year in PTA Program	Passed classes YTD on 1st attempt	Married or Household Partner	#Children living at home	Housing shares in paying my expenses	Employment	Current amount of student debt
Joe	1st year	Yes	Yes	1	shares in paying my expenses	not working	None
Jennifer	1st year	Yes	No	0	shares in paying my expenses	10 – 24 hours/week	10,000 – 29,000
Jeff	1st year	Yes	Yes	0	shares in paying my expenses	10 – 24 hours/week	None
Maria	3rd year	No	Yes	2	live with someone else who pays all my expenses.	not working	> 50,000
Stephanie	3rd year	No	No	0	shares in paying my expenses	< 10 hours/week	None
Rebecca	3rd year	No	No	0	shares in paying my expenses	40 or more hours/week	> 50,000
Jordan	2nd Year	Yes	Yes	1	live with someone else who pays all my expenses.	not working	None
Jamie	3rd year	No	No	0	live with someone else who	10 – 24 hours/week	<10,000

					pays all my expenses.		
					live with someone else who does NOT share in paying my exp	10,000 – 29,000	
John	2nd Year	Yes	Yes	0	25 – 39 hours/week		
					shares in paying my expenses	10,000 – 29,000	
George	2nd Year	Yes	No	1	not working		
					live with someone else who does NOT share in paying my exp	10,000 – 29,000	
Theo	3rd year	No	No	0	25 – 39 hours/week		<10,000

Figure 1



## Appendix A

### Study Recruitment Information Form

Hello, although you know me as Professor Voight, Program Director of the Houston Community College's (HCC) Physical Therapist Assistant Program (PTA), I am coming to you today as a student in the Doctor of Health Science Program at the University of Indianapolis.

I have become very interested in developing strategies within the HCC PTA Program that will help students to be successful in their required courses. Although the faculty developed a retention program recently, using their wealth of experiences, we did not ask what "doing well" or "success in the program" meant to you, the PTA student. In order to fill that gap, I decided to study the PTA student's perception of success and successful performance. I am here today because I want to offer you the opportunity to participate in this research study. Participation has no bearing on your status in the program or your grades. All identifiable information will remain confidential. If selected to participate, you may terminate your participation in the study at any time.

This study involves the participation of three Research Assistants who are Texas Woman's University (TWU) Doctor of Physical Therapy (DPT) students, and 10 PTA students from HCC. In order to participate, the PTA student must have earned a passing grade in all required program courses in at least the first semester of the program. Ten HCC PTA students will be selected from those students who volunteer. Every effort will be made to ensure a variety of participants in terms of all characteristics on the demographic form are represented in the study. Each HCC PTA student will participate in one interview conducted by two TWU DPT students (approximately 45–60 minutes long). Interviews will be audio-recorded. I will not be involved in the interview process; however, I will be analyzing the transcription. You will only

be identified in the interview and the study process by your HCC student ID number. During transcription and data analysis it may be possible that I recognize a demographic characteristic of a student, but there will be no efforts made to determine the exact identity of the participant.

If you are interested in participating, please complete the demographic information form that you have received. Once complete, place the form in the envelope that is being held by your lead instructor in this class. In order to participate, the demographic form must be completed by the end of class and placed in the envelope. I will not be present when you decide if you have an interest in participating. I will have no knowledge of who has or has not chosen to participate.

The demographic information will be entered into a password protected spreadsheet by the program administrative assistant. She will send the spreadsheet to me and I will choose the 10 de-identified participants based on various reported demographics, as explained above. Once selected, you will be contacted by one of the TWU DPT Research Assistants through your HCC student email that you entered on the demographic form. That email will explain that you have been selected and to expect a phone call from a Research Assistant, again to the number that you indicated on your demographic form. During the phone call, the time and date for the interview will be determined. The mechanism by which the interview will be held will either be in a conference room, face to face, with two Research Assistants or it will be held via Google Meets, depending on the status of COVID-19 restrictions. The format of the interviews will be the same for all participants. The format of the interview will be decided prior to contacting you to schedule an interview.

If you have any questions, I will be happy to answer them now. However, in order to maintain confidentiality and avoid any possibility of bias or coercion, questions after today

should be directed to the Research Assistants. Their names and email addresses are below. Thank you for your consideration.

Sincerely,

Michele Voight

Research assistants:

Breasha Blaylock, SPT [bblaylock1@twu.edu](mailto:bblaylock1@twu.edu);

Kaylee Hedricks, SPT – [Khedricks@twu.edu](mailto:Khedricks@twu.edu)

Emily Mowrey, SPT – [emowrey@twu.edu](mailto:emowrey@twu.edu)

IRB Approval – Houston Community College, Texas Woman’s University, University of Indianapolis – reliance agreement with Houston Community College

**Appendix B****Study Participant ID # 101****Student Demographic Information for the Qualitative Study:****Student Perceptions of Successful Performance in a Physical Therapist Assistant Program**

1. Participate in the study (circle one) \* Yes or \* No

- If you have circled “No”, **you do not need to complete** this demographic form. If you circled “Yes”, you are consenting to be a participant in the study and need to complete the following questions on this demographic form.

2. Student preferred email: \_\_\_\_\_

3. Student cell phone: \_\_\_\_\_

4. Age \_\_\_\_\_ Identified Gender \_\_\_\_\_

5. Ethnicity (circle one)

\* 2 or more races \* Hispanic \* Caucasian \* Black \* Asian

\* Pacific Islander \* Native American \*Other (fill in) \_\_\_\_\_

6. I am considered what year in the PTA Program (circle one)

\* 1<sup>st</sup> year \* 2<sup>nd</sup> year \* 3<sup>rd</sup> year \* 4<sup>th</sup> year

7. I have completed all courses in the PTA Program to date with all passing grades **on the first**

**attempt** (circle one) \* yes or \* no

8. Married or Household Partner (circle one) \* Yes or \* No

9. Number of Children living at home \_\_\_\_\_ Ages of children living at home \_\_\_\_\_

10. Outside of day care arrangements, describe your level of assistance with caring for your

children \_\_\_\_\_

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## 11. Housing (circle one)

- \* I live with someone else who pays all my expenses.
- \* I live with someone else who shares in paying my expenses.
- \* I live with someone else who does NOT share in paying my expenses.
- \* I live by myself and am responsible for all of my expenses.

## 12. Employment (circle one)

- \* 40 or more hours/week      \* 25 – 39 hours/week      \* 10 – 24 hours/week
- \* Less than 10 hours/week      \* not working      \* Other \_\_\_\_\_

## 13. Current amount of student debt (circle one)

- \* More than \$50,000      \* \$30,000 – 49,000      \* \$10,000 – 29,000      \* less than \$10,000
- \* No student debt      \* Other \_\_\_\_\_

## 14. Anything else that positively or negatively affects your ability to be successful in the program?

All demographic information will remain confidential. The information will be used to select various characteristics that are represented in the Houston Community College Physical Therapist Assistant Program. Student names will not be used at any time. Forms will be destroyed immediately following the data entrance into an Excel demographic spreadsheet. The demographic Excel demographic spreadsheet will be destroyed following the end of the study.

## Appendix C

### Email Notification of Participant Selection

Hello,

Thank you for your willingness to participate in the qualitative research study, *Student Perceptions of Successful Performance in a Physical Therapist Assistant Program*. This email is to notify you of your selection to participate in the study. In the next two – four weeks, a research assistant will call you using the phone number you provided on the demographic sheet, to schedule an interview. The mechanism by which the interview will be held will either be in a conference room, face to face, with two Research Assistants or it will be held via Google Meets, depending on the status of COVID-19 restrictions. The format of the interviews will be the same for all participants. The format of the interview will be decided prior to contacting you to schedule an interview.

As a reminder, participation in the study is voluntary and has no bearing on your grades in the HCC Physical Therapist Assistant Program. We are using your school identification number for identification purposes to maintain confidentiality. You may reply to this email if you have any questions regarding the study and you may also terminate your participation in the study at any time without consequence.

Thank you,

Breasha Blaylock, SPT - [bblaylock1@twu.edu](mailto:bblaylock1@twu.edu)

Kaylee Hedricks, SPT - [Khedricks@twu.edu](mailto:Khedricks@twu.edu)

Emily Mowrey, SPT - [emowrey@twu.edu](mailto:emowrey@twu.edu).

**Study Research Assistants**

## Appendix D

### CONSENT TO PARTICIPATE IN RESEARCH

#### Qualitative Study: Student Perceptions of Successful Performance in a Physical Therapist

##### Assistant Program

Primary Investigator: Michele Voight, PTA, MPA – [voightm@uindy.edu](mailto:voightm@uindy.edu) 361-834-1159

Research Assistants: Breasha Blaylock, SPT - [bblaylock1@twu.edu](mailto:bblaylock1@twu.edu)

Kaylee Hedricks, SPT - [Khedricks@twu.edu](mailto:Khedricks@twu.edu)

Emily Mowrey, SPT - [emowrey@twu.edu](mailto:emowrey@twu.edu).

You are invited to take part in a research project to investigate the student perception of successful performance in a physical therapist assistant program. This study will be conducted by Michele Voight, PTA, MPA, Breasha Blaylock, SPT, Kaylee Hedricks, SPT, and Emily Mowrey, SPT.

**Purpose:** The purpose of this basic interpretive qualitative study is to explore student perceptions regarding factors that influence performance in a PTA program.

**Procedure:** This research will involve an interview where you will be asked questions by the Research Assistants (Blaylock, Hedricks, and Mowrey) related to your perceptions of successful performance in the Physical Therapist Assistant Program at Houston Community College. You will also be contacted following the interview and data analysis to clarify comments and questions that arise after analyzing the data from interview.

**Total Time Commitment:** 45 – 60 minutes for the interview. Additional time of approximately 30 minutes will be required to confirm and clarify comments and interpretations following data analysis.

The interview will be audiotaped and transcribed verbatim (word for word) using an encrypted transcription service. The transcription will assist the Principal Investigator (Voight) to accurately analyze the interview at a later date and to capture a more complete picture of what was said/discussed. Only the Principal Investigator and Research Assistants will have access to the transcriptions and audiotapes.

#### Potential risks and steps to minimize the risks:

1. **Loss of time.** The time required will be a maximum of 60 minutes for the interview and approximately 30 minutes will be required to confirm and clarify comments and interpretations following data analysis.
2. **Embarrassment, emotional or psychological distress.** Interviews will be conducted in a non-judgmental manner with open-ended questions. You will have the right to take a break, to skip a question, to change the line of questioning or to terminate the interview—all without penalty.
3. **Confidentiality or identity breach.** Interviews will be conducted in a private meeting room (at Houston Community College (HCC) Coleman Campus in the Coleman Tower building at 1919 Pressler, Houston TX 77030). Private information will not be linked to your name. Private information will be requested only in the minimum level required to answer the research question. Raw interview transcripts and coded interviews, including demographic information and answers to interview questions and audio recordings will be accessible only to Michele Voight, Breasha Blaylock, Kaylee Hedricks, and Emily Mowrey. All data will be stored electronically

using an encrypted transcription and data analysis software application. The data will only be retrievable with the project's unique username and password. Data will be stored until the end of the study. At the end of the study, electronic files will be deleted from the software application services.

4. **Coercion.** Participation in this study is entirely voluntary. If you choose not to participate, there will be no penalty in terms of your physical therapist assistant (PTA) program status, your grades or any other aspect of your time in the PTA program.

*Confidentiality will be protected to the extent that is allowed by law.*

*The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. However, Texas Woman's University or Houston Community College does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research.*

5. Participation in this study is **voluntary** and you may withdraw from the study at any time without penalty.
6. There are **no direct benefits** to you as a result of your participation in this study.
7. You will be provided with a copy of your personal interview, including codes, categories and themes used to analyze the data. Additionally, if you would like a copy of the final results of the study, inform the Principal Investigator (Voight) and it will be provided to you.

*You will be given a copy of this signed and dated consent form to keep. If you have any questions about the research study, you should ask the researchers; their email addresses are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research at 713-794-2480 or via e-mail at [IRB@twu.edu](mailto:IRB@twu.edu) (Houston Community College Office of Institutional Review Board at [irb@hccs.edu](mailto:irb@hccs.edu))*

Participant Name (printed) \_\_\_\_\_

Participant signature \_\_\_\_\_ Date \_\_\_\_\_

Research Assistant signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix E

### Interview Questions

Thank you for volunteering to be interviewed for this study. The purpose of this study is to explore student perceptions of successful performance in a physical therapist assistant (PTA) program. In this interview, we will ask you questions about your perceptions. The interview will last approximately 45 minutes to an hour. This interview is confidential; it will be audiotaped on a voice recorder. The recording will be downloaded to an encrypted transcription service. The interview will be deleted from the voice recorder as soon as the download occurs to the transcription service. The transcription will be analyzed by the primary investigator and the research assistants. The results of the transcription and analysis will be stored in a secure, password protected location, and all data will be destroyed once the project has been completed. You may ask any clarifying questions regarding the purpose of this study, interview, and how the data will be used. You may skip any question that makes you feel uncomfortable and withdraw from participation at any time without consequence. (In the case that a virtual interview is necessary due to COVID-19, and videotaping is used, the process used will be inserted with the same deletion process occurring).

To ensure that we record your responses correctly, we will be audio recording the interview. Do I have your permission to do that? (once they confirm their permission) Wonderful, thank you. (start the audio recorder) I have started audio recording.

#### Interview Questions

1. Tell us what it has been like for you being a student in the PTA program.
  - a. Have there been any surprises?
  - b. Is the program harder than you expected, easier, or pretty much as you expected?

2. As you know this research is about defining success in a PTA program from the student's point of view. What thoughts come to mind when you think about success in this PTA program?
  - a. Tell us how your thoughts on success in the PTA program compares to how you feel about success in other aspects in your life.
  - b. Tell us how you perceive program faculty and classmates play a role in your definition of success in the PTA program.
3. Describe what successful performance means to you. What does that look like?
  - a. Describe a time in the PTA program when you felt like you performed successfully.
    - i. Talk to us how that made you feel.
  - b. Describe a time in the PTA program when you felt like you did not perform successfully.
    - i. Talk to us how that made you feel.
  - c. When you had an unsuccessful performance in the PTA program, describe how you feel you were able to keep moving forward. Tell us about any strategies that you used that may have helped you bounce back.
4. Let us look at the program from a timeline. When you were notified that you were accepted into the PTA program, what went through your mind? Talk to us about that.
  - a. Tell us how your family and friends reacted when they found out you were accepted.
  - b. Describe how you thought you would do in the program. What thoughts went through your mind regarding your likelihood of success in the PTA program?

- c. Tell us about your self-confidence heading into the PTA program.
5. So, let us move on to your PTA program orientation and that first day of the PTA program. What were your thoughts and opinions and just general feeling about that day?
  - a. We talked about your thoughts on your potential to be successful or your self-confidence. Did those thoughts or opinions change from the time you first heard you were accepted and following that day of orientation?
6. So, let us keep going on the timeline. Now you are in your first semester and you have your first major test. Let us come back to this idea of self-confidence. Tell us more about what you thought about your own abilities after that first test?
  - a. To take it a step further – did your perceptions of success in this PTA program change after your first test? (Explain your answer more)
  - b. How about after the end of the first semester?
  - c. How about after the end of the first year, the third year, or the fourth semester?
  - d. Have you been on a clinical experience yet? Did your perceptions of success in the PTA program change after your clinical experience?
  - e. Has there been a time elsewhere in the curriculum where you doubted your abilities? If so, describe that experience.
7. In your academic life, what do you see as the relationship between self-confidence and success?
  - a. Provide some examples of this.
8. We want to get some ideas if the outside influences in your life and your perception on what effect those might have on either your self-confidence or your ability to be successful in general.

- a. Tell us about any influence you think your family and friends may have had on your ability to be successful in the PTA program. Tell me more.
  - b. Tell us about your perceptions of your financial situation and if that situation may have any influence on your ability to be successful in the PTA program. Tell us more.
  - c. Talk to us about any other outside factors that you believe may influence your ability to be successful in the program. Tell us more.
  - d. Talk to us about your school/life balance. Do you feel you have balance and describe what that means to you. (f/u – explore positive and negatives).
  - e. Thinking back to that timeline, tell us how the outside influences you discussed (financial, family, friends, work, etc...) may have influenced your perception of your success or self-confidence since the beginning of the PTA program until now?
9. Let us review the topics covered, your perception of success, your self-confidence, how the other factors discussed (faculty, your classmates, family, friends, work, and social life) play a role in your success. Tell us what all has to happen or come together for you to be successful.
- a. Describe the most effective set-up you can imagine in your life that would help you be successful or perform successfully in the PTA program.
  - b. Is there anything else that we didn't ask or that you didn't get to talk about that help me understand your perceptions?

Thank you for your time. Your information from the interview will be de-identified and kept confidential. The audio recording of this interview will be downloaded to an encrypted

transcription service. The recordings on the voice recorder or Google Meets if virtual, will be deleted once downloaded to the transcription service. The transcription will be analyzed by the primary investigator and the research assistants. The analysis will be conducted using a research application which is an encrypted service with password protection and only accessible by the primary investigator and the research assistants. Once the research project is complete, the transcripts of the interview and analysis of the data will be deleted. If you have any questions after the interview, please feel free to contact the research assistants, Breasha Blaylock, SPT at [bblaylock1@twu.edu](mailto:bblaylock1@twu.edu); Kaylee Hedricks, SPT at [Khedricks@twu.edu](mailto:Khedricks@twu.edu); or Emily Mowrey, SPT at [emowrey@twu.edu](mailto:emowrey@twu.edu). You may also reach out to the University of Indianapolis Doctoral Committee Chair, Dr. Laura Santurri, at [santurri@uindy.edu](mailto:santurri@uindy.edu).

IRB Approval - Houston Community College, Texas Woman's University, University of Indianapolis – reliance agreement with Houston Community College