DISSERTATION

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KATHERINE ANNE M. SMITH

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Dedication and Acknowledgements

I dedicate this to my beloved family, friends, colleagues, and mentors who have supported me throughout my personal, academic, and professional journey. Your love, encouragement, guidance, and example led me to pursue this research. I could not imagine completing this project without you. I am truly grateful and hope to be able to reciprocate your kindness by supporting you in the future while paying it forward by supporting the next generation of healthcare providers and scholars.

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List of abbreviations

Board-Certified Pediatric Specialists through the American Board of Physical Therapy Specialists (ABPTS)

Academy of Pediatric Physical Therapy (APPT)

American Physical Therapy Association (APTA)

Health Promotion and Wellness (HPW)

Pediatric Annual Physical Therapy Visit (PAPTV)

Pediatric Certified Specialists (PCS)

Abstract

KATHERINE ANNE M. SMITH

VARIATION IN ORGANIZATIONAL FACTORS INFLUENCING THE IMPLEMENTATION OF THE PEDIATRIC ANNUAL PHYSICAL THERAPY VISIT

Under the direction of DR. KENT SAUNDERS

Hypothesis and Research Question

The research hypothesis is "Organizational Factors influencing the implementation of the Pediatric Annual Physical Therapy Visit (PAPTV) vary by practice setting, geographic location, and experience implementing the PAPTV." The related research question is "How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, and therapists experience with the PAPTV?

Problem and Purpose of Research

While health promotion and wellness (HPW) initiatives are widely accepted as beneficial to both the patient and the healthcare system, the rollout of new initiatives is often challenging. The PAPTV has been a significant HPW initiative supported by the American Physical Therapy Association (APTA) and the Academy of Pediatric Physical Therapists (APPT). Despite the support of professional organizations, utilization of the PAPTV is limited.

Organizational change strategies to enhance PAPTV utilization must target the specific organizational and clinical environments where the PAPTV will be utilized. To identify effective organizational change strategies, one must first understand the distribution of variation within the profession. This dissertation explores the variation in organizational factors impacting the implementation of the PAPTV in physical therapists who are Board Certified Pediatric Specialists through the American Board of Physical Therapy Specialists (ABPTS). Variation in organizational factors is explored through different practice settings, geographic locations, and experience implementing the PAPTV.

Research Methodology and Summary of Procedures

A quantitative survey explored Pediatric Certified Specialists perceptions of organizational factors impacting the PAPTV from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). Descriptive statistics explained trends in geographic regions, practice settings, and therapist experience with the PAPTV. Parametric (ANOVA), non-parametric (Kruskal-Wallis test), and Multiple regression analysis were used to analyze survey results to determine significant findings.

Results and Conclusions

Variation was found within three of Bolman and Deal's four frames. The symbolic frame and human resources frame vary by the therapist's frequency of completing a PAPTV in one quarter. The political frame varies by region, specifically the Southeast and Pacific regions. The human resource frame was consistent across practice settings, geographic location, and experience implementing the PAPTV. These findings support the need for further research into the barriers of organizational change toward greater HPW within pediatric PT.

Recommendations for Further Study

Future research into organizational barriers toward greater HPW in pediatric physical therapy should be founded on various aspects of organizational strategy and change scholarship and utilize diverse investigative tools and methodologies. In quantitative research, utilizing the Organizational Culture Assessment Instrument and Competing Values Frame may shed light on cultural considerations impacting the change process. Including qualitative methodologies, such as ethnography, in research may help produce profound and comprehensive insight into organizational barriers toward HPW. Ongoing investigation utilizing organizational change and strategy scholarship, tools, and methodologies is needed to understand better organizational barriers towards greater HPW in pediatric physical therapy.

Keywords: Pediatric Annual Physical Therapy Visit, Health Promotion and Wellness, Proactive Healthcare, Physical Therapy, Prevention

Chapter 1

Introduction to the study

A dichotomy exists between the potential utility of proactive healthcare initiatives and their utilization (American Physical Therapy Association, 2020; Bezner, 2015; Dean et al., 2016; Leech, et al., 2014; Miles et al., 2021; National Academy of Science, Engineering, and Medicine, 2023; Sanchez et al., 2007; Woolf, 2008). Throughout diverse healthcare settings, HPW initiatives are broadly accepted as beneficial to individual patients, the healthcare system, and society as a whole (Bezner, 2015; Miles et al. 2018; National Academy of Science, Engineering, and Medicine, 2023; Woolf, 2008). Despite this commonly accepted truth, the utilization of current proactive care initiatives and the rollout of new initiatives is often challenging (Booth et al., 2000; Dean et al., 2016; González et al., 2017; Weinstein et at., 2010; Woolf, 2008).

In response to the need for proactive care, health promotion, and wellness care within pediatric physical therapy, the APTA and the Academy of Pediatric Physical Therapy (APPT) developed a PAPTV template. The primary objective of the PAPTV is to identify children at risk of premature morbidity and mortality. A pediatric physical therapist uses noninvasive holistic assessment techniques, including movement analysis and screening tools, to evaluate the child during this appointment. A therapist can use a PAPTV to identify at-risk children and allow for proactive measures to ameliorate or eliminate disease processes leading to premature morbidity and mortality.

This contrast between proactive healthcare efficacy and consumption exists in the pediatric physical therapy profession. The PAPTV has been a significant health and wellness promotion initiative supported by national professional physical therapy organizations, including

the APTA and the APPT (American Physical Therapy Association, 2020; American Physical Therapy Association, 2019; American Physical Therapy Association, 2018; Miles et al., 2021; Miles et al. 2018). The American Physical Therapy Association recommends adults and children of all ages be evaluated by a physical therapist at least annually to "optimize movement and promote health, wellness, and fitness; and slow progression of impairments of body functions and structures, activity limitations, and participation restrictions" (APTA, 2019, p. 1). Despite the support of professional organizations, utilization of the PAPTV is limited.

Recognizing the lack of utilization of the PAPTV as a challenge with organizational change can help facilitate progress toward a solution. There is significant environmental and cultural diversity within pediatric physical therapy; therefore, organizational change strategies to increase PAPTV utilization must target the specific organizational environments where the PAPTV will be utilized. To identify effective organizational change strategies, one must first understand the characteristics of variation within the profession.

This dissertation explores the variation in organizational factors impacting the implementation of the PAPTV in APTA and APPT members with different practice settings, geographic locations, and therapists experience using the PAPTV. A quantitative survey explored Board Certified Pediatric Physical Therapists perceptions of organizational factors impacting the PAPTV from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). This project relies heavily on Bolman and Deal’s (2017) four frames theory. Descriptive statistics will explain trends in geographic regions, practice settings, and therapist demographics. Parametric, non-parametric and multiple regression analysis will be used to analyze survey results to determine significant findings.

Background of the Study

Analyzing U.S. healthcare from a system-wide perspective illuminates the dire need for innovation and intervention (McCarthy, 2019; John Hopkins Bloomberg School of Public Health, 2019; Van Wietmarschen et al. 2018). Predominant modern healthcare strategies emphasize a reactive model where patients seek care after manifestations of a debilitating disease or injury; preventative care advocates maintain that this is too late (Booth et al., 2000; González et al., 2017). Furthermore, reactive care models for treating common lifestyle-related chronic illnesses, including heart disease, many types of cancers, and type two diabetes, concentrate on symptom management through pharmaceutical intervention rather than resolution through lifestyle modifications. This practice occurs despite research concluding that "the synergistic impact of various lifestyle behaviors on health over a lifetime may significantly increase disease risk to a level greater than either factor alone" (Plotnikoff, 2008, p. 608). While lifestyle modifications are without adverse physiological side effects, the same cannot be assumed for pharmaceutical intervention. The prevailing contemporary reactive strategies in healthcare are ineffective and unjustifiable (John Hopkins Bloomberg School of Public Health, 2019; McCarthy, 2019; Van Wietmarschen et al. 2018).

While acknowledging the challenges and tremendous undertaking of deliberate change within an organization as inherently complex as the U.S. healthcare system, the fact remains that the current model of care neglects to address patient needs effectively and is an excessive and unnecessary economic burden on the country that needs to be improved (Anderson & Frogner, 2008; Booth et al., 2000; González et al., 2017; Weinstein et at., 2010). According to the John Hopkins Bloomberg School of Public Health (2019), "Americans on average continue to spend

much more for health care while getting less care than people in other developed countries" (p. 1). This reality was demonstrated by comparing data from the Organization for Economic Co-operation and Development and the World Bank. According to data from the OECD and World Bank, as cited by McCarthy (2019), Americans' spending on healthcare is nearly double that of Sweden and Canada, while the U.S. life expectancy is shorter than in both countries. Furthermore, despite higher spending, research has consistently shown that the U.S. scores average or below average on quality-of-care indicators compared to other industrialized countries (Anderson & Frogner, 2008). While intentional change in complex industries is problematic, it is a challenge that healthcare providers, patients and legislators must confront to address the needs of individuals and society.

The growing cost of healthcare in the U.S. has been well-documented as unsustainable and modifiable for more than a decade (Anderson & Frogner, 2008; John Hopkins Bloomberg School of Public Health, 2019; McCarthy, 2019; National Academies of Sciences, Engineering, and Medicine, 2023; Woolf, 2009). According to Anderson & Frogner (2008),

> The Congressional Budget Office (CBO), Federal Reserve Bank, and other government agencies are forecasting that the percentage of GDP [Gross Domestic Product] spent on health in the United States will continue to increase, and some policymakers are forecasting serious economic implications if this percentage exceeds certain thresholds (p. 1721).

The forecasts described by Anderson & Frogner (2008) are based on the insight that the "percentage of GDP spent on health care in the United States between 1970 and 2005 increased approximately 2.5 percentage points faster than the overall growth rate of the economy as

measured by the GDP, despite numerous efforts to control health spending" (p. 1721). Weinstein et al. (2010) found financial savings in healthcare were possible without compromising patient outcomes by "inducing providers to cut back on cost-ineffective services and replace them with more cost-effective but underutilized services" (p. 464). Agreement of the research clearly demonstrates the importance of proactive initiatives to address the escalating cost of healthcare within the United States.

A substantial factor contributing to the cost of healthcare in the U.S. is the burden of chronic disease (Anderson & Frogner, 2008; Center for Disease Control, 2023; Van Wietmarschen et al. 2018). Chronic disease contributes significantly to morbidity and mortality (Center of Disease Control and Prevention, 2023). It has been the leading cause of premature death in the United States and worldwide, accounting for 68% of deaths worldwide in 2012 (Gill et al., 2019). According to the Center for Disease Prevention (2023) “chronic diseases are the leading causes of death and disability in America, and they are also a leading driver of health care costs” (para. 1). Chronic diseases have been directly linked to modifiable health risk factors, stated by Van Weitmarschen et al. (2018) physical inactivity has been labeled as the “fourth major cause of death worldwide” (p. 269). Because of the significant percentage of the population impacted by chronic disease, the approaches to mitigating chronic disease may substantially impact citizens, society, and the healthcare system.

Preventative healthcare is a critical component in effectively addressing chronic diseases. Research has consistently concluded that efforts to combat chronic disease are inefficient due to underestimating the problem and emphasizing treatment strategies instead of preventative strategies (Booth et al., 2000; González et al., 2017). Plotnikoff (2009) stated that the

development of chronic conditions, including heart disease, various forms of cancer, and diabetes, had been linked to modifiable lifestyle risk behaviors, including physical inactivity, which can be addressed with preventative strategies. Maciosek et al. (2010) found that "investing in an evidence-based package of preventive services for the general population could produce more than two million additional years of life each year they are delivered" without additional healthcare costs (p. 1659). According to Woolf et al. (2009), economic studies "consistently report that evidence-based clinical preventive services offer high economic value" (p. 9). Based on the overwhelming evidence, proactive care initiatives need to be implemented as they have higher clinical efficacy for the patient and are more cost effective.

The APTA is the national organization for physical therapists in the United States and has taken a decisive stance in support of HPW initiatives within the profession. The APTA has endorsed the physical therapist's role in the prevention, wellness, fitness, health promotion, and management of disease and disability by passing a position statement illuminating the organization's support (American Physical Therapy Association, 2019). The APTA developed the Health Promotion and Wellness Council, which was:

> a community for physical therapists, physical therapist assistants, and students who are interested in incorporating prevention, health promotion, and wellness as an integral aspect of physical therapist practice, as well as in promoting and advocating for healthy lifestyles to reduce the burden of disease and disability on individuals and society (American Physical Therapy Association, 2020, para. 1)

In 2018, the APTA voted to support a position statement titled *Annual Visit with a Physical Therapist,* articulating the association's support of Annual Physical Therapy Visits, including the

PAPTV. Through these three key actions, the APTA has clearly stated its support of HPW in physical therapy, specifically the annual visit.

Scholars, national organizations, and industry leaders have responded to this void in healthcare by advocating for greater HPW initiatives in physical therapy (American Physical Therapy Association, 2020; APTA Academy of Pediatric Physical Therapy, 2023; Quinn & Morgan, 2017; Rafferty et al. 2022). The Academy of Neurologic Physical Therapy, The Academy of Geriatric Physical Therapy, and The Academy of Pediatric Physical Therapy have all advocated for an annual visit with a physical therapist as a means of proactive care (American Physical Therapy Association, 2020; APTA Academy of Pediatric Physical Therapy, 2023). The Academy of Neurology has developed a clinical decision tree to help physical therapists "in selecting the physical therapy (PT) delivery model incorporating HPW, best suited for the client and setting" (APTA Academy of Neurologic Physical Therapy, 2023, p. 1). Dr. Cindy Miles, former president of the APTA Academy of Pediatrics, spearheaded an educational campaign teaching about the benefits of the PAPTV (Miles et al. 2021). There is evident unity among industry leaders and national organizations for supporting initiatives to enhance HPW in physical therapy.

The PAPTV is widely supported and a good indicator of the APTA Academy of Pediatric Physical Therapy members challenges implementing HPW initiatives. APTA Academy of Pediatrics describes the purpose of the annual visit as being to "engage physical therapists and families in assessing and monitoring the status of ALL children on a yearly regular basis and shifting the paradigm of physical therapy care to one of prevention and monitoring across the

lifespan." (APTA Academy of Pediatrics, 2023, para. 2). The APTA Academy of Pediatrics has identified six benefits of the PAPTV template, including:

> (1) Collect consistent baseline measures and updated information on the function and health of the child's movement system (2) Use evidence-based assessments and screening to determine the need for further evaluation/physical therapy intervention (3) Coach regarding the benefit of movement and healthy behaviors to support wellness (4) Identify children with risk factors that might impact mobility and participation in age-appropriate activities (5) Encourage independence in daily activities and participation in family/community life (6) Collaborate with medical professionals and community agencies to provide optimal and coordinated care to the child and family (APTA Academy of Pediatrics, 2023, para 2)

The PAPTV is a HPW initiative that the APTA Academy of Pediatric Physical Therapy has consistently advocated for and promoted using. Investigation of barriers to the PAPTV has the potential to illuminate the difficulty of implementing other widely supported HPW initiatives within the field of pediatric physical therapy.

Statement of the Problem

The need for change within the field of physical therapy reflects the need for change within the U.S. healthcare system as a whole and has been apparent for a considerable amount of time (American Physical Therapy Association, 2020; American Physical Therapy Association, 2019; American Physical Therapy Association, 2018; Bezner, 2015; John Hopkins Bloomberg School of Public Health, 2019; McCarthy, 2019; Miles et al., 2021; Miles et al. 2018; Woolf, 2008; National Academies of Science, Engineering and Medicine, 2023). It is widely accepted

that throughout diverse healthcare settings HPW initiatives are beneficial to individual patients, the healthcare system, and society as a whole. Both the practice of physical therapy and healthcare within the United States has been built on a reactive care model, meaning that traditionally, patients do not initiate care with a clinician until after an injury or disease process has occurred. The push towards proactive care is based on the belief that the initiation of care after a problem has grown to a level where it has a significant negative impact on the person's function is too late.

The profession of pediatric physical therapy has responded to this need for change through health and wellness initiatives, including the PAPTV. The PAPTV has been highly supported by both the APTA and the APPT. Despite this backing, implementation of the PAPTV has been minimal. This struggle to implement can be viewed and studied as a challenge of organizational commitment to proactive care. Understanding the difficulty of limited implementation through this lens of organizational change can help facilitate a movement toward discovering a solution.

History of the Problem

To understand the challenge of organizational change within the pediatric physical therapy profession, it is helpful to understand the historical roots of the profession, which have shaped its practice structure and culture. Suddaby and Foster (2017) assert that members of an organization will relate to historical events and change differently. Furthermore, Suddaby and Foster (2017) state that "variations in how we conceptualize change are underpinned by different assumptions about history and its relationship to our capacity for change" (p. 20). Therefore,

while understanding the profession's history is helpful, one must also consider the variation in how individuals relate to historical events.

The physical therapy profession was established more than 200 years ago. The origins of physical therapy as a profession date back to Per Henrik Ling, who founded the Royal Central Institute of Gymnastics in 1813 for massage, manipulation, and exercise (Shaik & Shemjaz, 2014). The term "Physiotherapy" first appeared in 1851 in its German form, "Physiotherapie," in an article written by a military physician from Bavaria (Terlouw, 2006). The term "Physiotherapy" was first published in English in 1894 in the Montreal Medical Journal (Playter, 1894; Shaik & Shemjaz, 2014; Terlouw, 2006). Gradually the term "Physiotherapie" changed to "Physiotherapy" and then to "Physical therapy" in the United States (Shaik & Shemjaz, 2014). These key events demonstrate the long history and roots of the profession.

The profession of physical therapy in the United States was founded as a reactive care model. Many historians believe the United States' physical therapy profession evolved from the nation's response to the poliomyelitis epidemic and the effects of several wars (Moffat, 2003; Rogers, 2021). This belief is based on and exemplified by the actions of early leaders in the profession.

Florence Peterson Kendall and Henry Kendall were influential early leaders within the profession (American Physical Therapy Association, n.d.b). Florence Peterson Kendall started her career studying physical therapy at the Walter Reed Army Hospital in Washington, DC. She went on to work with veterans disabled by nerve and muscle injuries (Rogers, 2021). She transitioned from working with veterans at Walter Reed Hospital to caring for patients with poliomyelitis at the Baltimore Children's Hospital-School, where she worked for the next 50

years (Rogers, 2021). Henry Kendall was first introduced to the Evergreen School for the Blind in Baltimore after he lost his sight from a bomb during World War I (Rodgers, 2021). In 1920 Henry Kendall became the director for the department of physical therapy within the Hospital-School and soon helped to transform it into a leading rehabilitative facility (Rodgers, 2021). Florence Peterson and Henry Kendall are also scholars and coauthors of highly respected texts that are still used in physical therapy education (Kendall et al., 2005). Furthermore, the foundational clinical knowledge presented in their book is part of the required knowledge for the professional licensure exam (Federation of State Boards of Physical Therapy, 2018).

These historical figures served as highly respected heroes and heroines within the profession. They helped shape the culture of physical therapy as a service-based healthcare profession that responded to the nation's needs. The American Physical Therapy Association continues to recognize and celebrate these historic giants through the “Henry O. and Florence P. Kendall Practice Award” recognizing individuals who “embody and demonstrate a commitment to developing physical therapy as a caring profession” (American Physical Therapy Association, n.d.b). This response-based approach embodied by these early leaders helped to establish the reactive care model still in place today.

Several important events united the profession and contributed to the advancement of the physical therapy profession while further solidifying it in the traditional reactive-based care model. In 1921 the American Women's Physical Therapeutic Association was established and became the American Physical Therapy Association in 1947 (American Physical Therapy Association, 2020). While the professional organization was establishing, critical health emergencies were shaping the need, focus, and purpose of the organization. The poliomyelitis

epidemic lasted from the 1800s through the 1950s; however, the effects of post-polio syndrome remain a health challenge even today (Moffat, 2003; Rogers, 2021). As a result, by the 1920s, poliomyelitis had an influential role in "professionalizing physical therapy" (Rogers, 2021, p. 126). The Hospital Survey and Construction Act of 1946 led to an increase in inpatient physical therapy services (Moffat, 2003). By the 1950s, physical therapists had advanced from technicians to professional practitioners (Moffat, 2003). These key events contributed to the ongoing growth and development of the profession within a reactive care model.

Through these critical events and legislative initiatives, physical therapy developed in congruence with the larger United States healthcare system, which is also largely a reactive care model. Several states enacted practice acts in the 1950s and 1960s (Moffat, 2003). In 1967 the Social Security Act was amended, adding a definition of "outpatient physical therapy services" (Moffat, 2003); this legislative action had a lasting influence on reimbursement and validated the profession's role in healthcare. Specialized practice areas emerged over the next several decades (Moffat, 2003); demonstrating growth, broader expertise, and demand for focused areas of care. The APTA's House of Delegates recognized pediatrics as a specialty in 1978 (Heriza et al. 1983). Fast-forwarding to the new millennium, the APTA developed the Guide to Physical Therapy Practice and the *"Hooked-on-Evidence"* project (Moffat, 2003). Through these key events, physical therapy developed into a well-established healthcare profession deeply rooted in the reactive nature of the United States healthcare system.

Current Status of the Problem

Physical therapists are gaining recognition for their distinctive role in preventative care relating to movement and activity. Leaders in the profession have endorsed the distinguished

education of physical therapists in managing movement disorders and frequently refer to physical therapists as the "primary care providers of movement and development" (Miles et al., 2021). As stated by Miles et al. (2021), physical therapists play a unique role in society in prevention, wellness, fitness, health promotion, and management of disease and disability by serving as a dynamic bridge between health and health services delivery for individuals and populations. Furthermore, physical therapists are educated to provide services in a health service delivery model and community and home environments while considering social determinants of health, skills critical to implementing effective preventative care (APTA, 2019). The American Physical Therapy Association recommends that all individuals be evaluated at least annually to "optimize movement and promote health, wellness, and fitness; and slow progression of impairments of body functions and structures, activity limitations, and participation restrictions" (APTA, 2019, p. 1). It is evident that the past decade has represented a time of noteworthy efforts toward proactive care.

While significant effort and progress have been made towards proactive preventative care focused on health and wellness within physical therapy, the current state of personal and population health in the United States necessitates the acceleration of this change initiative. Rising healthcare costs have left many citizens vulnerable and concerned (Hitiris & Posnett, 1992). Hitiris and Posnett (1992) and Ginsburg (2008) found when evaluating national healthcare costs by the share of gross domestic product, U.S. spending on healthcare is greater than other developed countries. Aldana (2001) studied the financial impact of health promotion programs and found an association between health promotion programs and lower levels of

absenteeism and lower health care costs, and fitness programs are associated with decreased health care costs. As stated by Mile et al. (2021) “the time is NOW” for the PAPTV” (p.1).

Despite the tremendous need for a substantial conversion towards proactive healthcare, significant barriers remain. According to Benzer (2015), barriers to HPW in PT include:

> time, lack of interest or awareness of the patient or client, the public, and other health care providers that physical therapists provide these services, lack of education or knowledge and lack of reimbursement, and lack of resources. Additional barriers include limited counseling skills, lack of self-efficacy, the focus on secondary and tertiary prevention by physical therapists, and the perception that the physical therapy work environment is not suitable for health promotion. (p.1441).

These barriers can be understood as uniform barriers that impact all therapists and specific opposition to this transition which varies based on the demographic features of the therapist and their practice setting. To overcome these barriers and effectively implement profession-wide preventative strategies, both the uniform nationwide barriers and specific opposition factors must be addressed.

Uniform nationwide challenges to this transition result from the current structure of the larger healthcare industry, aspects of the culture of physical therapy, and the inherent challenges of organizational and personal change. Physical therapy is an allied healthcare profession nested within the larger U.S. healthcare industry; this industry is well-established and structured predominately as a reactive care model, which is reflected in all aspects of the profession, including the reimbursement structure. The profession of physical therapy within the U.S. healthcare system developed out of a need to respond to national challenges (Moffat, 2003;

Rogers, 2021). This founding response mindset is part of the culture of physical therapy and has facilitated a reactive care approach where individuals seek treatment after an injury or illness. Challenges to intentional organizational and personal change are well established (Buchanan et al., 2007; Burk, 2018; Bridges & Bridges, 2019; Cloud, 2010; Gordon & Pollack, 2018) and impede progress toward a preventative care model.

There is also specific opposition to this transition which varies based on practice setting and geographic region as well as patient population served. While the foundational knowledge and research that pediatric physical therapy is based on are uniform, the implementation of practice in various geographic areas and specialty practice settings is distinct, each facing unique challenges. For example, each state has its own practice act and legislation structuring its practice. Geographic regions vary in their utilization of preventative healthcare (Ruiz, 2009) and the population's overall health (Masterson, 2023). These trends may be influenced by deeply held beliefs of the citizens of the states. Powell et al. (2019) found that “men are generally less likely than women to use preventive health services, such as blood pressure and cholesterol screenings as well as routine check-ups. However, these utilization patterns are even more pronounced among African American men who delay health services for a variety of distinctive, psychosocial reasons” (p. 102). Powell et al. (2019) note, “Mistrust of healthcare organizations and professionals is reportedly higher among African Americans and associated with negative health-related outcomes such as decreased care satisfaction, treatment adherence, and utilization of health services” (Powell et al. 2019). While studying four regions of the United States, Powell et al. (2019) found that “Increasing preventive health screening among African American men requires addressing medical mistrust and racism in and outside healthcare institutions.”

Birkhäuer et al. (2017) conducted a met analysis and found patients trust in their health care professional was positively correlated with "more beneficial health behaviors," "higher satisfaction and health-related quality of life" and "better symptom-oriented subjective outcomes" (p.9). The diverse practice settings call for unique business and human resource models. For this reason, widespread organizational change within physical therapy requires understanding and consideration of both the nationwide challenges and diverse needs of therapists with different experience levels from various practice settings and geographic locations.

Theory and Action Related to the Problem

The profession of physical therapy and specialization of pediatric physical therapy is both well established and continuing to evolve. Traditional physical therapy is rooted in reactive healthcare as the profession was established in the United States in response to poliomyelitis and the return of injured veterans (Moffat, 2003; Rogers, 2021); however, there is growing interest in proactive, health and wellness-based care (American Physical Therapy Association, 2020; American Physical Therapy Association, 2019; American Physical Therapy Association, 2018; Benzer, 2015; Black et al., 2016, Dean, et al. 2015; Doholdt et al., 2020; Faigenbaum et al. 2013; Goodgold, 2005; Lein et al., 2017; Lucado et al., 2018; Magnusson et al., 2019; Miles et al., 2021; Miles et al. 2018; Morris & Jenkins, 2018; Riportella-Muller et al., 1996; Schlessman et al., 2011; Shirley et al., 2010; Tapley et al., 2021; Wilson et al., 2021). A successful transition towards increased proactive care involves significant large-scale organizational change.

Scholars, leaders and national organizations undisputedly support the annual physical therapy visit and proactive care within physical therapy, however, barriers to incorporating HPW

into physical therapist practice exist. The most commonly identified and cited barriers include: "time, lack of interest or awareness of the patient or client, the public, and other health care providers that physical therapists provide these services, lack of education or knowledge and lack of reimbursement, and lack of resources" (Benzer, 2015, p. 1441). Additional barriers identified by Benzer (2015) included limited counseling skills, lack of self-efficacy, a focus is on "secondary and tertiary prevention by physical therapists, and the perception is that the physical therapy work environment is not suitable for health promotion" (p. 1441). Morris and Jenkins (2018) conclude payment in the form of third-party reimbursement is a significant barrier to HPW within PT, as most health insurance policies do not cover PT HPW services, and PT is traditionally paid for, at least in part, by health insurance.

A deficit in coverage of HPW topics in physical therapy education exists (Dean et al., 2016; Domholdt et al, 2020). The impact of therapist training on the implementation of HPW in physical therapy has been studied. Domholdt et al. (2020) explored "the current and desired coverage of population health concepts within entry-level physical therapist programs accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE)" (p. 332). Domholdt et al. (2020) conducted a survey study targeting program directors of CAPTE-accredited Doctor of Physical therapy education programs with a 27% response rate. The survey results demonstrated agreement among program directors that 22 of 23 Clinical Prevention and Population Health (CPPH) Curriculum Framework domains should be included in entry-level physical therapist education programs (Domholdt et al., 2020). Despite the agreement on 22 CPPH Curriculum Framework domains, only nine domains had at least moderate coverage within their current curriculums (Domholdt et al., 2020). The most significant deficits between

current and preferred domain coverage were in occupational health, population health informatics, counseling for behavioral change, global health issues, and organization of clinical and public health systems (Domholdt et al., 2020). This educational deficit may contribute to therapists' lack of HPW implementation (Dean et al., 2016; Domholdt et al, 2020).

Patients perceive barriers to accessing HPW services across all areas of Bolman and Deal's (2017) four frames. Riportella-Muller et al. (1996) studied barriers to using preventive healthcare services for children. Riportella-Muller et al. (1996) found reasons for parents not utilizing Medicaid's Early and Periodic Screening, Diagnosis and Treatment Program services "included (a) competing family or personal issues and priorities; (b) perceived or actual barriers in the health care system, and (c) issues related directly to problems with the outreach efforts" (p. 71). Riportella-Muller et al. (1996) found parents who received EPSDT services encountered additional barriers, including "scheduling and transportation difficulties, long waiting room times, or care that they perceived to be either unresponsive to their medical needs or interpersonally disrespectful" (p. 71). Patient's perceived negative experiences with accessing HPW care can thwart their future utilization of preventative care services.

Provider and patient barriers are not the only hurdles to the use of preventative care; the structure of the healthcare system itself can imped access to and utilization of preventative care services. Levine et al. (2019) observed a gap between the prevalence and impact of chronic disease and the utilization of preventive services. To investigate this gap, Levine et al. (2019) designed a qualitative interview study to attain the perspectives of healthcare industry experts regarding "the levers and influencers that have the potential to increase utilization of clinical preventive care" (p. 2). The study's primary objective was to collect experience-based

assessments, which may be beneficial to policymakers for constructing policies, programs, and collaborations throughout the healthcare industry to improve the utilization of preventive care (Levine et al., 2019). The study was conducted from December 2017 to June 2018 (Levine et al., 2019). The study's conclusions included four findings that emerged as significant levers or influencers of preventive care across all healthcare industry sectors and organization types, including financial and economic considerations, the use of metrics to drive change in the healthcare system, the role of healthcare payers and the rapid changes in health care reimbursement models (Levine et al., 2019). The use of preventive services remains persistently low despite decades of initiatives to improve preventative health and wellness in part because of barriers at the healthcare system level.

The healthcare model has slowly evolved over decades to include more preventative proactive care. The APTA senior leadership has worked with the APTA Health Promotion and Wellness Council and APTA chapters and sections to transform society and physical therapist practice towards preventative care. The HPWC aimed to "facilitate the profession's role in transforming society and physical therapist practice by connecting people and knowledge to develop and disseminate best practices in prevention, health promotion, and wellness for all individuals and populations" (APTA, 2020). Despite the efforts and gradual change, many leaders in the field argue that the time has come for revolutionary transformational change that involves a cultural shift in healthcare rather than evolutionary improvements (Miles et al., 2018 & 2021). A revolutionary change to any organization can be described as a blow to the system itself (Burke, 2018). Careful strategic initiatives are needed to implement this type of change and reach the desired outcome.

Need for Further Study of the Problem

Despite the predominance of reactive care across the profession, pediatric physical therapists have been identified as uniquely qualified to implement preventative care measures. Faigenbaum et al. (2013) identified the lack of interest and decreased physical activity in youth populations as a significant public health concern. This lack of interest is a contributing factor in the development of "Exercise-deficit disorder," a term that is used to describe "a condition characterized by reduced levels of physical activity that are inconsistent with current public health recommendations" (Faigenbaum et al., p. 2). While Faigenbaum et al. (2013) concluded that "pediatric physical therapists are in an enviable position to identify and treat the exercise-deficit disorder in youth, regardless of body size or physical ability" (p. 2), this proactive approach described is not widely implemented.

Challenges to implementing preventative care strategies in pediatric physical therapy cannot be fully appreciated as a singular barrier. While it is widely accepted that the national reimbursement model for physical therapy services impedes employing preventative care models in physical therapy, it is not the only barrier. Furthermore, the performance of preventative strategies has not been uniform across the profession. A better understanding of the specific factors within the practice environment that has contributed to the successful implementation of preventative strategies can facilitate future change.

While pediatric physical therapists have commonalities with their peers, environmental and therapist demographic factors create diversity within the profession; therefore, pediatric physical therapy practice cannot be exclusively investigated as a homogeneous group. Pediatric practice patterns vary significantly by setting and geographic location, in part because the

patients' demographics also vary by these same factors, as do the laws and regulations governing practice. Greater implementation of the PAPTV necessitates a better understanding of the specific barriers that prevent its utilization that arise because of the diversity in the environmental and therapist demographic factors.

Purpose of the Study

This research aims to determine the perceptions regarding the organizational factors influencing the implementation of the PAPTV among therapists who are Pediatric Certified Specialists (PCS) through the ABPTS. The underlying theme of this question is rooted in both proactive healthcare delivery and organizational change, as the status quo in Western healthcare and physical therapy is reactive care. The specific question being answered is *"How do organizational factors influencing the implementation of the PAPTV vary by geographic* location, practice setting, and experience implementing the PAPTV?"

This research is directed toward Pediatric Certified Specialists because PCS through the ABPTS are healthcare providers who are most likely to maintain the highest degree of competence in pediatric physical therapy. The study is selective to PCS because they will likely be the pediatric therapists most familiar with APPT health and wellness initiatives, including the annual pediatric physical therapy visit. According to the ABPTS, 2,751 physical therapists have achieved board certification in pediatrics and as of 2022; 1,931 physical therapists possessed current pediatric board certification. Despite the professional organization's endorsement of the PAPTV, most therapists have not widely implemented the approach with their patients; this study is designed to determine why this is the case from the therapist's perspective.

Research Questions and Hypotheses

The research hypothesis is “Organizational Factors influencing the implementation of the PAPTV vary by practice setting, geographic location, and experience implementing the PAPTV.” The related research question is “How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, and therapists experience with the PAPTV?

Theoretical Framework

The theoretical framework provides a scholarly foundation to comprehend the meaning of data in a research project (Kivunja, 2018; Neuman, 1997). A theoretical framework encompasses the theories conveyed by experts in a field being researched (Kivunja, 2018). The theoretical framework of a research study allows the investigator to, intellectually and figuratively, build off of the prior work of leaders in the field while conducting a new investigation. Kivunja (2018) describes the theoretical framework as "a synthesis of the thoughts of giants in your field of research, as they relate to your proposed research or thesis, as you understand those theories, and how you will use those theories to understand your data" (p. 46). Kivunja (2018) refers to the theoretical frame as a metaphoric coat-hanger for future data analysis and interpretation of research results. While the conceptual framework answers the question of what a researcher will do and how they will execute their research, the theoretical framework answers the question of why a researcher is confronting a question in a particular manner and how the research question can be understood within the context of the intellectual giants of the field.

The inquiry framework for this study consists of aspects of systems theory developed by Von Bertalanffy (1950) and refined by Katz and Kahn (1978) and Senge (1990), which are directly applicable and cohesive with the current inquiry into preventative healthcare in pediatric physical therapy. Systems thinking is an approach or a methodology to addressing problems that follow two fundamental principles, including perceiving reality "in terms of wholes, and acknowledging that the environment is an essential part of the system, as it interacts with the system" (Cordon, 2013, p 14). According to Cordon (2013), primary scholars contributing to System Theory, including Senge, Wheatley, Von Bertalanffy, Wilber, and Meadows, agree "that in this organic world, where everything is inter-related, there are no linear systems, and that former approaches to solving complex problems by breaking it down into smaller manageable elements are no longer sufficient" (p. 15). Instead, the interrelationships of system components must be appreciated. Cordon (2013) assert

> Systems theories can also be used to help us better understand how humans interact with each other, and with their environment, and the intricacies that exists within their systems. In healthcare organizations, which involve people, processes, and structures, there are multiple types of systems that are involved. Each of the systems are inter-related with one another. Leaders need to be systems thinkers in order to facilitate sustainable change in their organizations. (p. 21)

Systems theory has natural applicability and cohesiveness with proactive preventive care inquiries. System thinking and preventative healthcare involve seeing the key interrelationships underlying a problem, leading to new insights for resolution.

There is a similarity between the concepts of the systems perspective, as described by Senge (2006), and how healthcare providers are taught to think about patients and their care. Senge (2006) recognized these similarities when comparing complex organisms and organizations and societies' "feedback processes" (p.84). Through formal education, healthcare providers are taught to evaluate the body's various systems individually and collectively and recognize the connection and influence of each component on the other to produce a specific health outcome. Furthermore, to succeed, clinicians must be skilled in manipulating key variables (also known as treatment interventions) to impact each of these systems for the desired health outcome. Moreover, systems thinking recognizes the human actor as part of the feedback process, not standing apart from it in much the same way as the clinician must recognize the interplay of a disease process with a human patient (Senge, 2006). This overlap supports systems theory's natural applicability and cohesiveness with proactive preventive care inquiries as both system thinking and preventative healthcare involve seeing the key interrelationships underlying a problem, leading to new insights for resolution.

Senge (2006) recognized the need for Systems thinking to be part of a larger approach. Senge (2006) stated, "System thinking also needs the disciplines of building a shared vision, mental models, team learning and personal mastery to realize its' potential" (p. 12). Senge (2006) describes mental models as "deeply engrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action" (p. 8). A critical component of working with mental models that Senge (2006) emphasizes is the importance of "turning the mirror inward; learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny" (p. 8). Senge (2006) underscores that

"managing mental models -surfacing, testing, and improving our internal pictures of how the world works-promises to be a major breakthrough for building learning organizations" (p. 163). The use and interrogation of mental models is critical to the application of Systems thinking.

Senge's (2006) scholarship involving mental models coincides with Bowman and Deal's (2017) mental models and reframing process. Bolman and Deal (2017) provide four mental models, labeled as frames, that can be used in collaboration with Systems thinking. Bolman and Deals (2017) presented a strategic method for interrogating, applying, and switching between the four mental models they gave; they called this process "reframing." These frames (symbolic, structural, political, and human resources) and the strategic approach of reframing have been used in healthcare organizations to understand healthcare organizations and their challenges (Lowe, 2017; Oh, 2018; Yilmaz et al., 2021)

When considering organizational change within pediatric physical therapy and the larger healthcare industry, it can be helpful to view it through the lens of open-system theory. Open-system theory is founded on precepts of cellular biology (Burke, 2018). It originates from General Systems Theory (GST) developed by Ludwig von Bertalanffy, which was created to "identify universal principles applying to systems in general" (Cordone, 2013, p. 16). "In GST, there are two different types of systems: closed systems and open systems. Closed systems are systems isolated from their environment, and open systems interact with their environment" (Cordone, 2013, p. 16). Open-system theory operates on the premise that within organizations, there is a cyclical process of events involving inputs and outputs (Burke, 2018). Pediatric physical therapy acts as an open system, interacting with the larger healthcare environment and American culture.

The concept of entropic processes applies to the field of pediatric physical therapy. The entropic process, as described by Katz and Kahn (1978), is "a universal law of nature in which all forms of the organization move towards disorganization or death" (Burke, 2018, p. 57). When viewed through this theory, the challenges of the ineffectiveness of the current healthcare model can be understood as a natural process, which, if left unmodified, will ultimately self-destruct. Similarly, industry leaders' role in the field is to combat entropy through regular feedback and corrective action. Therefore, the transition towards preventive care can be considered corrective action to mitigate the natural entropic process occurring, in much the same way a healthcare provider intervenes in a destructive disease process with specific interventions to abate an illness or condition.

The change towards proactive care can be facilitated by understanding and embracing a systems perspective. The core of the discipline of system thinking involves seeing change as a process rather than a snapshot and a transition in thought from seeing linear cause-effect chains to seeing interrelationships (Senge, 2006). As described by Senge (2006), a systems perspective involves looking into "the underlying structures which shape individual action and create the conditions where types of events become more likely" (p. 42). This shift in perception involves understanding the systemic structure, emphasizing the interrelationships and interdependency between crucial variables and ideas (Senge, 2006). The utility of the systems approach is further highlighted by Ponnala et al. (2021), who stated, "Healthcare systems are complex and dynamic in nature and are driven by many interactions between system factors and processes to shape outcomes. Much of the complexity can be attributed to the interactions between system elements

that influence healthcare delivery" (p. 3). Van Wietmarschen et al. (2018) support this assertion, stating:

> Although there is an overwhelming amount of science illuminating the road toward healthy living, many people are not adopting a healthy lifestyle. It appears that lifestyle choices are not determined solely by available information, but more so by other factors such as upbringing, peer group behavior, perception, available food stores, media, stress, and social norms. Motivating people to change lifestyle and behavior for optimal health is, therefore, an issue involving complex interactions between many factors (p. 270).

Embracing the application of systems theory to healthcare can facilitate an improved understanding of the multiple factors that interact as barriers to greater HPW in pediatric physical therapy.

When viewing the profession of pediatric physical therapy from a system perspective, the "human actor is part of the feedback process, not standing apart from it" (Senge, 1990, p. 77). From this perspective, it is important to recognize that a reactive healthcare model is as much of a product of an unhealthy population as a contributing factor. Preventative care interventions are a component of a healthy lifestyle. One must also recognize that the transition to proactive preventive care does not rest solely on the healthcare system or providers but also within the individual patient. There is a complex interaction between the patient, the provider, and the healthcare environment, which ultimately shapes the system as a whole and each individual entity within it.

Lipsitz (2012) noted the importance of systems thinking in healthcare. Lipsitz (2012) describes a process of policymakers' unsuccessful attempts to utilize various levers to control the healthcare system and its accelerating costs. He defined levers as a "variety of regulations that are enforced through surveys, certifications, payments, and penalties" (Lipsitz, 2012, p. 234). However, the levers indicate a mechanical approach that often leads to unintended consequences due to the vast complexity of the healthcare system (Lipsitz, 2012). Lipsitz (2012) recommended, "to help guide future policies and avoid the unanticipated consequences of regulation, policymakers and physicians need to understand health care as a complex system and apply the principles of complexity science to achieve its goals" (p. 234). Research regarding a model to understand the mutual interactions among the factors impacting healthcare organizations and to identify the driving and dependence power of the elements is ongoing (Vaishnavi et al., 2019).

In line with the systems approach, Kannampallil et al. (2011) investigated the complexity of healthcare systems and concluded that interrelatedness between system components could be used to indicate system complexity. Furthermore, they concluded complex systems could be considered in terms of functionally smaller pieces regarding "the relations between them, based on theoretical, rational, and practical considerations" (Kannampallil et al., 2011, p. 947). This information supports the validity of smaller workgroups to address change within the field of PT.

Burke (2018) identifies two unique components of the healthcare and governmental environment that can be processed through system theory thinking. Burke (2018) noted the culture of healthcare and government agencies are compelled by their mission of patient care and providing imperative services for society as opposed to more traditional profit-driven businesses.

Secondly, the culture within healthcare industries is affected by the impact of dual hierarchies (Burke, 2018). One example of dual hierarchies occurs between the professional organization and the business entity's administration (Burke, 2018). Burke (2018) stated,

> This duality is most keenly experienced by department heads, center directors, clinic directors, and the like. They must serve the profession, with its Hippocratic oath and related requirements, and ensure that the organization survives financially and operationally (p. 278).

This concept of dual hierarchies is not found solely between the business management and patient care models but also between public and private sector insurance providers. While government oversight will always impact the profession of physical therapy, the nature of healthcare within the U.S. necessitates operation in both the public and private sectors; although there is a similarity between the two segments, each has its own unique rules, regulations, and culture. Finally, because of the regulatory environment and payment structure, changes in healthcare industries are impacted by the governmental agencies' tolerance for change. These two unique features of healthcare, including its distinctive mission of patient care and the duality of hierarchies, contribute to an idiosyncratic environment for organizational change.

The inquiry framework for this study relies heavily on systems theory as described and applied by various scholars. Von Bertalanffy (1950) work frames the discussion of healthcare within an open system interacting with their environment. Senge's (1990) description of feedback processes, use of mental models, and recognition of the human actor being part of the feedback process instead of separated from it is particularly relevant to the study of organizational change toward proactive care. Katz and Kahn's (1978) entropic process explain the need for deliberate

intervention toward proactive care. These well-established theories afford the theoretical foundations of this study.

Conceptual Framework

The conceptual framework is the fundamental scholarly footing of what will done in a research project. The conceptual framework operates as the “logical conceptualization” of a scholarly investigation; it is a “is a metacognitive, reflective and operational element of the entire research process” (Kivunja, 2018, p. 47). The conceptual framework forms the “logical master plan” for the complete research project (Kivunja, 2018, p. 47). The conceptual frameworks work collaboratively with the theoretical framework to provide the scholarly foundation for research. As stated by Ravitch and Riggan (2016) “Reality is always more complex than a theory can completely capture, and you need to construct a conceptual framework that takes account of this complexity and avoids gross oversimplifications of the things that you are studying, as best you can” (p. xii). In this study the conceptual framework is developed from Bolman and Deal’s (2017) four frames.

The primary model used to develop the conceptual framework of this study and to identify and describe constructs associated with the outcome variables for the study is Bolman and Deal's (2017) reframing organizations. While acknowledging and embracing the complexity of organizations, Bolman and Deal (2017) offer a unique approach to perceiving and understanding organizations. This approach is founded on the belief that "organizations are open systems dealing with a changing, challenging, and erratic environment" (Bolman & Deal, 2017, p. 31). They assert "four key characteristics of organizations," including that organizations are "complex," "surprising," "deceptive," and ambiguous" (Bolman & Deal, 2017, p. 31-32). Bolman

and Deal (2017) recognize the added convolution of large organizations when considering the interplay between multiple organizations. Bolman and Deal's (2017) methodology for understanding organizations involves a "pluralistic" approach embracing four mental models they refer to as "frames" (p. 40); they describe these frames as perspectives that help leaders "find clarity and meaning amid the confusion of organizational life" (p. 40). These frames serve as the theoretical structure by which the organizational variables are understood in this research.

Bolman and Deal (2017) assert complexity and ambiguity are two inherent and fundamental characteristics of organizations that can lead to "cognitive biases" and "cognitive economizing" when a leader's "processing capacity" is exceeded (Bolman & Deal, 2017, p. 36). Bolman and Deal (2017) describe "processing capacity" as the human brain's "limits of time, memory, attention, and computing speed," resulting in leaders "processing a fraction of the information that might be relevant in a given situation" (p. 36). "Cognitive economizing" occurs when intellectual limitations force leaders to utilize "mental shortcuts, rules of thumb, mental models, or frames to cut complexity and messiness down to a manageable size" (Bolman & Deal, 2017, p. 36). Bolman and Deal (2017) assert that leaders can avoid these flawed approaches by embracing a "pluralistic" approach whereby leaders intentionally cognitively reframe organizational challenges to embrace confronts from multiple perspectives.

Bolman and Deal (2017) describe four types of cognitive bias that reframing can help to avoid. "Information overload" is an example of "cognitive bias" whereby leaders unknowingly "filter out most data and see only what seems important and consistent with" their present viewpoint (Bolman & Deal, 2017, p. 37). Ambiguous situations can result in leaders "filling in gaps" of information with data that is consistent with their existing mental models, thereby

creating and perpetuating "false beliefs and narratives" (Bolman & Deal, 2017, p. 37). "Memory overload" occurs when leaders "discard specifics to form generalities or use only a few specifics to represent the whole," leading to "errors and bias in memory" that serve to strengthen their present perspective and "biases in information processing" (Bolman & Deal, 2017, p. 37). The organizational need for rapid response can cause leaders to "jump to a conclusion," which endorses simple and obvious responses over disordered and multifaceted solutions" (Bolman & Deal, 2017, p. 37). Bolman and Deal (2017) conclude these four cognitive biases result in a leader's flawed decision-making with adverse organizational outcomes; furthermore, they assert leaders can avoid this by embracing a "pluralistic" reframing approach (Bolman & Deal, 2017, p. 37).

One must investigate the issue through multiple theoretical lenses to understand the organizational complexity described by Bolman and Deal (2017) while appreciating the intricacy of change from a reactive to a proactive approach. One must recognize that each theory illuminates an aspect of the challenge but does not fully explain the entire problem. To appreciate all aspects of this issue, one must consider the profession of pediatric physical therapy as an organization from both a systems perspective and from the view of a socially constructed organization.

Bolman and Deal (2017) advocate for a pluralistic approach to leadership by perceiving organizations through multiple frames to ensure a comprehensive understanding of organizational factors. Bolman and Deal (2017) define a frame as "a mental model- a set of ideas and assumptions" that leaders can use to help them "understand and negotiate a particular territory" (p. 12). According to Bolman and Deal (2017), this frame of reference "makes it easier

to know what you are up against and, ultimately, what you can do about it" (p. 12). Frames assist leaders in perceiving and defining organizational events and challenges; they guide the questions and solutions a leader may consider in a given situation. This approach requires leaders to be familiar with the different frames and how they apply to their organization; this allows leaders to discern the relationship between events and outcomes accurately.

Bolman and Deal (2017) present four frames: structural, human resources, symbolic, and political. Leaders can perceive the profession of physical therapy and the specialization of pediatric physical therapy through each of these four frames. Furthermore, treating therapists can be grouped by geographic locations, practice settings, and experience utilizing the APPTV to identify trends in the four frames across diverse practice groups. This approach facilitates organizational leaders' utilization of reframing strategies, enabling an understanding of organizational variables affecting individual practice settings and across the profession.

Reframing involves considering a situation from a different "frame," which ultimately creates a new mental model or picture of the case; this theoretical transition allows leaders to envision various solutions to the same challenge. This conceptual versatility enables leaders to consider complex situations more thoroughly and accurately. The leader's skill of reframing is essential, as problems must be understood through multiple frames to ensure optimal solutions. Furthermore, leaders may find that the most effective and appropriate solution to a setback perceived in one frame may reside in intervention in a different frame. Changes in one frame can also impact how an organization functions in a separate frame. For example, a problem may arise because of an issue with the structure of an organization; however, changing the structure of the organization may have ramifications in the political frame. The most effective leaders understand

this dynamic interplay and possess the intellectual versatility to comprehend problems from multiple frames through reframing (Bolman & Deal, 2017).

In this study, the survey questions address either demographic information (predictor variables associated with questions 1-6) or one of Bolman and Deal's (2017) four frames (outcome variable associated with questions 7-9.8). Respondents' answers can guide leaders toward a better understanding of the barriers to implementing the Annual Pediatric Physical Therapy Visit. This information can also determine if barriers to implementation are homogeneous or heterogeneous within the pediatric physical therapy specialty. Finally, leaders in the field can use this information to guide future HPW initiatives.

Six questions explore the demographics of the responding therapist. In question one, responding therapists are asked to provide information regarding their practice setting through a multiple-choice question that categorizes the practice setting as an outpatient clinic, natural environment, school, hospital, inpatient rehabilitation facility, or long-term care facility. Respondents in the second multiple-choice question describe their employer as a public or private business. In the third open ended question, survey respondents are asked to disclose the state where they currently practice. In the fourth multiple-choice question, responding therapists are asked if they currently practice in a rural, suburban, or urban area. The fifth question is formatted as an open-ended question with a continuous variable inquiring about the number of years the responding therapist has been a licensed physical therapist. The final, sixth demographic question is a fill-in-the-blank question with a continuous variable inquiring how often the responding therapist conducts a Pediatric Annual Physical Therapy Visit in a quarter.

These six questions will be used to perceive the demographic response trends of the outcome variable.

The symbolic frame involves exploring the meaning derived from events and the resulting organizational culture (Bolman & Deal, 2017). Bolman and Deal's (2017) perspective of organizational culture described in the symbolic frame is consistent with Schein and Schein's (2017) description of the characteristics of the culture. Schein and Schein (2017) explain that "organizational cultures can be analyzed at several levels, including visual artifacts, espoused beliefs, values, and behavioral norms, and taken-for-granted basic underlying assumptions" (p. 56). Schein and Schein (2017) describe that the most important lesson regarding culture is that "culture is deep, pervasive, complex, patterned and morally neutral" (p. 57).

The symbolic frame encompasses concepts from numerous disciplines, including organizational theory, sociology, political science, magic, and neurolinguistic programming (Bolman & Deal, 2017). Bolman and Deal (2017) explain the symbolic frame utilizes these diverse sources to support five conclusions, including:

> What is most important is not what happens but what it means. Activity and meaning are loosely coupled; events and actions have multiple interpretations as people experience situations differently. In the face of uncertainty and ambiguity, symbols arise to help people resolve confusion, find direction, and anchor hope and faith. Events and processes are often more important for what they express or signal than their intent or outcomes. Their emblematic form weaves a tapestry of secular myths, heroes and heroines, rituals, ceremonies, and stories to help people find purpose and passion. Culture forms the

> superglue that bonds an organization, unites people, and helps an enterprise to accomplish desired ends (p. 242)

In pediatric physical therapy, therapists' perceptions of the values and beliefs can represent aspects of the symbolic frame. In the context of this study, the symbolic frame is represented by therapists' perceptions of the role in health promotion and wellness and their perception of the benefit of HPW to the patient. In this study, respondents answer a multiple-choice question rating pediatric therapists' role in HPW as a primary focus, significant focus, moderate focus, minimal focus, or something that should not be emphasized. Respondents also answer a multiple-choice question classifying the benefit of the PAPTV as extremely beneficial, moderately beneficial, minimally beneficial, or not beneficial. These two multiple-choice questions provide information about important elements of the symbolic frame that can impact a therapist's ability to implement the PAPTV.

Bolman and Deal's (2017) human resources frame "centers on what organizations and people do to and for one another" (p. 113). "The human resources frame evolved from the early work of pioneers like Mary Parker Follett (1918) and Elton Mayo (1933, 1945), who questioned a deeply held managerial assumption that employees had no rights beyond a paycheck, and their duty was to work hard and follow orders" (Bolman & Deal, 2017, p. 117). These early leaders in the human resources frame foundational theories asserted the value of employees' talents, mindsets, drive, and organizational commitment (Bolman & Deal, 2017). The human resources frame is founded on four key assumptions; according to Bolman and Deal (2017), these assumptions are:

> Organizations exist to serve human needs rather than the converse. People and organizations need each other. Organizations need ideas, energy, and talent; people need careers, salaries, and opportunities. When the fit between the individual and system is poor, one or both suffer. Individuals are exploited or exploit the organization- or both become victims. A good fit benefits both. Individuals find meaningful and satisfying work, and organizations get the talent and energy they need to succeed (p. 118).

Pediatric physical therapy practice can be perceived through the lens of Bolman and Deal's (2017) human resources frame. The human resource frame advocates for investing the time and resources necessary to develop organizations' personnel (Bolman & Deal, 2017). Within the context of supporting new proactive care initiatives, the practice's approach to training administrators and therapists in the latest methods can be perceived through the human resources frame.

In this study, two matrix component questions address pediatric physical therapy practice through Bolman and Deal's (2017) human resources frame. Respondents answer matrix component questions by ranking each component's effect on the responding therapist's implementation of the annual pediatric physical therapy visit. Respondents are asked to rate the practice's current approaches to administrator training (matrix component question 9.1) and the practice's current approaches to therapist training (matrix component question 9.2). These two matrix component questions provide insight into critical factors in the human resources frame that can impact a therapist's ability to implement the PAPTV.

The structural perspective advocates optimizing roles and relationships through organizational architecture (Bolman & Deal, 2017). "Two issues are central to the structural

design: how to allocate work (differentiation) and how to coordinate diverse efforts parceling out responsibilities (integration)" (Bolman & Deal, 2017, p. 53). Within the structural frame, Bolman and Deal (2017) advocate vertically coordinating individual and group efforts to system-wide goals, involving the formal leadership hierarchy, and laterally, with collaborative meetings, task forces, networks, and matrix structures. Bolman and Deal (2017) explain, "the central beliefs of the structural frame reflect confidence in rationality and faith that a suitable array of roles and responsibilities will maximize distracting personal static and maximize people's performance on the job" (p. 47).

Pediatric physical therapy practice can be perceived through the lens of Bolman and Deal's (2017) structural frame. The internal and external organizational processes, rules, and regulations involved in a pediatric physical therapy practice can be understood through the structural lens. This information can help leaders determine if the organizational structure of the practice of physical therapy is a barrier or facilitator of proactive care initiatives.

In this study, four matrix component questions address pediatric physical therapy practice through Bolman and Deal's (2017) structural frame. Respondents answer matrix component questions by ranking each component's effect on the responding therapist's implementation of the annual pediatric physical therapy visit. Respondents are asked to rate the practice's current patient scheduling strategies (matrix component question 9.3), the practice's current approaches to patient documentation and maintenance of patient physical therapy records (matrix component question 9.4), the practice's current approaches for marketing to patients and patient education regarding the benefits of an annual pediatric visit (matrix component question 9.5), and the practices current approaches for marketing to referral sources and referral source education

regarding the benefits of an annual pediatric visit (matrix component question 9.6). These four matrix component questions provide insight into critical factors in the structural frame that can impact a therapist's ability to implement the PAPTV.

The political frame involves leaders carrying out specific activities of politicians, including agenda-setting, evaluating the political terrain, networking and developing a coalition, and bargaining and negotiating on behalf of the organization. Bolman and Deal (2017) explain that "organizations are lively arenas for internal politics" and are "also active political agents in larger arenas or ecosystems" (p. 223). Bolman and Deal (2017) reference work by Maslow and Kohlberg (1978), stating:

> If leaders are to be effective in helping to mobilize and elevate their constituencies, leaders must be whole persons, persons with full functioning capacities for thinking and feeling. The problem for them as educators and leaders is not to promote narrow, egocentric self-actualization but to extend awareness of human needs and the means of gratifying them, to improve the larger social situation for which educators or leaders have a responsibility over which they have power (p. 214).

While politics and politicians often have a negative connotation associated with them, the political frame is comparable to what physical therapists would describe as advocacy for their profession and patients. Within the pediatric physical therapy profession, the political frame can take the form of advocating for fair reimbursement and scope of practice standards for HPW services, allowing therapists to focus on caring for patients while earning reasonable compensation.

In this study, two matrix component questions address pediatric physical therapy practice through Bolman and Deal's (2017) political frame. Respondents answer matrix component questions by ranking each component's effect on the responding therapist's implementation of the annual pediatric physical therapy visit. Respondents are asked to scale the State Practice Act and other state regulations' impact on the initiation of the PAPTV (matrix component question 9.7) as well as third-party reimbursement impact on the implementation of the PAPTV (matrix component question 9.8). These two matrix component questions provide information into central factors in the political frame that can impact a therapist's ability to implement the PAPTV.

Gathering survey information based on Bolman and Deal's four frames has multiple benefits. First, this approach can offer valuable insight into the different types of barriers that impede the implementation of the PAPTV. Furthermore, this information can be used to facilitate a pluralistic approach to organizational change toward greater implementation of HPW initiatives within pediatric physical therapy. Finally, this information can be used to reframe leaders' perceptions and enhance future organizational change strategies.

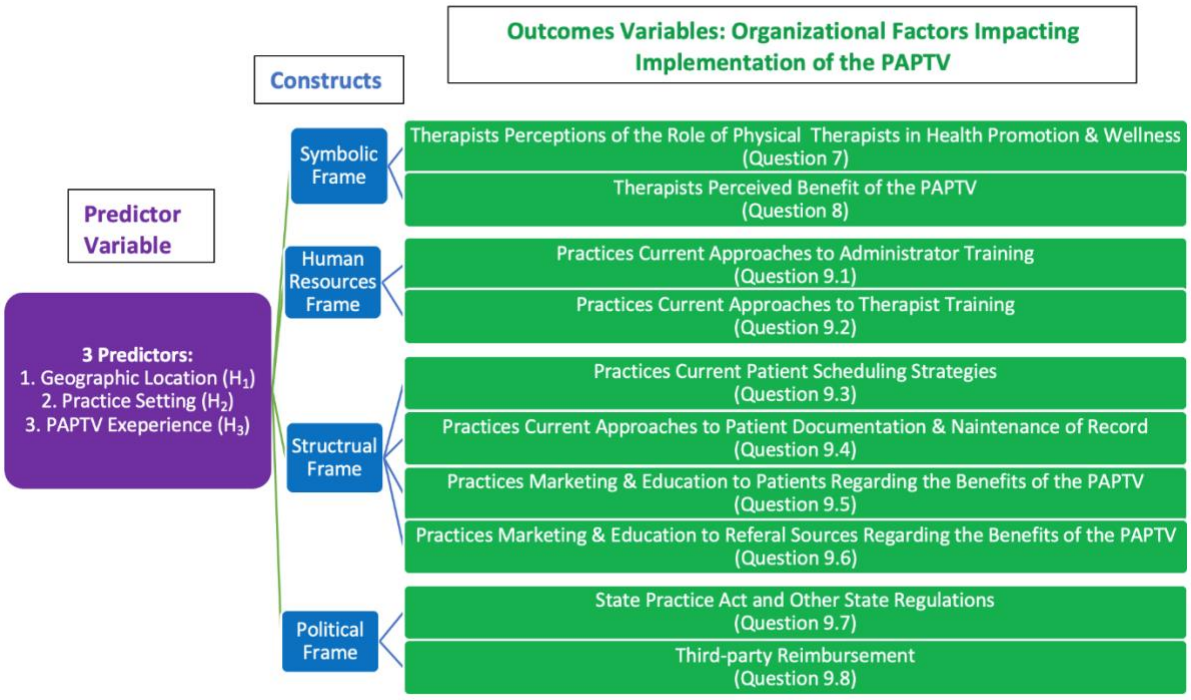


Figure 1.1: Model of the relationships between predictors, outcome variables, and constructs. Questions 1-6 are demographic questions. Questions 7 and 8 address the symbolic frame. Matrix component questions 9.1 and 9.2 address the human resources frame. Matrix component questions 9.3, 9.4, 9.5, and 9.6 address the structural frame. Matrix component questions 9.7 and 9.8 address the political frame.

Approach of the Study

The purpose of this study is to answer the question, "How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, or experience implementing the PAPTV?" The research methodology employed to resolve the questions addressed by the study is that of quantitative correlational design. An electronic survey will be used for data collection. Descriptive statistics, exploratory factor analysis, confirmatory

factor analysis, and regression analysis will be utilized for data analysis. This study tests hypothesized associations between variables but did not make a causal claim.

Procedures

The procedures for this study are broken down into five primary phases. The first phase involves completing a comprehensive literature review covering organizational factors, impacting the implementation of HPW initiatives in pediatric physical therapy framed through the lens of System Theory. The second phase involves a four-step process for developing and validating a survey instrument. The first step of survey development consists of the researcher drafting questions based on the literature review. The second step of survey development is to submit the proposed questions with the dissertation proposal to the IRB committee for approval. The third step of survey development involves establishing content and face validity by sending the survey to a panel of experts. The fourth step in survey development involves modifying the survey to reflect the experts' feedback. Resubmitting the finalized survey to the IRB committee for approval was unnecessary as significant changes were not required. The third phase of the study involves data collection through electronic survey distribution whereby a link to the survey was emailed to all Board-Certified Pediatric Specialists who had a correct email address listed on the American Physical Therapy Association's "Find a PT" page (American Physical Therapy Association, n.d.a). The fourth phase of the study involves data analysis using SPSS to conduct descriptive statistics calculation and univariant and multivariant analysis. The concluding fifth phase of the research project involved finalizing the study's manuscript through a draft review process with the dissertation committee.

The target population for this study is board certified pediatric physical therapists. According to the ABPTS, 2,751 physical therapists have achieved board certification in pediatrics and as of 2022; 1,931 physical therapists possessed current pediatric board certification. This population is ideal for this study because PCS through the ABPTS are healthcare providers who are most likely to maintain the highest degree of competence in pediatric physical therapy. The study is selective to PCS because they will likely be the pediatric therapists most familiar with APPT health and wellness initiatives, including the annual pediatric physical therapy visit.

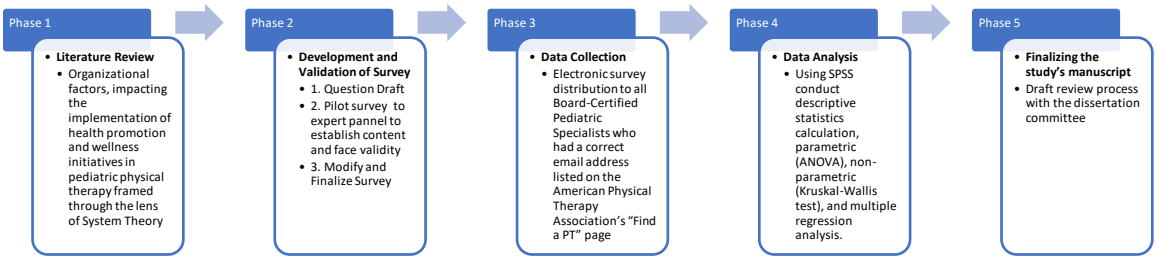


Figure 1.2: Model of phases of the research plan

Significance of the Study

There is a paradox between the support for HPW initiatives and their implementation and utilization. Consensus exists between a growing number of scholars, national organizations, and industry leaders of an irrefutable need for physical therapists to be involved with HPW efforts

(American Physical Therapy Association, 2020; APTA Academy of Pediatric Physical Therapy, 2023; Miles et al. 2021; Quinn & Morgan, 2017; Rafferty et al. 2022). Despite this fact, barriers exist that limit the inclusion of greater proactive care throughout the profession. While barriers to HPW in physical therapy have been studied in the past, no study focused on the PAPTV; this study is designed to fill that void.

Leaders and clinicians can utilize the findings from this study to enhance organizational change strategies toward HPW within pediatric physical therapy in two specific ways. First, the information in this study can be utilized in strategic planning by national organizational leaders and leaders within individual facilities to overcome barriers to implementing the PAPTV. Second, the PAPTV is broadly supported and can indicate trends in the APTA Academy of Pediatric Physical Therapy members' challenges in executing HPW initiatives. For this reason, leaders and clinicians can utilize knowledge gained from this study to customize future organizational change efforts to address the needs of pediatric physical therapists who are members of the APPT.

Uniqueness and Compatibility of the Research

This study offers a unique perspective on implementing HPW initiatives within physical therapy. While scholars have conducted research to illuminate the challenges of implementing greater HPW, no study focused on the PAPTV. Furthermore, no study explored barriers to organizational change in pediatric physical therapy through the lens of Bolman and Deal's (2017) four frames or System Theory. The current study will offer a new perspective that has the potential to improve the effectiveness of organizational strategy toward HPW by clarifying diverse barriers to implementation.

Contribution to Knowledge, Theory and Practice

This study will contribute to organizational knowledge, theory, and practice by applying a unique combination of current theory to new areas of organization, healthcare. There is limited research demonstrating the application of organizational studies to physical therapy practice and even less in pediatric physical therapy. Extensive literature searchers did not produce any application of Bolman and Deal's (2017) theories of the four frames or System Theory to pediatric physical therapy practice. Therefore, this study will expand the existing knowledge and literature on organizational knowledge, theory, and practice by applying this unique combination of current theory to pediatric physical therapy.

Delimitations and Limitations of the Study

To grasp the inherent limitations of this study, it is necessary to thoroughly understand the goals of the study as well as the methods, circumstances, and environment the study is conducted in. This quantitative correlational study investigates therapists' perceptions of organizational factors impacting the implementation of the PAPTV by deploying a survey designed specifically for this research. The survey was sent to all Board-Certified Pediatric Specialists with the correct email address listed on the American Physical Therapy Association's "Find a PT" page (American Physical Therapy Association, n.d.a). This quantitative survey aims to explore therapists' perceptions of organizational factors from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). Descriptive statistics explained trends in geographic regions, practice settings, and therapist experience with the PAPTV. Parametric (ANOVA), non-parametric (Kruskal-Wallis test), and Multiple regression analysis were used to analyze survey results to determine significant findings. While the study design is

well suited to answer the research question, it is not without unavoidable inherent limitations; a thorough understanding of the study's limitations supports the appropriate use of the research findings.

The voluntary nature of the survey completion could negatively impact the generalizability of the study results. A sampling bias that could affect the study is that only the more engaged therapists will complete the survey. These individuals are also more likely to be responsive to APPT philosophies, which support the PAPTV and other HPW initiatives. This bias could negatively impact the generalizability of the result in the study sample to the overall pediatric physical therapist population. This bias presents an inherent limitation of this research design and is unavoidable.

The outcome of this research is an organizational assessment of change towards a specific HPW initiative (the PAPTV) through the perspective of therapists who are Pediatric Certified Specialists. An inherent limitation of this study is that the findings may be representative of PCS's but not of the larger pediatric community, which can potentially be less involved with organizational change initiatives spearheaded by the APPT. This research can inform future organizational change efforts toward preventative care within the pediatric physical therapy profession while considering both profession-wide national trends and the unique challenges of various practice settings and geographic locations.

Assumptions

There are four primary assumptions imbedded in this research. First, there are assumptions that the responding therapists represent the larger population of Board Certified Pediatric Physical Therapists. Second, there are assumptions associated with the mathematical

statistical calculations used to analyze the survey data. There is an assumption of the accuracy of the expert panel in the validation of the survey. Finally, a fundamental assumption that drives this research is the benefit of proactive care within pediatric physical therapy. This assumption is well supported by scholars, national organizations, and leaders in the field (American Physical Therapy Association, 2020; APTA Academy of Pediatric Physical Therapy, 2023; Miles et al., 2021; Quinn & Morgan, 2017; Rafferty et al., 2022). However, it is essential to recognize this perspective as it is embedded throughout the study.

Parameters

This study has a narrow focus within the greater topic of health and wellness promotion as well as a limited focus within the field of physical therapy. The PAPTV is the only HPW tool utilized. The study participants will be limited to PCS's.

Definitions of Terms

Areas of Specialized Vocabulary

For consistency of interpretation, the following terms are defined:

Prevention:

Magnusson et al. (2019) describe prevention as "efforts aimed at avoiding or arresting disease processes" (p. 1040). Magnusson et al. (2019) describe four types of prevention: primordial, primary, secondary, and *tertiary prevention*.

Primordial Prevention

"Primordial prevention refers to conditions within the social, economic, or physical environment that minimize the emergence of factors known to increase disease

or injury risk (e.g., development of healthy eating patterns early in life)" (Magnusson et al., 2019, p. 1040).

Primary Prevention

"Primary prevention refers to the amelioration of specific risk factors (e.g., obesity) in susceptible populations" (Magnusson et al., 2019, p. 1040).

Secondary Prevention

"Secondary prevention involves early disease detection (e.g., type 2 diabetes) during a detectable, asymptomatic period through clinical and population-based screening" (Magnusson et al., 2019, p. 1040).

Tertiary Prevention:

"Tertiary prevention involves actions taken to limit disability and improve length and quality of life among symptomatic individuals" (Magnusson et al., 2019, p. 1040). "This level most closely aligns with historical views of physical therapist practice and somewhat limited views of contemporary practice." (Magnusson et al., 2019, p. 1040)

Operational Definitions

Reactive Care:

In this research, reactive care is analogues to tertiary prevention as described by Magnusson et al. (2019) whereby,

> Tertiary prevention involves actions taken to limit disability and improve length and quality of life among symptomatic individuals (e.g., rehabilitation for individuals with lower limb amputation secondary to diabetic peripheral neuropathy). This level most

closely aligns with historical views of physical therapist practice and somewhat limited views of contemporary practice. (p. 1040)

Proactive Care:

In this research, proactive care is an encompassing term analogues to primordial, primary, and secondary prevention as defined by Magnusson et al (2019).

Health

Health as a term holds different meanings to different individuals and groups based on culture and belief system. The traditional definition of health is the absence of disease; however, that has evolved to a more holistic interoperation. As stated by Bezner (2015), "the WHO developed what has become the most commonly referenced definition of health: a state of complete physical, mental and social wellbeing and not merely the absence of disease" (p. 1434).

Wellness

The concept of wellness is rooted in a holistic, proactive approach to one's wellbeing. As noted by Bezner (2015), "Wellness is defined as the sense that one is living in a manner that permits the experience of consistent, balanced growth in the physical, spiritual, emotional, intellectual, social, and psychological dimensions of human existence" (p. 1434). When considering the topic of wellness, it is important to recognize the consensus that there are multiple dimensions of wellness that dynamically interact with one another and that that interaction is unique to the individual patient or client. (Bezner, 2015). Societal and cultural norms may impact the perception of the specific dimensions of wellness and their importance.

Health Promotion

The term *health promotion* can be defined within the context of physical therapy practice as a whole. As noted by Bezner (2015), *health promotion* refers to empowering people to develop their health while concurrently increasing their control over their ability to impact their health positively. Furthermore, as stated by Benzer (2015), "The concept of health promotion moves beyond a focus on individual behavior, toward a wide range of social and environmental interventions" (p. 1436). Manusson et al. (2019) explain,

> Health promotion is closely tied to prevention and refers to the process of empowering people to increase control over their health, moving beyond a focus on individuals to consider social, cultural, and political environments that limit individual choice and opportunity (p.1040).

Population Health

Magnusson et al. (2019) recognize the following definition of Population health as it applies to physical therapy:

> the health outcomes of a group of individuals, including the distribution of such outcomes within the group. Traditional definitions of population health are reserved for geopolitical populations (e.g., neighborhoods, cities, or states). In contrast, terms such as population health management and population medicine refer to the application of population health to defined clinical populations (p. 1040).

Summary and Forecast

This study aims to answer the question, "How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, or experience implementing the PAPTV?" While HPW services are widely accepted as advantageous to both

the patient and the healthcare system, initiating new services is often challenging. The PAPTV has been a significant health and wellness promotion initiative supported by the APTA and the APPT. Despite the support of professional organizations, scholars, and leaders in the profession, utilization of the PAPTV is limited. Discerning barriers to implementing the PAPTV is the first step to greater implementation, which can benefit individual patients and society tremendously.

This quantitative correlational study investigates therapists' perceptions of organizational factors impacting the implementation of the Pediatric Annual Physical Therapy Visit by deploying a survey designed specifically for this research. The survey will be emailed to all Board-Certified Pediatric Physical Therapists who list a correct email on the APTA's "Find PT" data. Survey completion will be voluntary and available to all PCS's who list a correct email on the APTA's "Find PT" data. This quantitative survey aims to explore therapists' perceptions of organizational factors from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). A pilot survey study was used to establish content and face validity. Descriptive statistics, univariate, and multivariate tests are used to identify differences in geographic regions, practice settings, and the use of the PAPTV. While the study design is well suited to answer the research question, it is not without unavoidable inherent limitations; a thorough understanding of the study's limitations supports the appropriate use of the research findings.

This introductory chapter presented an overview of the study by describing the background, purpose, approach, significance, delimitations, limitations, and vocabulary of the research. Chapter Two constructs the study's theoretical framework through a review of the literature related to the research questions. Chapter Three describes the research design

employed to conduct the study, with particular attention to the methodology and technique applied to data collection and analysis. Chapter Four presents the study results in the form of data generated and analyzed through the application of the research design. Chapter Five presents a discussion of study findings and conclusions related to the research questions and reviewed literature. This concluding chapter also addresses the implications of the findings for practice, research, and leadership.

Chapter 2

Organization of Review

The purpose of this study was to answer the question, "How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, and experience implementing the PAPTV?" The related research questions and hypotheses were:

1. Do organizational factors influencing the implementation of the PAPTV vary by practice setting?
2. Do organizational factors influencing the implementation of the PAPTV vary by geographic location?
3. Do organizational factors influencing the implementation of the PAPTV vary by experience implementing the PAPTV?

A summary analysis of prominent themes and findings within the reviewed literature is presented at the end of the chapter.

Theoretical Framework

The inquiry framework is founded on systems theory as described and applied by various scholars. Von Bertalanffy's (1950) theories of open systems frame the discussion of healthcare as an open system interacting with its environment. Senge's (1990) description of feedback processes, use of mental models, and recognition of the human actor being part of the feedback process instead is particularly pertinent to the study of organizational change toward proactive care. Katz and Kahn's (1978) entropic process

explains the need for methodical intervention toward proactive care. These seminal provide the theoretical foundations of this study.

Review of Research and Theory Related to the Application of Systems Theory to Healthcare

The purpose of this literature review is to systematically evaluate research related to the application of systems theory in healthcare. The original intent was to systematically evaluate research related to the application of systems theory in physical therapy and pediatric physical therapy; however, due to limited data, the inquiry was broadened. The review is limited to articles published since 2013. The Anderson University Library database and Google Scholar were used to identify research articles published in peer-reviewed journals. The Anderson Library database search criteria included System Theory (title, exact phrase) and Healthcare (title, exact phrase), or Physical Therapy (title, exact phrase) or Pediatric Physical Therapy (title, exact phrase); the search was restricted to peer-reviewed articles, published in English since 2013. The Google Scholar search terms include System Theory Healthcare, System Theory Healthcare Organization, Healthcare System Theory, System Theory Physical Therapy, and System Theory Pediatric Physical Therapy. The findings are summarized in Table 2.1, Summary of literature relevant to System Theory in Healthcare.

All articles identified supported using systems theory or variations of system theory within healthcare. Two articles provided a review of Systems Theory (Cordon, 2013; Katrakazas et al., 2020). Cordon (2013) aimed to “provide healthcare professionals with concrete examples of how system theories can be used in analyzing complicated

issues in healthcare" and emphasized the importance of recognizing the smaller interdependent components that comprise a system (p. 13). Cordon (2013) emphasized three applications of Katrakazas et al. (2020) analyzed the application of General Systems Theory within healthcare, specifically to the hearing healthcare specialty. One article focused on the application of Bronfenbrenner's Ecological Systems Theory to patient care (Canoy, 2019). Colombo-Dougovito (2016) explored the application of a variation of Systems Theory (Dynamic Systems theory) to motor development in children with and without autism spectrum disorder. Overall, the research supported the application of Systems Theory to healthcare.

Author and Dates	**Research Design or Article Type**	**Findings or Significance to Research**
Adetola et al. (2023)	Perspective article	A "practical application of systems theory in relation to disease epidemiology and the preparedness/functioning of social and health systems" is presented (p. 298)
Anderson (2016)	Editorial Commentary	The article supported the use of System Theory in Healthcare.
Colombo-Dougovito (2016)	Literature Review	Article Explores the application of a variation of Systems Theory (Dynamic systems theory) to motor development.
Canoy (2019)	Qualitative evidence synthesis protocol from of was utilized.	Researchers utilized a variation of systems theory for their research framework (Bronfenbrenner's ecological systems theory).
Cordon (2013)	Perspective article	The article provides an overview and summary of different System Theories and their application in Healthcare.
Edwards et al. (2017)	Perspective article	Researchers concluded, "Approaches based on applying systems theory and human factors are much more likely to improve objectivity and transparency, leading to better system design" (p. 2342)

Holt-Lunstad (2018)	Perspective article	"Systems perspective is presented as a framework by which to move social connection into the realm of public health. A systems approach also helps identify gaps in our current understanding that may guide future research" (p. 437)
Katrakazas et al. (2020)	Systematic review of general systems theory in healthcare	The application of System Theory to Healthcare was explored.
Khatiban et al (2016)	Systematic Review of Neuman System Model	Researchers utilized a variation of systems theory in research for the research framework.
Lennox et al. (2018)	A systematic review using PRISMA guidelines to identify publications that reported approaches to support or influence sustainability in healthcare	Research findings: Four theoretical perspectives "guided how sustainability was defined within approaches and how it was viewed within healthcare systems" (p.4). "The approaches that were common across multiple sustainability approaches covering 45% of papers included diffusion of innovations theory, complexity theory, ecological theory, and open systems theory" (p. 4).
McCovey & Matusitz (2014)	Perspective article	Researchers applied the core principles of systems theory to health care delivery in the United States" (p. 451).
Montgomery & Oladapo (2014)	Perspective article	Researchers utilize the General Systems Theory framework to explore talent management vulnerability.
Palmer (2017)	Perspective article	The article provided a review of *Systems Theory and the Sociology of Health and Illness: Observing Healthcare*, supporting the use of the systems theory approach to understand healthcare.
Penney et al. (2018)	Systematic review of complex adaptive systems (CAS)	Researchers utilized a variation of systems theory in research for the research framework.
Ruhl & Harter (2013)	Perspective article	The article provided a review of a book supporting the use of the systems theory approach in healthcare.
Sturmberg et al. (2014)	"Historical integrative review using the following	Findings support using Systems theory in general practice/family medicine.

	systematic search strategy: medical subject heading [humans] combined in turn with the terms *complex adaptive systems*, *nonlinear dynamics*, *systems biology*, and *systems theory*, limited to general practice/family medicine and published before December 2010" (p. 66)	
Suter et al. (2013)	Editorial of 17 organizational and systems theories	Researchers discussed the application of System Theory in various forms to industries, including healthcare
Zhang & Lu (2023)	Retrospective study using Multivariate logistic regressions of data from 470 rural women in 9 villages.	Researchers utilized a variation of systems theory (Society Ecosystem Theory) in research for the conceptual framework.

Table 2.1 Summary of literature relevant to System Theory in Healthcare

Review of Research and Theory Related to the Application of Bolman and Deal's Four Frames in Healthcare

The purpose of this literature review is to systematically evaluate research related to the application of Bolman and Deal in healthcare. The original intent was to systematically evaluate research related to applying Bolman and Deal's Four Frames in physical therapy and pediatric physical therapy; however, limited data broadened the inquiry. The Anderson University Library database and Google Scholar were used to identify research articles published in peer-reviewed journals. The Anderson Library database search criteria included Reframing Organizations (title, exact phrase) restricted

to peer-reviewed articles published in English since 2013; the result produced 17 results. The results were individually reviewed for their relevance to healthcare. Three articles were found to have a bearing on healthcare. The Google Scholar search terms include Reframing Organizations, which produced no additional findings. The findings are summarized in Table 2.2, Summary of literature relevant to Bolman and Deal's Four Frames in Healthcare. All articles found supported using Bolman and Deal's Four Frames within healthcare.

Author and Dates	**Research Design or Article Type**	**Findings or Significance to Research**
Lowe (2017)	"A survey formed Phase 1 of a broader mixed-methods study to explore perceptions of the change process involved with integrating NPs into Australian health care settings." (p. 553).	Researchers concluded, "The Bolman and Deals framework is fitting for underpinning integration of progressive roles in health care" (p. 559).
Oh (2018)	Perspective article	The author introduces "women's leadership in the nursing profession of South Korea" through her "personal experience of leadership development based on Bolman and Deal's leadership typology" (p. 65). The article demonstrates the Utility of Bolman and Deal's (2017) four frames in healthcare.
Yilmaz et al. (2021)	"A qualitative study was conducted using framework analysis based on the Bolman and Deal's Four-Frame Model" (p. 1048)	The research supports using Bolman and Deal's (2017) four frames in healthcare research. Specifically, researchers found that "Bolman and Deal's Four-Frame Model framework may serve as an effective guideline for academic leaders who wish to strategically implement or enhance social media use into their organizations" (p. 1048)

Table 2.2 Summary of literature relevant to Bolman and Deal's Four Frames in Healthcare.

Summary of Findings and Themes within Reviewed Literature

Summary of Findings about the Application of Systems Theory to Healthcare

Finding: Direct Application and Indirect Application Through Research Framework

Throughout the past ten years of research involving systems theory within healthcare, two customary and conventional themes emerged, involving the direct application of systems theory to healthcare and an indirect application of systems theory through a research framework. First, there was a trend to explore the applications of System Theory in various forms to understand healthcare organizational challenges and clinical conditions (Adetola et al., 2018; Anderson, 2016; Cordon, 2013; Edwards et al., 2017; Holt-Lunstad, 2018; Katrakazas et al. 2020; McCovery & Matusitz. 2014; Palmer, 2017; Ruhl and Harter, 2013; Sturmberg et al., 2014; Suter et al. 2013). Based on these findings, it is clear that current literature supports the application of Systems Theory to organizational confronts and clinical ailments within health care. Additionally, there was a tendency to utilize Systems Theory as a theoretical or conceptual framework in healthcare research (Canoy et al., 2016; Khatiban et al., 2016; Penney et al., 2018; Lhang & Lu, 2013). Based on these findings, it is apparent that Systems Theory can be successfully used to provide a solid research framework within healthcare. These findings highlight the appropriateness of the conventional applications of System Theory to healthcare industries, clinical settings, and research.

Finding: Utilization of Systems Theory to Create or Apply a Mental Model

There was a trend in the past ten years of research involving systems theory within healthcare to utilize Systems Theory to create or apply a mental model or schema to understand healthcare organizational challenges and clinical conditions (Colombo-Dougovito, 2016; Lennox et al., 2018). Dynamic Systems Theory, discussed by Colombo-Dougovito (2016), and Bronfrenbrenner's Ecological Systems Theory, applied by Canoy et al. (2109) have notable similarities in their application. In both cases, they are used to understand aspects of healthcare through a variation of Systems Theory that simultaneously operates as a mental model. Colombo-Dougovito (2016) utilized Dynamic System Theory as a mental model to understand the complexity of motor development, noting the three categories of "constraints (i.e., individual, task, and environment) that influence the emergence of behavior" (p. 141). Canoy et al. (2019) applied the concepts of microsystems, macrosystems, exosystems, and chronosystems from Bronfrenbrenner's Ecological System Theory as a framework to "to identify, sort and review existing studies on engagement" in HIV care prevention and interventions among diverse groups of transgender persons" (p. 3). Through this model Canoy et al. (2019) identified "interaction patterns between system levels that influence treatment" and improved understanding of the role of "context, culture, and personal dispositions in different levels of care engagement" (p. 4). These articles demonstrate the link between mental models and systems thinking and support the use of Systems Theory in the current inquiry.

Summary of Findings about the Application of Bolman and Deal's Four Frames in Healthcare

Finding: Bolman and Deal as a Model for Healthcare Organization

Yilmaz et al. (2021) conducted a qualitative study using Bolman and Deal's four-frame model to analyze how organizational structures support or inhibit social media adoption with emergency physicians and other researchers. The study specifically targeted Academic Health Science Centers. Yilmaz et al. (2021) concluded, "Bolman and Deal's Four Frame Model framework may serve as an effective guideline for academic leaders who wish to strategically element or enhance social media use in their organization" (p. 2).

Yilmaz et al. (2021) study is particularly relevant to the current study because of how each of the four frames was defined. The researchers operationalized Bolman and Deal's structural frame by describing it as including "the governance, committee structure, policies and procedures, and organizational hierarchies present in the institutions" (p. 7). The human resources frame was identified as describing "how an organization fulfills the needs of its members and how the organization allows the workers to express their skills and ideas to create the optimal individual, organizational alignment that benefits both parties" (Yilmaz et al. 2021, p. 8). The political frame was identified as articulating "how serious actors within the organization, garner, and wield influence and power" (Yilmaz et al., 2021,p. 10). "The symbolic frame represents the motivations or a sense of purpose from members within an organization" (Yilmaz et al.,

2021,p. 12). This study demonstrates the application of Bolman and Deal's Four Frames model to the organizational analysis of an aspect of the healthcare industry.

Lowe (2017) researched the perceptions of the change process within an Australian healthcare setting using Bolman and Deal's Four Frames. Each frame was described as a lens and assigned a theme. The structural lens theme was "making a difference" (Lowe, 2017, p. 555). The human resources lens was "recognition of nursing" (Lowe, 2017, p. 556). The political lens theme was "politics" (Lowe, 2017, p. 556). The symbolic lens was interchangeably referred to as the cultural lens, and the theme was "teamwork" (Lowe, 2017, p. 557). Lowe (2017) concluded, "The Bolman and Deal framework is fitting for underpinning integration for progressive roles in healthcare" (p. 559). The research supports an additional application of Bolman and Deal's four frames in healthcare.

Finding: Bolman and Deal as a Model for Healthcare Leadership.

Oh (2018) wrote a perspective article asserting Bolman and Deal's frames as ideal for women's leadership in South Korea. Oh (2018) contends, "Structural leadership includes rethinking the relationships among structures, strategies, and environments, focusing on implementation and experimentation" (p. 70). Oh (2018) identified the human resources frame as including "a strong belief in people and empowerment for others" (p. 70). Oh (2018) underscored the emphasis on power within the political frame and the importance of symbols and storytelling within the symbolic frame. The article serves as an example of the utility of Bolman and Deal's (2017) four frames in healthcare.

Forecast Chapter Three

The methodologies used to collect and analyze the study's data are explained in Chapter Three. The research utilized a quantitative survey that investigated Pediatric Certified Specialists' perceptions of organizational factors impacting the PAPTV from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). Descriptive statistics explained trends in geographic regions, practice settings, and therapist experience with the PAPTV. Parametric (ANOVA), non-parametric (Kruskal-Wallis test), and Multiple regression analysis were used to analyze survey results to determine significant findings. All data collection and analysis methods were supported by contemporary research.

Chapter 3: Methodology

Introduction

This dissertation explores therapists' perceptions of organizational factors impacting the implementation of the PAPTV. The research explicitly targets Board-Certified Pediatric Specialists through the ABPTS. The Annual Physical Therapy visit has been a significant health and wellness promotion initiative supported by the APTA and APPT. While HPW initiatives are widely accepted as beneficial to both the patient and the healthcare system, the rollout of new initiatives is often challenging (Hartung, 2016).

Preventative health measures targeting lifestyle change can dramatically improve the quality and quantity of people's lives in the United States and worldwide. As noted by the World Health Organization and the Center for Disease Control and stated by Bezner (2015), "Noncommunicable diseases, also called lifestyle or chronic diseases, are the major cause of morbidity and mortality in the United States and most countries around the world" (p. 1433). Furthermore, health outcome data consistently reveals a handful of chronic diseases primarily resulting from modifiable behaviors create the greatest challenge to the health and well-being of Americans and the US healthcare system (Benzer, 2015).

If organizational factors influencing the implementation of the PAPTV vary based on practice setting, geographic location, and experience with the PAPTV, then the organizational change strategies to implement this new approach to treatment must also be differentiated and customized to each group to best meet their needs. One must first

understand the distribution of variation to identify effective organizational change strategies.

This quantitative survey explores therapists' perceptions of organizational factors from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). Descriptive statistics explain trends in geographic regions, practice settings, and therapist demographics. Parametric (ANOVA), non-parametric (Kruskal-Wallis Test) and multiple regression analysis will be used to analyze survey results to determine significant findings. The outcome of this research is an organizational assessment of change towards a specific HPW initiative (the PAPTV) through the perspective of Board-Certified Pediatric Specialists through the ABPTS. This research can inform future organizational change efforts toward preventative care within the profession of pediatric physical therapy while taking into account both profession-wide national trends and the unique challenges of various practice settings and geographic locations.

Research Purpose

The purpose of this study was to answer the question, "How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, and experience implementing the PAPTV?" The related research questions and hypotheses were:

1. Do organizational factors influencing the implementation of the PAPTV vary by practice Setting?

2. Do organizational factors influencing the implementation of the PAPTV vary by geographic location?

3. Do organizational factors influencing the implementation of the PAPTV vary by experience implementing the PAPTV?

Research Design

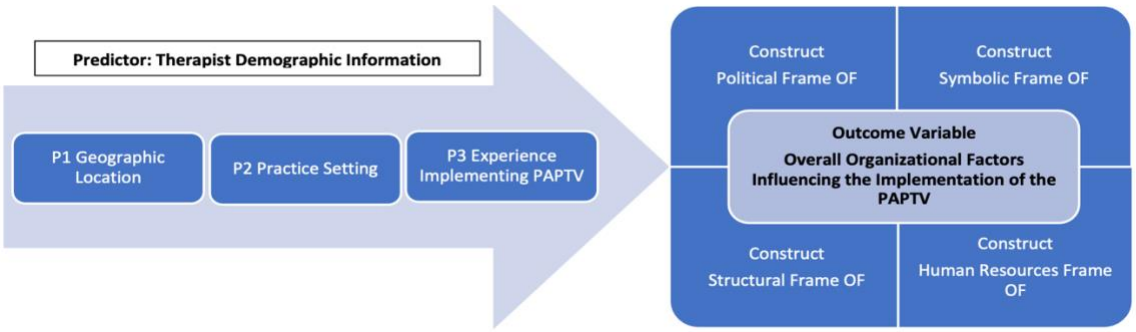
The research methodology employed to resolve the questions addressed by the study was that of quantitative correlational design. An electronic survey was used for data collection. Descriptive statistics, parametric (ANOVA), non-parametric (Kruskal-Wallis test), and multiple analysis were utilized for data analysis. This study tests hypothesized associations between variables but did not make a causal claim.

Bolman and Deal's (2017) theories of reframing organizations are used as constructs for the outcome variables. The four constructs used are the structural frame, human resources frame, symbolic frame, and political frame. An explanation of the theoretical perspective of the research plan further describing the constructs is located in Appendix A. As stated by Laerd Dissertation (n.d.), "Constructs are mental abstractions that we use to express the ideas, people, organizations, events and/or objects/things that we are interested in" (para. 2). As described by Nunnally and Bernstein (1994) and noted by Schriesheim and Cogliser (2009), constructs are "abstract and latent rather than concrete and observable" (p. 725). Constructs bridge the gap between theories and variables. Construct validity is critical for organizational and leadership research (Schriesheim & Cogliser, 2009).

Creswell and Creswell (2018) describe outcome variables as "variables that are considered the outcomes or results of predictor variables in survey method studies"; the outcome variables in this study are the individual therapists' perceptions which are

assessed and quantified through specific survey questions. Each outcome measure is associated with one of the four constructs derived from Bolman and Deal's (2017) four frames (structural frame, human resources frame, symbolic frame, and political frame). The ten outcome variables in this study are the therapist's perceptions of the role of physical therapists in HPW, the therapists' perceived benefit of the PAPTV, the state practice act and other state regulations, third-party reimbursement, the practice's current patient scheduling strategies, the practices current approaches for marketing to patients and patient education regarding the benefits of the PAPTV, the practices current approaches for marketing to referral sources and referral source education regarding the benefits of the PAPTV, the practices current approaches to patient documentation and maintenance of patient physical therapy, the practices current approaches to administrator training, and the practices current approaches to therapist training.

Creswell and Creswell (2018) describe independent (predictor) variables as "variables that are used to predict an outcome of interest in survey method studies" (p. 51). The current research proposal includes three predictor variables: geographic location, practice setting, and experience implementing the PAPTV. See *Figure 1: Model of relationships between predictors, outcome variables, and constructs* for a graphical and mathematical model of the hypothesized relationships between the predictor and outcome variables described in the study.



$$\text{Symbolic Frame} = \alpha + \beta_1\text{Geographic Location} + \beta_2\text{Practice Setting} + \beta_3\text{Experience}$$

$$\text{Human Resource Frame} = \alpha + \beta_1\text{Geographic Location} + \beta_2\text{Practice Setting} + \beta_3\text{Experience}$$

$$\text{Structural Frame} = \alpha + \beta_1\text{Geographic Location} + \beta_2\text{Practice Setting} + \beta_3\text{Experience}$$

$$\text{Political Frame} = \alpha + \beta_1\text{Geographic Location} + \beta_2\text{Practice Setting} + \beta_3\text{Experience}$$

Figure 3.1: Model of relationships between predictors, outcome variables, and constructs

Nature of the Methodology to the Research

Quantitative research has distinct qualities and characteristics. Quantitative research is a deductive approach used to test theories; it relies on objectivism while striving to keep values and biases in check (Choy, 2014; Salvador, 2016). Quantitative research is utilized in positivism, natural science models (Choy, 2014; Salvador, 2016). Numerical data is gathered and generated through closed-ended questions (Choy, 2014; Salvador, 2016). Quantitative research is well suited for representative samples of a larger population where the goal is to generalize to the larger population (Choy, 2014; Salvador, 2016).

Correlational research is fundamentally different than experimental research, which seeks to assert cause and effect relationships; however, its equivalent value to the body of knowledge has been established and recognized for nearly a century (Cronbach,

1957; Curtis et al., 2016; Woodworth, 1938). As stated by Leedy and Ormrod (2010) and noted by Curtis et al. (2016), "Correlational research is concerned with establishing relationships between two or more variables in the same population or between the same variables in two populations" (p. 2). Correlational design is often utilized in social science and healthcare settings where it is not possible or not advantageous to manipulate the independent variables being studied (Curtis et al., 2016). Mitchell (1985) established correlational techniques are regularly utilized to infer associations between variables in organizational research. Curtis et al. (2016) concluded that correlational research could be used to "inform decision-making and to improve or initiate health-related activities or change" (p. 25).

Appropriateness of the Methodology to the Research

A quantitative research method is well suited for this study because of the study's theoretical foundation, the population being studied, and the goal of generalizing the findings from the sample to the larger population. This study is designed to test theories of correlations between hypothesized predictor and outcome variables which is consistent with the deductive theoretical foundation of the quantitative design described by Choy (2014) and Salvador (2016). The population size being studied lends itself to quantitative design as the large number of Board-Certified Pediatric Specialists prevents inquiry from the entire population, necessitating a smaller sample to represent the larger population. Furthermore, the study's goal is to generalize these findings through statistical analysis to the larger population, which is consistent with a quantitative approach as described by Choy (2014) and Salvador (2016).

Based on long-standing research, correlational studies are well suited to test associations between variables, which is the goal of this study. Mitchell (1985) established correlational techniques are regularly utilized to infer associations between variables in organizational research. This research is designed explicitly to test hypothesized associations between the predictor and outcome variables but does not make a causal claim.

Research Plan

The procedures for this study are broken down into five primary phases. The first phase involves completing a comprehensive literature review covering organizational factors, impacting the implementation of HPW initiatives in pediatric physical therapy framed through the lens of System Theory. The second phase involves a four-step process for developing and validating a survey instrument. The first step of survey development consists of the researcher drafting questions based on the literature review. The second step of survey development is to submit the proposed questions with the dissertation proposal to the IRB committee for approval. The third step of survey development involves establishing content and face validity by sending the survey to a panel of experts. The fourth step in survey development involves modifying the survey to reflect the experts' feedback. Resubmitting the finalized survey to the IRB committee for approval was unnecessary as significant changes were not required. The third phase of the study involves data collection through electronic survey distribution whereby a link to the survey was emailed to all Board-Certified Pediatric Specialists who had a correct email address listed on the American Physical Therapy Association’s “Find a PT” page

(American Physical Therapy Association, n.d.a). The fourth phase of the study involves data analysis using SPSS to conduct descriptive statistics calculation and univariant and multivariant analysis. The concluding fifth phase of the research project involved finalizing the study's manuscript through a draft review process with the dissertation committee. See Figure 1.2 Model of phase of the research plan on page 48.

Selection and Description of Population

The target population for this study is board-certified pediatric physical therapists. According to the ABPTS, 2,751 physical therapists have achieved board certification in pediatrics, and as of 2022, 1,931 physical therapists possessed current pediatric board certification.

This population is ideal for this study because PCS through the ABPTS are healthcare providers who are most likely to maintain the highest degree of competence in pediatric physical therapy and are likely to be involved with APTA and APPT. The Annual Physical Therapy visit has been a significant health and wellness promotion initiative supported by the APTA and APPT. The study is selective to PCS because they will likely be the pediatric therapists most familiar with APPT health and wellness initiatives, including the annual pediatric physical therapy visit.

Year	Number of Newly Certified PCS	Number of Recertified PCS
2013	93	51
2014	107	58
2015	107	36
2016	130	60
2017	134	54
2018	145	48

2019	147	68
2020	164	77
2021	192	51
2022	158	51

Table 3.1 Newly Certified and Recertified PCS by year (American Physical Therapy Association, n.d.e)

Selection and Description of Sample

The sample was obtained through an online database that listed demographics and contact information for Board-Certified Specialists. All Board-Certified Pediatric Specialists with the correct email address listed on the American Physical Therapy Association's "Find a PT" page were included in the study sample (American Physical Therapy Association, n.d.a). The sample consisted of 263 Board-Certified Pediatric Specialists.

Communication with Sample

All Board-Certified Pediatric Physical Therapists identified for the study received three email communications throughout the data collection. All communication was conducted through email. The first communication, sent on September 10, 2023, included a brief introduction to the study and a request for them to participate. The second email, sent on September 11, 2023, requested participation and clarified the participation requirement; specifically, "The input of pediatric physical therapists who are and are not currently completing the Annual Pediatric Visit is valuable for this research." The third email was sent to all participants on September 13, 2023. It included a participation request and further clarification regarding the participation requirements, "The input of pediatric physical therapists working full-time, part-time, or per diem in pediatric clinical

care in all practice settings is valuable for this research." The third email to all participants also included a link where therapists could find more information about the PAPTV. The researcher received three emails requesting information regarding the study's target population or for more information on the PAPTV. In each instance, the information provided was consistent with what was sent to the entire sample population. Therapists who responded to the email to say they had/or had not completed received an email response thanking the therapist for their time, effort, and consideration. Samples of letters emailed to the sample population can be found in Appendix D.

Response Rate

The response rate was 35.4%. Of the 263 Board-Certified Pediatric Physical Therapists who received email communication from the researcher requesting their participation in the study, 93 completed the survey.

Data Collection

Within the research methodology of quantitative correlational research, this study employed the techniques of electronic surveying to generate data relevant to the research questions and hypotheses.

Nature of Electronic Survey.

Pinsonneault and Kraemer (1993) described survey research as "a quantitative method, requiring standardized information from and/or about the subjects being studied" (p. 80). While survey data is normally obtained for a small sample of individuals of the total study population in their natural setting, the findings are designed to be generalized to the population (Pinsonneault & Kraemer 1993). Gonzalez-Bañales and Adam (2007)

asserted that population characteristics well suited for electronic surveys are those who regularly use the internet and those who are interested in the topic. Baruch and Holtom (2008) investigated survey response rates and trends in organizational research and concluded that "electronic data collection efforts (e.g., email, phone, web) resulted in response rates as high as or higher than traditional mail methodology" (p. 1139). Creswell and Creswell (2018) state researchers "less interested in testing a causal claim" or unable to conduct an experiment can use survey methods to test claims about research hypothesized associations between variables (p. 51). Creswell and Creswell (2018) identify specific variables suited for survey research, including outcome variables, which they identified as "variables that are considered outcomes or results of predictor variables in survey method studies" (p. 51).

Appropriateness of the technique.

Electronic survey data collection is well suited for this study because of the study's methodological foundation in quantitative correlational research, the population being studied, and the goal of generalizing the findings from the sample to the larger population. Based on the research questions and stated hypotheses, this research aims to determine if organizational factors influencing the implementation of the PAPTV vary by practice setting, geographic location, and therapist experience with the PAPTV. These are not inquiries of causal relationships but of associations between variables, making surveys the appropriate method for data collection. Furthermore, this data collection model is consistent with historical and recent studies investigating aspects of HPW (Black et al., 2016; Domholdt et al., 2020; Goodgold, 2005; Jenkins, 2016; Molinari,

2021; Rethorn et al., 2021; Riportella-Muller et al., 1996; Webster, 2020). As previously stated, Gonzalez-Bañales and Adam (2007) asserted that population characteristics well suited for electronic surveys are those that regularly use the internet and those who are interested in the topic; Board-Certified Pediatric Physical Therapists meet both requirements.

Development of Reliable/Valid/Trustworthy Materials/Instrument(s).

An electronic survey has been created specifically for this research based on previous researchers' identification of barriers to HPW and the theories of Bolman and Deal (2017) (Levine et al., 2019; Riportella-Muller et al., 1996; Domholdt et al., 2020; Benzer, 2015; Rethorn et al. 2021). The survey questionnaire was created using Qualtrics Software. The survey included a total of nine questions. Eight of the nine questions were formatted as multiple-choice or fill in the blank questions. One question was formatted as a matrix table with eight subcomponents. Six survey questions were multiple choice or fill in the blank demographic and background questions focusing on the therapist's practice setting, location, years of experience as a therapist, and experience with the PAPTV. Two multiple-choice questions explored symbolic organizational factors. The one matrix question with eight subcomponents assessed the human resources, political and structural organizational factors. The survey instrument created for this study can be found in Appendix A.

A pilot survey consistent with prior survey validation studies in healthcare was conducted to ensure survey quality, validity, and time requirements (Molinari, 2020; Bernhardsson & Larsson, 2013). As noted by Taherdoost (2016) and stated by Straub et

al. (2004), "content validity is defined as the degree to which items in an instrument reflect the content universe to which the instrument will be generalized" (p. 30). Establishing content validity of a new survey instrument ensures it includes all essential items and is free from undesirable questions relative to a specific construct domain (Almohanna et al., 2022; Arnold & Schilling, 2016; Bernhardsson & Larsson,2013; Taheroost, 2016). The judgment approach to establishing content validity involves a literature review followed by an evaluation of the instrument by experts in the field (Taheroost, 2016; Arnold & Schilling, 2016). Taherdoost (2016) defines face validity as "The extent that measurement instrument items linguistically and analytically look like what is supposed to be measured" and recommends expert assessment of the items as a means of establishing face validity (p. 34). A panel of experts (n=8) reflective of the target survey population was identified and recruited to complete the pilot survey. The pilot survey was distributed to the panel of eight experts electronically for content validation. Experts were requested to provide feedback on the four essential components of content validity discussed in the literature, including domain definition, domain representation, domain relevance, and appropriateness of test construction procedure (Almanasreh et al. 2019). Experts were requested to comment on the clarity and relevance of questions and the time required to complete the survey; a general comment box was also included to allow for additional comments and recommendations. After adjustments were made based on the pilot survey results, the survey was prepared for electronic distribution to Board Certified Pediatric Physical Therapists.

Procedure.

There were four primary steps in electronically distributing the validated survey to Board Certified Pediatric Physical Therapists. The first step occurred on September 9th and 10th, 2023; the researcher searched the APTA "Find a PT" database for Board Certified Physical Therapists. The search criteria utilized by the researcher included "Pediatric" in the drop-down menu "Find By Specialist." The researcher sequentially entered each letter of the alphabet in the "Last Name" search box, having each Pediatric Board-Certified Specialist whose name started with that letter of the alphabet displayed on the screen. The researcher created a list of all Pediatric Board-Certified Specialists with an email address in the database. 301 Pediatric Board-Certified Specialists listed their email address and were sent the first email (See Appendix E) on September 11, 2023. Of the 301, 38 emails were returned undeliverable, which determined the final sample of 263 Board Certified Specialists who received the second and third email communications on September 12, 2023, and September 13, 2023, respectively.

Five potential research participants responded to the researcher's email by emailing question(s). Three participants asked for more information on the Annual Physical Therapy Visit in the Pediatric Population. One participant asked if they should complete the survey if they don't treat patients full-time. One participant asked if they should complete the survey if they worked in a particular setting. The researcher responded to the potential participant each time, including information from one of the three communications sent to the entire research sample population. See

Appendix F for copies of the email communication sent in response to potential participants' questions. The survey remained available until September 14,2023 at 10:00 a.m. EST.

Data Analysis

Data generated by techniques previously described were subsequently interpreted through the analysis of descriptive statistics, univariate, and multivariate tests using SPSS version 28 and 29.

Nature of Descriptive Statistics

There is expert consensus that descriptive statistics provide an important overview and reference of study information (Kaur et al., 2018; Fisher & Marshall, 2009; Yen et al., 2017). Descriptive statistics summarize the survey results and reveal fundamental trends in the data set, including measures of central tendency (Kaur et al., 2018; Fisher & Marshall, 2009). Yan et al. (2017) asserted summarizing data should include both numerical and graphical summaries which describe the center of the data and how the data is spread from the center.

Application to the Data and Validity.

Experts agree on the importance of descriptive statistics to healthcare-related research (Curtis et al., 2016; Grimes & Schulz, 2022; Kaur et al., 2018; Fisher & Marshall, 2009). Grimes and Schulz (2002) assert the importance of descriptive statistics in healthcare research, explicitly citing their use in the recognition and analysis of trends within healthcare. Descriptive statistics condense data into an uncomplicated summary that facilitates understanding healthcare data (Kaur et al., 2018; Fisher & Marshall,

2009). Furthermore, the use of descriptive statistics is consistent with prior research on the topic of HPW in physical therapy (Rethorn et al., 2021; Molinari, 2020; Black et al., 2016; Jenkins, 2016; Goodgold, 2005; Heriza et al., 1983).

Nature of ANOVA

Analysis of Variance, also known as ANOVA, is a widely applied statistical tool used to compare three or more unrelated samples or groups (Carpenter, 2023; Kim, 2017). The goal of ANOVA is to determine if there are significant differences between research groups (Carpenter, 2023). According to Kim (2017), ANOVA "is one of the most frequently used statistical methods in medical research. The need for ANOVA arises from the error of alpha level inflation, which increases Type 1 error probability (false positive) and is caused by multiple comparisons" (p. 22). These characteristics support the utilization of ANOVA in health and organizational science research.

ANOVA is a parametric analysis technique that necessitates conditions of the sample data must be met for its utilization (Kim, 2017). "Normality, independence, and equal variance of the samples must be satisfied for ANOVA" to be utilized to analyze data. (Kim, 2017). Kim (2017) recommends using the "Levene's test for determining whether homogeneity of variance was satisfied, and Shapiro-Wilk or Kolmogorov test for determining whether normality was satisfied" (p 22). If the data does not satisfy homogeneity of variance and normality assumptions, non-parametric tests must be used in its place.

Application to the Data and Validity.

ANOVA has demonstrated utility and validity in the study of various organizational and health science fields, including physical therapy, for decades (Bandi et al., 2021; Bohannon, 1986; Carpenter, 2023; Cleland et al., 2009; Emblemsvåg, 2005; Kim, 2017; Lipe & Salterio, 2002; Tsui et al., 2017). As Kim (2017) noted, ANOVA has particular application and validity in avoiding hypothesis testing errors. Carpenter (2023) emphasizes ANOVA's utility and validity for businesses for "informed decision making," "using resources," and "understanding different variables" (section 6). With appropriate data, ANOVA tests provide reliable and valid information about statistically significant differences between the means of three or more independent groups.

Nature of Kruskal-Willis Test

The statistical utility of the Kruskal-Wallis test is well established. The Kruskal-Wallis tests offer an additional method for analyzing univariant data. According to Chang and Walsmey (1997), “The Kruskal-Wallis one-way analysis-of-variance-by-ranks test (or H test) is used to determine whether three or more independent groups are the same or different on some variable of interest when an ordinal level of data or an interval or ratio level of data is available” (p. 1755). McClenaghan (2023) emphasized the utility of the Kruskal-Wallis test with small data sets because it does not assume normally distributed data. As stated by Holmes et al. (1996), when data does not satisfy parametric methods assumptions, “nonparametric methods provide the only analysis that can be guaranteed valid and exact” (p. 7).

Application to the Data and Validity.

For decades, the Kruskal-Wallis test has demonstrated utility and validity for conducting research in various organizational and health science fields, including physical therapy (Chan & Walmsley, 1997; Holmes, 1996; Nakano, 2014; Theodorsson-Norheim, 1986). Hecke (2013) Through a permutation simulation method to determine the power of a test, Hecke (2013) concluded that "in the case of asymmetric populations, the nonparametric Kruskal-Wallis test performs better than the parametric equivalent ANOVA method" (p. 241). As noted by Chan and Walmsley (1997), the Kruskal-Wallis test is an appropriate choice for clinical researchers to utilize when "comparing sample and population distributions to test for differences among three or more treatment groups when at least an ordinal level of data is available" (p. 1761).

Nature of Multiple Regression Analysis

Regression analysis is a set of statistical processes for estimating the impact one or more independent (X, predictor) variables have on a dependent (outcome) variable(s) (Leslie & Watkins, 2009). Regression analysis can be based on a single predictor (Simple Regression) or multiple predictors (Multiple Regression). Simple regression is one of the most common regression analysis techniques and involves only two variables (one X and one Y) (Leslie, 2009). Multiple regression is a more complicated analysis technique involving multiple independent (X) variables (Leslie, 2009). In a graphical format, Linear regression shows the relationship of X predicting Y with a straight line, whereas nonlinear regression relates the variables using a curve (Laerd, 2021).

Multiple regression analysis is appropriate for research with two or more independent variables that satisfy four primary assumptions (Hair et al., 2019). The first assumption is that of the linearity of the phenomenon measured (Hair et al., 2019). Homoscedasticity is the second assumption which involves the constant variance of the error terms (Hair et al., 2019). The third assumption is the normality of the error term distribution (Hair et al., 2019). The fourth and final assumption that must be satisfied for multiple regression analysis is the independence of the error terms (Hair et al., 2019).

Multiple regression presents strengths and weaknesses. As stated by Hair et al. (2019), "regression is a simple, straightforward dependence technique that can provide both prediction and explanation to the researcher" (p. 271). A challenge for researchers using multiple regression is to "add variables in independent variables that have the greatest additional predictive power" (Hair et al., 2019, p. 270). As stated by Hair et al., "the extent of the incremental predictive power for any additional variable is many times as much determined by its multicollinearity with other variables already in the regression equation" (p. 207).

Application to the Data and Validity.

The regression analysis has demonstrated utility and validity in the study of leadership, management, and HPW (Schriesheim & Cogliser, 2009; Liao et al., 2016; Lam et al., 2018; Parmerlee et al., 1982; Howell et al., 1990; Shin et al., 2012; Shalley et al., 2000; King et al., 2011, Jenkins, 2016). Regression analysis of electronic survey data has been used in top-tier journals dedicated to the topic of leadership and management for decades (Schriesheim & Cogliser, 2009; Liao et al., 2016; Lam et al., 2018; Parmerlee et

al., 1982; Howell et al., 1990; Shin et al., 2012; Shalley et al., 2000; King et al., 2011). Regression analysis has also been utilized recently in HPW research (Jenkins, 2016). Depending on the format of the dependent variable (continuous or ordinal), either ordinary least squares or ordinal regression will be conducted. Tests will be conducted to ensure that the underlying data satisfies the statistical assumptions necessary for multiple regression.

Role of the Researcher

Qualifications

I will be serving as the primary researcher. I am an experienced Doctor of Physical Therapy with board certification in pediatric physical therapy and an established health science educator. I have taught in undergraduate kinesiology, public health, athletic training, and education programs, as well as a Doctor of Physical Therapy Program. I earned my Master of Physical Therapy in 2002 from American International College in Springfield, MA, and my Doctorate in Physical Therapy in 2017 from the University of St. Augustine for the Health Sciences in St. Augustine, FL. I became a Board-Certified Clinical Specialist in Pediatric Physical Therapy in 2014. I have served as a consulting expert for Colleges and Universities opening physical therapy and physical therapy assistant programs. I have taught clinical education courses nationally for the American Physical Therapy Association in collaboration with the Academy of Pediatric Physical Therapy and the South Carolina Chapter of the American Physical Therapy Association. I have served as a Delegate for the South Carolina Chapter of the

American Physical Therapy Association. My clinical and academic background are well suited for this research project.

As an experienced healthcare provider with over 20 years of clinical experience as a physical therapist, my specialties include pediatric, neurologic, and orthopedic physical therapy. As a clinician, I have worked with children and adults in outpatient facilities and acute care hospitals. I have served as a Senior Therapist and mentor for new therapists and a clinical instructor for physical therapy students. I have served as a consultant for families of children with special needs as they navigate public education. I have also served as a consultant for private outpatient therapy practices, working with children who have unique and challenging medical conditions. Additionally, I served as a clinical liaison for Rady San Diego Children's Hospital and California Children's Services. I take a holistic approach to health and wellness, utilizing both traditional and non-traditional therapeutic interventions with my patients. I have a special interest in proactive wellness to promote health and well-being. My clinical approach emphasizes maximizing health and wellness through patient and family-centered proactive care.

Biases

A sampling bias that could affect the study is that only the more engaged Pediatric Board-Certified Pediatric Specialists will complete the survey. These members are also more likely to be responsive to APPT philosophies, which support the Annual Pediatric Physical Therapy Visit and other HPW initiatives. Also, those interested in the Annual Pediatric Therapy Visit, health promotion, and fitness may be more likely to complete the survey. This bias could result in a greater percentage of respondents having overcome

organizational barriers to completing the Annual Pediatric Therapy Visit responding than the overall population of Pediatric Board-Certified Pediatric Specialists. This is an inherent limitation of this research design and is unavoidable.

Responsibilities

The primary investigator was responsible for completing all aspects of the research plan; beyond the researcher's time, the software will be the only resource required to complete the research. Qualtrics software was utilized to create the survey. SPSS version 28 and 29 was used to perform the data analysis, which will include descriptive statistics, univariant and multivariant analysis. Ong (2018) concluded SPSS software is appropriate for research involving "comparison and correlational statistical tests in the context of univariate, bivariate and multivariate analysis for both the parametric and non-parametric statistical techniques" (p. 18). Ong (2018) further endorsed the use of SPSS for comparison analysis, correlational analysis, and regression analysis.

Timeline, Time Span, and Chronology of Events and Procedures

This research project has been a multi-year endeavor involving four fundamental phases outlined in *Figure 3: Time Span Chronology of Events and Procedures*. The phase of this research process involved completing a comprehensive literature review covering the topics of HPW as it related to physical therapy evaluation and treatment of children through the lens of systems theory. This first phase began in June of 2021 and fundamentally concluded in February 2023 before the submission of the IRB Approval;

however, the literature review was subsequently reviewed and updated prior to the finalization of the manuscript for additional relevant findings.

The second phase involved developing and validating a survey instrument, which was a four-step process. The first step of survey development was to draft questions based upon the literature review. The next step of survey development involved the submission of the IRB packet to the Anderson University IRB. The third step involved establishing content and face validity by sending the survey to a panel of experts. The final step in survey development involved modifying the survey to reflect the experts' feedback; this process concluded in August of 2023.

The third phase of the study involved data collection through electronic survey distribution. The survey was distributed electronically to all Pediatric Board-Certified Specialists with a correct email address listed on the APTA's "Find a PT" database. This phase occurred in September of 2023.

The fourth phase involved data analysis. The statistical analysis of survey data was analyzed using SPSS. Descriptive statistics will explain trends in geographic regions, practice settings, and therapist demographics. Univariant and multivariant analysis was used to analyze survey results to determine significant findings. This phase occurred in September 2023.

The concluding fifth phase of the research project involved finalizing the study's manuscript through a draft review process with the dissertation committee. This phase concluded with submitting a dissertation manuscript to the committee for review and future defense. This phase concluded on October 1, 2023.

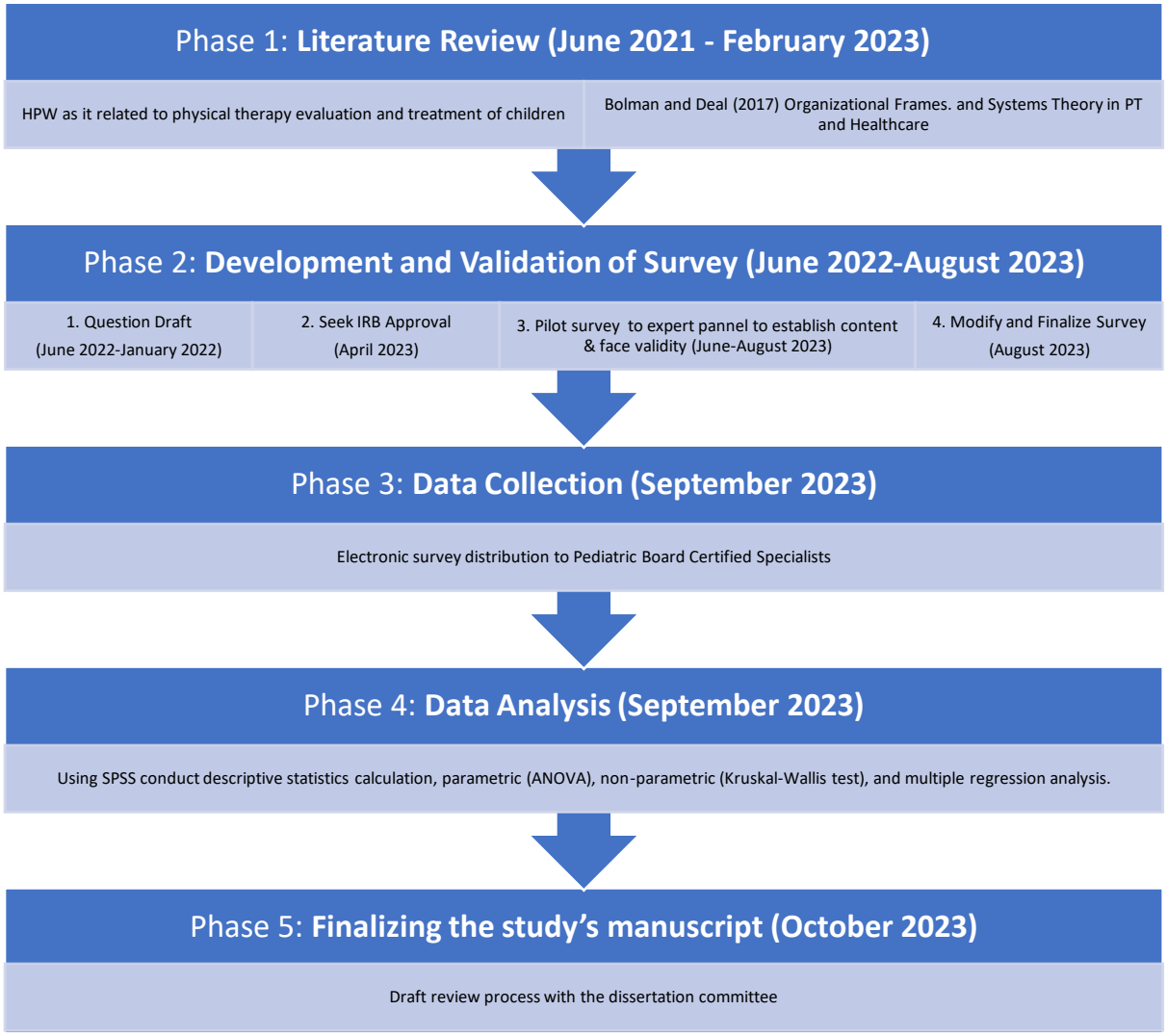


Figure 3.2: Time Span Chronology of Events and Procedures

Summary of Design and Limitations

This quantitative correlational study investigates therapists' perceptions of organizational factors impacting the implementation of the Pediatric Annual Physical Therapy Visit through the deployment of a survey designed specifically for this research. This quantitative survey explored therapists' perceptions of organizational factors from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and

Symbolic). A pilot survey study was used to establish content and face validity. Descriptive statistics were used to explain trends in geographic regions, practice settings, and therapist demographics. Univariant and multivariant analysis was used to analyze survey results to determine significant findings. The inquiry targeted explicitly Pediatric Board-Certified Specialists.

Limitations

An inherent limitation of this study is that the study findings may be generalized to Pediatric Board-Certified Specialists but possibly not to the larger pediatric community, which has the potential to be less involved with organizational change initiatives spearheaded by the APPT. Another limitation of the study is that the effects of the therapists' and patients race, and ethnicity were not addressed or explored.

Forecast Chapter Four

Chapter Three provided a summary of the methods and procedures utilized for the study. The research utilized a quantitative survey that investigated Pediatric Certified Specialists' perceptions of organizational factors impacting the PAPTV from each of Bolman and Deal's four frames (Structural, Political, Human Resources, and Symbolic). Descriptive statistics explained trends in geographic regions, practice settings, and therapist experience with the PAPTV. Parametric (ANOVA), non-parametric (Kruskal-Wallis test), and Multiple regression analysis were used to analyze survey results to determine significant findings. All data collection procedures and analysis methods were supported by contemporary research, which will be examined in Chapter Four.

Chapter 4: Results

Introduction

The purpose of the study is to determine the perceptions regarding the organizational factors influencing the implementation of the PAPTV among therapists who are PSC through the ABPTS. The underlying theme of this question is rooted in both proactive healthcare delivery and organizational change, as the status quo in Western healthcare and physical therapy is reactive care. The specific question being answered is *"How do organizational factors influencing the implementation of the PAPTV vary by geographic* location, practice setting, and experience implementing the PAPTV?" The related research questions and hypotheses were:

1. Do organizational factors influencing the implementation of the PAPTV vary by practice Setting?
2. Do organizational factors influencing the implementation of the PAPTV vary by geographic location?
3. Do organizational factors influencing the implementation of the PAPTV vary by experience implementing the PAPTV?

The design of the study was a quantitative correlational design employing the data collection methods of an electronic surveying through Qualtrics XM. The study also conducted a literature review of related research and theory in the areas of the application of System Theory to healthcare and the congruity of Bolman and Deal's four frames with System Theory.

This chapter presents a summary of data generated by the study design as follows: descriptive statistics, interferential comparative statistics including ANOVA and Kruskal-Wallis, and regression analysis.

Presentation and Summary of Data

Description of Sample

The target population for this study is Pediatric Board-Certified Therapists (PCS) who listed an accurate email address on the APTA's "Find a PT" database. According to the ABPTS, 2,751 physical therapists have achieved board certification in pediatrics. As of 2022, 1,931 physical therapists possessed current pediatric board certification APTA Specialist Certification, para. 2). Of the 1,931 physical therapists, 301 had an email address listed on the APTA's "Find a PT" database (American Physical Therapy Association, n.d.c). After further investigation, 263 therapists had an accurate email address on APTA's "Find a PT" database. This unique population not only met the criteria to become a PCS but also chose to share their professional contact information with the APTA's "Find a PT" database.

The PCS is a well-established and respected specialty certification in physical therapy. The APTA House of Delegates authorized pediatric board certification in 1981. According to the APTA, "the first pediatrics specialist certification examination was administered in 1986" (American Physical Therapy Association, n.d.c, para. 2). PCS are respected for their knowledge in pediatric physical therapy.

PCS represents a unique subset of the entire population of pediatric physical therapists because of the rigorous criteria required to become a PCS. To become a PCS,

physical therapists must meet the ABPTS standards. The first requirement to becoming a PCS is that the therapist meets one of two criteria. The first criteria involve a physical therapist submitting “evidence of 2,000 hours of direct patient care as a licensed United States physical therapist (temporary license excluded) in the specialty area within the last ten years, 25% (500) of which must have occurred within the last three years” (American Physical Therapy Association, n.d.d, para. 2). The second criteria requires therapists “submit evidence of successful completion of an APTA-accredited post-professional clinical residency within the specialty area, completed within the last ten years” (American Physical Therapy Association, n.d.d, para. 3). The second requirement is that the physical therapists

> must also sit for and pass a written examination which tests the application of advanced knowledge and clinical skills identified in the Physical Therapy: Description of Specialty Practice (DSP). The DSP includes content related to the knowledge base for the specialty. Refer to the exam content outline included in the application and the DSP book for detailed information on the exam (American Physical Therapy Association, n.d.d., para. 7).

This population is ideal for this study to answer this question because PCS are healthcare providers who are most likely to maintain the highest degree of competence in pediatric physical therapy and are likely to be involved with APTA and APPT. The Annual Physical Therapy visit has been a substantial health and wellness promotion initiative supported by the APTA and APPT. Are required to maintain their certification through scholarship, service, and direct patient care requirements. PCS are certified for

ten years before having to complete a recertification process. The study targets PCS because they will likely be the pediatric therapists most acquainted with APPT health and wellness initiatives, including the annual pediatric physical therapy visit.

Descriptive data about sample

Geographic location was categorized into five areas. Table 4.1 summarizes the five regions. Region one included the New England (Maine, Rhode Island, Vermont, Connecticut, New Hampshire, and Massachusetts) and Mid-Atlantic (New York, New Jersey and Pennsylvania) areas, accounting for 14 respondents. Region two included the Southeast (Virginia, West Virginia, Kentucky, Delaware, Maryland, North and South Carolina, Tennessee, Arkansas, Louisiana, Florida, Georgia, Alabama, and Mississippi) and accounted for 25 respondents. Region three was comprised of the Midwest (Michigan, North and South Dakota, Iowa, Minnesota, Kansas, Nebraska, Ohio, Indiana, Illinois, Wisconsin, and Missouri) and the Rocky Mountains area (Montana, Idaho, Colorado, Utah, Wyoming, and Nevada) and accounted for 23 respondents. Region four comprised the Southwest (Texas, Arizona, New Mexico, and Oklahoma) and accounted for 13 respondents. The Pacific (Coastal California, Oregon, Washington, Alaska, Hawaii) was region number five and accounted for eight respondents. Figure 4.1 summarizes the percentage of respondents from each region. The greatest number of respondents were from Region two, followed by three, one, and four, with the least respondents occurring in Region Five.

Region 1	Region 2	Region 3	Region 4	Region 5
14	25	23	13	5
New England Mid-Atlantic	Southeast	Rocky Mountains	Southwest	Pacific

Maine Rhode Island Vermont Connecticut New Hampshire Massachusetts New York New Jersey Pennsylvania	Virginia West Virginia Kentucky Del aware Maryland North Carolina South Carolina Tennessee Arkansas Louisiana Florida Georgia Alabama Mississippi	Michigan North Dakota South Dakota Iowa Minnesota Kansas Nebraska Ohio Indiana Illinois Wisconsin Missouri	Texas Arizona New Mexico Oklahoma	California Oregon Washington Alaska Hawaii

Table 4.1 Composition of Regions 1-5 and number respondents by region

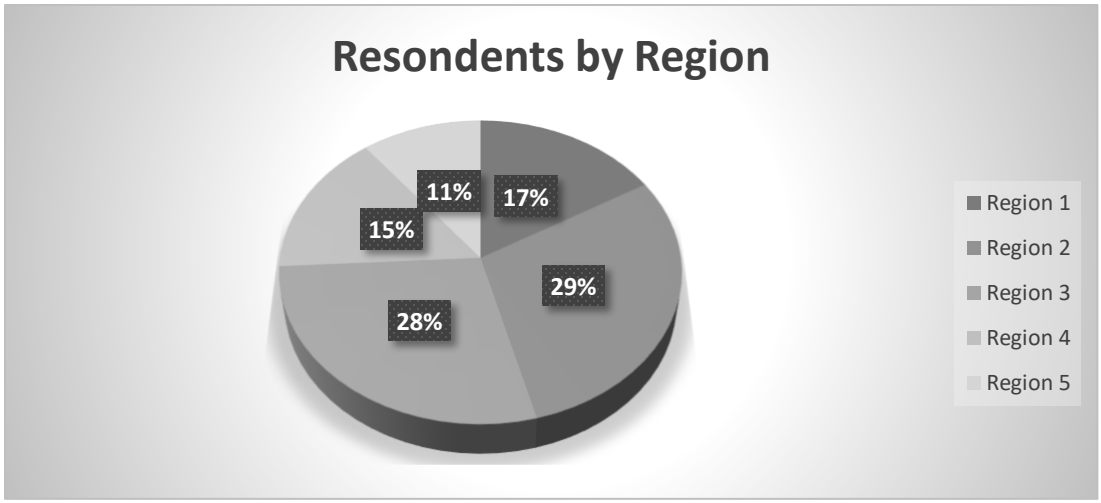


Figure 4.1 Percentage of respondents from Regions 1-5

Four categories described the setting. Table 4.2 summarizes the number of respondents for each practice setting and Figure 4.2 summarizes the percentage of respondents for each practice setting. Setting one included PCS primarily treating patients in outpatient clinics and represented 48 respondents. Setting two had PCS primarily treating patients in the patient's natural environment and represented 17 respondents.

Setting three included PCS, primarily treating patients in educational environments, and represented 13 respondents. Setting four included PCS primarily treating patients in inpatient environments, including hospitals, inpatient rehabilitation facilities, and long-term care facilities, and represented seven respondents. The greatest number of respondents worked predominately in setting one, followed by two, then three, with the least number of respondents in setting four.

Setting	Setting 1	Setting 2	Setting 3	Setting 4
Number of Respondents	48	17	13	7

Table 4.2 Number of respondents per setting

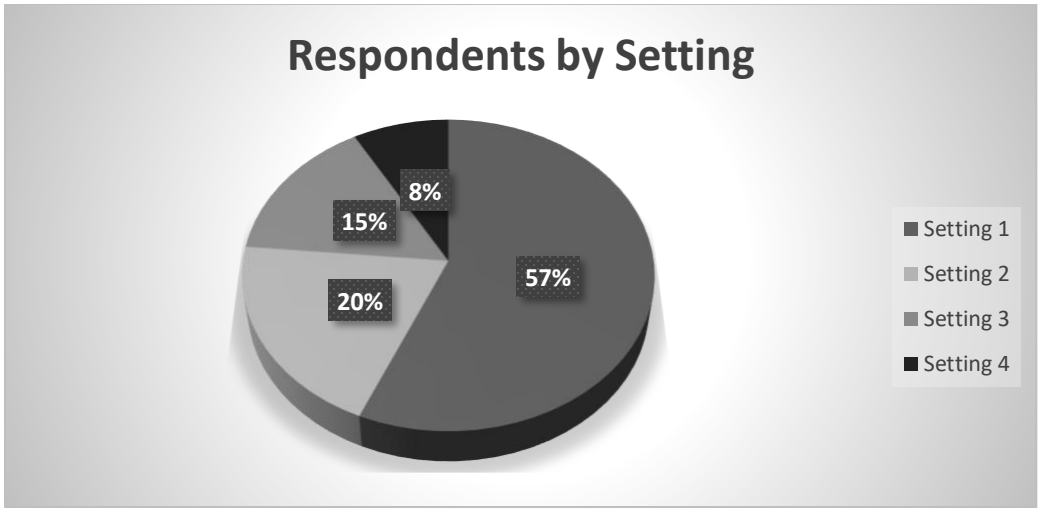


Figure 4.2 Percentages of respondents in setting 1-4

Data for experience with the PAPTV was collected as a continuous variable. To conduct univariate analysis, four categories were created to describe respondent's experience with the PAPTV. Table 4.3 summarizes the number of respondents for each experience category and Figure 4.3 summarizes the percentage of respondents for each experience category. "Experience 0" identifies PCS who complete no PAPTV per quarter and represent 43 respondents. "Experience 1-9" identifies PCS who complete between

one and nine PAPTV per quarter and represent 22 respondents. "Experience 10-19" identifies PCS who complete between 10 and 19 PAPTV per quarter and represent 15 respondents. "Experience ≥ 20" identifies PCS who complete between one and nine PAPTV per quarter and represent three respondents. The greatest number of respondents do not complete a PAPTV in a quarter, followed by those who complete between one and nine per quarter, with the least frequent completion rate being those who complete more than 20 per quarter.

Respondent Category	Experience 0	Experience 1-9	Experience 10-19	Experience ≥ 20
Number PAPTV/Quarter	41	22	15	3

Table 4.3 Respondents experience with PAPTV

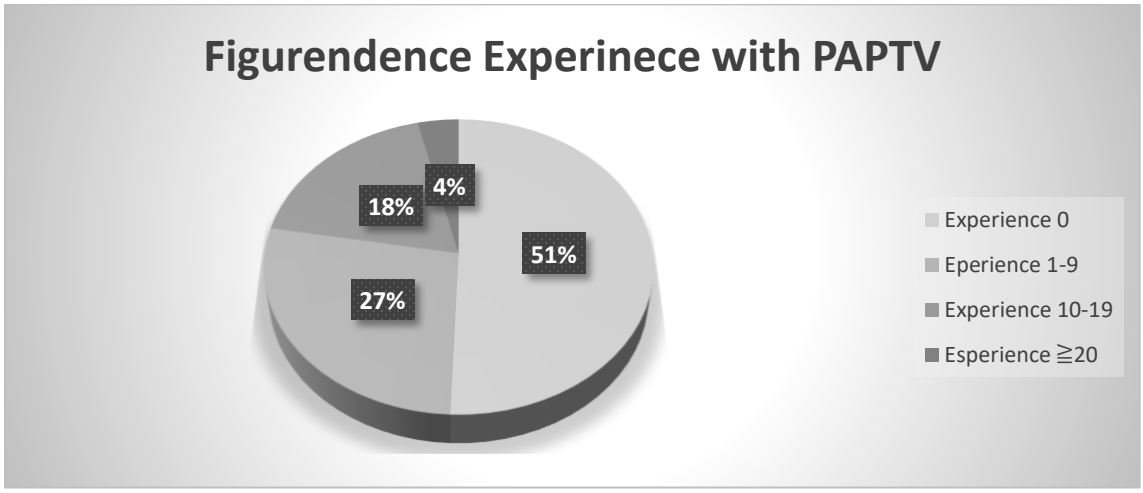


Figure 4.3 Percentages of respondents in Experience categories

Respondents

The response rate was 35.4%. Of the 263 Board-Certified Pediatric Physical Therapists who received email communication from the researcher requesting their participation in the study, 93 completed the survey.

Findings Related to Research Question/Hypotheses

Finding From Descriptive Statistics and Interferential Comparative Statistics

Descriptive statistics provide an important overview of the survey data collected. The descriptive statistics were used to summarize the survey results and expose fundamental trends in the variation in the data's measures of central tendency. Descriptive statistics were calculated for each dependent variable and broken down by each of the four practice settings, five regions, and four levels of experience. Interferential comparative analysis was utilized to evaluate data for differences in practice setting, region, and experience. The Shapiro-Wilk test indicated that the data for the Symbolic, Human Resources, and Political Frame was not normally distributed. Thus, the nonparametric Kruskal-Wallis test was utilized to analyze the data for these frames.

Table 4.4 provides the descriptive statistics of the Human Resources Frame and Table 4.5 provides Kruskal-Wallis results for the Human Resources Frame. Table 4.4 indicates that the mean value increases from 4.45 for Experience 0, to 5.20 for Experience 1-9, to 5.50 for Experience 10-19, and to 6.33 for Experience $\geq$ 20. Table 4.5 indicates that these differences in experience with PAPTV are statistically significant. People with more experience with PAPTV respond higher to the questions in the Human Resources Frame.

Dependent Variable: HR Frame

Ind. Variable	N	Mean	Median	Std. Dev.	Minimum	Maximum
Setting1	46	4.72	4.50	1.53	1.00	7.00
Setting2	17	5.09	5.50	1.06	3.50	6.50
Setting3	12	5.46	5.50	1.18	4.00	7.00
Setting 4	8	4.38	4.00	1.06	3.00	6.00

Region1	14	4.71	4.50	1.41	2.00	7.00
Region2	25	5.12	5.50	1.27	2.50	7.00
Region3	23	4.41	4.00	1.56	1.00	7.00
Region4	13	4.77	4.00	1.11	4.00	7.00
Region 5	8	5.81	5.50	1.10	4.00	7.00
Experience 0	42	4.45	4.00	1.30	2.00	7.00
Experience 1-9	22	5.20	5.00	1.25	2.00	7.00
Experience 10-19	15	5.50	5.50	1.06	4.00	7.00
Experience ≥20	3	6.33	6.00	0.58	6.00	7.00

Table 4.4 Descriptive statistics of the Human Resources Frame

Human Resources Frame: Kruskal-Wallis Test

Variable	N	Sig	
Setting	83	0.25	
Region	83	0.16	
Experience	82	0.00	*

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.5 Human Resources Frame Kruskal Wallis Test results

Table 4.6 provides the descriptive statistics of the Symbolic Frame and Table 4.7 provides Kruskal-Wallis results for the Symbolic Frame. Table 4.6 indicates that the mean value increases from 3.14 for Experience 0, to 3.30 for Experience 1-9, to 3.70 for Experience 10-19, and to 4.17 for Experience ≥ 20. Table 4.7 indicates that these differences in experience with PAPTV are statistically significant. People with more experience with PAPTV respond higher to the questions in the Symbolic Frame.

Dependent Variable: Symbolic Frame

Ind. Variable		Mean	Median	Std. Dev.	Minimum	Maximum
Setting1	48	3.30	3.50	0.57	2.00	4.50
Setting2	17	3.50	3.50	0.56	2.50	4.50
Setting3	13	3.23	3.00	0.63	2.50	4.00
Setting 4	7	3.29	3.00	0.76	2.50	4.50
Region1	14	3.50	3.50	0.55	2.50	4.50

Region2	25	3.40	3.50	0.66	2.00	4.50
Region3	24	3.21	3.00	0.46	2.50	4.00
Region4	13	3.11	3.00	0.51	2.50	4.00
Region 5	9	3.50	3.50	0.79	2.00	4.50
Experience 0	43	3.14	3.00	0.53	2.00	4.50
Experience 1-9	22	3.30	3.50	0.59	2.00	4.00
Experience 10-19	15	3.70	4.00	0.46	3.00	4.50
Experience ≥20	3	4.17	4.00	0.29	4.00	0.00

Table 4.6 Descriptive statistics of the Symbolic Frame

Symbolic Frame: Kruskal-Wallis Test

Variable	N	Sig	
Setting	85	0.61	
Region	85	0.22	
Experience	83	0.00	**

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.7 Symbolic Frame Kruskal Wallis Test results

Table 4.8 provides the descriptive statistics of the Political Frame and Table 4.9 provides Kruskal-Wallis results for the Political Frame. Table 4.6 indicates variation in the mean for region from a low of 3.02 in Region 2 to a high of 5.63 in Region 5. Table 4.9 indicates that variation between regions is statistically significant. Where the respondents live effects how they respond to the questions for Symbolic Frame.

Dependent Variable: Political Frame

Ind. Variable		Mean	Median	Std. Dev.	Minimum	Maximum
Setting1	45	3.69	3.50	1.72	1.00	7.00
Setting2	17	3.70	4.00	1.91	1.00	7.00
Setting3	12	4.00	3.75	1.60	2.00	7.00
Setting 4	8	3.75	4.00	1.41	1.50	6.00
Region1	14	3.61	3.25	1.72	1.00	7.00
Region2	24	3.02	3.00	1.29	1.00	6.50
Region3	23	3.96	4.00	1.81	1.00	7.00
Region4	13	3.69	4.00	1.55	1.00	7.00

Region 5	8	5.63	5.75	1.30	3.50	7.00
Experience 0	41	3.48	3.50	1.59	1.00	7.00
Experience 1-9	22	4.23	4.00	1.78	1.00	7.00
Experience 10-19	15	3.73	3.50	1.73	1.50	7.00
Experience ≥20	3	4.83	4.50	1.04	4.00	6.00

Table 4.8 Descriptive statistics of the Political Frame

Political Frame: Kruskal-Wallis Test

Variable	N	Sig	
Setting	82	0.94	
Region	82	0.01	*
Experience	81	0.20	

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.9 Political Frame Kruskal-Wallis Test results

The Shapiro-Wilk test indicated that the data for the Structural Frame did have a normal distribution. Thus, ANOVA was used to compare differences in the means for the Structural Frame. Table 4.10 provides the descriptive statistics of the Symbolic Frame and Table 4.11 provides ANOVA results for the Symbolic Frame. The ANOVA test results indicate that there are no significant difference between geographic location groups, practice setting groups, and experience with the PAPTV regarding the Structural Frame.

Dependent Variable: Structural Frame

Variable	N	Mean	Median	Std. Dev.	Minimum	Maximum
Setting1	46	4.25	4.25	1.38	1.00	7.00
Setting2	17	4.84	5.50	1.17	2.50	6.75
Setting3	12	4.21	5.50	1.37	1.50	6.25
Setting 4	8	3.88	4.00	1.25	2.00	5.75
Region1	14	4.32	4.25	1.38	1.50	6.25
Region2	25	4.22	4.25	1.55	1.00	7.00
Region3	23	4.21	4.00	1.25	1.50	6.50
Region4	13	4.21	4.00	0.93	2.50	5.75

Region 5	8	5.22	5.50	1.24	3.00	7.00
Experience 0	42	4.04	4.00	1.28	1.00	7.00
Experience 1-9	22	4.58	4.50	1.28	2.00	6.75
Experience 10-19	15	4.75	4.75	1.46	2.00	7.00
Experience ≥20	3	5.17	5.00	0.29	5.00	5.50

Table 4.10 Descriptive statistics of the Structural Frame

Structural Frame: ANOVA

Variable	N	Sig
Setting	82	0.30
Region	82	0.41
Experience	81	0.12

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.11 Structural Frame: ANOVA results

Findings from Regression Analysis

Regression analysis was conducted for each of the four dependent variables. Dummy variables were created for practice setting. Setting 1 is 1 if practice setting 1 and 0 otherwise. Setting 2 is 1 if practice setting 2 and 0 otherwise. Setting 3 is 1 if setting 3 and 0 otherwise. The coefficients for Setting 1, Setting 2, and Setting 3 are interpreted relative to the omitted practice setting 4. Region 1 is 1 if region 1 and 0 otherwise. Region 2 is 1 if region 2 and 0 otherwise. Region 3 is 1 if region 3 and 0 otherwise. Region 4 is 1 if region 4 and 0 otherwise. The coefficients for Region 1, Region 2, Region 3, and Region 4 are interpreted relative to the omitted region 5. Experience is a continuous variable based on experience using the PAPTV.

Table 4.12 presents the results for the Human Resources frame regression. It should be noted that the residuals from this regression are not normally distributed. So, the results should be considered with some concern. The therapist's experience using the

PAPTV has a positive coefficient estimate (0.29) that is statistically significant. This finding is consistent with the Kruskal-Wallis test results from Table 4.5. The overall model fit for the Human Resources Frame has an Adjusted R^2 value of 0.11.

Dependent: Human Resources Frame

N	82
R^2	0.20
Adj. R^2	0.11

Variable	Coefficient	Significance	
Constant	4.83	0.00	**
Setting1	0.10	0.58	
Setting2	0.18	0.30	
Setting3	0.30	0.06	
Region1	-0.24	0.16	
Region2	-0.01	0.60	
Region3	-0.24	0.20	
Region4	-0.17	0.30	
Experience	0.29	0.01	*

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.12 Human Resources Frame Regression Analysis

Table 4.13 presents the results for the Symbolic Frame regression. The therapist's experience using the PAPTV has a positive coefficient estimate (0.31) that is statistically significant. This finding is consistent with the Kruskal-Wallis test results from Table 4.7. The overall model fit for the Symbolic Frame has an Adjusted R^2 value of 0.08.

Dependent: Symbolic Frame

N	83
R^2	0.17
Adj. R^2	0.08

Variable	Coefficient	Significance

Constant	3.25	0.00	**
Setting1	-0.03	0.89	
Setting2	0.15	0.40	
Setting3	-0.04	0.80	
Region1	0.11	0.49	
Region2	-0.00	0.99	
Region3	-0.04	0.81	
Region4	-0.13	0.42	
Experience	0.31	0.01	*

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.13 Symbolic Fame Regression Analysis

Table 4.14 presents the results from the Political Frame regression. Region One (-0.43), Region Two (-0.68), and Region Four (-0.38) are all significantly lower than Region 5. These findings are consistent with the Kruskal-Wallis test results from Table 4.9. The overall model fit for the Political Frame has an Adjusted R^2 value of 0.13.

Dependent: Political Frame

N	82
R^2	0.21
Adj. R^2	0.13

Variable	Coefficient	Significance	
Constant	5.42	0.00	**
Setting1	-0.01	0.95	
Setting2	-0.04	0.82	
Setting3	0.04	0.80	
Region1	-0.43	0.01	*
Region2	-0.68	0.00	**
Region3	-0.36	0.06	
Region4	-0.38	0.02	*
Experience	0.12	0.27	

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.14 Political Frame Regression Analysis

Table 4.15 presents the results from the Structural Frame regression. Similar to the ANOVA results from Table 4.11, there are not any significant differences in response patters for practice setting, region, or experience with PAPTV in the Structural Frame.

Dependent: Structural Frame

N	82
R^2	0.11
Adj. R^2	0.02

Variable	Coefficient	Significance	
Constant	4.33	0.00	**
Setting1	0.14	0.46	
Setting2	0.29	0.11	
Setting3	0.09	0.59	
Region1	-0.16	0.36	
Region2	-0.24	0.22	
Region3	-0.15	0.45	
Region4	-0.19	0.28	
Experience	0.18	0.12	

* Indicates statistically significant at the 5% level.
** Indicates statistically significant at the 1% level.

Table 4.15 Structural Frame Regression Analysis

Summary of Results

Based on the preceding presentation and summary of data generated by the study, a summary of findings/conclusions is as follows:

1. Finding/Conclusion One: Organizational factors influencing PCS's implementation of the PAPTV did not vary by practice setting.
2. Finding/Conclusion Two: Organizational factors influencing PCS's implementation of the PAPTV did vary by geographic region, within the

political frame, specifically the Regions 1, 2, and 4 are all significantly different from 5.

3. Finding/Conclusion Three: Organizational factors influencing PCS's implementation of the PAPTV did vary by the PCS's experience completing a PAPTV, within the Symbolic and Human Resources Frames.

Forecast Chapter Five

The research question was comprised of three related research questions focusing on the three independent variables: practice setting, geographic location, and experience implementing the PAPTV. Data analysis revealed that organizational factors influencing PCS's implementation of the PAPTV varied by geographic region within the political frame and by the PCS's experience completing a PAPTV within the Symbolic and Human Resources Frames. Another significant finding within the data was that PCSs with greater experience with the PAPTV responded more favorably to the Human Resources and Symbolic Frames questions. These findings support the hypothesis that organizational factors influencing the implementation of the PAPTV vary by geographic location and therapists' experience with the PAPTV. The following chapter will summarize the findings related to the research purpose and reviewed literature and discuss the conclusions and implications of the study for practice, leadership, and research.

Chapter 5: Discussion

Overview

The purpose of this study was to investigate variations in organizational factors influencing the implementation of the PAPTV. The research question guiding this study was “How do organizational factors influencing the implementation of the PAPTV vary by geographic location, practice setting, and therapists' experience with the PAPTV?” This chapter presents a discussion of findings and conclusions related to this research purpose.

Summary of the Study

This study investigated Organizational Factors influencing the implementation of the PAPTV vary by practice setting, geographic location, and experience implementing the PAPTV. Chapter One introduced the research by describing the background, purpose, approach, significance, delimitations and limitations, and study vocabulary. Chapter Two reviewed literature about theory and research related to the study in the areas of the application of Systems Theory to Healthcare and the application of Bolman and Deal Four Frames in Healthcare. Chapter Three detailed the study's design through a description of electronic surveys, descriptive statistics, ANOVA, Kruskal-Willis Test, and Multiple Regression. Chapter Four presented and summarized data generated by the study design in alignment with the study research questions/hypotheses. This final chapter will discuss a summary of the findings related to the research purpose and reviewed literature. Chapter content will also discuss the conclusions and implications of

the study for practice, leadership for the advancement of learning and service, and research.

Summary of Major Findings

The primary question was divided into three related research questions focusing on the three independent variables: practice setting, geographic location, and experience implementing the PAPTV. Analysis of the data revealed that organizational factors influencing PCS's implementation of the PAPTV varied by geographic region within the political frame and by the PCS's experience completing a PAPTV, within the Symbolic and Human Resources Frames. Another trend within the data was that PCSs with more experience with the PAPTV responded more positively to the Human Resources and Symbolic Frames questions. These findings support the hypothesis that organizational factors influencing the implementation of the PAPTV vary by geographic location and therapists' experience with the PAPTV.

Conclusions Related to Research Purpose

Study Finding and Relationship to the Literature "Do organizational factors influencing the implementation of the PAPTV vary by geographic location?"

Organizational factors influencing PCS's implementation of the PAPTV varied by geographic region within the political frame; specifically, Regions 1, 2, and 4 significantly differ from Region 5. The political frame was identified based on survey results from survey question seven regarding the state regulations and question eight regarding third-party reimbursement. Study results identified variations in the organizational factors influencing the PCS's implementation of the PAPTV between the

Pacific region and the New England and Mid-Atlantic, Southeast, Rocky Mountains, and Southwest regions of the country.

There has not been prior research into organizational barriers influencing the implementation of the PAPTV. While Benzer (2015) and Morrison and Jenkins (2018) investigated barriers to incorporating health promotion wellness into physical therapy practice and concluded that lack of reimbursement and insurance coverage was a barrier, they did not explore the variation in responses by geographic location. While the current study demonstrates variation in political frame organizational factors, further research is needed to understand better the relationship between political frame organizational factors, including third-party reimbursement and state practice act, and the implementation of the PAPTV.

Study Finding and Relationship to the Literature "Do organizational factors influencing the implementation of the PAPTV vary by experience implementing the PAPTV?"

Organizational factors influencing PCS's implementation of the PAPTV varied by the PCS's experience completing a PAPTV within the Symbolic and Human Resources Frames. PCSs with more experience with the PAPTV responded more positively to the questions in the human resources frame. Two questions addressed the human resources frame. The first question addressed administrator training, "What impact does each of the following factors have on your implementation of the Annual Physical Therapy Visit with your pediatric patients?" The second human resources frame question addressed therapist training, "What impact does each of the following factors have on your

implementation of the Annual Physical Therapy Visit with your pediatric patients?" PCSs with more experience with the PAPTV responded higher to the questions in the human resources frame. Two questions addressed the symbolic frame, including: "How much focus should HPW (HPW) have in pediatric physical therapy?" and "How beneficial do you think the Annual Physical Therapy Visit is to your pediatric patients?". Data analysis demonstrates that PCSs with more experience with the PAPTV respond higher to the questions in both the Symbolic and Human Resources frames.

There has not been prior research into organizational barriers influencing the implementation of the PAPTV. Benzer (2015) studied barriers to incorporating HPW into physical therapy practice and found that a barrier included "the perception is that the physical therapy work environment is not suitable for health promotion" (p. 1441). This assertion is consistent with the questions addressing the symbolic frame within the current study. While analysis of the survey responses demonstrates PCSs with more experience with the PAPTV respond higher to the questions in both the Symbolic and Human Resources frames, additional research is needed to determine the underlying cause of this trend.

Study Finding and Relationship to the Literature "Do organizational factors influencing the implementation of the PAPTV vary by practice Setting?

Organizational factors influencing PCS's implementation of the PAPTV did not vary by practice setting. The practice settings explored in the study included the outpatient clinic setting, natural environment, school setting, and inpatient environments, which included hospital and inpatient rehabilitation settings. Attempts were made to

incorporate long-term care facilities as an additional setting; however, no respondents from this practice setting completed the survey. Analysis of survey results indicates no significant variability in organizational factors influencing the implementation of the PAPTV by PCSs between outpatient clinic settings, natural environments, school settings, and inpatient environments.

There has not been prior research into organizational barriers influencing the implementation of the PAPTV; however, scholars have studied barriers to incorporating HPW into physical therapy practice (Benzer, 2015; Morris & Jenkins, 2018). According to Benzer (2015), the most frequently identified barriers to incorporating HPW into physical therapy practice include "time, lack of interest or awareness of the patient or client, the public, and other health care providers that physical therapists provide these services, lack of education or knowledge and lack of reimbursement, and lack of resources" (Benzer, 2015, p. 1441). Additional barriers identified by Benzer (2015) included limited counseling skills, lack of self-efficacy, a focus is on "secondary and tertiary prevention by physical therapists, and the perception is that the physical therapy work environment is not suitable for health promotion" (p. 1441). Morris and Jenkins (2018) conclude payment is a significant barrier to HPW within physical therapy (PT) and occupational therapy (OT) as traditional PT and OT services are paid for, at least in part, by health insurance, health insurance policies do not cover most HPW services. Neither Benzer (2015) nor Morris and Jenkins (2018) identified or addressed practice-setting variability in barriers to incorporating health, promotion, and wellness into physical therapy. While variability was not found within the current sample, one question

that this analysis prompts is further investigation with a larger sample size, more diverse population of pediatric physical therapists and other variables that may explain more of the variance in the dependent variable.

Discussion of Findings and Relationship to the Literature

The current study revealed patterns of variation within organizational barriers influencing the implementation of the PAPTV. These findings demonstrate the heterogeneousness of organizational factors affecting PAPTV implementation experienced by PCSs. It should be noted that PCSs represent a specific population of the larger body of pediatric physical therapists and may be a more philosophically similar group because of their specialized training and experience level. Additionally, the PAPTV is a specific example of a HPW initiative supported by the APTA and Academy of Pediatrics; however, it does not represent the entirety of health promotion efforts within pediatric physical therapy. These findings support the need for a targeted and specialized approach to addressing organizational barriers influencing the implementation of the PAPTV. These findings demonstrate that individuals from different geographic regions and with diverse experiences utilizing the PAPTV experience variations in organizational barriers to the future implantation of the PAPTV.

These findings are consistent with the systems theory. This work demonstrates that the implementation of the PAPTV is impacted by the PCS experience with the PAPTV and the geographic region where the PCS practices. Furthermore, the study shows the variability within the political, symbolic, and human resources frames. These variables did not demonstrate a linear relationship that could completely describe the

organizational barriers to implementing the PAPTV; instead, they explained a component of a system where variables may interact with each other and other factors. This is consistent with systems theory, whereby the environment is an essential part of the system. Furthermore, it is compatible with Senge, Wheatley, Von Bertalanffy, Wilber, and Meadows, theories that emphasize the importance of the interrelationship of system components. While this study answered the question of variability, the next question involves determining interventions to address organizational barriers to greater HPW within pediatric physical therapy.

Conclusions

Based on the findings of this research, PCSs experience variability in the organizational factors that impact the implementation of the PAPTV. The differences in organizational factors are experienced in the political frame based on geographic region. The variability in organizational factors encountered in the symbolic and human resources frames differs by PCS's experience implementing the PAPTV. While variability has been identified, it is essential to recognize that these organizational factors interact uniquely within each clinical setting to create an even more distinct environment. These findings support the need for an individualized approach to addressing organizational barriers to implementing the PAPTV. Furthermore, the individualized approach needed to manage organizational barriers effectively will require significant collaboration time and effort. While the investment necessitated to address the variation in the organizational environment and barriers to the PAPTV and other HPW within pediatric physical therapy is substantial, so is the potential return on the investment.

Discussion of Implications

The findings of this study further inform fields of study and behavior associated with implementing HPW initiatives, specifically the PAPTV within pediatric physical therapy. The research findings have particular implications for practice, leadership, and related research.

Implications for Practice and Leadership

These findings have implications for both clinicians and leaders within pediatric physical therapy. First and foremost, clinicians and leaders hoping to implement the PAPTV or other HPW initiatives into their practice need to appreciate the uniqueness of their practice environment and the variables that interact to construct it. They need to recognize that they are a part of their environment, not a spectator of it, and that their own unique experiences contribute to the environmental readiness to implement the PAPTV. Additionally, while clinicians and leaders can learn from the experiences of others, it is important to acknowledge that they will not be able to successfully identically replicate others' solutions to their unique organizational barriers to implementation of the PAPTV. Instead, they must analyze their environment within the context of a larger body of knowledge about both organizational science and physical therapy. Finally, leaders advocating for change in the profession from a reactive to a proactive model can use these results to inform their efforts.

Implications for Future Research

These research findings can be used to direct future research. This analysis prompts future investigation with other variables that may explain more of the variance in the dependent variables and a larger sample size. This data could also be used to explore other related research questions; for example, this data could be used to determine the relationship between PCS's perceptions of the impact of their state practice act and third-party reimbursement structure and the implementation of the PAPTV. This research addressed organizational barriers to implementing the PAPTV by a very specific population, PCSs; however, PCSs are not the only pediatric physical therapists who could utilize the PAPTV in their practice. Future studies focusing on both larger populations of pediatric physical therapists as well as other specific practice settings would provide greater depth to the body of knowledge on this issue. Furthermore, further research into the barriers and recommendations for each of the four frames could benefit leaders within physical therapy. Additionally, the PAPTV is one HPW initiative within pediatric physical therapy; additional research exploring barriers to implementing other HPW initiatives and HPW in general could benefit the ultimate goal of increasing HPW in pediatric physical therapy. Finally, investigating this question with a different methodology, including a qualitative design such as an ethnographic study, could provide in-depth insights into various aspects of practice that impede or support the implementation of HPW in pediatric physical therapy. While this study successfully answered the question asked, it also prompted many more questions about the

organizational factors impacting the implementation of HPW in pediatric physical therapy.

Summary and Concluding Remarks

This study aimed to answer the question, "How do organizational factors influencing the implementation of the Pediatric Annual Physical Therapy Visit vary by geographic location, practice setting, and therapists' experience with the PAPTV?". The findings demonstrated organizational factors influencing PCS's implementation of the PAPTV varied by geographic region within the political frame and by the PCS's experience completing a PAPTV within the Symbolic and Human Resources Frames. These findings support the hypothesis that organizational factors influencing the implementation of the PAPTV vary by geographic location and therapists' experience with the PAPTV.

While there has not been prior research into organizational barriers influencing the implementation of the PAPTV, other scholars have studied barriers to incorporating HPW into physical therapy practice (Benzer, 2015; Morris & Jenkins, 2018). Benzer (2015) and Morris and Jenkins (2018), barriers were incorporated into exploring organizational factors explored in this study. These findings from this study demonstrate the diversity of organizational factors affecting PAPTV implementation experienced by PCSs. This study added to the body of knowledge regarding barriers to incorporating HPW into pediatric physical therapy.

While this study identified and described the organizational diversity of factors impacting the implementation of the PAPTV, it is crucial to appreciate that these

organizational factors interact distinctively within each clinical environment to create an even more distinctive environment. These findings support the need for an individualized approach to addressing organizational barriers to implementing the PAPTV. Furthermore, the individualized approach needed to manage organizational barriers effectively will require substantial collaboration time and determination. While the investment required to address the variation in the organizational environment and barriers to the PAPTV and other HPW within pediatric physical therapy is considerable, so is the potential gain for the patient and profession.

The research findings have specific implications for practice, leadership, and related research. This research can help clinicians and leaders hoping to implement the PAPTV or other HPW initiatives into their practice appreciate the uniqueness of their practice environment and the variables that interact to construct it. This analysis prompts future investigation with other variables that may explain more of the variance in the dependent variables and a larger sample size, investigation into other populations of pediatric physical therapists, investigation into other HPW initiatives within pediatric physical therapy, and utilizing different methodologies, including qualitative design. While this study effectively addressed the research question, it also stimulated additional questions about the organizational factors impacting the implementation of HPW in pediatric physical therapy.

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Appendix A: Sample Instrument

Questions 1-6 are demographic questions. Questions 7 and 8 address the symbolic frame. Matrix component questions 9.1 and 9.2 address the human resources frame. Matrix component questions 9.3, 9.4, 9.5, and 9.6 address the structural frame. Matrix component questions 9.7 and 9.8 address the political frame.

Informed Consent

Thank you for participating in this three- to five-minute survey. As a pediatric therapist, your insight will support research investigating variations in organizational factors that influence the implementation of the Annual Physical Therapy Visit in pediatric populations. The information you provide will help clarify current perceptions and inform future health promotion and wellness initiatives.

Your data will be anonymously reported and will be kept confidential. Participants may withdraw from participation at any time without penalty. This study poses no health risks. Dr. Katherine Smith is conducting this study. You were selected as a possible participant because you are an APTA Academy of Pediatric Physical Therapy Member. Your decision whether or not to participate will not jeopardize your future relations with Anderson University, the APTA Academy of Pediatric Physical Therapy, or the American Physical Therapy Association. For more information regarding your rights as a research participant, you may contact the Chairs of the Human Subjects Committee/Institutional Review Board by phone or email. The HSC Chairs, Dr. Joni Criswell and Dr. Robert Franklin, can be reached at (864) 231-2000 or through email at hsc@andersonuniversity.edu.

Completion of the survey indicates your willingness to participate. Are you willing to proceed?

- Yes (Participant enters survey without collection of identifiable information)
- No (Participant exits survey with a message. “Thank you for you for your time and consideration.”)

Instructions prior to beginning the survey:

If you are employed by or serve more than one company/entity, please respond to the following questions based only on the company/entity where you provide the majority of your direct patient care hours.

1. What is your current practice setting?

- Outpatient clinic
- Natural Environment
- School
- Hospital
- Inpatient Rehabilitation facility
- Long-term care facility

2. Are you employed by a public (public school, government agency, et.) or private organization (privately owned clinic, hospital, et.)?

- Public
- Private

3. What state do you currently practice?

- Continuous variable

4. Do you practice in a rural, suburban, or urban area?

- Rural
- Suburban
- Urban

5. How many years have you been a licensed therapist?

- Slide bar (0-99)

6. On average, how often do you conduct a Pediatric Annual Physical Therapy Visit per quarter?

- Slide bar (0-99)

7. How much focus should HPW have in pediatric physical therapy?

- HPW should be a primary focus of the practice of pediatric physical therapy.
- HPW should be a significant focus of the practice of pediatric physical therapy.
- HPW should be a moderate focus of the practice of pediatric physical therapy.
- HPW should be a minimal focus of the practice of pediatric physical therapy.
- HPW should not be emphasized in the practice of pediatric physical therapy.

8. How beneficial is the Pediatric Annual P.T. Visit to the patient?

- Extremely beneficial
- Moderately beneficial
- Minimally beneficial
- Not beneficial

9. Matrix Table Question Format: What impact does each of the following factors have on your implementation of the annual pediatric physical therapy visit?

	Mostly Negative Impact	Moderately Negative Impact	Minimally Negative Impact	No Impact	Minimally Positive Impact	Moderately Positive Impact	Mostly Positive Impact
9.1 Administrator training							
9.2 Therapist training							
9.3 Patient scheduling strategies							
9.4 Documentation							

and maintenance of patient physical therapy record							
9.5 Marketing the benefits of the PAPTV to patients							
9.6 Marketing the benefits of the PAPTV to referring sources							
9.7 State regulations							
9.8 Third-party reimbursement							

Appendix B: Anderson University IRB Approved as Exempt from IRB review

Anderson University
Human Subjects Committee (HSC)
Institutional Review Board (IRB)

To: Katherine Smith

Proposal Number and Title: AU2023-0164 Katherine Smith

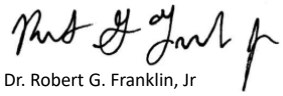
Date: 4/20/2023

The Human Subjects Committee (HSC) has received and reviewed the above-titled research proposal. The following committee members reviewed the proposal: Robert Franklin. The HSC decision is indicated below.

Approved as Exempt from IRB review. This study is approved as exempt from IRB review by meeting the exemption criteria listed at 45 CFR 46.104(d)(3) regarding benign behavioral interventions. The study may be conducted during the timeframe outlined in the proposal and is approved for one year from the date of this letter. Should you find it necessary to make any adjustments to the study as approved, please contact the HSC/IRB Chair in advance of implementing such changes.

If you need clarification regarding the committee's decision, please contact Dr. Robert Franklin, Chair at HSC@andersonuniversity.edu.

Sincerely,



Dr. Robert G. Franklin, Jr
Chair, Human Subjects Committee

INFORMED CONSENT FOR

Variation in organizational factors influencing the implementation of the Pediatric Annual Physical Therapy Visit (PAPTV)

You are invited to participate in a research study to determine the variation in organizational factors influencing the implementation of the Pediatric Annual Physical Therapy Visit (PAPTV). This study collects the opinions of therapists through a three to five-minute survey. This information will help us learn current perceptions to inform future health promotion and wellness initiatives. Your data will be anonymously reported and will be kept confidential. Participants may withdraw from participation at any time, without penalty. This study poses no health risks.

This study is being conducted by Dr. Katherine Smith. You were selected as a possible participant because you are an APPT Member.

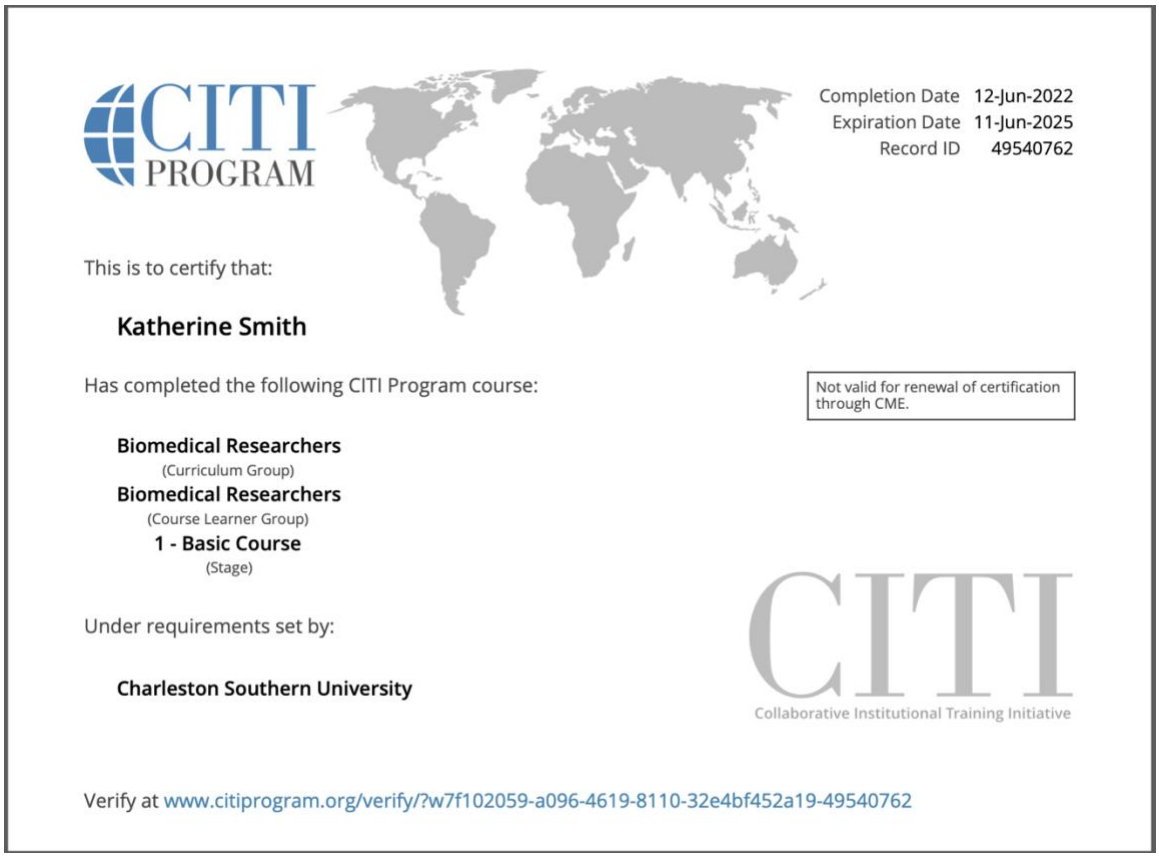
Your decision whether or not to participate will not jeopardize your future relations with Anderson University, the APPT, or the American Physical Therapy Association.

For more information regarding your rights as a research participant you may contact the Chairs of the Human Subjects Committee/Institutional Review Board by phone or e-mail. The HSC Chairs, Dr. Joni Criswell and Dr. Robert Franklin, can be reached at (864) 231-2000 or through email at hsc@andersonuniversity.edu.

Completion of the survey indicates your willingness to participate. Would you like to proceed?

- ☐ Yes (Participant enters survey without collection of identifiable information)
- ☐ No (Participant exits survey with a message. “Thank you for you for your time and consideration.”)

Appendix C: Citi Training Certificate



CITI PROGRAM

Completion Date 12-Jun-2022
Expiration Date 11-Jun-2025
Record ID 49540762

This is to certify that:

Katherine Smith

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Biomedical Researchers
(Curriculum Group)
Biomedical Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Charleston Southern University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w7f102059-a096-4619-8110-32e4bf452a19-49540762

Appendix D: Email to Research Sample

First Email to Research Sample

Good afternoon, (FIRST NAME),
I hope this email finds you well. I am reaching out to ask you to complete this 3-minute survey (https://anderson.qualtrics.com/jfe/form/SV_3TP8YGXIXC8ph9s) for my dissertation research into variations in organizational factors impacting pediatric physical therapy practice.

I am hoping to begin finalizing data collection by September 13th.

Thank you for supporting this research; I appreciate your time and effort!

Warm regards,
Katherine Smith, PT, DPT, ABD
Board Certified Pediatric Specialist
smithkat@hanover.edu
Ksmith109@andersonuniversity.edu

Second Email to Research Sample

Good morning, (FIRST NAME),
If you have not taken the survey, please support my research into organizational factors impacting pediatric physical therapy practice by taking this 3-minute survey (https://anderson.qualtrics.com/jfe/form/SV_3TP8YGXIXC8ph9s).

The input of pediatric physical therapists who are and are not currently completing the Annual Pediatric Visit is valuable for this research.

I am grateful for your time, effort, and consideration. I hope you have a wonderful day.

Warm regards,
Katherine Smith, PT, DPT, ABD
Board Certified Pediatric Specialist
smithkat@hanover.edu
Ksmith109@andersonuniversity.edu

Third Email to Research Sample

Good morning, (FIRST NAME),

The survey closes at the end of the day today; if you have not taken the survey, please support my research into organizational factors impacting pediatric physical therapy practice by taking this 3-minute survey (**https://anderson.qualtrics.com/jfe/form/SV_3TP8YGXIXC8ph9s**).

The input of pediatric physical therapists working full-time, part-time, or per diem in pediatric clinical care in all practice settings is valuable for this research.

For more information about the Annual Physical Therapy Visit in pediatric populations, visit the APTA Academy of Pediatric Physical Therapy https://pediatricapta.org/annualvisit/. The site includes educational resources and the Annual Physical Therapy Visit: Pediatric Template.

I am grateful for your time, effort, and consideration. I hope you have a wonderful day.

Warm regards,
Katherine Smith, PT, DPT, ABD
Board Certified Pediatric Specialist
smithkat@hanover.edu
Ksmith109@andersonuniversity.edu

Appendix E: Email to Response Questions

Response email for questions regarding what the Annual Physical Therapy Visit in the Pediatric Population is: (Sent 3x)
Good afternoon, (FIRST NAME)
I hope this email finds you well. Thank you for your feedback. I am investigating variations in organizational factors influencing the implementation of the Annual Physical Therapy Visit in pediatric populations. APTA Academy of Pediatric Physical Therapy has some great resources on this topic. This is a link to the APTA Academy of Pediatric Physical Therapy page on the Annual Physical Therapy Visit in the Pediatric Population https://pediatricapta.org/annualvisit/. The site includes educational resources and the Annual Physical Therapy Visit: Pediatric Template.

Thank you for your support; I appreciate your time, effort, and consideration! I hope you have a wonderful day.

Warm regards,
Katherine Smith, PT, DPT, ABD, PCS

Response email regarding should I take your survey if I don't treat patient's full time: (sent 1x)
Good afternoon, (FIRST NAME)
I hope this email finds you well. Thank you for your follow-up. This study targets pediatric physical therapists treating patients in some capacity; it does not need to be full-time. If you are not treating at all, the survey would not be applicable. If you are treating on a part-time or per diem basis, your input is valuable to the study. I appreciate your time, effort, and consideration. I hope you have a wonderful day.

Warm regards,
Katherine

Response email regarding should I take your survey if I work in ___ setting: (sent 1x)
Good afternoon, (FIRST NAME)
I hope this email finds you well. Thank you for your follow-up. Input from therapists working in outpatient clinics, natural environments, schools, hospitals, inpatient rehabilitation facilities, and long-term care faculties in both public and private sector practices is valuable to the study. I encourage you to complete the survey and am grateful for your time, effort, and consideration. I hope you have a wonderful day.

Warm regards,
Katherine Smith, PT, DPT, ABD

Board Certified Pediatric Specialist
smithkat@hanover.edu
Ksmith109@andersonuniversity.edu

Appendix E: APTA Annual Physical Therapy Visit Template: Pediatric

Annual Physical Therapy Visit Template: Pediatric

This form provides elements and suggested tests and measures for those elements to be included in an annual checkup for the pediatric population (birth-21 years). You can find links to specific tests mentioned in this document on APTA's Tests & Measures webpage. The Annual Checkup is designed to take approximately 30 to 60 minutes depending on your child's and family's individual needs.

Name of Therapist/Caregiver Completing this Form: Click or tap here to enter text.
Name of Primary Care Practitioner: Click or tap here to enter text.
Date of Examination: Click or tap to enter a date.

Personal Health Profile

Demographics and Family Information:

Name: Click or tap here to enter text.
Date of Birth: Click or tap to enter a date.
Gender: ☐ Female ☐ Male ☐ Other Click or tap here to enter text.
Support/caregiver's preferred contact method (☐ phone ☐ text ☐ email)? Click or tap here to enter text.
Medical insurance: ☐ adequate ☐ inadequate ☐ other Click or tap here to enter text.

Ethnicity:

☐ Hispanic or Latino ☐ Not Hispanic or Latino

Race:

☐ American Indian or Alaska Native
☐ Black or African American
☐ Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese, or Other Asian
☐ Hispanic, Latino, or Spanish
☐ Native Hawaiian or Other Pacific Islander
☐ White
☐ Prefer to self-describe
☐ Unknown or prefer not to say

Education/Services		Please list locations
Current educational service level?	☐ EI ☐ Preschool ☐ Pre-K ☐ K-5 ☐ 6-8 ☐ 9-12 (+) ☐ higher education	Click or tap here to enter text.
Past participation in EI, pre-school or special education in the past (list all that apply)	☐ Yes ☐ No	Click or tap here to enter text.
Current Special Education services	☐ Yes ☐ No	Click or tap here to enter text.

Personal Factors

Preferred language Click or tap here to enter text.
Family's preferred language Click or tap here to enter text.
Primary means of communication Click or tap here to enter text.
Sign language or language interpreter needed for this visit ☐ Yes ☐ No
Are there any social/emotional concerns that affect your family ☐ Yes ☐ No Click or tap here to enter text.

Environmental Factors		Please list
Use of any orthotics, assistive or adapted devices/technology	☐ Yes ☐ No	Click or tap here to enter text.
Barriers in the home setting, such as stairs, that limit independently movement throughout the home	☐ Yes ☐ No	Click or tap here to enter text.
Barriers in the school setting that limit independent movement throughout the school	☐ Yes ☐ No	Click or tap here to enter text.
Adequate access to transportation	☐ Yes ☐ No	Click or tap here to enter text.
Adequate access to healthcare providers	☐ Yes ☐ No	Click or tap here to enter text.

Individual's Medical History		Please list
Primary diagnosis or diagnoses	☐ Yes ☐ No	Click or tap here to enter text.
Concerns about development	☐ Yes ☐ No	Click or tap here to enter text.
Issues that affect health/function/movement	☐ Yes ☐ No	Click or tap here to enter text.
Precautions/contraindications to movement/ positioning	☐ Yes ☐ No	Click or tap here to enter text.
Current (or previous) primary care provider or agency	☐ Yes ☐ No	Click or tap here to enter text.
Medical providers or practitioners (orthopedic, neurologic, GI, vision, other)	☐ Yes ☐ No	Click or tap here to enter text.
Other health care specialists (physical/ occupational therapist, speech language pathologist, behavior specialist or other)	☐ Yes ☐ No	Click or tap here to enter text.
Current (or past) medications	☐ Yes ☐ No	Click or tap here to enter text.
Past hospitalizations or surgery	☐ Yes ☐ No	Click or tap here to enter text.
Are immunizations up to date	☐ Yes ☐ No	Click or tap here to enter text.
Has hearing been tested (If so, when)	☐ Yes ☐ No	Click or tap here to enter text.
Currently wearing hearing aids or cochlear implants	☐ Yes ☐ No	Click or tap here to enter text.
Has vision been tested	☐ Yes ☐ No	Click or tap here to enter text.
Currently wearing glasses	☐ Yes ☐ No	Click or tap here to enter text.

APTA

Individual's and Family's Medical History:

Conditions (check all that apply):	Child	Family	Details
Allergies	☐	☐	Click or tap here to enter text.
Bowel problems	☐	☐	Click or tap here to enter text.
Bone fractures	☐	☐	Click or tap here to enter text.
Blood disorder	☐	☐	Click or tap here to enter text.
Breathing or lung conditions	☐	☐	Click or tap here to enter text.
Cancer	☐	☐	Click or tap here to enter text.
Circulation/vascular problems	☐	☐	Click or tap here to enter text.
Dental caries (cavities)	☐	☐	Click or tap here to enter text.
Depression/anxiety/other mental health concerns	☐	☐	Click or tap here to enter text.
Developmental or growth problems	☐	☐	Click or tap here to enter text.
Diabetes/high blood sugar	☐	☐	Click or tap here to enter text.
Difficulty swallowing	☐	☐	Click or tap here to enter text.
Fatigue/Muscle Weakness	☐	☐	Click or tap here to enter text.
Hypoglycemia/Low blood sugar	☐	☐	Click or tap here to enter text.
Headaches	☐	☐	Click or tap here to enter text.
Heart problems (including palpitations)	☐	☐	Click or tap here to enter text.
High blood pressure	☐	☐	Click or tap here to enter text.
Infectious disease (e.g., tuberculosis, COVID-19)	☐	☐	Click or tap here to enter text.
Joint pain or swelling	☐	☐	Click or tap here to enter text.
Kidney or urinary disease	☐	☐	Click or tap here to enter text.
Liver disease	☐	☐	Click or tap here to enter text.
Loss of balance	☐	☐	Click or tap here to enter text.
Muscle tone condition or unusual movements	☐	☐	Click or tap here to enter text.
Seizures/epilepsy	☐	☐	Click or tap here to enter text.
Stroke	☐	☐	Click or tap here to enter text.
Thyroid problems	☐	☐	Click or tap here to enter text.
Ulcers/stomach problems	☐	☐	Click or tap here to enter text.
Unexplained nausea/vomiting	☐	☐	Click or tap here to enter text.
Other	☐	☐	Click or tap here to enter text.

Individual and Family Goals and Aspirations/Quality of Life	
Favorite or enjoyable activities	Click or tap here to enter text.
Examples of activities to participate in or perform better	Click or tap here to enter text.

Current Health Profile and Behaviors	
Physical activity (Physical Activity Guidelines: CDC, 2019):	
Average time per day engaged in moderate to vigorous physical activity	☐ <30 min ☐ 30–60 min ☐ 1–2 hr ☐ 2–3 hr ☐ >3 hr
Participation in sports	☐ Yes ☐ No Click or tap here to enter text.
Time spent sitting per day	Click or tap here to enter text.
Muscle-building and balance activities per day	Click or tap here to enter text.

Sleep (Pediatric Consensus Statement on Sleep, AAP, 2016)	
Average hours of sleep per day (including naps)	Click or tap here to enter text.
Sleep habit concerns	Click or tap here to enter text.
A TV or other screen in individual's room	Click or tap here to enter text.
Nutrition (Dietary Guidelines, CDC 2015-2020)	
Well-balanced diet (to include fruits/vegetables)	☐ Yes ☐ No Click or tap here to enter text.
Adequate fluid intake	☐ Yes ☐ No
Average number of sugary drinks or juice per day	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ >4
Special diet	☐ Yes ☐ No Click or tap here to enter text.
Parental Concerns	
Diet or weight concerns	☐ Yes ☐ No Click or tap here to enter text.
Smoking, vaping, or using alcohol or drug concerns	☐ Yes ☐ No Click or tap here to enter text.
Other concerns to share	☐ Yes ☐ No Click or tap here to enter text.

Standard Physical Examination

Vital Signs (norms: pedscases, 2018)	
HR: Click or tap here to enter text.	**BP:** Click or tap here to enter text.
RR: Click or tap here to enter text.	**SaO2:** Click or tap here to enter text.
Body Composition (CDC BMI guidelines)	
Height: Click or tap here to enter text. **Weight:** Click or tap here to enter text.	**BMI:** Click or tap here to enter text. **Waist circumference:** Click or tap here to enter text.

Integumentary Status		Detail
History of skin conditions	☐ Yes ☐ No	Click or tap here to enter text.
Visible bruises, scrapes, abrasions, or blisters	☐ Yes ☐ No	Click or tap here to enter text.
Signs of skin irritation or breakdown	☐ Yes ☐ No	Click or tap here to enter text.

Pain

Presence of pain ☐Yes ☐ No. Explain: Click or tap here to enter text.

Therapist method of evaluating pain/rating: Click or tap here to enter text.

Movement System (PT will determine which tasks are age-appropriate for the individual)

Quality of movement to observe:
Speed of movement — time to complete the task.
Amount of movement — amplitude, excursion, ROM of movement required to complete the activity.
Symmetry of movement — there may be natural asymmetries in a task.
Control — smoothness, coordination, stability, sequencing, timing initiation.
Symptom alteration — guarded, shortness of breath, pain alteration.

*Provocation: symptoms exacerbated or relieved with movement listed (use notes to explain).

Head Movement	Impaired	Not Impaired	Unable	Provocation*
In either sitting or standing, instruct individual to:				
• Look up to ceiling or sky (extension).	☐	☐	☐	☐
• Look down to floor or ground (flexion).	☐	☐	☐	☐
• Look over left and right shoulders (rotation).	☐	☐	☐	☐
• Bring left and right ear to same side shoulders (side bending/ lateral flexion).	☐	☐	☐	☐
	Notes: Click or tap here to enter text.			

Rolling	Impaired	Not Impaired	Unable	Provocation
Instruct individual from supine position to:				
• Roll to the right.	☐	☐	☐	☐
• Roll to the left.	☐	☐	☐	☐
• Roll to prone.	☐	☐	☐	☐
	Notes: Click or tap here to enter text.			

Lying to Sit to Lying	Impaired Not Impaired Unable Provocation
Instruct individual from supine position to: • Rise to sitting with feet dangling off mat/bed, then return to supine from dangling position.	☐ ☐ ☐ ☐ Notes: Click or tap here to enter text.
Sit to Stand to Sit	**Impaired Not Impaired Unable Provocation**
Instruct individual in a sitting position to: • Rise to stand, then return to sitting.	☐ ☐ ☐ ☐ Notes: Click or tap here to enter text.
Squatting	**Impaired Not Impaired Unable Provocation**
Instruct individual to: • Pretend to pick up a light object from the floor.	☐ ☐ ☐ ☐ Notes: Click or tap here to enter text.
Crawling / Walking / Running / Wheelchair	**Impaired Not Impaired Unable Provocation**
Instruct individual to: • Move forward on hands and knees (crawling) at comfortable pace. • Walk at a comfortable pace. * • Run at a comfortable pace on a treadmill or over ground. • Self-propel at a comfortable pace in wheelchair.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Notes: click to enter
Step Up and Step Down	**Impaired Not Impaired Unable Provocation** **Crawling / Walking / Running / Wheelchair**
Instruct individual to: • Step up and down onto a single step, leading with right foot, then with left foot.	☐ ☐ ☐ ☐ Notes: Click or tap here to enter text.

Flexibility/Functional Range of Motion

Examples:

Functional range of motion screen Click or tap here to enter text.

90/90 passive popliteal/hamstring flexibility Click or tap here to enter text.

Straight leg raise Click or tap here to enter text. **Other** Click or tap here to enter text.

Strength and Muscle Tone

Functional strength assessment: Click or tap here to enter text.

Muscle tone: ☐ Normal ☐ Abnormal **Describe:** Click or tap here to enter text.

Other: Click or tap here to enter text.

Sensation

Complete based on response to light touch/observation.

Click or tap here to enter text.

Posture

Asymmetries or abnormalities observed during the movement screen?

Click or tap here to enter text.

Motor Development CDC Milestones

Age-appropriate motor development? Click or tap here to enter text.

Summary

Summarize major findings of screen:

Click or tap here to enter text.

Plan/recommendations (check off all that apply)

☐ **Date of next check-up.** Click or tap to enter a date.

☐ **Physical therapist services are indicated without additional evaluation. Explain:** Click or tap here to enter text.

☐ **Child would benefit from additional evaluation in the following body system areas:**
☐ **Cardiovascular/pulmonary** ☐ **Musculoskeletal** ☐ **Integumentary** ☐ **Neuromuscular**

☐ **Child/family would benefit from referral to another professional (e.g., medical, educational, therapeutic technologies, social, community agencies; include discipline and contact information of service provider if known).** Click or tap here to enter text.
☐**Reason for referral** Click or tap here to enter text.

☐ **Other** Click or tap here to enter text.

Oct. 11, 2023

Katherine Smith, PT, DPT, ABD
Anderson University
Ksmith109@andersonuniversity.edu

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Michele Tillson

Michele Tillson
Member Communications Specialist

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