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A Research Study to Explore Casper College Undergraduate Education Majors' Perceptions of Educational Curriculum Concerning Occupational Therapy's Role in the Public School System

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**A Research Study to Explore Casper College Undergraduate Education Majors'
Perceptions of Educational Curriculum Concerning Occupational Therapy's
Role in the Public School System**

by

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A Scholarly Project

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of the

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Approval Page

This Scholarly Project Paper, submitted by and in partial fulfillment of the requirement for the Degree of Master's of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Faculty Advisor

Date

PERMISSION

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Degree: Master's of Occupational Therapy

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ABSTRACT

Purpose: The purpose of this study was to determine the level of knowledge concerning OT roles in the school district setting that undergraduate education majors are receiving at Casper College. **Methodology:** Data was collected from 57 participants through the use of a survey to identify pre-service teachers' perception of occupational therapy and the education they have received in their coursework.

Results: Results of this study indicate that undergraduate education majors at Casper College are receiving less than optimal instruction on the role of OT in school-based practice. Overall 91% of students polled indicated that they had not received education on OT in their coursework. **Conclusions:** Collaboration between educators and OT is necessary for both professions to operate effectively in a national system of federally mandated services. The lack of understanding of the role of OT in the public school setting may complicate the collaborative process between OT's and public educators during special education service delivery.

CHAPTER I

INTRODUCTION

Rationale

At the Wyoming Occupational Therapy Association State Conference in the fall of 2008, the researchers of this study had their first experience with occupational therapists (OTs) in the public school systems and the problems they identify in collaborating with teachers. Many of the therapists noted that they were having difficulty collaborating and interacting with teachers as the teachers did not understand the discipline of occupational therapy (OT) and the role occupational therapists perform in the school district. This state conference left a negative impression on the researchers' thoughts of collaboration with teachers and a compelling interest to understand why this breakdown occurs. According to U.S. Department of Labor Federal Bureau of Labor Statistics, in 2009 occupational therapists in the school district setting constituted nearly 13% of all occupational therapists in the nation. Occupational therapy has been a related service in public school settings since the 1970s and yet there is still a gap in the understanding among teachers of the role of OT and services provided in the school setting. With this data in mind, the investigators sought to understand what pre-service teachers are being taught about the role of OT in the public school setting.

Federal laws that mandate that services be provided to students with disabilities in the American public school system also define OT as a related service that must be

provided to students. Therefore, collaboration with teachers is a necessary function. Limited understanding of professional roles creates a dilemma as effective collaboration between occupational therapists and teachers starts with an educated understanding of each other's vocation. Evidence that pre-service teachers are receiving education on the role of OT is not present in current literature, thus encouraging the investigators to propose the research question regarding the level of education being received in teacher education training.

Theoretical Framework

Theory is used to guide OT practice as well as to provide the foundational principles of OT. The investigators found that this study is built on understanding the adaptation needs of pre-service teachers at Casper College; therefore, Occupational Adaptation (OA) was selected as the foundational ideology of this study. OA is based on the assumption that each person has the adaptive capacity or the ability to recognize a need for change and modification in his or her environment. Adaptive capacity then drives a person or organization to reach its relative mastery or satisfactory functioning in occupations (Cole & Tufano, 2008). Adaptation capacity and relative mastery together initiate the occupational adaptation process, which is comprised of three factors: "the person, the occupational environment and the interaction or process that takes place between the person and the environment" (Cole & Tufano, 2008, p. 108). Occupational adaptation was used to direct the investigators to not only look at the needed area of adaptation in pre-service teachers' education on OT, but also education students' relative mastery of functioning in their understanding of OT. The investigators hope that this research study will help initiate the occupational adaptation process and compel

education programs at Casper College to press for relative mastery in understating the role of OT and the collaborative process to provide services to students in the school setting.

Statement of Problem

Collaboration between occupational therapists and teachers is at times ineffective because of the limited knowledge of each professional's roles, leading to a decrease and eventual breakdown in communication inside the public school service delivery process. To define the scope of this problem, the researchers determined that the best way to complete this study in the limited amount of time given would be to assess, through a survey, the perceptions of education majors at Casper College concerning the role of OTs in the school setting. The assumption of the researchers is that education majors at Casper College are not receiving education on the services that Occupational Therapy provides in the public school setting. The researchers developed this assumption based on the problem statement that there is limited understanding within of the perception of Casper College education majors concerning the role of OT in a school setting.

Scope and Delimitation

Casper College education majors and their knowledge of OT are the two principle variables examined in this study. Because of the proximity and ease of access to the target population, the study was completed on the Casper College campus in Casper, Wyoming. The time-frame for this study was dependent on IRB certification from the University of North Dakota, which limited this research study to one year. Justification for this study is based on lack of available research in the area of knowledge level and

formal education training among education majors about the role of OT in the public school setting.

Study Importance

As research in teacher awareness of the role of OT is limited, this study will add to the knowledge base. The lack of published exploration of this topic indicates that there is a need for future research and this study is an initial step in providing a foundation for future studies. Findings from this study will be beneficial for Casper College faculty and administration as they will highlight a gap in the current education curriculum that could be expanded upon to assure greater likelihood of success for public school students through stronger team collaboration. Students at Casper College will also benefit from this study as they have been introduced to OT through participation in this survey and indicated that they would like more education in this area. After introduction to the existence of OT in the public school setting, participants in the study may now search independently for information on OT to increase their relative mastery in this topic area.

CHAPTER II

LITERATURE REVIEW

Introduction

Interprofessional collaboration has been a widely researched topic in health care; however, limited recent relevant research concerning OT in the educational context was found. To better examine this topic and the legislation affecting OT in the school district, aspects of the specific legislative parts and how they relate to service delivery have been considered. Both the positive and negative features of Individuals with Disabilities Education Act (IDEA) implementation have also been differentiated. An overview of the services that OT provides within the school district and the populations and interventions that are common in this area is presented. The relationship and collaboration that occupational therapists share with teachers are highly relevant to the scope of this study and have also been scrutinized.

Legislation

History of Disabilities Legislation

According to the National Council on Disability [NCD] (2000), the disabled in America were not always provided opportunities to succeed in the American educational system. They were often institutionalized or kept at home with their families. Before ground-breaking legislation of the 1970s, it was the general perception in the United States that disabled children would remain dependent upon families or an institution for their needs throughout their lifetimes. This resulted in the exclusion of children from public education, decreasing their preparedness for adult life. As children were

institutionalized and provided inferior education away from the general population, further and higher education was not often an option due to low expectations of future potential (NCD, 2000). In 1970, approximately one in five students with disabilities was educated in American schools. Additionally, there were a number of states that excluded students with certain disabilities by law; these students included not only the developmentally and emotionally disabled but also the deaf and blind. There were more than one million students who were excluded from public schools, 3.5 million who did not receive adequate services and 200,000 children who were institutionalized (NCD, 2000).

The Rehabilitation Act of 1973 Section 504 prohibited discrimination based on disability in programs conducted by the federal government or its agents (U. S. Department of Justice, 2005). Jackson (2007) describes Section 504 and IDEA as applying to all public schools as benefactors of federal funds. Section 504 protects the participation in free and appropriate public education for individuals with disabilities in public schools receiving federal funding (U. S. Department of Education, n. d.). In 2009, a broader definition of “disability” was put into law in the revised Section 504 language. Section 504, however, does not allocate any additional federal funding for those programs that already receive federal funding and that meet Section 504 requirements.

In 1975, a ground-breaking law assured that all individuals with a disability have the right to effective, free and appropriate public education. This law was initially called the Education for All Handicapped Children Act (EHA) and was renamed the Individuals with Disabilities Education Act (IDEA) in 1997 (NCD, 2000). Under the EHA, all children were to be provided with publicly funded special education and related services,

rights protected for handicapped children and their families, funding allocated to support special education services from the federal level, and determination of the effectiveness of services provided to handicapped children (Zettel, 1977, pp. 8-12).

The Americans with Disabilities Act of 1990 (ADA), requires that all state and local governments allow individuals with disabilities equal availability and accessibility to all public programs, services, and activities (U.S. Department of Education, n.d.). The ADA, like Section 504, is not federally funded but provides federally mandated guidelines for accessibility of services.

Head Start is another federal program that was initiated to provide early intervention within the school system. According to Jackson (2007), the Head Start program allocates grants to agencies to provide various developmental services to disadvantaged children as they prepare to enter the school system (p. 7). Parents play an important role in both the administration and the involvement in the Head Start programs, which must identify children with disabilities in 10% of the program's federally funded education services (Jackson, 2007, p. 2).

IDEA

The National Council on Disability (2000) states that IDEA is a civil rights law that is concerned with providing children with disabilities two basic rights: the right to free and appropriate public education (FAPE), and education that is in the least restrictive environment (LRE). Special education and special education services provided to children with disabilities need to be individualized, in the LRE, and alongside peers without disabilities. According to the law, proper justification must be provided for the removal of a child from a typical classroom environment (NCD, 2000). IDEA is a

multifaceted law that must be reauthorized every five years by the federal government, ensuring that its purpose stays true to providing for the needs of disabled children and their families (Jackson, 2007, p. 2).

IDEA includes four distinct parts that affect educational requirements differently. The first, part A, contains the purposes of the law, congressional findings, and definitions. Part A also lists, among other topics, the requirements for prescribing regulations within IDEA as well as outlining state administration. There are also policies for lessening paperwork burdens and to ensure that our freely associated states, such as the Marshall Islands, are eligible for competitive grants under IDEA (IDEA, 2004, § 108–446).

The second section, part B, includes requirements for the provision of FAPE for preschool and school-aged children aged 3-21 with disabilities. Part B addresses the allotment and use of funds as well as the authorization of appropriations. State and local educational agency eligibility are addressed within part B and include the evaluations, eligibility determinations and the individualized education programs that affect children with disabilities in the school system. The procedural safeguards, monitoring, technical assistance, enforcements, administration, program information, and preschool grants are also covered within part B of IDEA (IDEA, 2004, § 108–446).

IDEA Part C addresses early intervention focusing on services for infants and toddlers with disabilities and their families. Within part C, the findings, the policy information, and the governing body are identified. The eligibility and requirements for states are all covered by part C as well as the use of funds, which includes the payer of last resort. Part

C requires individualized family service plans covering the services that are provided to the child. The procedural safeguards, state and federal administration, the allocation of funds and the authorization of appropriations for this early intervention are presented within part C (IDEA, 2004, § 108–446).

The fourth and final section is Part D, identifying the support for professional development of school and early intervention personnel, research, parent information, training centers, and information clearinghouses. Part D is divided into three subparts. The first covers the applications, eligibility, and use of funds for states' personnel development grants. The second subpart includes personnel preparation, technical assistance, model demonstration projects, and the dissemination of information. The third subpart supports the improvement of results for children with disabilities. This improvement includes training and technical assistance for the parents of children with disabilities (IDEA, 2004, § 108–446).

Within IDEA, occupational therapy is mandated under the Related Services section. This section calls for services to be provided to students under developmental, corrective, and other supportive services to assist a child with a disability to benefit from special education (300.34[a]). Because occupational therapy is one field listed in these services, schools are required to provide OT to all children who fall under an individualized education plan (IEP).

IEP Basics

The National Council on Disabilities (2000) states that the individualized education plan (IEP) defines what is free and appropriate public education for each child. As required by IDEA, the IEP must outline the specific educational needs of the child,

performance levels, goals, objectives, related services, and supplementary aids that will be provided to the child by the school district. An explanation of the extent to which a child will not be included with nondisabled peers in a typical classroom setting must also be included in the IEP. The IEP also incorporates transitional needs and progress towards goals that were set for the child. Development and revision of the IEP must include the teacher, parent, child, and representative from the agency or school, along with other individuals who may be involved in the child's education, upon request of the school or parent (NCD, 2000). IDEA identifies 13 disorders that are recognized as disabilities and that will be examined later in this literature review (IDEA, 1997, § 330. 8). A child who falls under one or several of these 13 diagnoses will automatically be assigned an IEP.

Pros and Cons for Implementation for IDEA

While IDEA has been a ground-breaking law for students with disabilities, there have been those who have opposed it for a variety of reasons. According to Hall (2002), "the school environment presents a unique opportunity for children with disabilities to both experience and, more important, learn from educational experiences shared with their peers with disabilities" (p. 230). In other words, there can be benefits from not being included in a typical learning environment with nondisabled peers but instead learning in an environment with peers who are also disabled. Other concerns associated with IDEA are noted by Palley (2006), who states that IDEA is a right-based law and asserts that the act of one group classifying another limits their interaction and their ability for needs to be understood and addressed.

The extent to which LRE is facilitated in the schools differs from state to state due to the interpretations made in local court cases that influence this policy. As class action

lawsuits are not common at the state level, where implementation of IDEA happens, it is the individual court cases that impact the interpretation and delivery of services. Because few structural changes are made to legislation as a whole, and states interpret their policies based on lower court rulings, some children are pulled from their LRE to separate classrooms due to broad interpretations of federal guidelines (Palley, 2006, p.231).

An additional concern is that, while IDEA itself is not mandated, federal funding for special education and related services become mandated for those schools that accept federal funding, based on Section 504 requirements. Currently, all 50 states have elected to implement IDEA law. The implementation of this law allows federal funds to be allocated for its operation. However, only 17% of these funds come from the federal government (Palley, 2006, p. 232). Financial burden created by IDEA increases the financial strain at local and state levels, detracting from the appeal of the program.

Occupational Therapy

According to the American Occupational Therapy Association (AOTA), occupational therapy is a “. . . science-driven, evidence-based profession that enables people of all ages to live life to its fullest by helping them promote health and prevent—or live better with—illness, injury or disability” (AOTA, 2010, para. 1). Occupational therapists utilize “occupation” not as a person’s employment but as everyday activities that individuals participate in during their daily life such as brushing hair, paying bills, going to the supermarket, writing a check, playing on a swing set, coping with grief or anger, and dealing with stress (AOTA, 2010, para. 1). All humans are involved in occupations that are developmentally appropriate and identity specific to their existence

(Dickie, 2008, p. 16). Occupational therapists utilize their in-depth knowledge of everyday occupations to assist individuals in maintaining, establishing, or restoring functional activity to their lives (American Occupational Therapy Association, 2008). Occupational therapists work in a variety of practice areas. Due to the scope of the research question, the researchers will only define OT services in a pediatric school-based setting.

Occupations are the fundamental and guiding principles of OT practice. However, occupations present differently depending upon the developmental stages that the person is in. According to the American Occupational Therapy Association (2010), “For children and youth, occupations are activities that enable them to learn and develop life skills (e.g., school activities), be creative and/or derive enjoyment (e.g., play), and thrive (e.g., self-care and care for others) as both a means and an end” (AOTA, 2010, the role of children and youth, para. 1). Play is a large part of occupational therapists’ work in the school system. Theorists from all disciplines concur that play is a key role in a child’s life and, by removing play, the development of healthy and creative individuals is hindered (Packer-Isenberg & Quisenberry, 2002). Within the pediatric setting, OT clinicians assist students from preschool to high school by supporting successful learning, appropriate behavior, and participation in daily school routines and activities (AOTA, 2010, OT in the school system, para.1). Occupational therapy services in a school-based setting include a variety of different applications including handwriting, sensory integration, mobility, and positioning.

Populations

Occupational therapists treat many individuals with different diagnoses; given the enormity of diagnoses, the researchers will focus primarily on the thirteen specific diagnoses recognized by IDEA. The following 13 separate populations have been identified by IDEA as areas which qualify for accommodation: autism, deaf-blindness, deafness, emotional disturbances, hearing impairment, mental retardation, multiple disabilities, orthopedic impairments, other health impairments, learning disabilities, speech or language disabilities, traumatic brain injuries, and vision impairments.

Autism

According to the Data Accountability Center ([DAC], n.d.), children with autism account for 292,818 of children who received IDEA services in the school system in 2008, accounting for 4% of the disability population. Recent research has indicated that the prevalence rate for people with autism is 1 in 150 (National Autism Association, n.d., ABOUT autism, para. 4). Autism is a pediatric impairment that affects a child's ability to interact with the environment and is typically diagnosed before the third birthday. There are four distinctive symptoms that are seen in children with autism: "distruption in social interactions, disruption in communication, disturbance in behavior, and disturbances of sensory and perceptual processing and associated impairments" (Rogers, 2009, p. 170). Individuals who have these impairments may have difficulty being a part of a classroom and adapting to changes in their environment, which will decrease their participation in educationally relevant occupations.

Deaf-Blindness

Deaf-blindness is characterized by a loss of auditory and visual hearing impairments that occur simultaneously (IDEA, 2004, §300.8). Only 1,745 students in 2008 received services under IDEA, resulting in less than 1% of the total disability population ([DAC], n.d.). This population of children will have increased difficulty with educational performance because of their decreased ability to interact with their environment.

Deafness

Deafness is described as the inability to hear any type of sound. There are two types of deafness, post and pre-lingual, referring to before speech and after speech. Deafness will affect a student's ability to verbally communicate with others, which will decrease the ability to interact with the environment and achieve relative mastery of the environment. No statistical data were available regarding deafness for students who received services under IDEA in 2008 ([DAC], n.d.).

Emotional Disturbances

The IDEA identifies emotional disturbances as behaviors that disrupt the student's ability to participate in the education setting (IDEA, 2004, §300.8). Specific examples of disorders that may disrupt a child's performance include schizophrenia, depression or decreased moods, inability to learn with no specific diagnosis, poor social interactions and social building, and any other decrease in school performance not associated with any diagnosis. Emotional disturbances account for 7% of the total population of children who were assisted by IDEA in 2008 ([DAC], n.d.).

Hearing Impairment

According to IDEA, a hearing impairment is classified as a “permanent or fluctuating impairment . . . which is not included in deafness” (IDEA, §, 300. 8). Hearing impairments can include, but are not limited to, conductive hearing loss, sensorineural hearing loss, and mixed hearing loss (American Speech Language, 2010). Only 1% of the total children who received services under IDEA in 2008 had hearing impairments ([DAC], n.d.).

Mental Retardation

Another category that affects the brain in children is mental retardation (MR). Congenital defects or chromosomal abnormalities, lack of oxygen at birth, or injury during parturition can lead to MR (Rogers, 2005, p. 168). Mental retardation is generalized as disorders that affect the normal development of children under the age of 18 (Rogers, 2009, p. 169). MR is most commonly used as an umbrella term for all disorders affecting development that are not recognized by other disorders. Mental Retardation is the most common developmental disorder, with approximately .08% to 3% of the total population being affected (Rogers, 2009, p. 168). In 2008, 8% of the students who received services under IDEA had MR ([DAC], n.d.). The definition of MR is an individual with lower than average intelligence that affects all areas of functioning. There are three classifications of MR based on Intelligence Quotient (IQ): severe, with IQ range of 25-40; moderate IQ, 40-55; and profound, IQ less than 25 (Rogers, 2005, p. 191).

Multiple Disabilities

The grouping of multiple disabilities lends itself to its namesake: a student with more than one disability. Individuality and client-centered practice is the core of OT and thus treatment in this category would be solely dependent upon the needs of the child. This category totaled 124,073 students receiving services under IDEA in 2008, which was 2% of the disability population ([DAC], n.d.).

Orthopedic Impairments

In the category of orthopedic impairments, children may have congenital anomalies such as ontogenesis imperfect, which causes bones to have decreased collagen and increased potential to break repeatedly (Rogers, 2005). Limb defects such as amputations (congenital or acquired) and spine disorders are among those disorders in which OTs will assist children in function and are considered musculoskeletal disorders as well. Cerebral palsy (CP) is a disorder that results in irregular changes in motor, neurologic and postural deficits due to lesions in the brain (Rogers, 2009, p.156; Stamer, 2000). A number of neuromuscular disorders that OTs regularly encounter are CP as “the incidence of CP is estimated to be 1.4 to 2.4 live births” (Rogers, 2009, p. 155). In multiple sclerosis (MS), another disorder, children are born with no evidence of abnormality but then, in later development, symptoms occur that generally begin with clumsiness and then progress rapidly to nonmovement (Rogers, 2005, p. 155). MS also has specific categorizations according to the child’s impairment, including limb-girdle, facioscapulohumeral, congenital, and Duchenne’s muscular dystrophy, which is the most common and most severe form (Rogers, 2009, p. 162). The final area of neuromuscular

disorders that OTs often encounter is neural tube defects. Spina Bifida is the most common neural tube defect that OTs encounter because anencephaly is not a life-sustaining disease as the child is not born with a brain. There are three classifications of Spina Bifida--occulta, meningocele, and myelomeningocele, which is the most severe form (Rogers, 2005, p. 164). In 2008, approximately 62,371, less than 1%, children were served under IDEA in the orthopedic category([DAC], n.d.).

Other Health Impairments

The category of other health impairments is an all-encompassing label of those diagnoses which are not identified in any other class.

IDEA defines the other health impairments category of disability as having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that--(i) Is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and(ii) Adversely affects a child's educational performance. (IDEA, 2004, §300.8)

The category of other health impairments accounted for 648,398 of students receiving services under IDEA in 2008, 11% of the total disabilities ([DAC] n.d.). Again, as OT is a client-centered therapy, treatment will depend upon the student's area of limitation and personal strengths.

Learning Disabilities

According to the IDEA, children with learning disabilities are characterized by disorders in psychological process that relate to specific impairment in mathematical, reading, or other education areas not related to visual, hearing or motor disabilities (IDEA, 2004, §300. 8). Approximately 2.6 million students received services under IDEA for learning disabilities in 2008 with this category accounting for the largest segment of students, 42%, almost half of the total number of students in all categories ([DAC], n.d.)

Speech or Language Disabilities

IDEA identifies speech or language disabilities as “communication disorders, such as stuttering, impaired articulation, language impairment, or a voice impairment, which adversely affects a child's educational performance” (IDEA, 2004, § 300. 8). Approximately 1.2 million, 19% of students in 2008, required assistance under IDEA for speech and language disorders ([DAC], n.d.).

Traumatic Brain Injuries

Traumatic Brain Injuries (TBI) are insults to the brain that result in decreased brain capacity and function. Injury can occur during delivery and childhood or may also occur by traumatic means via impact or inertial forces on the brain (Rogers, 2009, p. 168). According to the Data Accountability Center, in 2008, 24,866 children received services for a TBI under IDEA, which accounts for less than 1% of the total disability population. Impact forces on the brain come from “the head striking a surface or moving object striking the head; these forces most often cause skull fractures, focal brain lesions and

epidural hematomas” (Rogers, 2009, p. 168). Children who have TBIs may have decreased mental capacities, motor deficits, speech difficulties, memory deficits as well as many other dysfunctions. TBIs account for 2,685 deaths of children 0-14 years old each year, with 50% of childhood mortality being associated with TBIs (Rogers, 2009, p. 168).

Vision Impairments

The final area of disability recognized under IDEA is vision impairments. The Data Accountability Center found that, in 2008, 25,816 children in the United States had vision impairments in and were receiving services under IDEA, which accounts for less than one percent of the population. Children who have vision impairments may have a variety of different impairments, including but not limited to spatial awareness, poor depth perception, diplopia, presbyopia, myopia, poor visual perceptual skills, poor visual processing, decreased visual acuity, decreased visual fields, decreased visual vestibular processing, absences of smooth pursuits, and inattention of the eye (Schneck, 2009, pp. 373-378).

Occupational therapists in school-based practice often work with very common disorders of children as described; however, they are not limited to these diagnoses. OT is a client-centered therapy; therefore, treatment is highly individualized and interventions are specific to the child’s needs. Several different interventions or treatment approaches may be utilized with each child. Also, treatment approaches are concurrent within different diagnoses, as the main goal of OT intervention is that a child be able to participate in the life occupations of student and child.

Treatment Areas and Interventions

Autism

OTs may assist students with autism through a variety of interventions, such as sensory modulation, adaptation to changes, tactile defensive issues, or environmental adaptation. Sensory integration (SI) is a treatment for children who have sensory processing deficits. According to Roley and Jacobs (2009), sensory processing is defined as a person's capacity to organize and understand sensory information from the environment and his or her ability to process this information (p. 799). Students who have sensory processing dysfunctions have difficulty participating in education functions because the information that they are receiving from the environment is either overloading or not registering on the child's sensory system, resulting in problems understanding the environment and difficulty with the most primitive actions such as vision, postural control and much more (Roley & Jacobs, 2009, p. 798). Occupational therapy can assist a child to overcome sensory processing difficulties through repetitive tactile sensations to decrease defensiveness, or weighted blankets and vests to increase proprioception, and vestibular opportunities (Roley & Jacobs, 2009, p. 802). Because of the nature of treatment techniques used for autism, many of the interventions utilized are overlapping with other diagnoses.

Deaf-Blindness

Therapists who work with deaf-blind children will assist the child in sensory awareness of the environment and developmentally appropriate self-care tasks such as dressing, bathing, and personal hygiene, as well as enhancing fine and oral motor skills, and encouraging socialization and peer interaction (Russel & Nagaishi, 2009, p. 759).

Additional areas where occupational therapists can assist students are in tactile awareness secondary to possible tactile defensiveness, when physically interacting with the environment is disruptive to them (Russel & Nagaishi, 2009, p. 760). Children learn through play and interaction with their environment; therefore, occupational therapy will assist a child in developing play skills to thus learn from them (Russel & Nagaishi, 2009, p. 761).

Deafness

Children who are deaf may be assisted by occupational therapists by learning American Sign Language in cooperation with the speech language pathologist. Further, OT assists as well as encourages students in exploring and seeking out new experiences within their environment. Finally, OT may assist a student who is deaf by helping to develop strategies to increase independence.

Emotional disturbances

Students with emotional disturbances may benefit from a variety of different types of OT interventions including but not limited to cognitive training, behavioral management, positive social interactions, following rules and directions, as well as following school procedures. Also, collaboration between occupational therapists, teachers and other team members helps to build a behavior program for students. These types of programs help the student learn to diminish negative behaviors through meaningful positive reinforcement.

Hearing Impairment

Depending upon the magnitude of the hearing impairment, OT may assist the child in many different forms. One way to assist a child with limitations is to help him or

her use different forms of communication such as American Sign Language. Another area of intervention may be to facilitate learning social interaction skills with other students and children.

Mental Retardation

Occupational therapists assist students who have MR first and foremost by increasing their ability to adapt to the challenges that they have in educational areas. Occupational therapists will help with a student's ability to complete the activities of daily living (ADLs), which include dressing and using the restroom. Occupational therapists may also need to facilitate the student's functional ability, for example, in seating, handwriting, environmental modifications and functional mobility.

Multiple Disabilities

A combination of intervention approaches and types is utilized for students who are in this population. This category is primarily a compilation of children with many different disabilities; for example, a child with a TBI who also has trauma-related orthopedic issues. The individual treatment for the child will depend upon the multiple disabilities encountered.

Orthopedic Impairments

In the school setting, children who have orthopedic impairments often require assistance with positioning and mobility. Often, positioning is required to assist the child in setup to interact with the environment. Occupational therapists may assist in positioning through evaluation and recommendation of proper wheelchair and wheelchair setup.

Learning Disabilities

Occupational therapists may facilitate students in many dynamic aspects of learning such as socialization skills, sensory integration aspects, handwriting skills, and strategies to decrease interference of dyslexia. Additionally, as students age, the occupational therapist may work towards independence in “living skills, psychosocial skills, and the development of compensatory and adaptive techniques” (Rogers, 2009, p. 174).

Speech or Language Disabilities

Students who have speech or language disabilities work directly with a speech language pathologist to decrease the effects of poor communication. Occupational therapy’s scope of practice identifies that occupational therapists may be a part of working with a student with speech and language difficulties in conjunction with speech language pathologists to increase the student’s ability to participate in the context of an education setting.

Traumatic Brain Injuries

Students who have a traumatic brain injury (TBI) often have several different limitations that hinder their ability to participate in an educational environment. TBIs are often a result of traumatic means and, consequently, several accompanying injuries occur simultaneously. In such cases, occupational therapists treat the whole client and, therefore, treat all the different limitations a student may have. Many different treatment areas may be applicable to students with TBIs, such as cognitive retraining, or compensatory techniques for memory. Also, occupational therapists may assist with the motor needs of a student with a TBI.

Vision Impairments

These disorders of vision may affect children in many different facets of their life, including their ability to participate in school-based reading assignments, class activities, social interactions, and even exploring their environment through playful activities.

Occupational therapists often work with children with vision impairments with handout activities that address the vision impairment in a child's natural occupation of play. At times, children with vision impairments may also develop tactile defensive issues, resulting in difficulty with feeling items. Occupational therapists will assist students with tactile defensiveness by decreasing their negative sensations through repeated exposure.

In conjunction with IDEA law, occupational therapy services should emphasize special education and the needs of the child (IDEA, 1997, § 300. 1). Federal law mandates that OT services be educationally relevant and necessary for successful school participation in accordance with the student's abilities (IDEA, 1997, § 300. 1). Children learn and develop through play and playful interactions with others. Therefore, OT builds on a student's developmental occupations and assists children in goal development through playful activities that are educationally geared. There are a wide variety of childhood dysfunctions that occupational therapists are equipped to address in school-based practice. Because of the extensive scope of practice for OT, the researchers will define only the typical treatment areas of handwriting, sensory integration, mobility, positioning, assistive technology, and self-care activities.

Although assisting with handwriting may be perceived as a negative stereotype of occupational therapy's role in the school setting, it is nonetheless a treatment area by occupational therapists. Handwriting is an essential skill that children must master to

become competent students. The skill of handwriting consists of many different parts, including development of hand arches, ability to hold a writing tool, stability of upper extremity, postural stability necessary for sitting, cognition to recognize letters, and visual perceptual skills for letter recognition. Children's hands develop prior to entering school and, if developmental benchmarks are not reached, then a student may fall behind in his or her education and overall development. OT can assist in the development of the arches of the hand through manipulation of small objects or playing games with small items. Another area of hand development necessary for handwriting is ensuring that the student has strength and activity tolerance in the fingers so that they can hold the writing instrument properly. Strengthening and increasing endurance of a child's hand can be completed through use of Thera-Putty® or repetitive movements with the fingers. Vision and visual perceptual skills are vital components to handwriting, which can be developed through drawing, mazes, and strengthening of the eyes.

Positioning.

Because of various types of diagnoses, children often have difficulties with positioning their bodies in a way that allows them better functioning in their environment. Postural control is one of the leading factors that occupational therapists work with concerning positioning. Children's bodies face many demands throughout the day and must be able to maintain sitting at a desk, sitting in a lunch room, physical education activities, using public restrooms, and participating in activities on the playground. Because some individuals are unable to effectively sit in standard chairs, occupational therapists often fabricate or recommend pre-fabricated seating devices for students in classroom situations.

Assistive Technology.

Assistive technology (AT) is defined as “any item, piece of equipment or product system whether acquired commercially off the shelf, modified, or customized that is used to increase or improve functional capabilities of individuals with disabilities” (IDEA, 2004, §101.467). The demand for and the technology associated with AT has increased over the last 10 to 15 years, resulting in a wide range of devices used to support meaningful occupational engagement (Schoonover, Grove, & Swinth, 2009, p. 583). If AT is determined to be necessary, it is provided so that a child will receive free and appropriate public education in the least restrictive environment under IDEA with regard to the requirements of the child’s IEP or individualized family plan (IFP) (Schoonover, Grove, & Swinth, 2009, pp. 584-587). “Occupational therapy practitioners’ understanding of their clients’ daily occupational needs, abilities, and contexts make them ideal collaborators in the design, development, and clinical application of new or customized technological devices” (AOTA, 2004, p. 687).

Relationship with Teachers

According to the Individuals with Disabilities Education Act (IDEA) of 1997, federal law mandates that occupational therapy services be provided to individuals who fall into one of the 13 disability categories (IDEA, 1997, § 300. 8). IDEA requires that individual school districts provide OT services, which in turn requires the therapist to become a part of each child’s interdisciplinary team. As a member of the interdisciplinary team, occupational therapists collaborate with other team members to identify goals and objectives as well as other individualized needs of the child. Therefore, teachers and occupational therapists often work in partnership to assist the child in goal achievement.

Federal law does not mandate collaboration; however, recent research has shown that collaboration may increase the child's goal achievement. According to Barnes and Turner (2001), "team collaborative practices [should] be considered intricate components of educational programming for students with disabilities and may be influential factors for educational outcomes" (p. 87). Collaboration consists of different professionals coming together to work towards the same goal; given these differences in professions, there are bound to be concerns. A grounded theory study by Bose and Hinojosa (2008) noted that one of the concerns of the therapist interviewed was the value of collaboration, time constraints, uneven balance of collaboration, under-defined scope of practice, member roles, and receptiveness to collaboration (pp. 291-294). In an extensive systematic review of six research articles, Villeneuve (2009) found that there were two areas that are imperative for effective collaboration. The first is the educator's knowledge of the OT scope of practice and responsibility; the second is adequate amount of time for collaboration (p. 212).

Collaboration and Communication

Because OT is a diverse and dynamic career, occupational therapists must be competent and have the ability to be an essential team member. Occupational therapists contribute knowledge and skills toward many different teams and in many different contexts. One way for effective collaboration and communication to become standard between occupational therapists and teachers is to incorporate interprofessional education (IPE) between the two professions. OT is classified as a related service and therefore is required to be a part of a public school service delivery team. Multidisciplinary, interdisciplinary and transdisciplinary are three types of teams that may occur in the

education system (Cohn, 2009, p. 398). A multidisciplinary team occurs when team members work concurrently, with members working on their respective practice areas (Cohn, 2009, p. 398). On interdisciplinary teams, professionals complete their own evaluation process according to their scope of practice but the goals and the plan process are shared. Transdisciplinary teams “commit to teaching, learning, and working across disciplinary boundaries to plan and provide integrated services” (Cohn, 2009, p. 400). Teams do not always follow one pattern and may change between the three types; however, often in the school district the transdisciplinary approach is utilized (Cohn, 2009, p. 398). Because the law requires team collaboration, it is important for the team members to know each of the professionals on the team and their roles. Recent research has noted that interprofessional education is an essential piece of the puzzle for good patient care. Tunstall-Pedoe, Rink, and Hilton (2007) state that “successful functioning of teams requires good communication, respect, and understanding of each other’s roles” (p. 161).

Professional awareness, communication and respect are necessary components for effective collaboration between teachers and OTs as well as other members of an interdisciplinary team. According to the Center for Advancement of Interprofessional Education in 2002, “interprofessional education occurs when two or more professions learn with, from and about others to improve collaboration and the quality of care” (CAIPE, 2010). Through IPE, these skills of awareness, communication and respect can be cultivated. IPE has been utilized more in the past decade because of the vast amount of research available. MacDonald et al. (2009) states:

Interprofessional practice is dependent on knowledge of the professional role of each team member and on the ability to value the collaborative contributions of each professional as enhancing positive client outcomes. In turn, effective team function and collaborative practice will lead to cost effective, high quality client care. (p. 241)

In the education system, the students are the main focus; therefore, effective collaboration between the occupational therapist and the teacher is of utmost importance as it will help to increase student performance outcomes. One area of break-down for interprofessional cooperation can be negative preconceived notions of each of the involved professions (Howell, 2009, p. 68).

Stereotypical attitudes of different professions can be an obstacle to successful collaboration between the teacher and the OT (Howell, 2009 p. 68). A prime example of negative stereotyping in education professions occurs when teachers identify OT as the “pencil grip people” or the “handwriting people.” These negative stereotypes limit other professionals’ opinions of the value and knowledge that occupational therapists can provide on an educational team. According to Ateah et al. (in press), professionals can enter the workforce with stereotypes of their profession, as well as others, and if these attitudes are not confronted, they will lead to break-downs in team collaboration.

Interprofessional education’s aim is to dismiss stereotypes before individuals enter their respective careers (p. 5). Ateah et al. (in press) notes that, through classroom education in conjunction with professional education, individuals learn to adopt a positive consideration of other professions such as nurses, physicians, pharmacists, occupational therapists, physical therapists, dental hygienists, and dentists in correlation with their

profession (p. 5). The aim of this research question is to identify whether there is a need for additional professions to receive interprofesional education.

CHAPTER III

METHODOLOGY

Research Design

The investigators of this study identified that the best way to determine the level of knowledge concerning OT roles in the school district setting that undergraduate education majors are receiving at Casper College was to complete a quantitative research study. A survey research design was selected by the investigators based on the definition by Forsyth and Kwiz (2006), that “survey research is a method of inquiry characterized by collecting data using structured questions to elicit self-reported information from a sample of people” (p. 91). The investigators felt that this research design would best determine the accuracy of the hypothesis by giving concrete statistical values. Because of the ease of access to the target population and the relatively short amount of time that the researchers had access to the participants to gather data, a survey design was ideal. Survey design was also chosen as cost and time efficiency were of utmost importance to the researchers. No filter question was used in the survey design as these may limit full participation in response and the researchers wanted to force responses. In designing the survey, a closed-question design was utilized as it allows for increased consistency in responses and allowed for ease of data analysis. Demographics were not collected from the participants as the entire target population was accessed. The researchers were only concerned that the participants were education students at Casper College and that a determination be made concerning their knowledge about occupational therapy. Informed consent was printed on the reverse side of the survey and the participants were instructed

to read the consent thoroughly. Participants were informed that by completing the survey, the students gave their consent to participate in the research study.

Institutional Review Board Certification

Institutional Review Board certification was granted through the University of North Dakota on April 15, 2010, after completion of qualification requirements. This research project was identified as exempt through the University of North Dakota Institutional Review Board as the emphasis of the research was perceptions of the students identified as research subjects. As the study was conducted on the Casper College campus, additional Institutional Review Board certification was granted contingently through the Casper College IRB upon approval of this project by the University of North Dakota Institutional Review Board.

Locale of the Study

All participants for the study were undergraduate education majors attending Casper College, enrolled in and attending the special education course on the day of survey distribution. The participants were chosen through convenience sampling due to the ease of access through their scheduled class time. Additionally, the investigators are located in Casper on the Casper College campus and were able to access the research participants during their scheduled class meeting time. Subjects were undergraduate students completing their second year of education curriculum prior to transferring to a 4-year institution for completion of their bachelor's degree in elementary or secondary education. The participants were chosen due to the high probability that they had received most of their prerequisite curriculum classes, and were enrolled in the Introduction to

Special Education class. This course was selected because the researchers felt that this point in the curriculum was the most likely time when information on OT would be presented to the students. The survey was given at the end of the special education course material to ensure that the students would have maximal time for information on OT to be presented to them. Data collection was completed during two semesters, spring of 2010 and fall of 2010, to increase the reliability of responses. No duplication of survey participants was permitted.

Structure of Casper College Education Curriculum

Participants in this study were undergraduate education majors attending the Introduction to Special Education course at Casper College. The Introduction to Special Education course is a sophomore-level degree requirement for all elementary and secondary education majors seeking an associate's degree in education from Casper College. This course is designed to provide education majors with vital information related to instructional models and techniques, as well as the continuum of additional services, for teaching students with special needs in the least restrictive environment. Students admitted to this class must first complete Foundations of Education, also a sophomore-level education major's requirement. Due to the prerequisite requirements of the Introduction to Special Education and Foundations of Education courses, the earliest most education majors enroll in this course is the third semester of their education at Casper College.

Data Collection

For this study, it was decided by the researchers that the most accurate method to determine the perceptions and knowledge of the students about OT would be through

survey completion. A fifteen-question survey, consisting of seven Likert scale, six dichotomist, and two short answer questions, was given to the subjects. The survey content was intended to determine the level of the student's knowledge of OT and the amount of instruction on collaboration between classroom teachers and occupational therapists given during their coursework. The subjects were informed verbally of the purpose of the research and then given the survey with the informed consent face up. Participants were instructed to not write their names on the survey to protect anonymity and thereby increase the validity of the data. Participants were also notified that completion of the survey did not yield any monetary gain to themselves or the investigators. After instructions were given, the investigators left the room and an unbiased individual gathered the surveys and placed them in a manila envelope to further ensure anonymity of the participants. The unbiased individual was given specific instructions to not look at the surveys, so as to ensure that no participants could be identified by their survey. The manila envelope was then given to the project advisor and locked in a secure file cabinet per IRB requirements until data analysis was completed. Each semester, the special education course is offered in two separate course sections at Casper College; therefore, data collection was completed on two separate occasions each semester in separate course sections, for a total of four discrete data samples.

An informant was used for development of the research tool; this consultant is an Assistant Lecturer for the University of Wyoming, and holds a Ph.D. in Educational Administration. Prior to completion of the survey the consultant gave feedback on its validity and assisted the researchers in further developing the survey. After data was collected, the consultant was again used to ensure proper analysis of the data.

Validity of a data collection tool requires that the tool will measure what it was designed to evaluate. As this study sought to find specific information on Casper College elementary education majors' knowledge of OT roles in the school district, and because the researchers wanted to produce quantifiable objective data, a survey was utilized. Due to the specificity of the sample population and data gathered, a unique survey was designed by the researchers. The researchers used a well-constructed and refined survey to ensure the validity and focused specifically on answering the research question.

Reliability indicates that the data collection method will produce consistent results for the users across multiple subject pools. Reliability is a means to guarantee that the instrument reduces errors in data collection. Data was collected on four separate occasions, two separate times each in two different semesters, thus increasing the reliability of the data. To further increase the reliability of the study the survey questions were clear and concise and an attempt was made to avoid biased terminology.

Data Analysis

For data analysis, the SPSS version 18 software package was used. SPSS was selected because of its ability to perform statistical procedures. The ease of use of SPSS and its ability to assist in appropriate data analysis and obtaining statistical results lead the investigators to select this tool (Cronk, p. v).

CHAPTER IV

FINDINGS

Research problem: Education majors at Casper College are not receiving education on the services that Occupational Therapy provides in the public school setting.

A survey directed towards education majors at Casper College was completed in April 2010 and then repeated in November 2010. After analysis of the survey data, it was the following findings emerged:

Question One

I have received instruction on occupational therapy through my educational coursework.

- For data set one: 97.1% of participants did not receive any instruction on OT in their educational coursework.
- For data set two: 82.6% of participants did not receive any instruction on OT in their educational course work.

INSTRUCTION		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	33	97.1	19	82.6
	Yes	1	2.9	4	17.4
Total		34	100.0	23	100.0

Question Two

I feel it is important to know what occupational therapy does in the school district.

- For data set one: 94.1% stated that they felt it was important to know what OT does in the school district.
- For data set two: 91.3% stated that they felt it was important to know what OT does in the school district.

IMPORTANCE		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	strongly disagree	1	2.9	1	4.3
	disagree			1	4.3
	agree	24	70.6	13	56.5
	strongly agree	8	23.5	8	34.8
	Total	33	97.1	23	100.0
Missing	System	1	2.9		
Total		34	100.0	23	100.0

Question Three

I am aware of the services that are provided by occupational therapists in the school.

- For data set one: 79.4% of participants stated that they were not aware of what OT does in the school.
- For data set two: 60.9% of participants stated that they were not aware of what OT does in the school.

AWARE		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	27	79.4	14	60.9
	Yes	6	17.6	8	34.8
	Total	33	97.1	22	95.7
Missing	System	1	2.9	1	4.3
Total		34	100.0	23	100.0

Question Four

I am comfortable explaining what occupational therapists do in a school-based setting.

- For data set one: 91.2% stated that they were not comfortable explaining what OT does in school-based settings.
- For data set two: 69.6% stated that they were not comfortable explaining what OT does in school-based settings.

COMFORT		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	strongly disagree	10	29.4	4	17.4
	disagree	21	61.8	12	52.2
	agree	2	5.9	7	30.4
	strongly agree	1	2.9		
Total		34	100.0	23	100.0

Question Five

I feel that the education I received on occupational therapy services is adequate.

- For data set one: 91.2% of the participants stated that they did not feel their education on OT was adequate.
- For data set two: 86.9% of the participants stated that they did not feel their education on OT was adequate.

ADEQUATE		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	strongly disagree	12	35.3	3	13.0
	disagree	19	55.9	17	73.9
	agree	1	2.9	2	8.7
	Total	32	94.1	22	95.7
Missing System		2	5.9	1	4.3
Total		34	100.0	23	100.0

Question Six

I feel it would be beneficial to my career to know more about the services that are provided by occupational therapists in the school setting.

- For data set one: 97.1% of the participants felt that it would be beneficial to their career if they knew what OT did in school settings.
- For data set two: 91.3% of the participants felt that it would be beneficial to their career if they knew what OT did in school settings.

CAREER		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	strongly disagree			1	4.3
	disagree	1	2.9	1	4.3
	agree	21	61.8	8	34.8
	strongly agree	12	35.3	13	56.5
Total		34	100.0	23	100.0

Question Seven

I feel that services provided by occupational therapists are beneficial to public school students.

- For data set one: 94.1% of the participants felt that OT services are beneficial to public school students.
- For data set two: 95.6% of the participants felt that OT services are beneficial to public school students.

PUBLIC SCHOOL		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	agree	24	70.6	10	43.5
	strongly agree	8	23.5	12	52.2
	Total	32	94.1	22	95.7
Missing	System	2	5.9	1	4.3
Total		34	100.0	23	100.0

Question Eight

I feel my textbooks/course material contain appropriate information on occupational therapy services.

- For data set one: When asked about textbook and class material appropriateness, 91.2% of the participants did not feel that they were appropriate.
- For data set two: When asked about textbook and class material appropriateness, 87% of the participants did not feel that they were appropriate.

TEXT BOOKS		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	31	91.2	20	87.0
	Yes	1	2.9	3	13.0
	Total	32	94.1	23	100.0
Missing	System	2	5.9		
Total		34	100.0	23	100.0

Question Nine

Did you ever have an occupational therapy guest speaker in any of your classes?

- For data set one: Of the students questioned in the first session of the survey, 100% have not had an OT guest speaker in any of their classes.
- For data set two: Of the students questioned in the second session of the survey, 91.3% have not had an OT guest speaker in any of their classes.

GUEST SPEAKERS		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	34	100.0	21	91.3
	Yes			2	8.7
Total		34	100.0	23	100.0

Question Ten

I have shadowed/observed an occupational therapist in a school setting.

- For data set one: Only 2.9% of participants have ever shadowed an OT in a school-based setting.
- For data set two: 4.3% of participants had shadowed an OT in a school-based setting.

JOB SHADOW		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	33	97.1	22	95.7
	Yes	1	2.9	1	4.3
Total		34	100.0	23	100.0

Question Eleven

How much in class time has been provided to you on occupational therapy services in a public school setting?

- For data set one: All of the participants had less than one hour of class time dedicated to OT services.
- For data set two: 91.3% of the participants stated that they had less than one hour of class time dedicated to OT services.

JOB SHADOW		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	33	97.1	22	95.7
	Yes	1	2.9	1	4.3
Total		34	100.0	23	100.0

Question Twelve

I would like more education on the services provided by occupational therapists in the school setting.

- For data set one: 91.2% of the participants identified that they would like more education on OT in the schools, with 5.9%, or two participants, saying they would not like more information.
- For data set two: 91.3% of the participants identified that they would like more education on OT in the schools, with 4.3%, or one participants, saying they would not like more information.

MORE EDUCATION		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	No	2	5.9	1	4.3
	Yes	31	91.2	21	91.3
	Total	33	97.1	22	95.7
Missing	System	1	2.9	1	4.3
Total		34	100.0	23	100.0

Question Thirteen

I have spent approximately this amount of time in a public school setting for my degree.

- For data set one: 76.4% of the population surveyed had spent 2 weeks or more in the public school setting for their degree.

- For data set two: 82.6% of the population surveyed had spent 2 weeks or more in the public school setting for their degree.

TIME IN SCHOOL		Data Set 1		Data Set 2	
		Frequency	Percent	Frequency	Percent
Valid	less than one week	7	20.6	1	4.3
	1 to 2 weeks	3	8.8	3	13.0
	2 to 3 weeks			4	17.4
	3 weeks or more	23	67.6	15	65.2
	Total	33	97.1	23	100.0
Missing	System	1	2.9		
Total		34	100.0	23	100.0

Questions Fourteen and Fifteen

The final two questions on the survey, questions 14 and 15, were in a free-response format to allow students to define OT as a profession and identify the services OTs provide in the school setting in their own words. Question 14 on the survey asked the participants to define occupational therapy in their own words. In the first data set in April 2010, only 50% of the participants responded to question 14. Responses were analyzed for themes and coded into five categories, as determined by the indicated responses.

The categories for responses to question 14 were: no response or “don’t know,” job/work/vocational aspects, physical therapy, rehabilitation, and working with disabled students. On question 14, 15% of participants defined OT in terms of job and vocational activities; one participant defined OT as “assistance in learning valuable work-related

skills to be applied when diploma is obtained.” In the next category, coded as physical therapy, 6% of the participants used the phrase “physical therapy” in their own definition of OT. For example, a respondent indicated that “occupational therapy is similar to physical therapy but more complex.” The third category was coded as “rehabilitation” if a participant used the word “rehabilitation” in the response, or if the participant used key terms that define rehabilitation as learning life skills, regaining activities of daily living or regaining never learned skills. In data set one, 15% of respondents’ answers fell into the rehabilitation category. One comment highlights the most frequent response received in the rehabilitation category: “occupational therapists work with people to rehabilitate them.” Respondents’ answers on 11% of the surveys were placed into the final category, indicating that OTs work with disabled students. An illustration of a response in this category was the respondent who indicated that OTs “help with disabled students.” The final 3% of responses were unable to be classified into a theme or code as the response was “They have to know lots about bones joints and muscles.”

In the second data set, collected in November 2010, there was an increase of responses to 80% on question 14. Responses to this question were analyzed for themes and coded into five categories, with two responses unable to be categorized, as determined by the indicated responses. The categories included: no response or don’t know, job/work/vocation aspects, rehabilitation, motor skills and components, and skill building. In question 14, 22% of participants defined OT in terms of job and vocational activities: one participant defined OT as a “professional who helps students achieve their career goals.” The next category was coded as motor skills components. In this data set 17% of the participants identified motor skills in their definitions of OT. For example, a

respondent indicated that “occupational therapy help to develop fine motor skills needed to be successful in life.” The third category was coded as “rehabilitation” if a participant used the word “rehabilitation” in the response, or if the participant used key terms that define rehabilitation as learning life skills, regaining activities of daily living or regaining never learned skills. In data set two, 17% of respondents’ answers fell into the rehabilitation category. One comment highlights the most frequent response received in the rehabilitation category: “Therapy to help people be successful at their own level. Maybe to their basic occupations of taking care of self or to help students/people gain back abilities lost due to injury.” Respondents’ answers on 13% of the surveys placed into the final category, indicating that occupational therapists work with people to build skills. An illustration of a response in this category was the respondent who indicated that “OT is help for student to strengthen their skills in everyday tasks that will benefit them throughout their life.” The final 12% of responses were unable to be classified into a theme or code as the response was “therapy to assist/improve deficiencies that hamper learning” and “occupational therapy is a service that is provided to help guide someone.”

The last question on the survey asked the participants to “List the duties of an occupational therapist in a public school setting.” In the first data set collected in April 2010, on question 15, 76% of the participants did not respond and, due to the varying and limited responses received, no themes were defined. Of the 24% who did respond, individual responses included: “council, help, therapy, and support,” “help students get access to classrooms, use pencils, etc...,” “provide physical therapy for students,” “adapt equipment to meet the needs of students to help them use the appropriate muscle and

skills for the job,” “to work/on/with children who need services,” “make sensory rooms,” “help accident victims to rehabilitate,” and “make sure children are safe.”

For data set two collected in November 2010, 30% of the respondents left question 15 blank or stated that they did not know. The remaining 70% of the responses to this question were analyzed for themes and coded into four categories as determined by the indicated responses. The categories include: relating to disabled students, motor skills components, learning and educational components, and skill building. In this data set, 3% of the responses were coded into the relating to disabled students category. One wrote “Help kids with disabilities, help kids with injuries, deal with stress of teachers.” The motor skills components category totaled 17% of the respondents and one example of this includes “to help students through what they are doing, such as motor skills.” The next category was identified as learning and educational strategies, with 9% of respondents including “help students physically obtain learning strategies.” The final theme was identified as skill building and 17% of respondents were placed in this category; an illustration of a response is “to assist and adapt strengthening skills to help student [sic] overcome or improve their daily functions in life.” Three responses were unable to be coded as they did not fit into other categories. These responses, 13% of the participants, are as follows: “I thought they were primarily for adults. The link I make is FLS and ABLE,” “To help the child,” “listen, empathy, help devise a plan.”

Interpretation

From the data, the researchers have found that undergraduate students in education at Casper College are not receiving education on OT in their special education coursework, which supports the research hypothesis. Given the level of collaboration

between teachers and OT in the public schools, the need to understand each professional's role is imperative for students in the school setting who receive OT and success in their goals. The research findings indicate that Casper College education majors do not fully understand what role OT serves as a related service to students, which undermines the collaborative process. Tunstall-Pedoe (2007) identifies that "successful functioning of teams requires good communication, respect, and understanding of each other's roles" (p. 161). Only two participants' responses were relatively similar to what OT professionals may define as their scope of practice. Other responses included facets of OT practice, but on the whole, their definitions lacked the larger picture of OT. A significant percentage of participants failed to provide a response to questions 14 and 15, leading the researchers to glean that the participants do not have an understanding of the role of OT and its relationship to the collaborative school setting process indicated by federal legislation for school-based intervention. However, it is significant that 93% of participants stated that they felt it was important to know what occupational therapists do in the school district, which leads the researchers to question how important the role of OT is to a population who are mostly unfamiliar with the OT profession. In the study, 95% of the respondents felt that knowledge of OT would be beneficial to their careers and 95% of the respondents felt OT would be a beneficial service to the students. However, 91% of the students polled indicated that they had not received any education on OT in their coursework. The remaining 9% of the participants responded "yes" to receiving instruction through their education coursework on OT. However, as evidenced by their responses to questions 14 and 15, a clear definition of OT was not provided. It could be inferred that these participants know they need to understand what OT is and

even state (91%) that they would like more information about OT; nevertheless, they are lacking exposure to the role of OT in the public school setting in their education curriculum. From the data, it was found that 84% of the participants had spent two or more weeks in a public school setting for their degree, yet these participants were not exposed to OTs or the services they provide with only 4% stating they had observed an OT in a school setting. All of these findings further strengthen the argument that knowledge of OT, which is imperative for children's success, is not being provided to pre-service teachers at Casper College in their initial school setting experiences.

This research provides preliminary evidence that students in the education major at Casper College do not have a basic understanding of OT. Occupational therapy is a federally mandated related service that requires direct collaboration and communication with teachers, thus leading the researchers to believe that interdisciplinary education is an important and necessary part of a pre-service teacher's education. Understanding each professional role may increase the ease of collaboration and, as the literature has shown concerning the use of collaboration as effective training in the medical model, interprofessional education may create an effective learning environment.

CHAPTER V

SUMMARY

Limitations

An identified limitation of this study is the inability to generalize the study findings to the larger U.S. higher education population as the study targeted a specific population at a specific educational institution. While the researchers were able to survey the entire targeted population, the sample size was still limited to 57 individuals. The survey instrument used was created for this specific research study and therefore was not standardized. No piloting of the survey was done prior to gathering the first data set. Two different data sets were used in the study in two different semesters, which could decrease the reliability of the data; the initial survey could have increased the awareness by education faculty at Casper College of the lack of education on OT from the presentation of the survey, resulting in an increased emphasis on related services in the public school setting.

Summary of Findings

The investigators hypothesized that education majors at Casper College are not receiving sufficient education on the role of OT in the public school setting. To test the research question, the researchers devised a survey to sample education majors in the Casper College Introduction to Special Education course. The data from this survey was analyzed using SPSS 18 and it was found that a limited number of Casper College education majors accurately recognized the profession of OT. Successful collaboration for mandated special education services in the public school setting requires that all parties understand the professional roles of related services disciplines and the services they provide. From the findings of the survey the hypothesis was supported, indicating

that indeed education majors are not receiving adequate education on OT at Casper College.

Conclusion

Collaboration between educators and OT is necessary for both professions to operate effectively in a national system of federally mandated services. From the results of the study, it appears that Casper College education majors do not fully understand what OT is and the services occupational therapists provide to students. This lack of understanding of the role of OT in the public school setting may complicate the collaborative process between occupational therapists and public educators during special education service delivery.

Recommendations

From the findings of this study it appears that education majors at Casper College are not receiving education on OT. Therefore, the researchers recommend that these students begin receiving education on what OT is and how it is applicable to their role as a teacher. A marginally complex way to increase student education would be to increase guest speakers in both the OT and education programs. The researchers propose having students in the OT department request time to promote OT in the Introduction to Special Education course. An additional area for guest speakers may be to include a representative of the education program in the OT pediatric course. A joint collaboration assignment between occupational therapy and education majors may prove to be sufficient in providing the interdisciplinary education necessary without having a full curriculum change for both professions. An alternate recommendation to increase collaboration between OTs and teachers would be to introduce a curricular section

covering OT in Casper College's Introduction to Special Education coursework. The final and most drastic recommendation would be to develop an interprofessional course designed for the specific needs of majors in both education and OT programs.

Interprofessional courses in the medical field have been shown to increase patient outcomes; a similar course could be used to increase collaboration among the varied professionals in the public education setting. It is understood that adding a course of this nature into a program's curriculum would be a difficult undertaking due to the effort necessary to bring together two separate program philosophies, accreditation standards, and approval from each program on course content while melding student schedules.

Additionally, this effort would require extensive development time for faculty from both academic programs. While this task may be a problematic, the researchers feel that the benefits of increased collaboration, more informed professionals, and ultimately stronger public school student outcomes outweigh the difficulties. Further research on this subject matter needs to be undertaken to include a larger sample size across institutions of higher learning that provide degrees in education.

APPENDIX

1. I have received instruction on occupational therapy through my educational course work.

Yes No

2. I feel it is important to know what occupational therapy does in the school district.

Strongly Disagree Disagree Agree Strongly Agree

3. I am aware of the services that are provided by occupational therapists in the school.

Yes No

4. I am comfortable explaining what occupational therapists do in a school based setting.

Strongly Disagree Disagree Agree Strongly Agree

5. I feel that the education I received on occupational therapy services is adequate.

Strongly Disagree Disagree Agree Strongly Agree

6. I feel it would be beneficial to my career to know more about the services that are provided by occupational therapists in the school setting.

Strongly Disagree Disagree Agree Strongly Agree

7. I feel that services provided by occupational therapists are beneficial to public school students.

Strongly Disagree Disagree Agree Strongly Agree

8. I feel my textbooks/course material contain appropriate information on occupational therapy services.

Yes No

9. Did you ever have an occupational therapy guest speaker in any of your classes?

Yes No

10. I have shadowed/observed an occupational therapist in a school setting.

Yes No

11. How much in class time has been provided to you on occupational therapy services in a public school setting?

Less than 1 hour 1 hour to 2 hours 2 hours to 3 hours 3 or more hours

12. I would like more education on the services provided by occupational therapists in the school setting.

Yes No

13. I have spent approximately this amount of time in a public school setting for my degree.

Less than 1 week 1 week to 2 weeks 2 weeks to 3 week 3 weeks or more

14. In your own words define occupational therapy.

15. List the duties of an occupational therapist in a public school setting.

INFORMED CONSENT

TITLE: A research study to explore Casper College undergraduate education majors' perceptions of educational curriculum concerning occupational therapy's role in the public school system.

PROJECT DIRECTOR: Breann Lamborn, M.P.A.

PHONE # 307-268-2223

DEPARTMENT: University of North Dakota Occupational Therapy Department

You are invited to take part in a research study about your understanding of occupational therapy. The purpose of this research study is to explore what undergraduate education students learn about occupational therapy in the public schools. We hope in the future other people might benefit from this study by promoting teamwork between teachers and occupational therapists in the school system. About 100 people will be participating in this study at Casper College. Your role in this study will be limited to completion of the attached survey. The 15 question survey asks what you have learned about occupational therapy in your class work. There are no expected risks with your participation in this study. Your participation is voluntary. Please do not put your name on the survey. We want to make sure that you cannot be identified. If you decide not to participate your grade will not be affected. There is no cost and you will not be paid for completing this survey. The University of North Dakota, Casper College and the research team are not being paid to for this research study. The results will be described so that you cannot be identified. No information will be released unless required by law and an all efforts will be made to notify you. The records of this study will be kept private in a locked cabinet. The researchers and their advisor will be the only people with access to this cabinet.

The researchers conducting this study are Jenny Lok and Michael Seabeck. You may ask any questions you have now. If you have questions, concerns, or complaints about the research study please contact the researchers or research advisor, Breann Lamborn at 268-2223.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

By completing this survey you are giving your consent to participate in this study.

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