Retaining Physical Therapists in North Carolina Public Schools

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A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in the School of Education, Department of Educational Psychology, Measurement and Evaluation.

Chapel Hill
2011

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ABSTRACT

Laurie Ray: Retaining Physical Therapists in North Carolina Public Schools
(Under the guidance of Karen Erickson)

The intent of this research was to describe school-based physical therapists in North Carolina (NC) and examine relationships between personality traits of this group, their job satisfaction and their perception of factors that influence decisions to remain at or leave their jobs. School-based physical therapists across NC (n=97) anonymously completed a web-based survey. The web-based survey was comprised of three separate survey instruments:

- Big Five Factors Mini-Markers, a personality assessment,
- Measure of Job Satisfaction, a job satisfaction assessment and
- a demographic questionnaire asking about participants their work environments, personal and professional lives

Results suggested that school-based physical therapists want to stay on the job and are motivated by: the meaningfulness of the work, making a difference, the schedule, autonomy and teamwork. Poor opportunity for career development and advancement along with paperwork, inadequate salary and inadequate administrative support encourages them to consider leaving. Small administrative adjustments can improve job satisfaction and may ensure students with disabilities have access to these professionals in every school.

To honor my mother, Christine Georgia King Ray, who never saw this work but inspires all that is kind and good in everything I do.

ACKNOWLEDGEMENTS

I would like to gratefully acknowledge all the people who helped and supported me in accomplishing this research. I would like to thank my family, family of friends and church family for their prayer and support in so many ways. Thank you for perpetually listening and caring, Friday night women; especially the ever faithful Ruth Kay and Susan Voskuil. I am thankful for my colleague and friend Lauren Holahan who teaches me though our work together and helps to make my work a joy. This work could not have been completed without support from: my husband, James Perry-long suffering and hungry; my father, Joseph Ray-who was unflagging in his drive and encouragement to see this work completed; my sister, Cynthia Mitchell-who is my rock and occasionally my hiding place…you bless my life.

I must especially thank remarkable colleagues who walked this path with me, lightened my load, offered sage advice and companionship that celebrated each small hurdle surmounted and were righteously indignant at every obstacle: Margaret Gillis, Penelope Hatch, Tracy West and Michelle Flippin. There is a slight possibility that I could have done this without you, but it would have been a misery. I would like to especially recognize Margaret Gillis for persistently working alongside me, helping me in ways great and small: running data, providing relentless assistance and support, as well as one of my outcome measures.

I am thankful to my knowledgeable and insightful committee members: Dr. Angela Rosenberg, Dr. Karen Lunnen, Dr. Sam Odom, Dr. Jill Hamm and Dr. Karen Erickson. I grew tremendously through this process and appreciate all your expertise, insight, suggestions and support. Thanks to Dr. Angela Rosenberg for her thoughtful comments and flexibility that made

the difference. I am grateful for Dr. Karen Lunnen's participation and expertise from such a distance. I thank Dr. Sam Odom for investing in this work and in me. I would not have progressed through and completed this program without Dr. Jill Hamm. Knowing she was reading and supervising my work inspired me to strive for excellence. My deepest gratitude is to my advisor, Dr. Karen Erickson. I am profoundly grateful and honored that you agreed to work with me. You are a force of nature. You deepened my understanding and improved this work in countless ways.

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Chapter 1

Introduction

Related services, which encompass various therapeutic and support services (including physical therapy) required to assist students with disabilities at school, have been a part of special education since it was federally mandated in the 1970's. The Individuals with Disabilities Education Act (IDEA) requires that all students receive a free and appropriate education (IDEA, 2004; US DOE, 2008). Some students contend with disabilities that require additional expertise and assistance in order to learn, participate with their peers and progress through the curriculum. From its inception, IDEA anticipated the additional needs of some students by requiring the provision of related services. Related services include, among many others, physical therapy, occupational therapy and speech language therapy. Physical therapy is a related service that, comparatively, is needed less frequently than other related services but is nonetheless critical to successfully educate some students (NC DPI, 2010c). Unfortunately, keeping public schools staffed with physical therapists has been and is becoming increasingly difficult (Rapport & Williamson, 2004).

A National Shortage of Physical Therapists

Nationally there is a persistent shortage of physical therapists, occupational therapists and speech language pathologists (APTA, 2010b; Rapport & Williamson, 2004). The overall shortage of physical therapists compounds the difficulty of retaining physical therapists to serve students with disabilities in the public schools. North Carolina (NC) is just one of many regions of the United States that is experiencing a dire shortage of physically therapists. In fact, 53% of

counties in NC have less than three physical therapists per 10,000 residents (Sheps Center, 2007b). Beyond the overall shortage of physical therapists, there are many additional obstacles to retaining school-based physical therapists when compared to physical therapists working in other settings. These obstacles include but are not limited to: salary discrepancy, overwhelming case loads, professional liability, the itinerant nature of the work, poor integration into the educational environment and a paucity of professional supports and opportunities for advancement in this work (APTA, 2010b; David & McEwen, 2001; Effgen & Klepper, 1994; Rapport & Effgen, 2004). While these tangible factors certainly influence retention of these professionals, the literature indicates that there are other intrinsic factors at play (Harkson, Unterreiner & Shepard, 1982; Haynie, Hartman & Lundberg, 2007).

Job Satisfaction, Retention and Personality Traits

Job satisfaction has long been understood as a construct that is directly related to retention (Harkson, Unterreiner, & Shepard, 1982; Lopopolo, 2002; Manahan, Hardy & MacLeod, 2009). However, not all workers who are dissatisfied with their jobs leave and conversely, not all workers who are satisfied with their jobs stay. However, the literature confirms that job retention does have a positive relationship with job satisfaction (Agho, Prince, & Mueller, 1992; Schneider & Schneider, 1994). In fact, when examining retention of allied health providers in rural British Columbia, Manahan, Hardy and MacLeod (2009) found; "Job satisfaction and factors that influenced job satisfaction were the most important professional factors influencing retention" (p. 8).

Personality traits represent another set of factors that may influence job satisfaction and job turnover/retention. There has been a rich history of research (e.g., Holland, 1976; Lysack, McNevin & Dunleavy, 2001; Rovezzi-Carroll & Leavitt, 1984) examining vocational decision-

making and career choices from a perspective of personality traits, especially for health care students beginning their careers. However, it seems the links between personality and career or specialty decisions have been studied most closely in medical sciences and health care professions (Borges & Savickas, 2002; Dorsey, Jarjoura & Rutecki, 2003; Lysack, McNevin & Dunleavy, 2001; McGrath & Zimet, 1977; Zeldow & Daugherty, 1991). Most recently, the emphasis has been on the relationship between personality traits and retention decisions (Akroyd, Wilson, Painter & Figures, 1994; Haynie, Hartman & Lundberg, 2007; Richardson et al, 2009). A number of measures have been developed to ascertain which personality traits or types relate most closely to specific occupations. Also, more universal measures of personality have been applied to occupational investigations. In the latter category, the Myers Briggs Type Indicator (Myers, 1998) is most frequently utilized. However, the Big Five Factors (Goldberg, 1990), has gained prominence for vocational applications in the most recent literature. Research by Holland (1996) asserts that a worker's satisfaction is premised on the congruence of his/her personality with the work environment and culture where s/he is employed. In the current investigation, the measure of the Big Five Factors was applied to school-based physical therapists.

Links between personality traits, job satisfaction, and retention are well established (Agho, Prince & Mueller, 1992; Rodwell, Noblet, Demir & Steane, 2009). These factors clearly influence whether or not individuals accept and remain in positions (Manahan, Hardy & MacLeod, 2009; Schneider, Goldstein & Smith, 1995; Schneider & Schneider, 1994). The literature indicates that, while these factors have a role in retention, their importance can vary across professions. For example, for social workers working in hospitals (Blosser, Cadet & Downs, 2010), congruence between personal and professional values and the organizational

culture is a high priority. For teachers (Bobbitt, Leich, Whitener & Lynch, 1994; Gonzalez, 1995), working conditions and salary are paramount. For physical therapists working in hospitals (Lopopolo, 2002), opportunities for promotion and career advancement have prominence. However, there is no information in the literature regarding the personal, environmental or other factors that are most important for school-based physical therapists. Understanding more about the role of personal, environmental and other factors in the decisions physical therapists make to work and remain in the public schools could assist school administrators in their efforts to focus on retention, given the scarce resources available. With few fiscal resources at their disposal, school administrators must be increasingly creative in their efforts to retain these skilled workers. Improved understanding of the factors that contribute to job satisfaction for school-based physical therapists, their decision to remain on the job, and the role of personality traits in educational environments may offer some suggestions as to how to target these factors and increase the likelihood of retention once a physical therapist is hired.

The Current Investigation

This investigation was designed to identify personality traits common to school-based physical therapists and the relationship between those traits and job satisfaction. The study was based upon existing understanding of obstacles to retaining physical therapists in educational practice settings, as well as the factors that contribute to retention of school-based physical therapists. The investigation was situated in Schneider's (1987; 1995) Attraction-Selection-Attrition (ASA) theoretical framework, which suggest that the dynamic interactions among attraction, selection, and attrition work to define the types of people who work in an organization and, in turn, determine the organization's values, structure and culture (Schneider, Goldstein & Smith, 1995). Using a web-based survey of school-based physical therapists practicing in North

Carolina, this study sought to understand the factors associated with retention of physical therapists in school settings with a long-term goal of identifying factors and promoting change that could enhance the attractiveness of schools as a workplace for physical therapists.

Chapter 2

Serving Our Students: PT Please Don't Go?

Related services, including physical therapy, have been a part of special education since the first federal mandates provided children with disabilities access to public education. Yet, few are aware that there are physical therapists at work in public schools. Physical therapists work in the realm of rehabilitative sciences and most people encounter them in medical contexts: hospitals, clinics or institutions. However, there is a long history of physical therapists serving students with disabilities that began in 'special' schools or institutions where students with disabilities were most often placed in the first half of the 19th century (Batten, 1933; Cable, Fowler & Foss, 1938). By the mid 1930's, physical therapy services were delivered as common practice in 'special' schools (Batten, 1933; Mulcahey, 1936). While some neighborhood schools may have reached out for consultation from therapists and rehabilitation specialists as they attempted to educate some students with disabilities; it was legislative action that fully brought therapeutic services into public schools (Effgen et al, 2007).

The need for specialized expertise to meet the needs of students with disabilities was evident from the very first legislative mandates for public education for all students with disabilities (Mills v. Board of Education, 1972; PRAC v. Pennsylvania, 1971). Since the 1970 passage of PL 91-230, which amended the Elementary and Secondary Education Act, related services have been a part of special education mandates. This pre-dates the passage of PL 94-142, the law that is equated with the introduction of special education into public schools.

Today, the Individuals with Disabilities Education Act (IDEA, 2004) mandates that public schools provide physical therapy whenever it is necessary for a student to benefit from special education (US DOE, 2008), regardless of how frequently or infrequently physical therapy service is required. Currently there is a shortage of physical therapists at the national and regional levels (APTA, 2010b), as well as across the state of North Carolina (Sheps Center, 2007a). These shortages occur across medical and educational settings; however, several obstacles and complications accentuate the shortage in school settings. Further, aspects of the work place, as well as internal and external supports, appear to influence whether physical therapists accept and continue working in public schools.

Understanding the factors that influence physical therapists in their decisions to accept and keep positions in the public schools requires an understanding of the role of physical therapy in educational settings. Additionally, it requires an understanding of the way that physical therapists were introduced and continue to be supported in the schools. Below, these issues will be discussed in detail, as well as the challenges involved in ensuring the provision of physical therapy for students who require it to access an education.

The Individuals with Disabilities Education Act (IDEA)

Before 1975, the majority of the almost 4 million children with disabilities in America were denied access to a public education (New America Foundation, 2007a). The authors of IDEA relied on a federal study from that time that found 60 percent of children with disabilities were excluded entirely from public schools (Herz, 2007). The children with disabilities who did attend school were either placed in inadequate, segregated classrooms or in regular classrooms without meaningful support.

Spurred by the civil rights movement and the *Brown v. the Board of Education* decision, parents of children with disabilities turned to the courts for help. The state and local obligation to educate children with disabilities appropriately was established by two US District Court cases. In *Pennsylvania Association for Retarded Children (PARC) v. Pennsylvania* (1971) and *Mills v. Board of Education* (1972), the courts interpreted the equal protection guarantee of the 14th Amendment to establish the right of children with disabilities to a free and appropriate public education (FAPE) in the least restrictive environment (LRE).

In 1974, NC enacted one of the first comprehensive special education laws in the nation. By 1975, more than 30 states had passed legislation that guaranteed children with disabilities the right to a free, appropriate public education in the least restrictive environment (121st Cong. Rec., 1975). These state laws and subsequent court decisions placed a new, heavy fiscal burden on state and local school districts to provide the required programs, supports and services. To respond and assist states and local school systems with these financial demands, Congress passed the Education for All Handicapped Children Act, P.L. 94-142 (EHA) in 1975. Amendments to EHA (P.L. 99-199) in 1983 supported transition services from high school to adult life. In 1986, EHA was amended (PL 99-457) to expand programs to include children with disabilities from birth to three. In 1990 EHA was re-titled the Individuals with Disabilities Education Act, P.L. 101-476 (IDEA). Finally, in 2004, IDEA was altered to make it consistent with No Child Left Behind legislation (NCLB) (OSERS, 2008). At that time, IDEA was renamed the Individuals with Disabilities Education Improvement Act (IDEIA), but it is still most frequently referred to as IDEA. In NC, legislation that ultimately became Article 9 (2008) brought NC law into compliance with the 2004 IDEIA. This was the first complete re-write of special education legislation for NC since 1977.

Related Services in the Individuals with Disabilities Education Act. Under the IDEA, in order to receive federal funds, public schools must provide students with disabilities a free and appropriate education (EHA, 1975; IDEA, 2004; US DOE, 2008). This includes, if necessary, special education and related services as outlined in each student's individualized education program (IEP), as determined by his/her IEP team. Schools are mandated to provide a free and appropriate education to students with disabilities in the least restrictive environment regardless of the cost incurred. There are three criteria students must meet in order to receive special education and related services:

1. The student must have a disability.
2. The disability must negatively impact the student's education.
3. The student must require specialized instruction in order to benefit from the special education program delineated in the IEP (IDEA, 2004; US DOE, 2008;).

Once these three conditions are met for an individual student, that student is entitled to specially designed instruction, as well as any and all related services required to benefit from his/her special education program. The IEP team determines exactly what and how much service is required for each student, individually, during meetings held at least annually.

Physical Therapy as a Related Service in the Educational Environment

The collection of therapeutic and support services required to get students with disabilities to and from school, meet diverse medical needs and support educational needs throughout the school day are referred to as related services (IDEA, 2004). The current re-authorization of the IDEA (2004) defines related services as:

> "(A) In general.--The term `related services' means *transportation*, and such developmental, corrective, and other supportive services (including *speech-language pathology and audiology services, interpreting services, psychological services, physical and occupational therapy, recreation, including therapeutic*

> *recreation, social work services, school nurse services* designed to enable a child with a disability to receive a free appropriate public education as described in the individualized education program of the child, *counseling services, including rehabilitation counseling, orientation and mobility services, and medical services,* except that such medical services shall be for diagnostic and evaluation purposes only) as may be required to assist a child with a disability to benefit from special education, and includes the early identification and assessment of disabling conditions in children.
> (B) Exception. --The term does not include a medical device that is surgically implanted, or the replacement of such device."
>
> (italics added; IDEA Title I, (A) 602, 26)

Therapeutic interventions designed to meet needs resulting from education were relatively unknown prior to 1975, when the Education of All Handicapped Children Act (Public Law 94-142) was first enacted (Effgen, et al 2007; Lunnen, 2008). When PL 94-142 mandated a free and appropriate public education for all students, it was immediately evident that students with varied and unique needs would require assistance from individuals with expertise that goes beyond the preparation educators and special educators receive. Therefore the law built in the provision of health and/or medical services related to a student's educational needs during his/her school day. Delivery of these services requires the presence of professionals with specific expertise. At a minimum, even if direct services are not necessary, these professionals provide valuable insight through the assessments they complete and his/her active participation in the development and, as warranted, implementation of IEPs (Giangreco, 2001; McEwen, 2009).

Related services are varied. Per IDEA, services range from interpreting to nursing to transportation. The prevalence of these disparate related services varies widely. Physical therapy is not prominently featured nor frequently utilized in special education as a whole. There is a relatively low incidence of students with physical impairments that limit access to education. However, for those students with physical impairments that impede safety and full access,

physical therapy is a critical service (Effgen et al, 2007). Unfortunately, keeping physical therapists working in our schools is often a challenge.

Shortage of Physical Therapists

According to the American Physical Therapy Association (APTA), based on evidence from a number of sources (e.g. studies conducted in outpatient, acute care and skilled nursing settings, anecdotal reports, increase in number and amount of signing bonus offers, etc.) a shortage of physical therapists persists nationally (APTA, 2010b). MacDowell, Glasser, Fitts, Nielsen and Hunsaker (2010) found that 61.2% of participating CEOs from rural hospitals reported a shortage of physical therapists. Using projections from the US Bureau of Labor Statistics, the spring 2010 Occupational Outlook Quarterly projected 'much faster than average growth' in the need for physical therapists (30%) between 2008 and 2018. This projection is based on population growth, the increasing average age of our population, the rising return of injured veterans and anticipated medical advances which improve survival rates of people who are injured or ill (Janicki, Dalton, Henderson & Davidson, 1999). In NC, despite overall growth in the supply of physical therapists, 22 counties had no change in the number of physical therapists and 6 of 100 counties in NC continued to have no physical therapists in 2008 (Sheps Center, 2009). The latest Allied Health Job Vacancy Report from the Sheps Center for Health Services Research (2007a, p. 3) reports "Physical therapists had the greatest number of job openings, representing 26% of the total vacancies advertised (n=554)". The result is that public schools must compete for physical therapists during a time when they have sparse resources to achieve the mandates they are required to fulfill. Moreover, schools frequently compete in bidding wars to hire and retain physical therapists because they are in such high demand.

Competing for Pediatric Physical Therapists. While it is increasingly difficult to hire any physical therapist, the challenge to hiring physical therapists to work in the public schools is more complicated than can be described by a mere shortage of professionals (Harkson et al, 1982; Okerlund et al, 1994; Sheps Center, 2000 & 2009). Practicing in public schools requires a skill set developed from working with pediatric populations (Effgen, Chiarello & Milbourne, 2007). This further limits the scarce pool of qualified physical therapists available to serve students in public schools. While all practice settings are complicated in their own way and require unique skill sets, working as a school-based therapist is exceptionally demanding. A school-based therapist must possess facility with the disparate requirements of various laws, policies, and mandates governing public education and the practice of physical therapy on the federal, state and local levels (David & McEwen, 2001; Effgen et al, 2007; Lunnen, 2008; Rapport, 2010; Rapport, 1995). Physical therapists working in the public schools must be proficient in many, varied therapeutic skills and develop a nuanced understanding of the role of a medical professional in an educational world (David & McEwen, 2001; Giangreco, 1995) that only comes through experience working as a school-based therapist. It is not an easy task to find and keep qualified physical therapists that are willing to commit the effort and time to become competent to practice in educational settings (Effgen, et al 2007 & 1994).

Retaining Professionals

Often when there is a shortage of qualified personnel, focus is placed on recruitment of professionals, especially into underserved areas or settings. The majority of schools in NC are underserved as a rule and many of these schools, not coincidentally, are in counties that meet the US Department of Health and Human Services, Health Resources and Services Administration criterion to designate them as a medically underserved area or population (US DHHS, n.d.). This

compounds the need to retain qualified personnel, especially when those professionals are in short supply (Hancock, Steinbach, Nesbitt, Adler & Auerswald, 2009; MacDowell, Glasser, Fitts, Nielsen, & Hunsaker, 2010; Manahan, Hardy & MacLeod, 2009).

In a recent survey (NC DPI, 2010c), 10% of the responding school systems (approximately 41% of all school systems in NC) had a vacancy for at least one physical therapist. These school systems reported the number of days the position remained vacant ranged from 90 to 921 days (3 months to 2 ½ years). The Sheps Center Allied Health Job Vacancy Tracking Report (2007a) ranks physical therapy as the allied health profession with the most vacancies in NC for the last two years. The difficulty employers have hiring and retaining these skilled professionals is obvious. The reasons why are not as obvious. However, once a school system has employed a physical therapist, administrators and human resource managers should not underestimate how vital it is to keep them. Waldman, Kelly, Arora and Smith (2010) report the "shocking" cost of recruiting a physical therapist in a medical/hospital setting averages $720 and training cost averages $1,587. Therefore, once trained, the cost of failing to retain a physical therapist is $2,300, plus the costs of recruiting and training a replacement. Costs are likely to be higher for schools given that entry-level, generalist, physical therapy professional programs such as those in NC do not include educational practice settings as a foundational component of their curricula. Therefore, it is more than likely that the cost to fully train and retain a school-based physical therapist would exceed costs in a medical setting.

Human resource expert Dick Finnegan (2010) has developed an online 'turnover cost calculator' that also includes algorithms for determining indirect or 'disruption' costs (e.g., days vacant, costs in revenue, training costs). This method of calculating costs places the total cost of turnover of physical therapists in the public schools at $28,200 (using average data from a NC

DPI survey in 2010c). Clearly, NC schools cannot afford to lose qualified school-based physical therapists once they have been successfully recruited.

Based upon the shortage of physical therapists, the compounded cost of retention versus recruitment and personal and professional knowledge of excellent physical therapists working in NC schools who must decide annually whether they should continue to work for the schools; the long term goal of this study is to improve the current retention rate for the excellent physical therapists already working in NC schools. The short term goals of the current project are to investigate: (a) the job satisfaction of physical therapists currently employed in NC schools; (b) factors, including personality traits, that may or may not be related to job satisfaction for school-based physical therapists; (c) intentions to continue working as a school-based physical therapist; and (d) the relationship between job satisfaction, personality traits and retention.

Retention of professionals serving public schools is likely to be a complicated, nuanced and individual issue. Many factors must be considered and may manifest differently for each individual physical therapist. The literature confirms that underserved areas and settings have many challenges to address in efforts to retain professionals across health care fields (Hancock et al, 2009; MacDowell et al, 2010; Manahan, Hardy & MacLeod, 2009); however, there is a paucity of literature on retention of school-based physical therapists. The following review will therefore draw from research from other health care professions, physical therapists working in other settings and professionals in educational settings (educators and other related service providers) in order to discuss the range of factors that may be associated with retention of school-based physical therapists.

Health Care Professionals

The relationship between economic limitation and lack of services and service providers, especially in the health care arena, is clear (Hancock et al, 2009; MacDowell et al, 2010; Orranita, 2005; Manahan et al, 2009). Underserved areas and settings remain underserved because they cannot match the salaries offered in other, better resourced, areas and settings. Beyond salary discrepancies, there are other professional supports that are scarce in underserved areas and settings. There can be a lack of: (a) colleagues, (b) public and private resources (programs, funding, agencies, etc.), (c) convenient and appropriate continuing education opportunities, (d) social supports and (e) knowledgeable vendors and parent groups (Brooks, 2002; Harkson, 1982; Orranita, 2005; Manahan et al, 2009). Conversely, there are benefits of underserved areas that often go overlooked. Hancock, Steinbach, Nesbitt, Adler and Auerswald (2009) determined that physicians are more likely to stay and serve small towns when they have a desire for community involvement, a sense of place and familiarity. Those physicians who have a history of strong community or geographic ties and demonstrate prior resilience under adversity are more likely to continue practicing in underserved areas (Hancock et al, 2009). A review of studies examining recruitment and retention of primary physicians in rural Great Britain (Brooks, 2002) concurs that being raised in an underserved area is the best predictor for a physician to serve an underserved area. Special programs during professional healthcare training also increased the likelihood that a physician would serve these populations (Hancock et al, 2009; Orranita, 2005). According to Orranita (2005), the creation of a special program in rural Canada resulted in increased numbers of providers available. The author reported an increase in the services offered and improved doctor retention by creating a supportive group of general practitioners who met regularly and collaborated to provide services. This study suggests that

ancillary supports are important to healthcare providers and may improve overall retention and long term stability.

Blosser (2010) reported on career concerns for social workers employed in a specific hospital. While this research may be slightly removed from the population targeted for this study, it reveals similar concerns that seem to parallel those of other workers in the health care field. Among primary concerns reported were workload, opportunities for advancement and pay parity. These concerns are common across the literature for various professions including health care professionals (Akroyd et al, 1994; Richardson et al, 2009), physicians (Hancock et al, 2009), speech and language pathologists (Edgar & Rosa-Lugo, 2007), social workers (Blosser, 2010), teachers (Bobbitt et al, 1994), occupational and physical therapists (Bloom, 1989; Effgen & Klepper, 1994; Goldberg, 1993; Harkson et al, 1982; Harrington, Beam & Laurel, 1992; Okerlund et al, 1994; Witworth, 1994).

Educational Professionals

Research related to the retention of educators mirrors many of the same factors as outlined above. Given that school-based physical therapists work in the same settings as educators, the research regarding their retention is applicable to understanding why and when physical therapists work in the schools. Billingsley (2004) suggests, from her critical review of 20 articles, that the literature for special educators identifies the following environmental factors as leading to low job satisfaction: (a) low salaries, (b) poor work climate and (c) lack of administrative support. Gonzalez (1995) found these same factors contributed to educator attrition in rural settings. This seems a consistent message from educators: low salaries and limited support have a negative influence on job satisfaction.

School-based related service providers work in the same contexts as teachers. They likely share the primary concern of salary and support. However, it does appear that related service providers have some concerns that extend beyond those of educators. Six factors have been linked to job dissatisfaction for related service professionals working in educational settings (Goldberg, 1999; Gonzales, 1995): (a) salary, (b) inadequate work/office space, (c) inadequate equipment/materials, (d) excessive caseload, (e) limited staff development and (f) isolation from colleagues. In another study (Harrington, Beam & Laurel, 1992), related service providers in early intervention identified four of the six factors (inadequate work space or inadequate equipment were not identified) as factors related to job satisfaction. This research identified one additional factor: opportunities for professional development and/or advancement. Although Gonzales (1995) focused on teacher attrition, she also reported that related service providers were at greatest risk to leave schools in favor of other work settings.

Research looking at physical therapists in settings other than schools really clarifies the factors most important to job satisfaction for these professionals. A survey of physical therapists across work settings (Harkson, Unterreiner & Shepard, 1982) found poor salary (48%) and poor opportunity for promotion (45%) as the top reasons for turnover. This finding was confirmed by Okerlund, Jackson and Parsons (1994) who surveyed physical therapists in Utah who identified 'freedom on the job' and professional development as the top contributors to job satisfaction. In an investigation of hospital turnover for physical therapists, Davis (1989) determined the most common reasons that physical therapists leave hospitals is a "lack of upward mobility" and workload issues.

Obstacles to Retaining School-based Physical Therapists Specific to Educational Settings

The shortage of physical therapists makes it increasingly difficult to retain physical therapists in any position. Some difficulties faced by school administrators attempting to retain school-based physical therapists are unique to the school setting. Each of these difficulties is described in detail below.

Salary Discrepancy. The largest obstacle to retaining physical therapists in school-based practice settings appears to be the discrepancy in pay between school practice and other practice settings, such as hospitals, sports, home health and rehabilitation clinics. The US Department of Labor, Bureau of Labor Statistics estimates the average, annual salary for physical therapists in 2009 across the US was $76,220 (ranging from $52,170-105,900) (US Dept. of Labor, 2009). The APTA reports for 2008 median annual salaries for physical therapists ranged from $73,000-86,000, varying regionally (APTA, 2010b). This report (APTA, 2010b) further stipulates that physical therapists working in school systems reported the lowest average salary at $64,200. The annual salary reported by physical therapists working in school systems was $25,800 less than that of the highest paid group of physical therapists who work in industrial settings (APTA, 2010b).

This discrepancy is slightly less egregious in NC. Physical therapists report annual salaries to the NC Bureau of Labor Statistics (2010). In 2009, hospital-based physical therapists entering the profession reported earning $59,093. The average salary for hospital-based physical therapists was $74,453; $82,132 was the reported average for 'experienced' physical therapists. The same physical therapist working in NC public schools would make: $43,464, $57,232 or $64,116 respectively. While this is better than the national averages, these differences translate into a salary decrease of over $18,000 for an experienced physical therapist choosing to work in

the schools rather than a hospital setting. There is a preponderance of evidence that salary is a major consideration for physical therapists in accepting and retaining a job (Blosser, 2010; Edgar & Rosa-Lugo, 2007; Harkson et al, 1982), as well as job satisfaction (Haynie et al, 2007; Richardson et al, 2009).

Comparisons with Educators. As licensed professionals, school-based physical therapists compare salaries with local peers in other practice settings. However, within public school systems, administrators and human resource staff begin all wage negotiations with a comparison to notoriously under-paid educators. This presents a 'catch-22' to the school-based physical therapist. While they could be receiving much higher pay were they to work, as a physical therapist, anywhere else, the pay they receive markedly exceeds that received by educators. The salary range for educators teaching children with disabilities in NC is $33,417 to $50,340 (NC Bureau of Labor Statistics, 2010). Those making fiscal decisions in public school systems are under intense scrutiny and increasing pressure to improve educators' salaries and are consequently hard pressed to justify pay increases for staff that already make $10,000-$14,000 more than well deserving educators.

Environmental Issues: External

Medical Personnel in an Educational World

Physical therapy was developed within the medical realm in order to serve rehabilitative needs (Heriza, 1994). School-based physical therapy has evolved as it developed within the educational setting and outside of the medical setting (David & McEwen, 2001; Effgen, 1995; Kalish & Presseller, 1980; Scarnati, 1971; Stuberg & Harbourne, 1994). This has led to marked differences between school-based physical therapy and physical therapy provided outside of the school in private clinics, home-based care settings, or hospital clinics. The difference is primarily

in the rationale for, not the type of, therapy provided. Physical therapy provided in clinical or medical settings can have multiple goals: (a) to optimize performance, (b) improve quality of movement, (c) address impairments and/or (d) improve function in a variety of settings. In contrast, physical therapy provided in schools focuses on ensuring students can participate in and benefit from his/her special educational program (Holahan & Ray, 2009; IDEA, 2004; US DOE, 2008).

Frequently, parents and even physicians would like to see schools provide all the physical therapy that students with disabilities require because it provides many benefits. First of all, the school must provide educationally required therapy as part of a free and appropriate public education (IDEA, 2004; US DOE, 2008); therefore, there is no need to utilize insurance or co-payments. Secondly, the school is required to provide transportation and school attendance is mandatory, so families do not have to take time off work or miss appointments. While this is convenient for families and physicians, the law mandates physical therapy *only* as a service related to education (IDEA, 2004; US DOE, 2008). The law does not require schools to provide physical therapy for ease of service provision or for a student to optimize potential, rehabilitate from surgery or address issues of movement quality. Schools are only required to provide physical therapy to the extent required for each student to benefit from special education (IDEA, 2004; US DOE, 2008).

Although McEwen and Shelden (1995) declared this issue dead, many school-based physical therapists continue to deal with problems that arise from confusion around the type and level of service to deliver (Holahan & Ray, 2009). Frequently, parents obtain a prescription from their child's physician for physical therapy and bring it to the IEP meeting, anticipating that the school will provide physical therapy services as prescribed. A physician's order is considered

with all other collected data in order to determine appropriate services at school. A prescription on its own is insufficient to determine whether physical therapy at school is required for the student to make progress through the curriculum and benefit from his/her individualized educational program. Parents are, in general, accustomed to a physician's prescription being accepted and implemented without discussion. When medical models of physical therapy conflict with educational models of physical therapy, it is difficult, especially for parents, to understand why the same rules do not apply (Holahan & Ray, 2009).

Frequently, being a medically trained therapist working in an educational setting results in consistent pressure from both arenas, educational and medical, to conform more closely to the expectations and norms of each (David & McEwen, 2001; Scarnati, 1971). This serves to increase the isolation, or at least the perceived isolation, of the school-based physical therapist.

Lack of Professional Identity and Opportunities for Collaboration

In most cases, physical therapists working in public school systems are isolated from other medical professionals completely and also from education professionals by context and the itinerant nature of the work (David & McEwen, 2001; Effgen, 1995). It is difficult to be the sole medical professional upon whom the team relies for medical advice and expertise. On one hand, school-based physical therapists bear a great responsibility as *the* medical resource; on the other hand they have no colleagues with whom to exchange ideas or consult. Given the itinerant nature of the majority of school-based physical therapists' workload (Effgen, Charello & Milbourne, 2007; Effgen & Klepper, 1994), it is rare that they are able to build a community feeling with individuals on school teams with whom they work. School-based physical therapists often work with six or more schools and teams (NC DPI, 2010c), which amplifies the effort and time it takes to build and maintain relationships. Being spread thin across so many teams makes it hard to

connect with team members for service coordination, let alone to collaborate closely (David & McEwen, 2001; Effgen, 1995; McEwen, 2009).

School-based physical therapists are surrounded by educational professionals who clearly understand that physical therapist receive higher pay and have more education than most of them, thus potentially alienating educators from the start (Blosser, 2010). Also the training a physical therapist receives is very different from the background and perspective of an educator. Both groups have misguided expectations about what the other group should know 'from common sense.' These 'common sense' notions are likely foundational premises long established by the nature of the professionals' education and experience.

The nature of service delivery can also be a source of conflict. Best practices in service delivery are increasingly moving school-based therapists into the classroom (Holahan, Ray & Flynn, 2009). Educators may perceive this as invasive. At the same time, many educators feel trapped in the classroom (Billingsley, 2004; Gonzalez, 1995) while itinerant physical therapists can feel oppressed by the multiple demands for their time, the need to carry all equipment and materials with them from site to site, and the amount of time they spend traveling from one school to another.

Serving Two Masters

All practice settings have regulations to follow and requirements for appropriate documentation governing the practice. Additionally, most settings demand specific skills. This is the case for physical therapists in all practice settings. What differentiates the setting of the school-based physical therapist is that s/he must contend with multiple authorities (Effgen & Klepper, 2007; Rapport, 2010; Rapport, 1995).

Physical therapists working in public schools must be aware of and compliant with many laws and regulations (Rapport, 2010) including but not limited to the:

- Individuals with Disabilities Education Act (IDEIA, 2004),
- Rehabilitation Act of 1973,
- Americans with Disabilities Act,
- Family Education Right to Privacy Act,
- Health Insurance Portability & Accountability Act, and
- Elementary Secondary Education Act (NCLB, PL 107-110).

They must also contend with various levels of administration, authoritative bodies and oversight for how they practice and document their practice (Holahan, Ray & Flynn 2009; Rapport, 2010) including:

- NC Board of Physical Therapy Examiners,
- NC Physical Therapy Association,
- NC Department of Public Instruction,
- NC Division of Medical Assistance,
- Local education agency administration and
- Individual school administration.

Every physical therapist must comply with relevant laws and policies. However, the multiple authorities and levels of policy and administration that school-based physical therapists navigate are markedly more complex than that of other practice settings (Effgen, Chiarello & Milbourne, 2007). While grappling with requirements and legislation that frequently do not align, school-based physical therapists are often making judgment calls and contending with contentious issues. However, they do all of this in the absence of institutional safeguards.

Professional Liability. In NC, school-based physical therapists are assigned to the Curriculum Support Personnel category (which is non-certified) for human resources within school systems (NC DPI, 2007). This is due to the fact that NC Department of Public Instruction does not license physical therapists to work in NC schools. All physical therapists and physical therapist assistants are licensed to practice in NC by the NC Board of Physical Therapy Examiners. This leads to many difficulties. Physical therapists are considered at-will employees and lack any due process or protection that other educational professionals have access to by virtue of being designated to a certified category. This presents large risk for physical therapists who frequently work one-on-one with students developing motor skills. The potential for liability is unavoidable under these circumstances. Additionally, physical therapists are often asked to provide assistance to families in order to obtain medical equipment or to work with students off-campus at work sites, on field trips, or as part of transition plans. Rarely do school systems have policies outlining the physical therapists' responsibilities in these cases. Often each school-based physical therapist is forced to make and defend decisions without a legal safety net or employment security.

Poor Opportunity for Advancement and Mentorship

Due to NC Department of Public Instruction classification of physical therapists, they are not included in the certified category of professionals who are eligible for mentoring programs. Furthermore, physical therapists working in schools have few, if any, options for career advancement (Effgen, 1995). Physical therapists employed by school systems generally have three options available:

1. Continue to work as a school-based physical therapist

2. Manage other physical therapists as a ‘lead’ physical therapist in large school systems (currently only 8 out of 115 school systems in NC designate a ‘lead’ physical therapist).
3. Manage all related service provision as a related service coordinator within a school system, moving away from serving students and towards administration.

School-based physical therapists are often seen as expensive employees who must maximize productivity. As a result, the average workload does not allow school-based physical therapists to engage in program development, contribute to the school system as a whole or demonstrate managerial abilities that improve potential for advancement. As previously described, opportunities for professional advancement clearly contribute to job satisfaction for many health professionals (see e.g., Billingsley, 2004; Gonzales, 1995; Ingersoll, 2001); the same is true arguably to a greater extent for physical therapists (Lysack et al, 2001; Okerlund et al, 1994). However, in the last five years, only two physical therapists in NC (out of approximately 178) have been promoted into administrative roles for their school systems and no longer serve students.

Adequate pay and benefits, an effective continuing education program and flexible scheduling were cited by Okerlund and colleagues (1994) as the top three work incentives for physical therapists. Shanahan (1993) points out that many of the retention strategies (contracting, overtime, pooling staff, hiring temporary staff, etc.) implemented at hospitals are inappropriate and are not actually retention strategies but strategies to address shortages and should be replaced by efforts to promote more autonomous practices and administrative support. Each of these external factors influences the school-based physical therapist.

Environmental Issues: Internal

Because relatively few students require school-based physical therapy, a school-based physical therapist is, by definition, itinerant and expected to provide therapy in many locations. Physical therapists are stretched further than occupational therapists and speech-language pathologists in public school systems. In NC, according to a recent survey of school systems, while 41.6 % and 12% of students who receive special education also receive speech-language and/or occupational therapy respectively, only 4.2% receive physical therapy (NC DPI, 2010c). Therefore, school-based physical therapists are spread thin as they must travel more to provide the necessary services and support for staff and students who are often widely dispersed. Occupational therapists and speech and language pathologists are commonly full-time employees based at one or two schools (Mattson, 2001). Conversely, school-based physical therapists are often part-time, contracted employees covering five to six schools (Effgen, 1995; Mattson, 2001). These factors dramatically increase the demand for skills in collaboration and team building.

The practice of a school-based physical therapist is characterized by great autonomy (David & McEwen, 2001; Effgen & Klepper, 2007; McEwen, 2009). While this type of professional latitude can be very appealing to some individuals, it also means that few administrators fully understand the role and responsibilities of the school-based physical therapist. Most often, school-based physical therapists are not well integrated into the special education staff (McEwen, 2009). While this is often the case for all related service personnel (Edgar & Rosa-Lugo, 2007; Kalish & Presseller, 1980), these effects are compounded for school-based physical therapists because they are responsible for a workload spread across many miles and multiple sites. In this way, school-based physical therapists are less likely to develop

meaningful professional relationships. This can lead to poor communication and professional structures, such as lack of regular work reviews, unclear or absent supervision and poor administrative support.

Underrepresentation of School-based Physical Therapists in the Profession

Both professional associations for occupational therapists (American Occupational Therapy Association) and speech language pathologists (American Speech and Hearing Association) report that public schools are the primary work setting for their respective members; 29.6% of occupational therapists and 50.1% of speech-language pathologists work in schools. In contrast, only 4.5% of the membership in the American Physical Therapy Association works in schools (APTA, 2010b). While some of this discrepancy may be explained by poor representation/membership in the respective professional association, these percentages still carry the weight of comparison.

Since fewer students require school-based physical therapy, it takes a county or school system of substantial size to employ a full- or even half-time, physical therapist. This results in the need for school systems to contract with physical therapists for service instead of hiring them directly as school system employees. Contracting may improve the salary a physical therapist receives, but as contracted employees they are even further isolated from the school community, rarely included in communication within the school system, updates in policy or continuing education offerings (David & McEwen, 2001; Effgen, 1995; McEwen, 2009). This compounds the issue of disenfranchised physical therapists; they must move around a great deal to provide services, and they are not a part of any team.

Multiple factors complicate retention of physical therapists to serve public schools. Practicing in the educational setting can be isolating and require specific skills sets and expertise.

Given the persistent shortage of physical therapists and the salary discrepancy between work settings, the challenges facing hiring administrators is daunting.

The issues outlined above clearly have a role in the choices a physical therapist has to make regarding work setting and whether s/he will accept and keep a position working in public schools. However, there are other aspects to consider that influence the occupational decisions of a physical therapist. The literature from allied health professions confirms that personality is related to career choices and job satisfaction (Lysack, McNevin & Dunleavy, 2001; Richardson et al, 2009; Rovezzi-Carroll & Leavitt, 1984). Using the Big Five Factor personality assessment, Richardson and colleagues (2009) determined nine personality traits related positively to job satisfaction with health care professionals, including assertiveness, extraversion, openness, customer service and teamwork. While the literature describes numerous illustrations of the link between personality traits and job satisfaction across professions (Barrick & Mount, 1991; Haynie, Hartman & Lundberg, 2007; Lopopolo, 2002; Manahan, Hardy & MacLeod, 2009), the link has not been investigated with school-based physical therapists.

Job Satisfaction

Job satisfaction, for the purposes of this study, is defined as "an attitudinal variable" (Edgar & Rosa-Lugo, 2007, p. 33) that conveys the degree to which employees like or dislike their work *and* various aspects of that work (Castle, 2006). Research has delineated job satisfaction, workload and salary as primary factors in the retention of physical therapists in various settings, as well as in the retention of educators and related service providers in schools (Akroyd et al, 1994; Bluedorn, 1982; Bobbitt et al, 1994; Cooley & Yovanoff, 1994; Edgar & Rosa-Lugo, 2007; Harkson et al, 1982; Gonzalez, 1995; Harrington et al, 1992; Wisniewski & Gargiulo, 1997;). The attitude, job satisfaction, is not a reaction; it is an individualized evaluation

or judgment. There are a number of factors to be considered when assessing job satisfaction and these factors fluctuate in importance according to the values, preferences and personality of each worker (Haynie, Hartman & Lundberg, 2007).

While there are a number of job satisfaction instruments available, Traynor and Wade (1993) have developed one that is brief (38 items), meets high levels of reliability and construct validity and possesses good content validity (van Saane, Sluiter, Verbeek & Frings-Dresen, 2003). More importantly, it captures key aspects that appear to be related to the work of school-based physical therapists. Specifically, it assesses levels of satisfaction related to constructs defined by the authors as: (a) Personal Satisfaction, (b) Satisfaction with Workload, (c) Satisfaction with Professional Support, (d) Satisfaction with Training, (e) Satisfaction with Pay and Prospects, and (f) Overall Job Satisfaction.

Personality Traits as a Factor in Job Satisfaction

John Holland (1996) asserted that a worker's job satisfaction, stability and performance are dependent upon the 'fit' between that worker's personality and the work environment. He theorized that when there is congruence between the inherent personality of the worker, the demands of the work and the characteristics of the work environment, the worker thrives and remains in that position. When these factors are in conflict or mismatched, the worker rapidly becomes discontent and leaves the position. Current research has validated this presumed relationship between job satisfaction and personality traits (Barrick, Mount & Gupta, 2003; Richardson et al, 2009).

One approach that might improve job satisfaction would involve assessing individual physical therapists (e.g. personal characteristics, needs, motivation) and their work environments (e.g. personal and professional supports, sense of belonging, tasks, job requirements) to identify

practical improvements that could be made to their work, workload and environment to optimize satisfaction. While this approach might improve satisfaction, it would require a great deal of time from supervisors and employers and extensive financial resources to implement any improvements that are identified.

As a more cost-efficient alternative, it might be possible to identify personality traits of school-based therapists who experience the highest levels of job satisfaction. This information could be used to inform those seeking a position in schools of the characteristics identified by physical therapists currently happy and successful working in the educational setting. The current investigation was designed to investigate personality traits of school-based physical therapists, to ascertain if there are traits commonly held by physical therapists working in public schools and which of these personality traits are associated with higher levels of reported job satisfaction. Identifying a common set (or sets) of traits that relate to job satisfaction may support the development of a holistic administrative approach to improve the work, work environment and job satisfaction of a majority of school-based physical therapists, thereby increasing retention.

Theoretical Framework

The study of personality and personality traits has a long history as a means to assess and understand employees, meet their needs, improve employee productivity, and increase retention and outcomes for workers (Barrick & Mount, 1991; Haynie, Hartman & Lundberg, 2007; Holland, 1976; Richardson et al, 2009). Organizational science has provided a wealth of research that reflects the importance of studying personality and personality traits. Theory provided by organizational science later integrated the individual and organizational levels. Schneider proposed (1987) and later updated (1995) an example of a theoretical model that explores this

middle ground of dynamic interaction between the individual and organizational level: the Attraction-Selection-Attrition (ASA) model. This model suggests that organizations are defined by a dynamic interaction between three processes: attraction, selection, and attrition. The outcome, over time, is that these processes determine the organization and its values, structure, and culture by establishing the types of people within that organization (Schneider, Goldstein & Smith, 1995).

The pivotal factors in the model are the individual personality traits that initially attract (or repel) the job seeker, afford (or deny) evidence for the employer to hire and resolve the 'fit' between the employee and the work environment as good or bad. The ASA model asserts that organizations are founded in order to achieve specific goals. Procedures and policies emerge that serve to achieve the goals of the organization, thereby creating the culture of the organization. The culture of the organization reflects the foundational goals and traits required to attain them. As an organization matures, the procedures, policies and goals that propel the organization to success distill into a culture that determines the kinds of people who are attracted to, selected by and remain with the organization.

As Schneider and colleagues (1995) describe, "People's preferences for particular organizations are based upon an implicit estimate of the congruence of their own personal characteristics and the attributes of the organization." (p.749). Over time, the ASA model asserts, these three processes (attraction, selection and attrition) result in organizations comprised of individuals with identifiable personality traits who continue to develop the goals, procedures and policies which manifest the character of the organization. Workers who perceive divergence between personal and organizational characteristics of their workplace will leave (Schneider, Goldstein & Smith, 1995).

Research has demonstrated consistent, positive links between turnover and perception of 'fit' (Richardson et al, 2009; Schneider et al, 1995). In this investigation, the focus will be on the attrition aspect of the model. The goal is not to assert that there is a personality type or trait for a physical therapist that is more likely to succeed and persist in school-based practice. However, the literature is clear; employees who do not feel they 'fit' as a part of an organization "tend to leave it" (Schneider & Schneider, 1994, pg. 437). The purpose of this investigation is to identify common personality traits among physical therapists employed by schools and the factors that contribute to job satisfaction for these therapists. Once identified, this understanding may lead to insights that could improve retention of trained school-based physical therapists to serve students.

Summary

School-based physical therapists are key players in the provision of a free and appropriate public education to students with a wide array of health and physical disabilities. This field requires a varied skill set, as well as deep and broad expertise. In general, physical therapists are in high demand and short supply. Educational settings have specific challenges in retaining qualified physical therapists. School system administrators and human resource personnel are competing with hospitals, clinics and home health agencies, many of which have access to resources that support signing bonuses, professional supports and better salaries, for a dwindling number of pediatric physical therapists. Once a school-based physical therapist is hired and competently delivering educationally relevant physical therapy, every effort should be made to retain these professionals in the schools. While many, if not all, school systems lack fiduciary resources to improve pay and/or benefits, there are other inducements that may improve retention.

It may be that school-based physical therapists who experience high job satisfaction share common personality traits that allow them to experience high satisfaction in the face of the many challenges physical therapists experience in school settings. If school districts are able to recognize key traits and factors while addressing organizational challenges faced by school-based physical therapists, they could create work environments that lead to high levels of satisfaction and decrease the risk of attrition. Understanding what factors, including personality traits, compel physical therapists to remain in public schools and report high levels of job satisfaction is critical and the goal of this endeavor.

Chapter 3

Methods

The purpose of this investigation was to understand the potential relationship between personality traits of school-based physical therapists, their job satisfaction and perceptions of the factors that influence decisions to remain at or leave their jobs. There is a national shortage of physical therapists in general, yet schools are mandated to provide physical therapy services to students with disabilities who require the related service to access educational programs. Unfortunately, the educational environment presents multiple challenges for physical therapists. Nonetheless, some physical therapists choose to work in the schools rather than other settings. This investigation was designed to improve understanding of these individuals and the factors that influence their decisions to work in the schools. Potentially, this information can inform efforts to improve work environments and retain school-based physical therapists.

Research Questions

This investigation used an electronic survey to investigate physical therapists working in the schools in NC. The multi-part survey was designed to capture demographic information, personality traits, job satisfaction and perceptions of factors that influence decisions to remain in school-based practice. The specific research questions addressed include:

(a) What are the demographic characteristics of school-based physical therapists practicing in NC?

(b) Are there personality trait(s) that are common to school-based physical therapists practicing in NC?

(c) Is there a relationship between the demographic characteristics and job satisfaction of school-based physical therapists practicing in NC?

(d) Are there personality factor(s) that are significantly associated with the number of years that school-based physical therapists have practiced in the schools?

(e) Are there personality factor(s) correlated significantly with job satisfaction for school-based physical therapists practicing in NC?

(f) Are there personality factor(s) that can predict overall job satisfaction for school-based physical therapists practicing in NC?

Participants

Physical therapists currently working in NC public schools comprised the sample. According to the NC Board of Physical Therapy Examiners' 2010 licensure information, there are 178 physical therapists currently licensed in NC, with NC mailing addresses *and* who report schools as their primary practice setting. Participants were recruited through direct contact via email and the NC school-based physical therapy listserv (n=241). Individuals subscribe to this listserv in order to receive information regarding school-based physical therapy. The NC DPI gave permission to utilize this listserv for this research (Appendix A). Some listserv members may be physical therapy assistants or hold other administrative positions. Therefore, the recruitment emails and the consent form and header on the survey instrument clearly indicated that only licensed, school-based physical therapists should participate in this research. While the average response rate reported for web-based surveys is 34% with a standard deviation of 15% (Cook, Health & Thompson, 2000); the goal for this research was set at a 50% return rate. A return rate of 54% (97 completed surveys) over three months (January-March 2011) was

eventually achieved. Fifteen participants submitted partial surveys and did not respond to all questions posed.

This sample was comprised predominantly of females (93%) with children (87%). Mean age for participants was 45.75 years old, with a majority of the sample over the mean (56%). Half (50%) of these physical therapists reported a Bachelor of Science as the highest degree attained (18% hold Master level degrees; 16% hold advanced Master degrees; 9% hold Doctor of Physical Therapy degrees; 7% hold other degrees). Additional information regarding the demographic characteristics of the participants is reported in the results section.

Procedures

This investigation utilized a web-based survey that was completed anonymously and administered via Qualtrics. Potential participants received a link to the survey (Appendix D including consent) and were asked to respond within two weeks of receiving emailed invitations. A targeted invitation (Appendix B) was emailed one week later to specific subgroups of school-based physical therapists who:

(a) supervise a team of therapists
(b) contract to provide services to schools or
(c) serve an entire county

in order to encourage participation and facilitate a representative sample. Additional listserv email reminders (Appendix B) were sent at two week intervals. In addition, the research was announced at two meetings involving school-based physical therapists in February and one meeting in March. All surveys were anonymously submitted electronically.

Measures

Three web-based survey instruments were utilized for this research: (a) a self-reported personality survey, (b) a job satisfaction survey, and (c) a survey of demographic information

that included history of practice in a school setting and future work intention. Participants completed a single survey which was a compilation of these three distinct survey instruments. Survey measures were carefully selected for sound psychometric properties, brevity (to encourage response) and a focus on items that address issues that might enhance retention of school-based physical therapists.

For the purposes of this study, personality traits are understood as a description of an aspect or aspects of personality (Goldberg, 1990). Further, personality is understood consistent with Digman's definition (1990) as a construct with four levels of abstraction that move from specific behaviors to traits. Specifically, Digman defines personality manifesting at the most concrete level as responses, and then habits, dispositions and acts in which people frequently engage. At a more abstract level, Digman's view of personality references the characteristics and facets of an individual, and at the most abstract level, Digman refers to traits.

In order to determine which assessment tools would be best suited to conduct this research, it was important to identify personality traits and factors related to satisfaction commonly held by a majority of school-based physical therapists. Several key factors and traits were gleaned from existing research regarding job satisfaction and retention which include: (a) flexibility, (b) organizational skills, (c) time management ability, (d) communication and interpersonal skills, (e) collaboration skills and (f) autonomy and independence.

With this basis of understanding, many personality assessments were considered, including the Myers-Briggs Type Indicator (Myers, 1998), Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B), Decision Style Profile (Schnell, 2000), the Big Five Factors (Goldberg, 1990 & Digman, 1990) and Change Style Indicator (Musselwhite, 2000). Of these, the Big Five Factors or Five Factor Model (FFM) (Digman, 1990; Digman & Inouye, 1986;

Goldberg, 1990), best captured the traits considered to be most important for physical therapists in the educational setting. Further, the FFM has been used successfully in research investigating job satisfaction and retention for other health care professionals (Haynie, Hartman & Lundberg, 2007; Richardson et al, 2009).

The Five Factors Model. The FFM personality tool has a far-reaching history. FFM is based on a 'fundamental lexical hypotheses' which holds that the most essential differences in person, character and personality will manifest eventually as a single word within a language (Goldberg, 1990). This hypothesis was first embraced by Sir Francis Galton in 1884, when he endeavored to capture these differences through dictionary definitions. This basic premise has been supplemented, edited and re-classified over subsequent years (Goldberg, 1990). Across the decades, this work has resulted in five factors of personality that have emerged as replicable (Digman & Inouye, 1986; Digman & Takemoto-Chock, 1981; McCrae & Costa, 1985, 1987) and serviceable as a meaningful structure for classification and comparison of personality in a variety of contexts (Barrack & Mount, 1991; Digman, 1990). These five factors are:

1. Extraversion,
2. Emotional Stability,
3. Agreeableness,
4. Conscientiousness, and
5. Openness to Experience.

While several versions of the FFM exist (Goldberg, 1982; McCrae & Costa, 1987; Norman, 1967), the accepted long version is Goldberg's Big Five Questionnaire (1999). The literature indicates more patent outcomes can be gained using a FFM comprised of single terms rather than multiword statements (Digman, 1990; Goldberg, 1990; John, 1990). Additionally, brevity in a tool has long been held to improve rates of return from subjects (Dillman, 2007; Heberlein & Baumgartner, 1978). Given these assertions, the Big Five Mini-Markers developed

by Saucier (1994) was identified as the personality assessment tool with the best potential for the proposed study.

Big Five Mini-Markers. The Big Five Mini-Markers were developed from Goldberg's adjective markers (1992) and validated by Saucier (1994) to measure the FFM. Saucier successfully addressed several issues with Goldberg's adjective markers, such as high interscale correlations and infrequent use of some of Goldberg's adjectives (Palmer & Loveland, 2004). The Big Five Mini-Markers (Mini-Markers) consists of 40 adjectives (8 for each personality factor). The response scale used in this study ranges from 1 (extremely accurate) to 5 (extremely inaccurate). Saucier reported the Mini-Markers to possess acceptable internal consistency ($\propto$= .78-.83) and Palmer and Loveland (2004) found strong criterion validity of the Mini-Markers as a measure of the FFM. For this sample, the internal consistency reliability for all the individual items of the Mini-Markers assessment was calculated at 0.776 using Cronbach Alpha ($\propto$). Thompson (2008) further refined the Mini-Markers item set by appraising each item and conducting further validation studies. Thompson reports improved internal consistency ($\propto$= .79-.85) with this version. His revision of the Mini-Markers, the International English Big-Five Mini-Markers, offers better factor structures, higher scale internal consistency reliabilities, greater orthogonality (relative to Saucier's set of items), temporal stability and acceptable convergent validity (Thompson, 2008). All of the development that led to Thompson's work, combined with the brevity of the International English Big Five Mini-Marker assessment and improved psychometric properties (Thompson, 2008), made it the most appropriate tool for this investigation. Table 3.1 displays the Big Five Mini-Marker factors and a brief description of each and lists the traits that compose them.

Table 3.1
Big Five Mini-Marker: Factors and Personality Traits

Factor (n=107)	**Personality Traits**	
I. Extraversion [a]	Talkative	Shy
outgoing/energetic vs. reserved/reflective	Extraverted	Quiet
	Bold	Bashful
	Energetic	Withdrawn
II. Agreeableness [b]	Sympathetic	Cold
cooperative/compassionate vs. suspicious/reticent	Warm	Unsympathetic
	Kind	Rude
	Cooperative	Harsh
III. Conscientiousness [c]	Organized	Disorganized
efficient/organized vs. relaxed/carefree	Efficient	Sloppy
	Systematic	Inefficient
	Practical	Careless
IV. Emotional Stability [d]	Unenvious	Envious
sensitive/nervous vs. secure/calm	Relaxed	Touchy
	Moody	Fretful
	Jealous	Temperamental
V. Openness [e]	Creative	Uncreative
exploratory/curious vs. consistent/cautious	Imaginative	Deep
	Philosophical	Complex
	Intellectual	Unintellectual

Note: [a] traits of energy, sociability, activity and expressiveness, [b] traits of interaction, quality of connection with and perception of others, pro-social or anti-social attitudes, [c] traits of discipline,

duty, impulsiveness, achievement, spontaneity, goal directed, [d] traits of liability, patience, persistence, irritability, [e] traits of curiosity, creativity, structure, ease with variety, complexity

Measure of Job Satisfaction. Many instruments are available to assess job satisfaction. For this investigation, the focus was on measures developed for health care professions. Initially, the survey by Warr, Cook and Wall (1979) appeared to be the best tool. It is well established and defended by researchers within human resources and management (Agho, Prince & Mueller, 1992; Shader, Broome, Broome, West & Nash, 2001). The survey examines aspects of job satisfaction that are hypothesized to be important for school-based physical therapists (e.g. intrinsic job motivation and traits and life satisfaction). However, several factors proved to be problematic for the current investigation. Specifically, the survey by Warr, Cook and Wall (1979) is lengthy, includes multiple response scales across items and includes questions outside the scope of this investigation (e.g. questions regarding anxiety, happiness and overall satisfaction with life). A published, systematic review of instruments measuring job satisfaction led to the identification of measures that addressed these issues (van Saane, Sluiter, Verbeek & Frings-Dresen, 2003). A review of these measures led to the selection of the Measure of Job Satisfaction (MJS) for use in the current investigation (Traynor & Wade, 1993).

The MJS was developed to assess the job satisfaction of nurses by Traynor and Wade (1993). It addresses both the intrinsic value assigned to work (Personal Satisfaction) and many of the factors that are related to the employment of physical therapists in the schools (e.g. Satisfaction with Workload, Professional Support, Pay and Prospects). The MJS possesses a high level of reliability and construct validity. Traynor and Wade (1993) report internal consistency reliability ranging from 0.84-0.93 using Cronbach Alpha ($\propto$). Employing the same method, the internal consistency reliability for all the individual items of the MJS was calculated at 0.925 for

this sample. Furthermore, the MJS includes the majority of work factors considered necessary for good content validity (van Saane, Sluiter, Verbeek & Frings-Dresen, 2003). Perhaps most importantly, the measure fits the goals of the proposed investigation while offering a brief set of items.

Demographic, Intention and Retention Questionnaire. To capture information regarding demographics and intention to continue working as a school-based physical therapist, the researcher constructed a questionnaire. The questionnaire focused on demographic information and included questions intended to quantify the respondent's intention to remain in school-based practice in NC's schools. The initial draft of the questionnaire was reviewed by 10 school-based physical therapists and the NC Department of Public Instruction consultants for occupational therapy and speech-language pathology. These reviewers were asked to review the document both to evaluate its content and clarity. Ideas, suggestions and comments were incorporated into the final survey instrument.

The final instrument (Appendix D) consists of 25 items that request specific information regarding shortage issues, retention, supports provided by school systems and rationale for decisions. Participants were afforded an opportunity to add a response choice ("other, please specify") or write in additional open-ended comments. Many participants (ranging from 21% to 38% of the sample on each item) took advantage of these opportunities. The number and volume of comments generated exceeded expectations. These open-ended comments were not a part of the analysis plan and are used only to offer specific examples that illustrate the discussion of results in the final chapter.

The questionnaire requested demographic information of the respondents, including age, gender, educational, marital/family status, size of school district, practice experience in physical

therapy and school-based physical therapy specifically. Participating school-based physical therapists also reported paid and unpaid work hours as well as the number of schools and sites for which they are responsible. Respondents were asked via multiple-choice questions if they intend to continue working in schools and chose from a list the reasons that influence that decision.

Consultation for the Online Survey

This study utilized the Qualtrics survey tool available through the Odum Institute. Also, the Odum Institute offers consultation for survey construction and administration. Teresa Edwards, a survey development expert from the Odum Institute, agreed that the personality assessment should be offered first to avoid any influence from responding to other survey questions. Ms. Edwards also offered guidance regarding specific wording for some questions and response choices, as well as the number of questions on each page to promote the flow of the survey. All efforts were made in the course of developing the survey to keep it as short as possible. Ms. Edwards' advice helped to clarify questions and choices for participants. This resulted in only a few initiated surveys (15) being incomplete. The majority of those who participated completed the survey (92%).

Chapter 4

Results

The purpose of this research was to describe the physical therapists working in NC schools, examine personality traits and job satisfaction for this group and investigate any relationships between these variables. School-based physical therapists were recruited from the NC school-based physical therapy listserv to participate in an anonymous web-based survey. The long-term goal of the project is to recommend administrative structures and supports to promote retention of school-based physical therapists once hired and promote satisfaction with positions and job requirements in the educational setting. The specific research questions addressed in this study include:

(a) What are the demographic characteristics of school-based physical therapists practicing in NC?

(b) Are there personality trait(s) that are common to school-based physical therapists practicing in NC?

(c) Is there a relationship between the demographic characteristics and job satisfaction of school-based physical therapists practicing in NC?

(d) Are there personality factor(s) that are significantly associated with the number of years that school-based physical therapists have practiced in the schools?

(e) Are there personality factor(s) that correlate(s) significantly with job satisfaction for school-based physical therapists practicing in NC?

(f) Are there personality factor(s) that can predict overall job satisfaction for school-based physical therapists practicing in NC?

Several analyses were completed to answer these questions, better understand the characteristics of this group and investigate how satisfied physical therapists are with school-based practice in NC.

Data Analysis

All analyses were completed using the most recent version of the Statistical Package for the Social Sciences (SPSS) for Windows with a significance level set at 0.05. Initially, first order analyses to assess reliability and assumptions were run, as well as simple descriptive statistics for the sample. Then Pearson correlations and polyserial correlations (Kruskal's gamma, Kendall's tau-b, Kendall's tau-c and Somer's *d* tests) were completed to answer questions about relationships between demographic characteristics, personality factors and job satisfaction for this sample. Finally, simple linear and stepwise regressions were conducted to seek any predictive value for personality factors on job satisfaction.

Assumptions

All assumptions regarding the characteristics of the data that must be met to conduct correlational and regression analyses were verified. All variables meet the assumption of non-zero variance. Ranges for each variable can be found below in Table 4.1. Scatter plots were examined for each predictive variable to ensure variance of the residual terms was constant. Homoscedacity was confirmed. Data were checked to confirm that they meet the assumptions required for correlation and regression and they did. Also, no perfect multicollinearity was found. All variables fail the Kolmogorov-Smirnov Goodness-of-Fit Test, except for Extroversion, one of the factors in the Mini-Markers. However, histograms were reviewed and

revealed no serious deviations, which is acceptable given that correlations are robust to deviations from normality (Vasu, 1979).

Table 4.1
Range of Variance for Meaningful Variable

Variable	**Variance Range**
Big Five Factors Mini-Markers	
Extraverted	8-32
Agreeableness	8-24
Conscientiousness	8-27
Emotional Stability	9-32
Openness	9-27
Measure of Job Satisfaction	
Personal Satisfaction	26-50
Workload Satisfaction	13-35
Professional Support	15-45
Pay and Prospects	14-37

Characteristics of School-based Physical Therapists Responding to the Survey

The first research question addresses the demographic characteristics of participants and sought sufficient information to describe the group of school-based physical therapists working in NC who participated in the survey. Specifically, the research question is: what are the demographic characteristics of school-based physical therapists practicing in NC? Simple descriptive statistics were generated for all participants' responses to the demographic survey. Of the 178 physical therapists who reside in NC, are currently licensed to practice physical therapy

in NC and practice primarily in NC public schools, 112 consented to participate in the study. Ninety-seven (54% of potential applicants) completed surveys in full. Partial surveys were submitted by 15 participants (8% of potential participants); therefore the numbers of responses vary with each question.

This research began with perceptions of the investigator gained from interactions with physical therapists in schools throughout NC and exceptional children (EC) program administrators or directors. The perception was that the vast majority of physical therapists working in NC schools were: underpaid, isolated women who were contracted for part-time work and spent their days running from school to school with little interaction or understanding from those they worked alongside. While many of these notions regarding school-based physical therapists in NC were confirmed with this survey, some were clearly dispelled.

Personal demographic characteristics. Women certainly dominated the sample of school-based physical therapist who completed the survey. The sample was overwhelmingly female (93%). The preponderance of the participants reported that they are married (87%) and have children (87%). Six percent of the sample is divorced, while 4% is single, 3% is widowed and 1% is separated. Mothers in their 40s and early 50s (52.4%) constitute the majority of this participant group. While ages range from 24 to 62 years old, 57% of the sample is over 46 years old. The mean age for participants was 45.75 years old. Complete personal demographic information is reported in Table 4.2.

Table 4.2
Personal Demographics for Sample

Characteristic	**[Range]**	**Mean (SD)**	**Frequency (Percentage)**
Age, yrs. (n=106)	[24-62]	45.7 (10.13)	
24-30			10 (10%)
31-35			9 (9%)
36-40			16 (15%)
41-45			12 (11%)
46-50			20 (19%)
51-55			22 (20%)
56-60			9 (9%)
60-62			8 (7%)
Gender (n=105)			
Female			98 (93%)
Male			7 (7%)
Marital Status (n=105)			
Single			4 (4%)
Married			91 (87%)
Separated/Divorced			7 (7%)
Widowed			3 (3%)
Family Status (n=106)			
Do not have children			14 (13%)
Have children			92 (87%)

Full responsibility	20 (22%)
Shared or partial responsibility	51 (55%)
Limited or no responsibility	21 (23%)

Professional demographic characteristics. Table 4.3 lists all the professional demographic information collected with this survey. Half (50%) of these physical therapists hold a Bachelor of Science as the highest attained degree, followed by master's degree (MPT) in physical therapy (34%) and entry-level doctoral degree (DPT) in physical therapy (9%). The remainder of participants (7%) reported various other degrees including: master's in public health, master's in business administration, master's in health science, and one certificate in physical therapy (not a degree). This reflects the escalation in entry level degrees for physical therapists experienced over the last four decades. In the early 70's, certificate programs had been almost completely replaced with baccalaureate programs (APTA, 2011). Post-baccalaureate degrees as the entry level degree for physical therapists gained prominence in the mid-1980s. The APTA again advanced the entry level expectation in 2000 to have all graduating therapists receiving a DPT degree by 2020 (APTA, 2011).

This sample of NC school-based physical therapists was an experienced group of professionals. While professional experience ranged from 1 to 40 years, the average experience in physical therapy was 21 years, in pediatric physical therapy an average of 16 years and an impressive average of just under 13 years of school-based experience.

Table 4.3
Professional Demographics for Sample

Characteristic	**[Range]**	**Mean (SD)**	**Frequency (Percentage)**
Highest attained educational level (n=106)			
BS			53 (50%)
MPT			16 (15%)
MS			3 (3%)
MSPT			17 (16%)
DPT			10 (9%)
PhD			1 (1%)
Other (MBA, MPH, MHS, certificate in PT)			6 (6%)
Professional experience (n=105)			
Years of PT experience	[1-40]	21.1 (11.11)	
Years of pediatric PT experience	[1-35]	15.9 (10.57)	
Years of school-based PT experience	[1-35]	12.8 (9.32)	

Information about work environment. The NC DPI categorizes school systems or local educational agencies (LEAs) into *very small* LEAs (<5,000 students with Individualized Education Program or IEP); *small* LEAs (between 5,001 and 15,000 students with IEPs); *medium* LEAs (between 15,001 and 48,000 students with IEPs) and *large* LEAs (>48,001 students with IEPs). The physical therapists surveyed work across NC and are representative of

the distribution of LEAs in NC with the majority (43%) in very small LEAs, 21% in small LEAs, 19% in medium LEAs, and 17% in our largest LEAs.

However, thwarting the perception that most physical therapists are contracted part-time, the significant majority of the participants were hired directly by LEAs for full-time positions (65%). Full-time contractors made up only 10% of the sample, and only a quarter of school-based physical therapists in NC who responded are employed part-time (25%; 6% directly hired by the LEA and 19% contracted).

Most NC school-based physical therapists who responded to the survey work only during the 10-month school calendar (77%). However, year-round schools may be having an impact, with almost 17% of participants working all year and 6% working for 11 months. The data does confirm that the school-based physical therapists in NC who completed the survey are itinerant, serving an average of 10.7 schools or sites each month. Table 4.4 contains full details of all collected data.

Table 4.4
Work Details for Sample

Characteristic	**[Range]**	**Mean (SD)**	**Frequency (Percentage)**
Size of employing LEA (n=100)			
Very small (<5,000 students with IEPs)			43 (43%)
Small (between 5,001 and 15,000 students with IEPs)			21 (21%)
Medium (between 15,001 and 48,000 students with IEPs)			19 (19%)
Large (>48,001 students with IEPs)			17 (17%)
Type of employment (n=105)			

Directly hired, full-time		68 (65%)
Directly hired, part-time		6 (6%)
Contracted, full-time		11 (10%)
Contracted, part-time		20 (19%)
Months working (n=105)		
10 months/year		79 (77%)
11 months/year		6 (6%)
12 months/year		18 (17%)
Monthly averages		
IEP hours/month (n=90)	[1-150]	43.93 (35.5)
Sites visited/month (n=102)	[1-20]	10.64 (5.65)
Average paid hrs/month (n=103)	[20-160]	122.82 (44.75)
Average unpaid hrs/month (n=103)	[1-100]	11.5 (12.01)

Factors influencing school-based physical therapists decisions to stay or leave.. An unexpected and encouraging finding was that the vast majority (88%) of school-based physical therapists completing the survey would like to and plan to remain in educational practice and in their current positions. When asked directly, "How do you feel about staying in school-based practice?", the majority (53%) of respondents indicated that they felt strongly about staying in school-based practice and an additional 35% responded that they would like to stay. Responses to various nuanced probes regarding retention are reported in Table 4.5.

Table 4.5
Sample Intention to Stay

Characteristic	**Frequency**	**Percentage**
Desire to stay (n=103)		
Strongly want to leave	2	2%
Would like to leave	2	2%
Don't care	8	8%
Would like to stay	36	35%
Strongly want to stay	55	53%
Longevity for school-based practice (n=103)		
Do not intend to stay	2	2%
Intend to stay < 5 yrs.	20	19%
Intend to stay between 5-10 yrs.	27	26%
Intend to stay between 11-20 yrs.	31	30%
Intend to stay > 20 yrs.	23	22%
Longevity for current position (n=103)		
Do not intend to stay	3	3%
Intend to stay < 5 yrs.	19	18%
Intend to stay between 5-10 yrs.	40	40%
Intend to stay between 11-20 yrs.	20	19%
Intend to stay > 20 yrs.	21	20%

Participants were asked to rate various factors that may influence retention. Clearly, intrinsic motivation is vital for these professionals in assessing their work and positions. Practically

everyone surveyed identified making a difference and/or working with students (97%), autonomy of practice (86.2%) and meaningful work (93.1%) as factors that are instrumental to retention. When asked to indicate the top two factors influencing their decision to stay, 18.4% wrote in meaningful work and/or making a difference and 11.2% wrote in their students as the number one factor. In the number two position, 11.2% listed teamwork and/or collaboration, and there was a three way tie with 10.2% of responses each for: students, autonomy and respect. Specific results from this question are reported in Table 4.6 below.

Table 4.6
Top 2 Factors Influencing Decisions to Stay or Leave

Factors Written in by Respondents (n=98)	**Number 1 Ranked Factor**		**Number 2 Ranked Factor**	
	Mean	**Percentage**	**Mean**	**Percentage**
Schedule/Flexibility	38	38.7%	22	22.4%
Meaningful work/Making a difference	18	18.4%		
Students	11	11.2%	10	10.2%
Teamwork/Collaboration			11	11.2%
Respect			10	10.2%
Autonomy			10	10.2%

The school schedule was another factor frequently reported as a factor that compels the physical therapists who completed the survey to stay in this practice setting. In fact, 85.2% of participants cited it as a key factor in the decision to remain in school-based physical therapy. This is obviously a crucial part of motivation to remain because schedule and flexibility was written in as the number one factor influencing this decision by 38.7% of those surveyed and

number two by 22.4% of participants. Participant responses to each of the items regarding factors that influence his/her decision to stay in school-based practice are reported in Table 4.7 and factors that influence his/her decision to leave are reported in Table 4.8.

Table 4.7
Factors Influencing Decision to Stay

Key factors (n=103)	**Encourages me to stay**		**Strongly Encourages me to stay**		**Total**	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Working with Students/Making a Difference	35	35.6%	62	61.4%	98	97%
Schedule	24	24.8%	61	60.4%	86	85.2%
Autonomy of Practice	32	31.7%	55	54.5%	87	86.2%
Meaningful Work	43	42.6%	51	50.5%	94	93.1%

Table 4.8
Factors Influencing Decision to Leave

Key factors (n=103)	**Encourages me to leave**		**Strongly Encourages me to leave**		**Total**	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Opportunity for Career Advancement	30	29.7%	7	6.9%	37	36.6%
Paperwork	28	27.7%	8	7.9%	36	35.6%
Pay	27	26.7%	10	9.9%	37	36.6%
Administrative Support	24	23.8%	7	6.9%	31	30.7%
Isolation	22	21.8%	7	6.9%	29	28.7%

Common Personality Traits of Survey Respondents

The second research question sought to understand if there are personality traits that were common to the group of school-based physical therapists who completed the survey. Specifically, question two asked, "Are there personality trait(s) that are common to school-based physical therapists practicing in NC?" To address this question, the Big Five Mini-Markers personality assessment was examined using simple descriptive statistics. Inclusion was set at greater than 80% agreement (responding as extremely accurate or accurate) or disagreement (responding as inaccurate or extremely inaccurate) across the sample. The score on the Big Five Mini-Markers was calculated for each subscale by computing the average score on the five point Likert scale (Accurate (1) (2) (3) (4) (5) Inaccurate) for each item within the scale (Thompson, 2008).

These school-based physical therapists did self-identify personality traits for a large majority with both positive and negative associations. Table 4.9 below lists the individual traits, mean score and percentage of respondents reporting the accuracy or inaccuracy of each trait. It is interesting that the highest proportion of common traits were from the Agreeableness factor, equally positive (four) and negative (four) in their association. The factors Openness and Conscientiousness accounted for five commonly held traits each (three positive and two negatively associated). However, Extraversion (two, one positive and one negative) and Emotional Stability (one negative) represented few common traits for this sample.

Table 4.9
Common Personality Traits from Big Five Mini-Markers

Individual Trait (n=107)	**Mean Score (Percentage Accurate)***	**Mean Score (Percentage Inaccurate)****
Kind	1.51 (100.0%)	
Cooperative	1.55 (99.1%)	
Warm	1.72 (97.2%)	
Practical	1.53 (96.3%)	
Sympathetic	1.61 (93.5%)	
Efficient	1.93 (88.8%)	
Intellectual	2.03 (88.8%)	
Energetic	1.88 (86.0%)	
Imaginative	2.02 (84.1%)	
Creative	2.10 (81.3%)	
Organized	2.00 (80.4%)	
Rude		4.56 (94.4%)
Careless		4.34 (92.5%)
Unsympathetic		4.43 (92.5%)
Cold		4.58 (91.6%)
Unintellectual		4.41 (91.6%)
Withdrawn		4.32 (88.8%)
Harsh		4.39 (87.9%)
Inefficient		4.14 (84.1%)
Uncreative		4.06 (83.2%)

Envious	4.15 (83.2%)

*Scores that approach 1 are desirable
**Scores that approach 5 are desirable

Big Five Mini-Markers

Participants in this survey identified most closely with the Agreeableness and Conscientiousness factors. The lowest average score was in Extraversion. Extraversion demonstrated the greatest variance for this sample (31.85). Average scores for each of the five factors are reported in Table 4.10 below.

Table 4.10
Sample Personality Factors

Factor (n=107)	**Mean Accuracy Score (SD)**
I. Extraversion	2.339 (0.378)
II. Agreeableness	1.57 (0.103)
III. Conscientiousness	1.871 (0.182)
IV. Emotional Stability	2.225 (0.258)
V. Openness	2.209 (0.418)

Measure of Job Satisfaction

School-based physical therapists' responses would indicate that they are satisfied with their jobs, as measured by this assessment. No subscale mean reached the level of dissatisfied (≤ 2). Respondents were most satisfied with intrinsic aspects of their work, captured in the Personal Satisfaction subscale, such as sense of accomplishment and contributing to student success. Mean scores and standard deviations for each subscale and Overall Job Satisfaction are offered in Table 4.11. The items within the Personal Satisfaction subscale that

participants reported highest satisfaction with are independence of work (*M*= 4.41; *SD*=0.67) and the fact that their work is varied and interesting (*M*= 4.18; *SD*=0.85). They were relatively less satisfied with Pay and Prospects. Although still above the level of dissatisfaction on average, the lower items within the Pay and Prospects subscale were prospects for promotion (*M*= 2.59; *SD*=0.76) and career advancement (*M*= 2.65; *SD*=0.82). The subscale Satisfaction with Training was also relatively lower, with many participants less than satisfied with the funding employers provided for continuing education (*M*= 2.68; *SD*=1.25). Overall job satisfaction rests at the midpoint of the scale, between neutral and satisfied.

Table 4.11
Measure of Job Satisfaction

Satisfaction (n=97)	**Average Score (Standard Deviation)**
Personal Satisfaction	4.102 (0.622)
Satisfaction with Workload	3.64 (0.926)
Satisfaction with Professional Supports	3.818 (0.941)
Satisfaction with Pay and Prospects	3.146 (0.89)
Satisfaction with Training	3.155 (0.985)
Overall Satisfaction	3.572 (0.873)

Demographic Characteristics and Job Satisfaction

The third research question sought to identify relationships between the demographic characteristics of participants and job satisfaction. The variables of interest for this question were those from the demographic portion of the survey, questions that focused on reasons for

staying or planning to leave school practice and responses to the total score on the job satisfaction portion of the survey. Since this required testing the relationship between interval data (responses to demographic questions) and continuous data (total score on the job satisfaction survey), a series of simple Pearson product moment correlations and polyserial correlations were utilized. Polyserial correlations were employed when analyzing ordinal and interval variables.

The only significant correlations with overall job satisfaction, summarized in Table 4.13, were with number of years in physical therapy practice, r (92)=0.247, p <.05, and number of years in pediatric practice, r (92)=0.216, p <.05. Age, educational level, marital status, having children, type of employment (directly hired or contracted), number of sites covered, average of IEP hours covered and average unpaid hours, for example, did not demonstrate significant correlations with overall job satisfaction. These results suggest that among the respondents, there are not factors that universally influence satisfaction with work; however, it does suggest that perhaps physical therapists working in educational environments who do not have high levels of overall job satisfaction move on to other practice settings. The failure to find any significant relationship associated with years of school-based physical therapy experience may support this view of the data. This appears to be the mechanism described by Schneider, Goldstein and Smith (1995) in the Attraction-Selection-Attrition Model.

Table 4.12
Pearson Correlation Matrix among Demographics and Overall Job Satisfaction

	O-JS	AGE	EDUC	YPT	YPPT	YSBPT	UPH	IEPH	SS
O-JS	---	.100	.045	.247*	.216*	.150	-.136	-.156	-.168
AGE		---	-.385**	.919**	.816**	.756**	.301**	.100	-.016
EDUC			---	-.403**	-.329**	-.433**	-.129	-.168	.037
YPT				---	.869**	.799**	.254**	.068	-.013
YPPT					---	.890**	.259**	.038	-.086
YSBPT						---	.333**	.013	-.114
UPH							---	.238*	-.076
IEPH								---	.213*
SS									---

*$p < .05$
**$p < 0.01$
Note: O-JS, Overall Job Satisfaction; AGE, Age of Participant; EDUC, Highest Level of Education Attained; YPT, Years of Physical Therapy Experience; YPPT, Years of Pediatric Physical Therapy Experience; YSBPT, Years of School-based Physical Therapy Experience; UPHR, Unpaid Hours of Work/Month; NIEPH, Number of IEP Hours/Month; NNS, Number of Schools/Sites/Month.

Correlation between Personality Factor(s) and Years of School-based Practice

The fourth research question asked if any of the examined personality factors were significantly associated with the number of years that the participating school-based physical therapists have practiced in schools. Pearson correlations were again utilized to compare responses to the interval scale regarding number of years in school-based practice and the scores for each of the five scales on the Mini-Markers survey. The results are displayed in Table 4.13. While the factors of Agreeableness, r (92)= -0.238, p <.05, and Emotional Stability, r (92)= -0.290, p <.05, were significantly correlated with years of school-based practice, this correlation was negative. In other words, the longer these physical therapists remain in practice in schools, the less likely they are to report that traits related to

Agreeableness and Emotional Stability accurately describe them. In contrast, physical therapists with fewer years of experience working in the schools are more likely to indicate that these traits are accurate in describing themselves. No other personality factors examined in this investigation were related to years of school-based practice.

Table 4.13
Pearson Correlation Matrix among Personality Factor(s) and Years of School-based Practice

	Extrav	Agree	Consc	ES	Openness	YSBPT
Extrav	---	.052	.051	.120	.274**	-.182
Agree		---	.249**	.408**	.137	-.253*
Consc			---	.330**	.138	-.300*
ES				---	.114	-.116
Openness					---	-.045
YSBPT						---

*$p < 0.05$
**$p < 0.01$
Note: Extrav, Extraversion; Agree, Agreeableness; Consc, Conscientiousness; ES, Emotional Stability; YSBPT, Years of School-based Physical Therapy Experience

Correlation between Personality Factor(s) and Job Satisfaction

The fifth research question asked if any of the measured personality factors significantly correlated with overall job satisfaction for NC school-based physical therapists who participated with this research. Pearson product-moment correlations were conducted to answer this question and investigate relationships between the total score on the MJS and each of the subscales on the Mini-Markers. Again, two personality factors were found to have a significant relationship with overall job satisfaction: Agreeableness, r (92) = -0.253, p <.05 and Conscientiousness, r (92)= -0.300, p <.05. Again, these relationships were negative,

as seen in Table 4.14. The school-based physical therapists who see themselves as Agreeable and Conscientious are less likely to experience overall satisfaction with their work.

Table 4.14
Pearson Correlation Matrix among Personality Factor(s) and Overall Job Satisfaction

	Extrav	Agree	Consc	ES	Openness	YSBPT
Extrav	---	.052	.051	.120	.274**	.052
Agree		---	.249**	.408**	.137	-.238*
Consc			---	.330**	.138	.075
ES				---	.114	-.290*
Openness					---	.021
YSBPT						---

*$p < 0.05$
**$p < 0.01$
Note: Extrav, Extraversion; Agree, Agreeableness; Consc, Conscientiousness; ES, Emotional Stability; YSBPT, Years of School-based Physical Therapy Experience

Personality Factor(s) Predicting Overall Job Satisfaction

The final research question sought to understand the predictive relationship between personality factors as measured by the Big Five Mini-markers and overall job satisfaction as measured by the MJS. A simple linear regression was estimated, to explore the predictive relationship between each personality factor and overall job satisfaction. Results are summarized in Table 4.15. Then, a stepwise regression was estimated with variable order determined on knowledge of the relationship between the variables (each personality factor) and the outcome (overall job satisfaction). The resulting order for the stepwise regression was: [Conscientiousness > Agreeableness > Extraverted > Emotional Stability > Openness].

Table 4.15

Simple Linear Regression with 5-Factor Model (Personality Factors Predicting Overall Job Satisfaction)

	Sum of Squares	Df	Mean Square	Adjusted R Square	Std Error of the Estimate	F
Regression	4784.012	5	956.802	.115	16.53892	3.498
Residual	24891.761	91	273.536			
Total	29675.773	96				

**p < 0.01

Note: Predictors: Openness, Agreeableness, Extraverted, Conscientiousness, Emotional Stability; Dependent variable: Overall Job Satisfaction

Utilizing the step-wise regression analysis in order to assess predictive values for each individual personality factor, all five factors constituting the whole model explain 16% of the variance in overall job satisfaction for this sample, *r* (92)=.402; Adjusted R Square=.115; $F_{5,92}$=3.498; Sig. F Change= .560. Conscientiousness was the only variable that had predictive value on its own. However, the 9% of the variance that was explained by Conscientiousness, *r* (92)=.300; $F_{5,92}$=9.371; Sig. F Change= .003, had a negative relationship suggesting that Conscientiousness, or in actuality, lack of Conscientiousness predicts overall job satisfaction for school-based physical therapists in this sample. The results of the step-wise regression are displayed in Table 4.16.

Table 4.16

Step-Wise Regression with 5-Factor Model (Personality Factors Predicting Overall Job Satisfaction; Change Statistics)

Model	R Square Change	F Change	B	Std. Error	Sig. F Change
1 Constant			157.450	6.058	
	.090	9.371			.003
Consc			-1.189	.388	
2 Constant			167.080	7.832	
Consc	.034	3.619	-1.001	.396	.060
Agree			-.991	.521	
3 Constant			176.268	9.361	
Consc			-.990	.392	
	.028	3.059			.084
Agree			-.956	.516	
Extrav			-.523	.299	
4 Constant			173.354	9.983	
Consc			-1.081	.406	
Agree	.007	.722	-1.136	.558	.398
Extrav			-.557	.302	
ES			.403	.474	

5	Constant			169.317	12.161	
	Consc			-1.106	.410	
	Agree			-1.161	.562	
		.003	.343			.560
	Extrav			-.599	.311	
	ES			.393	.476	
	Open			.322	.550	

**p < 0.01

Note: Predictors: Consc, Conscientiousness; Agree, Agreeableness; Extrav, Extraversion; ES, Emotional Stability; Open, Openness; Dependent variable: Overall Job Satisfaction

Summary

The majority of school-based physical therapists who responded to the survey were female, married, had children and were 46 years old or older. Most surveyed hold a Bachelor of Science degree and have, on average, a decade of experience in school-based physical therapy and more than two decades of physical therapy experience. Respondents are primarily hired directly by LEAs for full-time positions and more than three quarters of those surveyed work during the traditional school calendar for 10 months. School-based physical therapists in NC are itinerant with participants reporting that they work, each month, at more than 10 sites.

The factor of Agreeableness holds traits that a majority of the participants identified as accurate (Kind, Cooperative, Warm and Sympathetic) and inaccurate (Rude, Unsympathetic, Cold and Harsh) descriptions of themselves. Conscientiousness and Openness factors also had five common traits each. In this factor, participants agreed that they were Practical, Efficient and Organized and not Careless or Inefficient. From the

Openness factor, respondents found the traits Intellectual, Imaginative and Creative accurate and Unintellectual and Uncreative as inaccurate describing themselves.

Only years of physical therapy experience and years of pediatric physical therapy experience correlated significantly with overall job satisfaction for this sample. Negative correlations characterized the relationship between years of school-based experience and the Agreeableness and Emotional Stability factors, as well as the relationship between overall job satisfaction and the Agreeableness and Conscientiousness factors. Personality factors, in a five-factor model, predicted 16% of the variance for overall job satisfaction. Conscientiousness alone predicted 9%, and the relationship was negative.

This investigation attempted to identify relationships among personality traits, demographic characteristics and retention for surveyed school-based physical therapists. While the literature offers many studies examining retention for health care professionals, their relationships were not previously explored with the group of physical therapists who work in schools. NC is experiencing a persistent shortage of physical therapists and faces many challenges to ensure students with disabilities have access to these professionals. The data above indicate there are some factors within the educational work environment that are important to the job satisfaction of participating school-based physical therapists in NC which can be changed or altered to increase the likelihood that physical therapists will continue working in school-based practice.

Chapter 5

Discussion

The aim of this research was to better understand the physical therapists who serve NC schools, how satisfied these physical therapists are with their work and what motivates physical therapists to stay or leave positions in NC schools. Retaining physical therapists, specifically ones who understand educational therapy, is difficult. This challenge is compounded by the persistent shortage of physical therapists in all practice settings throughout the state, the salary discrepancy between schools and other practice settings, work environment issues and diminishing budgets for local educational agencies (LEAs) in the face of our struggling economy (APTA, 2010b; David & McEwen, 2001; Effgen & Klepper, 1994; Rappart & Effgen, 2004). This research attempted to identify factors associated with retention for this population. Understanding what motivates school-based physical therapists to leave or remain in school-based practice may assist LEAs in targeting efforts to improve work, work conditions and work environments for their physical therapists. Additionally, describing NCs school-based physical therapists as a group contributes to the professional literature on physical therapy.

This inquiry worked to build upon current understanding of issues regarding retention for other educators and health care workers and attempted to discover if the same or different factors contribute to retention of school-based physical therapists. In addition to completing the survey as requested, participants were generous in offering many written comments that

illuminate issues surrounding retention for physical therapists in school settings and potential areas for improvement. The long term goal of this investigation was to determine specific, pragmatic ways to improve NC schools as a workplace for these professionals, thereby bolstering or improving the quality of services to students with disabilities and the satisfaction of physical therapists already working in the schools.

Retaining Physical Therapists in Educational Settings

This research was grounded in a theoretical model that explores the dynamic interaction between individuals and the organizations in which they work. This model, the Attraction-Selection-Attrition (ASA) model, suggests that organizations are defined by a dynamic interaction between three processes: attraction, selection, and attrition. Over time, these processes shape the organization, including its values, structure and culture by establishing the types of people within that organization (Schneider, Goldstein & Smith, 1995). In the current investigation, the focus was on the attrition aspect of the model, which was studied by looking specifically at the factors or work incentives that contribute to job satisfaction and retention of for school-based therapists.

In many respects, results from this research replicated findings by Okerlund and colleagues (1994), which identified adequate pay and benefits, an effective continuing education program and flexible scheduling as the top three work incentives for physical therapists. Specific results from the current study support the relative importance of these factors and adds to the literature by revealing other aspects of work that are critical to the retention of the school-based physical therapists participating in the study. Importantly, many of the retention-related aspects identified by participants may be addressed easily and with little or no cost to the schools that employ them. For example, working with school-based

physical therapists to identify or create opportunities for professional development, ensuring efficiency and continuity of paperwork and procedure throughout a school system, and maximizing the aspects of school-based practice that are appealing (e.g. schedule, autonomy, meaningful work) would require only an investment of time and effort. The aspects of work that the group identified were fairly uniform given the size of the sample; however, this sample is more homogeneous than the population of physical therapists as a whole, and includes a significant portion of working mothers for whom factors such as schedule are understandably important. Given this homogeneity, it is understandable there would be continuity in the aspects of work they believe to be important when examining their own likelihood to remain in the profession.

Homogeneous group

One of the factors that clearly influenced the findings of this study and informed our understanding of retaining school-based PTs is the homogeneous nature of the participants in the study. Even to a greater extent than the general population of PTs, the participants in the study were very similar to one another. For example, many of participants were college-educated mothers over the age of 45. The American Physical Therapy Association (APTA) reported that physical therapists surveyed (2010b) were distributed "fairly evenly across the 25- 54 year old age groups" (p. 29), and only 68.2% of physical therapists who were members of the APTA were female (compared to 93% of the sample in the current investigation). There are other differences between the composition of this sample and the general membership in APTA. For example, 81.7% of APTA members worked full-time versus only 65% in the current sample. At the same time, 27.3% of the APTA membership reports having a bachelor's degree as the highest degree held versus 50% in the current

sample. Finally, 27.3% of APTA members surveyed held DPT degrees versus 9% in the current sample. Compared to this national survey of members of the APTA, the results of this current study find that participants in the current investigation were more likely to be female, a bit older and less educated.

Survey participants were, generally speaking, satisfied with their work and appreciated the schedule that comes with working in schools. There are many aspects of school-based practice that appeal to a professional with a family. For example, approximately 61% of this sample reported schedule as the most or second most important factor influencing decisions to stay or leave. Enhancing this perceived benefit of working in the schools by implementing schedule-enhancing options such as flexible work hours could amplify employee appreciation for aspects of school-based practice. Employees are frequently reminded of why a work setting is difficult; occasionally, administrators should emphasize what it is that makes this work environment desirable.

Salary Discrepancy

Based on the literature, it appeared that the salary discrepancy would be a key issue influencing retention of school-based PTs (Blosser, 2010; Haynie et al, 2007; Richardson et al, 2009). This was a daunting prospect, as salary is an issue that cannot easily be remedied. Physical therapists working in public schools could generate more income working in any other practice setting (APTA, 2010b). While practice setting is likely to explain much of the salary gap, gender may be another reason that salaries are not as competitive in educational settings (APTA, 2011). Professions dominated by a female work force (e.g. nursing, education) usually experience marked disparities in salary when compared to other professions (APTA, 2011). The results of the current survey data suggest that school-based

physical therapists in NC are predominantly female, even more so than physical therapists in general. It may be that gender combined with setting contributes to lower salaries for school-based physical therapists. It is likely that being held up for comparison to educators and other staff who have significantly lower salaries and working in a female dominated profession (physical therapy) within a female dominated setting (education), in largely underserved areas, have all worked together to create a practice setting (or organization) with salaries that are quite discrepant from others employing physical therapists.

Improving pay for these professionals might be the most direct route to improving retention; however, current economic circumstances make this option next to impossible. Further, given that school-based physical therapists participate in LEA Medicaid cost recovery programs, salaries of PTs who work directly for the LEA must be paid out of state and/or local, versus federal, funds. State-funded positions are increasingly difficult to maintain, much less add for those LEAs experiencing rapid growth in the number of children with disabilities that they serve. The availability of local dollars, except in the very wealthiest counties, is all but non-existent. Fortunately, survey responses indicated that salary is not a focal issue in the decision to remain or go for the majority of participants. It may be that, in accordance with the Attraction-Selection-Attrition (ASA) model, those for whom level of pay is the essential factor have left these positions long ago or never accepted an offer to work in the schools (Schneider, 1987; Schneider, Goldstein & Smith, 1995). The findings of the current investigation support this possibility, given the significant, positive relationship between years of practice and overall job satisfaction. It is possible that physical therapists who are not happy with the pay leave. Pay may be an issue on the minds of many school-based physical therapists; however, it is *not* the fulcrum on which the decision to remain or

leave swings. In fact, 43.6% of those sampled responded that pay 'did not move me either way'. Although pay was frequently mentioned, only 7% listed salary or pay as the number one factor 'that most influences you to stay or leave school-based practice'; 6% of respondents listed pay as the number two factor.

Based on the results from the Measure of Job Satisfaction, it is unmistakable that school-based physical therapists who participated in this investigation are motivated to work and continue to work in school settings by a number of factors. What motivates them undoubtedly is a combination of environmental, intrinsic and altruistic factors, rather than solely external factors such as pay.

Environmental Factors: External

The literature makes clear that working as a school-based physical therapist in educational settings is a two-edged sword. On one hand, the work of a school-based physical therapist requires tremendous collaboration with many different people of varied backgrounds around a myriad of diagnoses and issues. On the other hand, it is rare that anyone working with a school-based physical therapist fully understands their responsibilities and requirements of their job (David & McEwen, 2001; Effgen, 1995). In this way, school-based PTs can be both isolated and overwhelmed by collaborators needing their expertise. School-based physical therapists are medical professionals held to many regulations and practice standards regarding service delivery, ethics, licensure and appropriate equipment acquisition in addition to educational mandates, laws and policy (Holahan & Ray, 2009). They often do not have regular contact with other school-based physical therapists given the itinerant nature of their work and relative professional underrepresentation (David & McEwen, 2001; Effgen, Charello & Milbourne, 2007; Effgen & Klepper, 1994). Results

from this study indicate that some practitioners thrive in this environment and what may encourage some to leave school-based practice is the very thing that keeps others working in public schools. This is the mechanism which underpins the Attraction-Selection-Attrition theoretical model (Schneider, Goldstein & Smith, 1995). The very act of attracting and winnowing potential workers dynamically creates the work environment and simultaneously reinforces those who can achieve given the characteristics/requirements that environment engenders and fortifies. While new understanding was gained about school-based physical therapists and what motivates their professional choices, the current research also confirmed assertions, discussed below, made in prior research with physical therapists from other practice settings.

Autonomy/Independence. Okerlund and colleagues (1994) surveyed PTs from various practice settings in Utah and found that 'freedom on the job' was closely linked to job satisfaction. In the current sample, the physical therapists that thrive with autonomy appear to be very satisfied with school-based practice. One participant summed up this sentiment well, "The people I have the opportunity to work with, colleagues and teachers, students and families are who make the job worthwhile (as well as challenging at times). I am independently motivated and appreciate the autonomy I have been given in this position." It is not surprising that autonomy and independence rose to the top as factors that the school-based physical therapists in this sample identified as important in their decision to remain in school-based practice. There is very little direct supervision or guidance provided to physical therapists practicing in the schools. The fact that they are expected to work in an average of 10 or more sites each month (NC DPI, 2010c) combined with persistent shortages in physical

therapists preclude the possibility of offering direct, professional supervision (Effgen, Charello & Milbourne, 2007; Effgen & Klepper, 1994).

The very nature of this work requires school-based physical therapists to work independently. On one hand, being a medical professional in an educational context can lead to isolation (David & McEwen, 2001; Effgen, 1995); however, this can also contribute to a work setting that affords great autonomy on a daily basis. Professionals who desire supervision and guidance would not be satisfied in the school-based PT work environment and as described by the ASA model would leave to work in other more compatible practice settings.

Teamwork/Collaboration. For some participants, colleagues, relationships and collaboration are a strong asset of school-based practice. This was evident from spontaneously offered comments (e.g. "I much prefer school system's teamwork and caring atmosphere over that in the hospital based work I have done in the past.") and from the fact that teamwork, collaboration or some version of this part of school-based practice was written in by 11% of those surveyed as the second most important factor in decisions to stay or leave. This appeared to be a factor that, if working well, has a positive effect on daily practice and perception of work. If there is not effective teamwork and collaboration, as was the case for many participants, the negative impact is just as great. Reports of isolation and a lack of administrative support can be treated as indicators of the absence of teamwork and collaboration; 44.6% of therapists surveyed report that these factors encouraged them to leave school-based practice.

The literature indicated that working as medical professionals with advanced degrees in the educational environment could lead to professional seclusion and potential acrimony

(Blosser, 2010). This was true for some of the sampled physical therapists, but not all. It is clear that teamwork and effective collaboration are positive influences on the retention of school-based physical therapists.

While some degree of isolation must be anticipated with itinerant work (Effgen, 1995; David & McEwen, 2001; McEwen, 209), the isolation can easily become overwhelming for school-based physical therapists. Obviously for work environments contending with this issue, the absence of teamwork and lack of collaboration has a major adverse impact on retention. This would appear to be an area where administrators could quickly and at little cost remediate challenges by encouraging or mandating team meetings that include otherwise isolated personnel as active team members, establishing mentoring programs or ensuring that there are opportunities for brainstorming and problem-solving with staff regarding means to mitigate isolation and promote teamwork.

Poor Opportunity for Advancement

The literature made it abundantly clear that career development and opportunities for advancement are critical to physical therapists (Davis, 1989; Lysack et al, 2001; Okerlund et al, 1994). Despite a professional reputation for school-based practice being the 'mommy track', the current data indicate that school-based practitioners have as much ambition for career advancement and professional growth as do physical therapists in other practice settings. This is borne out by the fact that over a third of surveyed physical therapists (36.6%) agreed that the lack of opportunities for professional advancement made them want to leave school-based practice. Effgen (1995) found that physical therapists practicing in educational environments are afforded fewer opportunities for career development and advancement than physical therapists in other practice settings. It may be complicated for administrators to

develop career ladders or paths of career development for related service staff, but clearly, it would be a great mechanism to increase retention of school-based physical therapists. If traditional opportunities for career advancement are not available, administrators should be creative in uncovering or developing professional challenges to keep current employees engaged and moving forward.

Respect for Expertise

Licensed medical professionals are accustomed to writing orders, giving recommendations and having their skills, knowledge and expertise met with deference and followed to the letter. This is not what happens in the typical meeting of a team planning the Individual Education Plan (IEP) for a child with disabilities. Decisions are made by team consensus rather than by experts alone. School-based physical therapists are not required members of IEP teams (IDEA, 2004), and service delivery decisions about physical therapy at school can be made without any input from a school-based physical therapist.

As outlined previously, many aspects of school-based practice may interfere with these practitioners being held in high regard [e.g. medical professionals in education (Effgen, 1995; Holahan & Ray, 2009), relatively low professional representation (APTA, 2010b), poor integration with LEA system (David & McEwen, 2001; Effgen, 1995; McEwen, 2009), and salary issues (APTA, 2010b; NC Bureau of Labor Statistics, 2010)]. All these factors impact the way that school-based PTs are perceived. Results and comments from the survey demonstrated that some physical therapists miss the professional respect they received in other practice settings and that collaborative work does not compensate adequately.

Other pointed comments indicated how strongly lack of support and respect from administration can be felt by school-based physical therapists. Administrators for programs

serving children with disabilities may not understand the role or value of school-based physical therapy, but do see how much of their budget is encumbered by school-based physical therapists' salaries. Just under a third of the physical therapists surveyed (30.7%) reported that [a lack of] administrative support encouraged them to leave their jobs.

Parents and families are another source of frustration that have a negative impact on retention of school-based PTs. Nothing is more important to parents than their children. This leads to many passionate (occasionally heated) discussions of what the appropriate course of action should be to address the educational needs of students. Consistent challenges from IEP team members regarding educational assessment results, priorities, and recommendations made by school-based physical therapists contribute to the perception many therapists have that the their professional input is not respected (McEwen, 2009).

It is difficult to tease out from the data collected why/how some work environments are able to integrate physical therapists, convey how valued their work is and promote a team feeling while others can or do not. None of the variables collected, such as size of LEA, correlated significantly with satisfaction. It presents as a 'chicken and egg' situation: did the disconnected therapist become increasingly isolated thereby amplifying poor connections or did the work setting promote, from the start, the perspective that, "My current EC director does not treat OT/PT staff as professionals but as over-priced requirements to comply with IDEA"? In either case, the Attrition-Selection-Retention model once again helps us understand how individual work settings (in this case LEAs) are shaped by the people who select and are selected to work in them. In some instances, the individual work setting has been shaped (by the individual PT and others in the organization) in a way that insures that the PT is integrated successfully, while in others they are not. It is not possible from this

research to determine causation of this issue. Solutions are not as difficult to find. The best approach to remedy poor relationships is communication. Often a lack of perspective is at issue and sufficient time invested can build the necessary bridge.

Environmental Factors: Internal

Meaningful work. One of the goals for this inquiry was to discover why school-based physical therapists choose to remain in school-based practice. A major finding that was not foreshadowed in the literature is the foundational importance these practitioners draw from making a difference in the lives of their students and the families and educators with whom they work. It is clear from the survey responses that this group is driven intrinsically to have a positive influence on the lives of others. Clearly, the type of physical therapy practiced in the educational environment was compelling for many.

Over and over again, participants' responses addressed the difference they make in the lives of the students they work with as well as students' teachers and families. They reported that they enjoyed solving problems and addressing difficulties that have profound impact on individual lives. The school-based physical therapists who participated in this study find their work to be very meaningful and very important. This appeared as a top factor in their decisions to stay and less than 7% did not report the meaningfulness of their work as a factor influencing decisions to remain in school practice.

Personality as a Factor in Job Satisfaction and Retention

The extant literature revealed that job satisfaction can be related to personality traits (Barrick, Mount & Gupta, 2003; Holland, 1996; Richardson et al, 2009). Although the results of the current study confirmed this relationship and revealed several significant correlations

between personality traits and job satisfaction, it is interesting to note that all were negative relationships.

Unpacking the negative relationships. Results from this survey revealed several significant negative relationships between:

- personality factors and years of school-based practice,
- personality factors and overall job satisfaction, and
- a predictive value for Conscientiousness for overall job satisfaction.

When utilizing years of school-based practice as an indicator of longevity; two of the personality factors Agreeableness and Emotional Stability were significantly and negatively correlated with years of school-based practice. Significant negative correlations were also discovered between overall job satisfaction and Agreeableness and Conscientiousness. One interpretation of these relationships is that to remain in school practice and have satisfaction with your job, one cannot be too agreeable. Frequently, school-based practice requires that professionals advocate strongly for something, e.g. level of service delivery, when coming to consensus with a student's team. The Agreeableness factor indicates cooperativeness and compassion. If practitioners do not deal well with dissention and would rather acquiesce than persist to avoid conflict, school-based practice would be a very difficult work environment. Therefore, a negative relationship between Agreeableness and years of school-based practice and overall job satisfaction is congruent with the reality of the daily job.

It has been asserted that in order to survive and thrive as a physical therapist in school-based practice one must have great passion for the work (David & McEwen, 2001; Effgen, 1995; Holahan & Ray, 2009). Results from this investigation also support this premise. One way to understand the negative relationship between Emotional Stability and

years of school-based practice is to recognize that someone with great stability in the emotional realm may not be able to contend with the disparity between the rate of progress for many of the students who receive physical therapy at school and the amount of effort. It may require some amount of emotional lability to celebrate each small success and persist in the face of glacial progress. Perhaps school-based practice necessitates a capacity for contentment with emotional instability and change. It could be that someone who is composed and less reactive does not 'fit' the requisites for longevity in the educational setting.

A similar argument can be made for Conscientiousness. For highly conscientious professionals, school-based practice would potentially be a poor fit. Often these therapists are flying by the seat of their pants: responding to urgent calls for assistance (e.g. this wheelchair brake is broken and the student can't ride the bus if you don't come and fix it) or managing frequent, unplanned schedule changes while still attempting to provide high quality therapy. Attention to detail is rarely possible given the schedule and responsibilities of a school-based physical therapist; a negative correlation between overall satisfaction and Conscientiousness makes perfect sense given the realities of the settings.

Conscientiousness explained a significant portion of the variance in overall job satisfaction, although its relationship to job satisfaction was also negative. For the same rationale espoused above, it is understandable that an exceedingly conscientious school-based therapist would not be very satisfied. This practice setting requires flexibility and responsiveness which is inconsistent with traits comprising this factor (e.g. systematic, organized).

This raises the question: is personality less of a factor in the job satisfaction and retention of school-based physical therapists than it is for other groups or has the Attraction-Selection-Attrition model been especially effective in culling those from this practice setting who are not well suited for this work and its demands? The negative relationships revealed may indicate that certain traits are intolerable when working in this setting. While it provides an interesting context to ponder this effect, the information gathered for this study is insufficient to answer this question with any level of certainty.

Hope for change. Several participants commented that the school-based practice setting was very different from other work settings and that time was required to adjust to school-based practice, as evidenced in this quotation, "This [satisfaction with work] has improved over time. I guess that I adjusted to the expectations and to what I was given. I have also learned to create and ask for what I need to work with students." These comments lend insight to the significant correlation between years of experience with physical therapy and pediatric physical therapy with overall job satisfaction. It seems that a strong professional background may allow the physical therapist to focus on the other aspects of this challenging work setting. Without deep experience, there may be too many new skills to acquire (i.e. clinical decision making, selecting appropriate interventions, effective documentation on top of educational regulations, iterant work, building relationships, learning IEP procedures) to allow a novice physical therapist to enjoy school-based practice.

Other respondents reported that it takes time to enact change in programs, procedures and structures but that things are improving each school year. It may be that it isn't years of service per se that is related to overall job satisfaction, but the strengthening of relationships with administration that results from longevity that leads to overall satisfaction.

Advice from Participants: What Not to Do

The literature asserts that physical therapists, in general, are highly ambitious and motivated by professional advancement (Davis, 1989; Harkson, et al, 1982; Okerlund, et al, 1994). The current research suggests that while professional advancement is also important to this group of respondents, there are fewer opportunities for advancement in school-based settings. As a result, other factors such as making a difference for others rise to the top as motivating factors. This again reflects the ASA model. The educational work setting has attracted, selected, and then been shaped by physical therapists who continue to value professional advancement but find satisfaction in their work through other means when opportunities for advancement are limited. This shift from extrinsic factors such as advancement to intrinsic factors such as making a difference is reflective of a number of ways that school-based physical therapists appear to work with the environment to find satisfaction with their work.

Supervision. Issues with administrative support, or a lack of support, were reported by 30.7% of surveyed school-based physical therapists as reasons they would leave their jobs. While many participants (43%) lauded their supervisors and lead physical therapists, comments regarding problems with supervision and administrators were repeated often and with vigor. This issue is complicated by the exceedingly high rate of turnover for directors of exceptional children programs (during the 2009-2010 school year more than 50% of LEAs changed EC directors across the state).

When supervision is a problem it is usually because school-based physical therapists are supervised by administrators or staff from other disciplines. It is difficult to assess job performance and assign workloads without a thorough understanding the amount of time

necessary for required travel, appropriate documentation and to obtain specialized equipment, as well as the work tasks associated with providing physical therapy at school. Several respondents mentioned, in spontaneously offered comments, that administration does not understand or consider all the requirements of time, travel and consultation required to serve students. At the same time, many felt the role of the school-based physical therapist was misunderstood by administrators (and teachers) and that their work was not valued. Often supervisors have backgrounds from other disciplines, such as speech pathology, which entail very different professional tasks, are much less itinerant in nature than is school-based physical therapy, have very different documentation standards and do not have to contend with equipment, issues of procurement, monitoring and maintenance.

A very few respondents reported that they felt "micromanaged", as if they could not be trusted, and experienced a lack of respect from those who supervise them. On the other hand, several survey participants voiced the sentiment that they do not have, do not know if they have or do not interact with their supervisor. Two participants mentioned that they had *never* had an assessment of their job performance. Although not pervasive, repeated comments indicated that administrative support or the lack of it may be a lynchpin for job satisfaction for many school-based physical therapists.

Paperwork and procedure. Paperwork alone encourages 35.6% of surveyed physical therapists to leave their jobs. Documentation is a part of practicing physical therapy in any practice setting. However, it can be overwhelming if efficient systems are not in place. Participants reported having insufficient time to render it appropriately and having to repeat documentation for different audiences. This issue is one that can be improved if not solved through collaboration between physical therapists and central office administrators. Often

onerous paperwork is not required but expected due to local tradition (as in 'this is the way we do it here…'). Another common cause of paperwork overload is miscommunication or misinterpretation that can be remedied in one meeting. It is possible that administrators could increase retention by as much as 35.6% if they worked to create systems that increased efficiencies in reporting and documentation within the schools.

If any inconsistency in procedure exists in an LEA, it will be revealed by the itinerant nature of this work. Procedural inconsistencies are most apparent and problematic for these practitioners who work in so many schools across an LEA because they have to work with the procedures, policy interpretations, expectations and staff at each site, which can vary widely. Participants reported frustration with having to remember how each school and/or team they serve interprets and implements local procedures. Inconsistent procedure undermines competency, breeds frustration and complicates work and documentation for these therapists who may have to be fluent with eight or more varied expectations due to varied implementation and interpretation of policy.

Workload. This issue is frequently caused and/or intensified by the itinerant and remote nature of school-based physical therapy. Although administrators empirically *know* that a single physical therapist may serve 8 schools and 5 other sites (e.g. daycares, homebound students); they often fail to recognize how much time is require to accomplish necessary travel between schools and other sites (e.g. other child care facilities, students' home). A detailed time study can help dispel underestimation of time spent in travel, getting into and out of schools (e.g. parking, finding the student, signing in/out, building relationships). It is a common practice for school-based physical therapists to spend school hours working to serve as many students as possible and then spend afterschool hours

completing documentation, returning voicemails and emails and other work tasks. Participants reported that they work an average of 11.5 unpaid hours each month but the range extended all the way up to one hundred hours. Administrators must look more closely at data when determining the workload of the physical therapists they employ.

One respondent summed up the core findings of this research, "I love making a lasting impact on student and family lives, enjoy my autonomy. Love the work, hate the pay and that central administration does not value me as a professional."

Limitations of this Research

Related Services in North Carolina: Unique Experience

The findings of this study are influenced by the fact that related service provision within the schools in NC is not the same as the provision of these services in other states. This is largely due to the role of the NC DPI Exceptional Children Division. The NC DPI has a strong tradition of working with LEAs statewide to provide guidance, consultation, and technical assistance to school-based related service providers, special education teachers and administrators (Cutchin & Dickie, n.d.). When federal Public Law (PL) 94-142 was passed in 1975, leaders at NC DPI and some NC legislators recognized the need for specific expertise in the provision of related services, like occupational (OT) and physical therapy (PT). With its history of serving the state, the University of North Carolina, Chapel Hill (UNC-CH) simultaneously had occupational and physical therapists on faculty who anticipated public schools' need for a supply of therapists to meet this new mandate. UNC-CH approached NC DPI to propose a collaborative statewide plan to develop OT and PT programs in local school systems and recruit therapists with pediatric experience (Cutchin & Dickie, n.d.). Together,

UNC-CH and NC DPI established a pilot project in 1977. Full-time Physical Therapy and Occupational Therapy Consultants were hired with federal funds to lead this project. Each successive year NC DPI has renewed these contracts with UNC-CH. These consultants have served NC for 34 years, providing technical assistance, coaching, professional development and expertise throughout the state to NC DPI, school-based therapists, local and state administrators, parents, advocacy groups and other state agencies.

This resource is unique to NC. Other states may have consultants that are responsible for physical therapy but no other state has a 34 year history of a licensed physical therapist providing consistent, professional support at the state level. This service has, hopefully, influenced all aspects of this research and impacted job satisfaction for school-based physical therapists throughout NC. It would be interesting to compare responses from this sample to a similar sample from other states without this history.

Lack of comparison

A potential limitation of this research is that characteristics or aspects unique to this group, school-based physical therapists in NC, may not have been clear when viewed in isolation. When researching a sub-grouping of a sub-group (physical therapists working in schools) from one geographic area, variability may be limited or distinctive facets may not be apparent in the absence of comparison. It might be the case that personality traits or job satisfaction would appear very different when comparing school-based physical therapists from NC with school-based physical therapists from New York City or with school-based occupational therapists or speech pathologists from NC. An opportunity to compare this small, unique professional subset to another subset in physical therapy, to other professions

within the same subset or to the same subset in other states would enlighten current perspectives and understanding.

Sampling

These results may be limited by having only 54% of potential participants responding to the survey. It is possible that the only practitioners motivated to participate did so because they had strong feelings about job satisfaction. Other school-based physical therapists who do not love or hate their jobs may have been less likely to take the time to complete the survey. This could have skewed results.

Another potential limitation is that participants were recruited from an email listserv established to convey information about school-based physical therapy for NC. It is likely that the motivating factors that encouraged people to enroll in the listserv might manifest in biases. Physical therapists working in NC schools who do not often check the listserv might have different responses to survey questions, thereby potentially changing outcomes and results.

Recommendations

There are several clear recommendations that can be taken from this research to improve retention rates for school-based physical therapists in NC.

- LEAs can fund continuing education for therapists that are contracted as well as those who are hired directly. NC DPI has distributed $10,000 to each LEA and $2,000 to each charter school to expend on the professional development and support of related services through PRC 118 funds. Pay and Prospects was the area most respondents were dissatisfied with in school-based practice and Satisfaction with Training was a very close second. The fact that dissatisfaction with training

had the lowest variance of any of the areas of satisfaction suggests that the dissatisfaction is pervasive for participants.

- Survey participants were least satisfied with Pay and Prospects. While increasing pay is simple, it is not easily accomplished. It may be easier to create or identify opportunities for promotion, leadership roles or career advancement for school-based physical therapists. In addition, LEAs should consider benefits that would offset below-market salaries, such as:

    - Reimbursement for state licensure
    - Reimbursement for membership in professional association
    - Reimbursement for individual malpractice insurance
    - Provide requested professional journals, texts, assessment tools and relevant resources in LEA professional library
    - Administrative supports for itinerant providers (e.g. laptops, pagers, PDAs, mobile phones)
    - Allocate funds for treatment supplies

Given what was learned about the intrinsic motivation of the sample, affording these opportunities may well translate into more satisfaction for some.

- School-based physical therapists, other related service providers and administrators should collaborate to improve efficiency of documentation by ensuring one process meets all requirements. Regular audits of IEP folders and accompanying documentation can reinforce requirements, expectations and eliminate any redundancy or error.

- Ensuring that each school-based physical therapist is assessed each year for job performance is critical for retention. Regular evaluation of work implies that the work is important enough that it requires review. If at all possible, the assessment should be completed by a physical therapist. In the case of LEAs that employ only

one therapist, the LEA should consider trading assessments with physical therapists from neighboring LEAs. Additionally, regular work evaluations could dispel perceptions of disconnection or isolation and strengthen communication between administration and physical therapists.

- Improving communication between administration and school-based physical therapists would assist in addressing procedural inconsistencies and improving processes. Having a regular, ongoing meeting schedule would help to build and improve this relationship as well as lead to increased appreciation of each other's challenges, limitations and strengths. This practice would also assist in proactively addressing issues as they arise and improve awareness by both parties. Many participants reported that they pay out of their own pockets for equipment and materials, mobile phones used for work and endure high personal costs to cover vehicle maintenance and repairs and gas prices that well exceed reimbursement rates and wish this was known by LEA administrators.

Conclusions

This investigation sought to find relationships between personality traits, demographic characteristics, job satisfaction and retention for school-based physical therapists in NC. While the literature offers many studies examining retention for educators and health care professionals, the current investigation is the first to contribute new information regarding retention for school-based physical therapists, who claim partial citizenship in both realms.

Some widely held ideas about school-based physical therapists in NC were confirmed. This sample varied from the average member of the professional association of

physical therapists in that more are female and slightly less educated (APTA, 2010b; APTA, 2011). The school schedule is a powerful factor for these physical therapists' choosing to stay, as is the meaningfulness of the work and making a difference for students, teachers and families. Although those surveyed do need and appreciate the flexibility of the work, it is plainly not their sole motivation. School-based physical therapists also enjoy the autonomy, teamwork and collaboration of their practice.

Other suppositions about school-based physical therapists were not supported by those surveyed from NC. These are very experienced therapists, with many more years of experience than the average member of the American Physical Therapy Association (APTA, 2010b; APTA, 2011). Two thirds of the sample reported that they are employed full-time (75%). Most school-based physical therapists who responded to this survey are not contracted (~30% report employment through contract). It was assumed that some of the isolation was a result of not being considered 'an employee' in the traditional sense. Obviously there are opportunities for improving the sense of 'team' for all school-based physical therapists, but even more directly (or easily) for those who are on staff at LEAs.

Some significant relationships of personality factors to key outcomes were discovered; however, personality was not as strong a factor in job satisfaction as hypothesized. It was clear which aspects of personality (Agreeableness and to a lesser degree Conscientiousness and Emotional Stability) are not a 'good fit' with school-based physical therapy. It was also clear that experience is positively related to job satisfaction, but what causes experience to relate to job satisfaction is unclear. Overall, school-based physical therapists in NC are satisfied with their work and their positions. The highest level of satisfaction for this group is with Personal Satisfaction and spontaneous comments support

this as well. However, being generally satisfied does not mean they are without suggestions for improvement as described above.

The overall results of this investigation suggest that minor administrative adjustments could improve job satisfaction and may ensure students with disabilities have access to these professionals in every school. Improved communication and work to change perceptions regarding school-based physical therapists could have a marked impact on daily work for these therapists. In some ways, school-based physical therapists appear to have a public relations problem. Those who work closely with them (teachers, students, other therapists and educational staff, some Exceptional Children program directors, parents and families) highly value their work, expertise and persistence (Effgen, 1995; Giangreco, 1995). Others who have little or no professional interaction with school-based practitioners tend to perceive them as overpaid and question their necessity in the context of improving test scores and overall school performance.

School-based physical therapists in NC may not be numerous or influential in the grand scheme of education or health care. But they have a dramatic influence on the students, teachers and parents they serve. School-based physical therapists make the difference in the classroom for an overwhelmed teacher, on the playground that was not planned for a student who uses a walker, at the work site with a student gaining strength and coordination needed to work as a courier and on the football field where a student using a wheelchair can still play in the marching band. Physical therapists who work in public schools are drawn by the feeling that they can make a difference, that they are an invaluable asset to families struggling to navigate their way through the system. They are not motivated strictly by

money, nor professional advancement alone, but thrive doing their work ‘down in the trenches’, where they can make a difference in a student’s life.

Physical therapists who choose to work in public schools may do so at some personal cost (unpaid time, lost potential salary, unreimbursed work expenses, diminished professional respect). Those who remain do so because meaningful work that can sometimes change the course of someone’s life is worth the sacrifice.

Appendix A
DPI Consent

Re: Survey to PT listserv>>> “Laura Snyder” <lsnyder@dpi.state.nc.us> Thu 12/16/2010 8:57 PM>>>
Laurie,
I have reviewed your survey and approve the distribution. Hopefully you will receive useful information related to the retention of PTs.
Thanks for all you do to support school-based therapists.
Laura
Laura H. Snyder
Assistant Director
Exceptional Children Division
North Carolina
Department of Public Instruction
Mailing address:
6356 Mail Service Center
Raleigh, NC 27699-6356
lsnyder@dpi.state.nc.us
919/807-3992 (voice)
919/807-3243 (fax)
Office location:
301 N Wilmington Street
Raleigh, NC

All email correspondence to and from this address is subject to the NC Public Records Law, which may result in monitoring and disclosure to third parties, including law enforcement.

>>> "Ray, Laurie" <laurie_ray@med.unc.edu> 12/16/2010 4:18 PM >>>
Hi Laura,
The invitation to participate in the Retention of School-based PTs survey is attached.
Please let me know if I can send this invitation through the listserv.
Thank you,
Laurie Ray
laurie_ray@med.unc.edu
Physical Therapy Consultant for NC DPI
UNC at Chapel Hill
Campus Box 7135
Chapel Hill, NC 27599
ph 919-636-1827
fx 919-966-3678
"All e-mail correspondence to and from this address is subject to the North Carolina Public Records Law, which may result in monitoring and disclosure to third parties.”

Appendix B
Recruitment Correspondence

Initial contact:

Dear Listserv Member,

I am emailing the listserv to invite school-based physical therapists to participate in the research outlined below. If you are not a school-based physical therapists (e.g. if you are a PTA or an administrator) please disregard this message, although this research may expand at later time. If you are a school-based physical therapist, please read the information below and consider participation in this study.

Dear School-based Physical Therapist,

You are invited to participate in research to examine retaining physical therapists (PTs) in school practice. The aim of this survey is to better understand the physical therapists who serve North Carolina schools, how satisfied PTs are with their work and what motivate PTs to stay or leave positions in our schools. This study has been approved by University of North Carolina at Chapel Hill Institutional Review Board.

If you have any questions or concerns about the study, please contact me (Laurie Ray) at 919-636-1827 or laurie_ray@med.unc.edu. If you have any difficulty with the survey please call me at the number above. If you have questions or concerns about your rights as a research participant, or how you were treated, please contact the UNC-Chapel Hill IRB at 919 at 919-966-3113 or by email to IRB_subjects@unc.edu reference IRB # 10-2297.

This study is voluntary and will be conducted as an on-line survey, submitted anonymously. You will first be provided with consent information. If you consent, you will then be presented with a demographic questionnaire, a job satisfaction questionnaire and a personality assessment. These instruments were selected for their validity, reliability and brevity. The entire survey should take 8-10 minutes to complete. Even if you choose not to participate, please do indicate that when prompted, so I can keep track of how many individuals have responded either "yes" or "no" to my invitation.

Just click on the following link to open the survey: https://uncodum.qualtrics.com/SE/?SID=SV_cNjMmRZgkXVxjyk Please submit your survey within two weeks from today (**by 26th January 2011**). It is very important that all

questions are answered and each survey is complete. Your responses will be kept anonymous throughout the study and will be destroyed once responses have been compiled.

Retaining physical therapists who understand educational therapy is difficult, especially given the persistent shortage of PTs, the salary discrepancy between practice settings, and our struggling economy. With this research, I hope to identify what factors correlate with retention. Understanding what motivates school-based physical therapists to leave or remain in school-based practice may assist LEAs in targeting efforts to improve the work, work conditions and work environments for their physical therapists. Additionally, describing NC's school-based physical therapists as a group will add to our professional literature.

I know how limited your time is and therefore have kept the survey as short as possible. It is critical to have complete information from a representative sample, especially since our numbers are small (although mighty!). Please participate. Just click on the following link to open the survey:
https://uncodum.qualtrics.com/SE/?SID=SV_cNjMmRZgkXVxjyk

Your Grateful,

Laurie Ray

Small group reminder (1 wk. after initial email invitation):

Dear School-based PTs,

This is a reminder to complete the survey sent out on 12th January 2011. If you have already completed the survey, thank you for your time. If not, please take a moment to read the rest of this notice and consider participating.

A- I know how limited your time is and therefore have kept the survey as short as possible. It is critical to have a representative sample. You represent the PTs that work for an entire LEA alone and I would like to encourage you especially to participate. It is important that the information collected will include your perspective.

B- I know how limited your time is and therefore have kept the survey as short as possible. It is critical to have a representative sample. You represent PTs that contract to serve and LEA and I would like to encourage you especially to participate. It is important that the information collected will include your perspective.

C- I know how limited your time is and therefore have kept the survey as short as possible. It is critical to have a representative sample. You represent the PTs that supervise other SBPTs and I would like to encourage you especially to participate. It is important that the information collected will include your perspective. I would also appreciate you reminding your teams of this research and promote their participation.
You are invited to participate in research to examine retaining physical therapists (PTs) in school practice. The aim of this survey is to better understand the physical therapists who serve North Carolina schools, how satisfied PTs are with their work and what motivate PTs to stay or leave positions in our schools. This study has been approved by University of North Carolina at Chapel Hill Institutional Review Board (IRB 10-2297). If you have any questions or concerns about the study or difficulty with the survey, please contact me (Laurie Ray) at 919-636-1827 or laurie_ray@med.unc.edu. If you have questions or concerns about your rights as a research participant, or how you were treated, please contact the UNC-Chapel Hill IRB at 919 at 919-966-3113 or by email to IRB_subjects@unc.edu.

This study is voluntary and will be conducted as an on-line survey, submitted anonymously. You will first be provided with consent information. If you consent, you will then be presented with a demographic questionnaire, a job satisfaction questionnaire and a personality assessment. These instruments were selected for their validity, reliability and brevity. The entire survey should take 8-10 minutes to complete. Even if you choose not to participate, please do indicate that when prompted, so I can keep track of how many individuals have responded either "yes" or "no" to my invitation. Just click on the following link to open the survey:
https://uncodum.qualtrics.com/SE/?SID=SV_cNjMmRZgkXVxjyk Please submit your survey one week from today (by 26th January 2011). Your responses will be kept anonymous throughout the study. It is very important that all questions are answered and each survey is complete. Your responses will be kept anonymous throughout the study.

Retaining physical therapists who understand educational therapy is difficult, especially given the persistent shortage of PTs, the salary discrepancy between practice settings, and our struggling economy. With this research, I hope to identify what factors correlate with

retention. Understanding what motivates school-based physical therapists to leave or remain in school-based practice may assist LEAs in targeting their efforts to improve the work, work conditions and work environments for their physical therapists. Additionally, describing NC's school-based physical therapists as a group will add to our professional literature.
I know how limited your time is and therefore have kept the survey as short as possible. It is critical to have complete information from a representative sample, especially since our numbers are small (although mighty!). Please participate. Just click on the following link to open the survey: https://uncodum.qualtrics.com/SE/?SID=SV_cNjMmRZgkXVxjyk

Your Grateful,

Laurie Ray

Reminder (2 weeks after initial email):

Dear Listserv Member,

I am emailing the listserv to encourage school-based physical therapists to participate in the research outlined below. If you are not a school-based physical therapist (e.g. if you are a PTA or administrator) please disregard this message although this research may expand at later time. If you are a school-based physical therapist, please read the information below. I do want to represent many views in my research, and hope you would be willing to spend 10 minutes to complete this survey.

Hi all,

This is a reminder for you to submit a survey to participate in the research gathering information about SBPTs and your job satisfaction. I am sending this to all members of the SBPT listserv. I do not know if you are not a SBPT or if you have or have not submitted your anonymous survey. If you have submitted one, thank you **very** much! If you are a SBPT and have not yet participated, please consider doing so.

The survey will only take approximately 10 minutes to complete and is submitted anonymously. Since the number of SBPTs in North Carolina is not large, each individual's participation is vital. Please submit your survey by 31st January 2011. If you have had difficulty with the survey, or have questions or concerns, please contact me at 919-636-1827 or laurie_ray@med.unc.edu

Please participate. Just click on the following link to open the survey:

https://uncodum.qualtrics.com/SE/?SID=SV_cNjMmRZgkXVxjyk

Thank you for your contribution to this research,

Laurie Ray

Final Reminder (4 wks. after initial):

Dear Listserv Member,

I am emailing the listserv once again to encourage school-based physical therapists to participate in the research outlined below. If you are not a school-based physical therapist (e.g. you are a PTA or administrator) please disregard this message although this research may expand at later time. If you are a school-based physical therapist, please read the information below and consider participation by submitting a survey.

Hi all,

This is a reminder for you to participate in research gathering information about SBPTs and job satisfaction. I am sending this to all members of the SBPT listserv and do not know if you are not a SBPT or if you have or have not submitted your survey. If you have submitted one, thank you very much! If you are a SBPT and have not yet participated, please consider doing so. The survey will only take approximately 10 minutes to complete and is submitted anonymously. So far 59 SBPTs have completed surveys. Since the number of SBPTs in North Carolina is not large, each individual's participation is vital. If you have begun the survey and not yet completed it, you are still able to complete your survey from where you left off. Incomplete surveys cannot be included in this research. 31 more completed surveys will be necessary in order to analyze the data. Please complete or submit your survey by Monday 7th February 2011. If you have had difficulty with the survey, or have questions or concerns, please contact me at 919-636-1827 or laurie_ray@med.unc.edu

Please participate. Just click on the following link to open the survey: https://uncodum.qualtrics.com/SE/?SID=SV_cNjMmRZgkXVxjyk

Thank you for your time and contribution to this research,

Laurie

Appendix C

Consent

University of North Carolina-Chapel Hill
Consent to Participate in a Research Study; Adult Participants
IRB Study # 10-2297
Consent Version Date: December 7, 2010
Title of Study: Physical Therapists in NC Educational Settings
Principal Investigator: Laurie Ray
UNC-Chapel Hill Department: School of Education;
School of Medicine, Allied Health Sciences, Division of Physical Therapy
UNC-Chapel Hill Phone number: 919-636-1827
Email Address: laurie_ray@med.unc.edu
Faculty Advisor: Jill Hamm, Ph.D., 919-843-7877, jhamm@email.unc.edu
& Karen Erickson, Ph.D., 919-966-8828, Karen_erickson@med.unc.edu
Study Contact telephone number: 919-636-1827
Study Contact email: laurie_ray@med.unc.edu

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty. Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies. Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You can print out a copy of this consent form for your records. You should ask the researchers named above any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about school-based physical therapists in North Carolina, their intention to remain in school-based practice and job satisfaction. You are being asked to be in the study because you are a physical therapist practicing in NC schools.

Are there any reasons you should not be in this study?

You should not be in this study if you are not a physical therapist, not currently licensed to practice in NC or if you are not currently working in school-based practice.

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 175 people in this research study.

How long will your part in this study last?

The on-line anonymous survey will take approximately 8-10 minutes.

What will happen if you take part in the study?

You will answer questions on-line and will submit your survey anonymously. The survey includes questions about you, your work and work environment, and your job satisfaction. There will be no follow-up survey after you submit your survey.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study. Some potential indirect benefits may be

received if recommendations derived from this research improve work environments and/or retention of physical therapists serving our schools, however this is by no means assured.

What are the possible risks or discomforts involved from being in this study?

There are no known risks involved from participating with this anonymous survey. You should report any problems you experience to the researcher.

How will your privacy be protected?

Surveys will be submitted anonymously, so even the researchers will not know who chose to participate. Data will be maintained on a password-protected laptop. One researcher will be performing the analysis with support from two faculty advisors.

What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, without penalty.

Will you receive anything for being in this study?

You will not receive anything for taking part in this study.

Will it cost you anything to be in this study?

There will be no costs for being in the study

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

- - - -

Appendix D

Web-based Survey

(with consent removed, see Appendix C)

Q1 Consent (see Appendix C)

Q2 How accurately does each word describe you?

	Extremely accurate (1)	Accurate (2)	Neither accurate or inaccurate (3)	Inaccurate (4)	Extremely inaccurate (5)
Harsh (1)	❍	❍	❍	❍	❍
Creative (2)	❍	❍	❍	❍	❍
Sloppy (3)	❍	❍	❍	❍	❍
Bold (4)	❍	❍	❍	❍	❍
Jealous (5)	❍	❍	❍	❍	❍
Intellectual (6)	❍	❍	❍	❍	❍
Practical (7)	❍	❍	❍	❍	❍
Cold (8)	❍	❍	❍	❍	❍
Shy (9)	❍	❍	❍	❍	❍
Fretful (10)	❍	❍	❍	❍	❍
Extroverted (11)	❍	❍	❍	❍	❍
Organized (12)	❍	❍	❍	❍	❍
Warm (13)	❍	❍	❍	❍	❍
Philosophical (14)	❍	❍	❍	❍	❍
Deep (15)	❍	❍	❍	❍	❍
Moody (16)	❍	❍	❍	❍	❍
Cooperative (17)	❍	❍	❍	❍	❍
Systematic (18)	❍	❍	❍	❍	❍
Withdrawn (19)	❍	❍	❍	❍	❍
Envious (20)	❍	❍	❍	❍	❍
Complex (21)	❍	❍	❍	❍	❍
Sympathetic (22)	❍	❍	❍	❍	❍
Talkative (23)	❍	❍	❍	❍	❍
Inefficient (24)	❍	❍	❍	❍	❍
Touchy (25)	❍	❍	❍	❍	❍
Temperamental (26)	❍	❍	❍	❍	❍

Unsympathetic (27)	❍	❍	❍	❍	❍
Relaxed (28)	❍	❍	❍	❍	❍
Disorganized (29)	❍	❍	❍	❍	❍
Kind (30)	❍	❍	❍	❍	❍
Rude (31)	❍	❍	❍	❍	❍
Unintellectual (32)	❍	❍	❍	❍	❍
Bashful (33)	❍	❍	❍	❍	❍
Unenvious (34)	❍	❍	❍	❍	❍
Energetic (35)	❍	❍	❍	❍	❍
Imaginative (36)	❍	❍	❍	❍	❍
Careless (37)	❍	❍	❍	❍	❍
Efficient (38)	❍	❍	❍	❍	❍
Uncreative (39)	❍	❍	❍	❍	❍
Quiet (40)	❍	❍	❍	❍	❍

Reprinted from Personality and Individual Differences, 45, Thompson, E., Development and Validation of an International English Big-Five Mini-Markers, 542–548 (2008), with permission from Elsevier.

Q3 What is your age? Write in your age (1)

Q4 What is your gender?
- ❍ Female (1)
- ❍ Male (2)

Q5 What is your highest level of education attained?
- ❍ BS (1)
- ❍ MPT (2)
- ❍ MS (3)
- ❍ MS PT (4)
- ❍ DPT (5)
- ❍ PhD (6)
- ❍ Other, please specify: (7) _____

Q6 What is your marital status?

- ❍ Single (1)
- ❍ Married (2)
- ❍ Separated (3)
- ❍ Divorced (4)
- ❍ Widowed (5)

Q7 Do you have children?

- ❍ Yes (4)
- ❍ No (5)

If No Is Selected, Then Skip To Number of years in physical therapy p...

Q8 Do you have full responsibility, shared or partial responsibility or limited or no responsibility for child care?

- ❍ Full responsibility (1)
- ❍ Shared or partial responsibility (2)
- ❍ Limited or no responsibility (3)

Q9 Number of years in physical therapy practice, part-time or full-time:

Number of yrs. in PT practice (1)

Q10 Number of years in pediatric practice (including school-based), part-time or full-time:

Number of yrs. in pediatric PT (1)

Q11 Number of years in school-based practice, part-time or full-time:

Number of yrs. in SBPT (1)

Q12 Type of current employment

- ❍ Employed full-time by LEA/ school system (1)
- ❍ Employed part-time by LEA/ school system (2)
- ❍ Contracted full-time by LEA/ school system (3)
- ❍ Contracted part-time by LEA/ school system (4)

Q13 Please indicate the size of the LEA/ school system where you work (by number of students receiving Special Education / students with IEPs):

- ❍ Very small, (1)
- ❍ Small, between 5,001 and 15,000 students receiving Special Education (2)
- ❍ Medium, between 15,001 and 48,000 students receiving Special Education (3)
- ❍ Large, >48,001 students receiving Special Education (4)

Q14 Is your LEA/ school system trying to hire for another part-time or full-time school-based PT?

- ❍ Yes (1)
- ❍ No (2)

Q15 How many months per year do you work?

- ❍ 10 (1)
- ❍ 11 (2)
- ❍ 12 (3)

Q16 On average, how many paid hours do you work per month in your role as a school-based PT:

Monthly average of paid hours (1)

Q17 On average, how many unpaid hours (paperwork, phone calls, etc. done on your own time) do you work per month in your role as a school-based PT?

Monthly average of unpaid hours (1)

Q18 How many IEP service hours do you cover each month (time documented on DEC4/ service delivery page)?

How many IEP hours per month? (1)

Q19 How many schools/ sites do you serve each month?

How many sites each month? (1)

Q20 How do you feel about staying in school-based practice?

- ❍ I strongly feel I want to leave (1)
- ❍ I would like to leave (2)
- ❍ I don't care if I stay or leave (3)
- ❍ I would like to stay (4)
- ❍ I strongly feel I want to stay (5)

Q21 How long do you intend to remain at your current position?

- ❍ Do not intend to stay (1)
- ❍ For the short term (approx. (2)
- ❍ For the long term (approx. between 5-10 yrs.) (3)
- ❍ For the majority of my career (approx. between 11-20 yrs.) (4)
- ❍ For my whole career (approx. >20 yrs.) (5)

Q22 How long do you intend to remain in school-based practice?

- ❍ Do not intend to stay (1)
- ❍ For the short term (approx. (2)
- ❍ For the long term (approx. between 5-10 yrs.) (3)
- ❍ For the majority of my career (approx. between 11-20 yrs.) (4)
- ❍ For my whole career (approx. >20 yrs.) (5)

Q23 How much do each of the factors below encourage you to remain in or leave school-based PT?

	Strongly encourages me to leave (1)	Encourages me to leave (2)	Did not move me either way (3)	Encourages me to stay (4)	Strongly encourages me to stay (5)
Autonomy of practice (1)	❍	❍	❍	❍	❍
Time to work with students (2)	❍	❍	❍	❍	❍
Creativity of practice (3)	❍	❍	❍	❍	❍
Meaningful work (4)	❍	❍	❍	❍	❍
Diversity of practice (5)	❍	❍	❍	❍	❍
Schedule (6)	❍	❍	❍	❍	❍
Teamwork/ Collaboration (7)	❍	❍	❍	❍	❍
Problem solving (8)	❍	❍	❍	❍	❍
Working with students, making a difference (9)	❍	❍	❍	❍	❍
Pay (10)	❍	❍	❍	❍	❍
Administrative support (11)	❍	❍	❍	❍	❍
Isolation (12)	❍	❍	❍	❍	❍
Opportunities for career advancement (13)	❍	❍	❍	❍	❍
Paperwork (14)	❍	❍	❍	❍	❍
Level of respect/ appreciation (15)	❍	❍	❍	❍	❍

Q24 Please click in the box to write in any factors not included in the list above:

	Strongly encourages me to leave (1)	Encourages me to leave (2)	Did not move me either way (3)	Encourages me to stay (4)	Strongly encourages me to stay (5)
Click to write Statement 1 (1)	❑	❑	❑	❑	❑
Click to write Statement 2 (2)	❑	❑	❑	❑	❑
Click to write Statement 3 (3)	❑	❑	❑	❑	❑

Q25 Please type, in order of importance, the top two factors that most influence you to stay or leave school-based practice:
Click in the box to type #1 factor (1)
Click in the box to type #2 factor (2)

Q26 How satisfied are you with your current position, overall?
❍ Very Dissatisfied (1)
❍ Dissatisfied (2)
❍ Neutral (3)
❍ Satisfied (4)
❍ Very Satisfied (5)

Q27 Do you have any comments regarding your overall satisfaction with your current position?

Q28 How satisfied are you with your work expectations (workload, programmatic input, schedule, etc.)?
❍ Very Dissatisfied (1)
❍ Dissatisfied (2)
❍ Neutral (3)
❍ Satisfied (4)
❍ Very Satisfied (5)

Q29 Do you have any comments regarding your satisfaction with your work expectations?

Q30 How satisfied are you with your work environment (colleagues, support, supplies/ materials, etc.)?
- ❍ Very Dissatisfied (1)
- ❍ Dissatisfied (2)
- ❍ Neutral (3)
- ❍ Satisfied (4)
- ❍ Very Satisfied (5)

Q31 Do you have any comments regarding your satisfaction with your work environment?

Q32 How satisfied are you working as a PT in schools? (type of work, impact of your work, time with students, etc.)?
- ❍ Very Dissatisfied (14)
- ❍ Dissatisfied (15)
- ❍ Neutral (16)
- ❍ Satisfied (17)
- ❍ Very Satisfied (18)

Q33 Do you have any comments regarding your satisfaction with your work?

Q34 Does your Lea/ school system allow time off for continuing education (check all that apply)?
- ❑ My LEA pays for continuing education (1)
- ❑ My LEA pays for time at continuing education on school days without taking vacation/ PTO (2)
- ❑ I can take vacation/ PTO for continuing education on school days (3)
- ❑ I cannot attend continuing education on school days (4)
- ❑ Other/Comment: (5) _____

Q35 Does your LEA/ school system provide other supports or benefits (check all that apply)?
- ❑ My LEA pays for my license (1)
- ❑ I receive local bonus money (2)
- ❑ My LEA provides me with a laptop, PDA or mobile phone (3)
- ❑ Other, please specify: (4) _____
- ❑ Other, please specify: (5) _____
- ❑ My LEA provides no additional support/benefit (6)
- ❑ Comment: (7) _____

Q36 How satisfied are you with each aspect of your job?

	Very Dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Very Satisfied (5)
The feeling of worthwhile accomplishment I get from my work (1)	❍	❍	❍	❍	❍
The extent to which I can use my skills (2)	❍	❍	❍	❍	❍
The contribution I make to student success (3)	❍	❍	❍	❍	❍
The amount of challenge in my job (4)	❍	❍	❍	❍	❍
The extent to which my job is varied and interesting (5)	❍	❍	❍	❍	❍
What I have accomplished when I go home at the end of the day (6)	❍	❍	❍	❍	❍
The standard of care given to students (7)	❍	❍	❍	❍	❍
The amount of personal growth & development I get from my work (8)	❍	❍	❍	❍	❍
The quality of my work with students (9)	❍	❍	❍	❍	❍
The amount of independent thought & action I can exercise in my work (10)	❍	❍	❍	❍	❍
The time available to get through my work (11)	❍	❍	❍	❍	❍
The amount of time available to finish everything I have to do (12)	❍	❍	❍	❍	❍
The time available for treating students (13)	❍	❍	❍	❍	❍
My workload (14)	❍	❍	❍	❍	❍
Overall staffing (15)	❍	❍	❍	❍	❍
The way that I am able to care for students (16)	❍	❍	❍	❍	❍

The amount of time spent on administration (17)	❍	❍	❍	❍	❍
The amount of support & guidance I receive from my supervisor (18)	❍	❍	❍	❍	❍
The opportunities I have to discuss my concerns (19)	❍	❍	❍	❍	❍
The support available to me in my job (20)	❍	❍	❍	❍	❍
The overall quality of the supervision I receive in my work (21)	❍	❍	❍	❍	❍
The degree of respect & fair treatment I receive from my boss (22)	❍	❍	❍	❍	❍
The degree to which I feel part of a team (23)	❍	❍	❍	❍	❍
The people I talk to & work with (24)	❍	❍	❍	❍	❍
The contact I have with colleagues (25)	❍	❍	❍	❍	❍
The value placed on my work by my colleagues (26)	❍	❍	❍	❍	❍
The amount of pay I receive (27)	❍	❍	❍	❍	❍
My recognized years of experience (28)	❍	❍	❍	❍	❍
The degree to which I am fairly paid for what I contribute to the organization (29)	❍	❍	❍	❍	❍
My prospects for promotion (30)	❍	❍	❍	❍	❍
The opportunities I have to advance my career (31)	❍	❍	❍	❍	❍
The match between my job description & what I do (32)	❍	❍	❍	❍	❍
How secure things look for me in the future of this organization (33)	❍	❍	❍	❍	❍
The amount of job security I	❍	❍	❍	❍	❍

have (34)					
The opportunity to attend courses (35)	❍	❍	❍	❍	❍
Time off to attend courses (36)	❍	❍	❍	❍	❍
Being funded for courses (37)	❍	❍	❍	❍	❍
The extent to which I have adequate training for what I do (38)	❍	❍	❍	❍	❍

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