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In-classroom versus pull-out occupational therapy services: the opinions of children within three public school systems in upstate New York

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In-Classroom versus Pull-Out Occupational Therapy Services: The Opinions of Children Within Three Public School Systems in Upstate New York

by

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An Abstract

of a thesis in partial fulfillment of the

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Abstract

Current education laws are mandating that children be educated in the least restrictive environment. Most often, this is interpreted as the inclusion or mainstreaming of children with special needs in the general classroom. Provision of therapy services in naturally occurring environments within the school (i.e. the classroom) is also widely suggested. However, there is little information regarding the implementation of this practice or its effectiveness for children with specific needs.

The purpose of this study was to discover the opinions of children regarding the differences between occupational therapy services provided in the classroom versus those provided in a separate therapy space. By knowing what children perceive as most helpful for them, occupational therapy services may be improved within the public school system of the future. A short interview of nineteen children receiving occupational therapy services for handwriting was conducted to discover their feelings related to this topic. This population was selected because handwriting is a common and significant occupational therapy goal area within the public school system related to the child's ability to communicate functionally.

All children participating in the interview indicated a preference for being pulled out of the classroom setting for occupational therapy services. Each child had definite opinions and thoughts about each setting. These opinions were in direct contrast to adult perceptions found in the literature. This study suggests that what lawmakers and educators perceive as the "least restrictive" environment may actually be seen as "most restrictive" in the eyes of the student.

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CERTIFICATE OF APPROVAL

This is to certify that the Thesis of

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Submitted in partial fulfillment of the requirements for the degree of Master of Science in the Department of Occupational Therapy, School of Health Sciences and Human Performance at Ithaca College has been approved.

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Chapter One

Introduction to Topic

Background

Since the passage of PL 94-142 in 1975, the Education for All Handicapped Children Act, school-based occupational therapy as a related service has been a growing area of practice. Traditionally, occupational therapy in the school system involved treating children with special needs in a separate therapy space with the expectation that the child would eventually improve function in the classroom. Due to changes in the laws regarding services for persons with disabilities, emphasis is now placed on treating children within the classroom setting whenever possible.

Occupational therapists in the school system have traditionally provided services by pulling the child out of the classroom under a "direct" service delivery approach. A direct approach is when a therapist provides one- to- one, hands- on intervention and is often required when the therapist's knowledge and training is needed in order to ensure safety and efficacy of treatment (Blossom, Ford, & Cruse, 1988). Direct services can either be implemented in the classroom, a "push- in" setting, or in a separate space other than the child's typical environment, a "pull- out" setting (AOTA, 1989).

Monitoring and consultative services are other approaches used by school- based therapists that often take place within the classroom. In these delivery models, some contact between the child and the therapist is usually necessary, although this occurs less often than with direct intervention. Monitoring is used when other caregivers must carry out a specific plan designed by the therapist, although the therapist is responsible for the outcome (Dunn, 1991). Consultation is a method of intervention whereas the therapist and other professionals collaborate to design strategies to enhance a child's success. In

this model, the therapist is responsible for being in contact with other professionals as needed, however he or she is not directly responsible for outcomes (Dunn, 1991). Some children benefit from a single type of intervention while others require a combination of approaches. This determination must be made to allow students to receive the most effective treatment possible within the educational setting while remaining least restrictive.

Direct services tend to be implemented as pull- out or push- in services. Pull- out services are defined as when the therapist and child leave the classroom for treatment in a therapy room or separate space, whereas push- in services are defined as when the therapist and child work in the classroom. When developing treatment plans, the occupational therapist makes an educated decision on the most appropriate settings and service delivery models to utilize. There are no clear guidelines for deciding which model to use when treating a child with a certain disability or needing a particular service (Dunn, 1988). However, there is increasing pressure to utilize push- in services due to the laws regarding the least restrictive environment.

The Individuals with Disabilities Education Act (IDEA) requires that school systems make available a free and appropriate public education to eligible and qualified children with disabilities (Osborne & Dimattia, 1994). Part B of IDEA states that services must be provided in the least restrictive environment. The law states that children should remain in the regular classroom throughout the day unless there is no alternative other than to pull them out. Although the law may be interpreted as stating that children should be treated in the general classroom in most cases, the actual efficacy of this approach has not been proven.

Pull- out services may provide the child with individualized occupational therapy and allow the child to meet therapeutic goals without distractions of the classroom. However, this setting reduces the time the child is exposed to the regular classroom environment and limits opportunities for interaction with classroom peers. The pull- out approach also assumes that the child will have the ability to transfer skills learned in the therapy room to the classroom in order to improve educational performance.

Occupational therapy theory suggests that it is important to involve the client in decision- making (AOTA, 1994; Brodley, 1986; Brown & Bowen, 1998; Law, Baptiste, & Mills, 1995; Ryan, 1997). The client-centered approach suggests that the person receiving treatment should be the sole determinant of treatment rendered. Reliance on the opinion of clients in terms of the most appropriate treatment is supported by ethical standards as well. Principle 3. A. of the Occupational Therapy Code of Ethics requires collaboration with the person receiving therapy to determine treatment goals and priorities throughout the intervention process (AOTA, 2000). Within the public school system, it is important that the therapists learn and take into account the opinions of children regarding their own therapy services.

Problem

There is limited evidence regarding which setting is truly "least restrictive" when treating children with special needs. Research is needed to determine the efficacy of service provision, including the child's perception of pull- out versus in classroom occupational therapy services. By better understanding the children's opinions of important factors relating to therapy services, an occupational therapist may begin to

solve the questions regarding the appropriate and most effective treatment environment for these children.

Rationale/Significance

It is essential that occupational therapists provide services within the guidelines of or mandates of the educational laws, however it is difficult to determine how to follow the laws in terms of what is truly least restrictive for each child. Professional judgement, school building atmosphere, resources, and historical methods of service delivery impact on pragmatic implementation of services. In most cases, therapists within the school system have the option of conducting services within the classroom or within a separate space or combining these approaches. Opinions of the effectiveness of one approach over another vary and this is reflected in the service delivery model used. Past studies have attempted to determine perceptions of professionals and parents involved in these treatments to determine the most effective and most accepted model of service delivery. Because it is the children who are receiving these services and being affected by the implementation of treatment, their opinions should be considered as essential in the decision process.

If it could be demonstrated that children find one service delivery model superior to another, this may aid therapists in determining effective treatment for this population. Although each child is unique and the reasons behind each opinion must be considered individually, it is important to have a baseline to better understand the needs of children within the public school system.

Purpose of the Study

The purpose of this study is to discover the opinions of children regarding the differences between occupational therapy services provided in the classroom versus in a separate therapy space. By interviewing children with similar therapeutic goals, this study intends to determine the perceived acceptance of both options by children with special needs. In discovering the client's own perceptions, the therapist will be better equipped to provide effective services within the least restrictive environment mandate.

Basic Definitions of Terms

Attitudes: One's manner, disposition, feeling, position, etc., with regard to a person or thing (Webster's New Universal Unabridged Dictionary, 1989).

Client-centered therapy: An approach of occupational therapy practice whereby the therapist makes treatment decisions based on the client's own goals and choice in regards to services (Law, Baptiste, & Mills, 1995).

Consultative Service: An approach whereby the therapist uses his or her professional knowledge to assist another person in identifying the child's needs and solutions to meet these needs. The therapist is not responsible for the outcome of the program, but for the proper contact with the adult carrying out the program (Dunn, 1991).

Direct Service: An approach in which a treatment program is specifically designed and implemented by the occupational therapist. This model is used when other professionals cannot safely carry out the treatment. Direct therapy is suggested when the focus of therapy is to meet a child's needs through specific, therapeutic strategies. Direct services can be provided both in the classroom and in a separate space (Dunn, 1991).

Inclusion: The child remains in the general classroom with his or her non-disabled peers and is considered a full member of the regular educational setting. Any supportive services needed are provided within the classroom environment (Kellegrew & Allen, 1996).

Individuals with Disabilities Education Act (IDEA): Established in 1975 to guarantee that persons with disabilities receive free public instruction, with appropriate services, in the least restrictive environment (Rapport, 1995).

Least restrictive environment: The Individuals with Disabilities Education Act (IDEA) states that to the maximum extent possible, all children with disabilities should be educated with peers that are not disabled. This encompasses settings including private or public institutions, and other care facilities. Separate schooling, removal of the child from the classroom, or exclusion from activities in the general education setting should only occur when, due to the nature or severity of the condition, the child will not benefit from the general education setting. This should only be an option when use of supplementary aids and services will not allow the child to succeed in the regular classroom (Rapport, 1995). This term encompasses a wide range of settings depending on the needs of the child. A more restrictive environment would include a segregated special education classroom with least restrictive being the child's full- inclusion within the regular classroom (Kellegrew & Allen, 1996).

Monitoring: Monitoring is a form of service delivery in which the expertise of the occupational therapist is used to address the child's needs in his or her natural environment. The therapist assesses the child's needs and designs a specific program to be carried out by trained caregivers in other environments so that procedures will be

consistent throughout the child's day. The therapist continues to be in close contact with the persons involved in the program so that adjustments can be made as needed. The safety of the child must be addressed by the therapist and the caregivers must demonstrate the ability to carry out the plan correctly (Dunn, 1991).

Pull- out services: When treatment is provided in a space other than those school environments that children would access in a typical school day. This can be provided individually or in a small group setting (Rourk, 1996).

Push- in services: When treatment is provided in the child's regular classroom environment (Rourk, 1996).

Chapter Two

Review of the Literature

Introduction

Occupational therapists working in the public school system work under several types of service delivery provisions including direct, monitoring, and consultation. Direct treatment can either occur within the classroom or in a separate space within the school system and is performed directly by the occupational therapist. Monitoring and consultative services often take place within the classroom, as the therapist collaborates with the educational staff to determine appropriate adaptations, accommodations, or programming for the child to succeed within the classroom. Some children require only one type of intervention while others require a combination of approaches. This determination must be made to allow the child to receive the most effective treatment possible within the educational setting.

When deciding treatment plans, the occupational therapist is required to make an educated decision on which setting is most appropriate and which service delivery model to implement. The current education laws mandate that the child be included in the normal classroom to the furthest extent possible. However, little research has been done to determine the effectiveness of this approach and few studies focus on children's perceptions of receiving therapy outside of the classroom versus within the classroom. Because children are required to be treated in the least restrictive environment, according to the law, it seems necessary to have evidence of what environment is actually the "least restrictive" for the child.

An important factor in determining the correct method of intervention is to discover which is preferred and seen as the most helpful in the eyes of the persons

receiving therapy. The practice of considering client input when delivering services is receiving more attention in the current literature relating to service delivery. Because clients often are aware of what works best for themselves, the child may be a starting point to determine the best model for treating within the school setting. In discovering the preferences of this population, occupational therapists can make better choices regarding service delivery and help justify these decisions. Also, utilizing children's opinions will help empower them by giving them input in treatment, a concept inherent to occupational therapy practice.

Laws Regarding Related Services

The 1970's brought about many laws regarding education and the rights of persons with disabilities. School systems are now required to educate the children with disabilities in a general classroom setting to the greatest extent possible. Legislation has explained that children should be serviced in the least restrictive environment (LRE) so that the child can benefit from the appropriate educational and social environment. The least restrictive environment mandate first appeared in the regulations in Section 504 of the Rehabilitation Act of 1973 and was included in the Education for All Handicapped Children Act (Public Law 94-142) of 1975. These laws required states to provide special education and related services consistent with the unique needs of each child (CHADD, 1999).

The Education for All Handicapped Children Act was renamed and restructured in 1990 under the Individuals with Disabilities Education Act (IDEA). IDEA, according to Rapport (1995) is the "most influential piece of federal legislation associated with the delivery of therapeutic intervention within educational environments." These acts define

the rights of children with disabilities in the public school system. There are some guarantees within this legislation, including free public instruction, appropriate education in the least restrictive environment, and the right to procedural due process (Etscheidt & Bartlett, 1999).

Part B of IDEA outlines the rights to related services for all children with special needs ages 3-21. Part B includes the mandate that the Committee on Special Education ensure that each child in need of special services in the public school system has an Individualized Education Program (IEP) to define treatment for the school year (CHADD, 1999). The IEP must include the child's current level of function and the goals the child is expected to meet. A statement about the related services the child will receive and in what environment these services will take place is also essential (Rapport, 1995). Part B also explains that children with disabilities must be educated with children who are not disabled as much as possible. Only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactory, should one be removed from the normal classroom routine (CHADD, 1999).

IDEA defines related services as including occupational and physical therapy as well as many others. This legislation brought about a growth in the numbers of school-based occupational therapists within the public schools, as these services are now required to be available for all children in need of assistance in the educational setting. Occupational therapists working in this setting are required to provide services according to the law, however varied interpretations have led to conflicts as to how to implement the law in practice (Osborne and Dimattia, 1994).

Osborne and Dimattia (1994) explained the law further and the misconceptions of its meaning. With the passing of IDEA legislation, an increased focus on inclusion and mainstreaming developed. They discussed the distinction between the term least restrictive environment and mainstreaming, as they are often thought to mean the same. The mandate that children be placed in the least restrictive environment refers to the need to educate children with disabilities within the general educational environment as much as possible. The term "least restrictive" incorporates a continuum of environments depending on the needs of the child. The least restrictive environment can range from a segregated special education classroom or institutionalized setting to the regular classroom, with the child being fully included for the entire day (Kellegrew & Allen, 1996). Full- inclusion and mainstreaming are not the same. Mainstreaming is one way to facilitate the least restrictive environment practice. This is when children are involved within the regular classroom for specific periods of the day and given needed support throughout the school day. The law does not state that mainstreaming is needed in all cases, but that children should only be separated from the regular classroom when absolutely necessary.

Children are not always treated in the general classroom environments for a variety of reasons. Some placement decisions are made based on factors such as administrative convenience, building space, service provider availability, monetary issues, attitudes of educators, therapists, parents, or the general public (Coutinho & Hunter, 1988). Because this is not always consistent with the laws mandating practice, occupational therapists must be advocates for the children and consistently evaluate whether or not they are really providing a service in the best environment for the child.

When school-based occupational therapists evaluate their options and decisions, Coutinho and Hunter (1988) suggest that they ask the following: "Has educational progress been affected significantly? If so, why has progress been affected, and can the use of supportive aids and services in the present environment facilitate progress?" (p. 709). Also, when choosing the context to implement treatment, one must balance the child's needs, the child's perception of which environment is more helpful, and the law regarding the least restrictive environment.

Occupational Therapy Role in Educational Settings

Occupational therapy has been a part of the school system since the early 1900's (Coleman, 1981). As society began to realize their role in providing services for children with disabilities, and as more children with handicaps were able to survive due to new medical technology and knowledge, coalitions began to form to protect these children and ensure they received proper treatment (Coleman, 1981). By 1960, occupational therapists and the Maternal and Child Health (MCH) agency joined to support the development of services for children. In both rehabilitation centers and special education programs, it was commonplace to find occupational therapists treating children with various conditions (Gilfoyle & Hays, 1979).

The American Occupational Therapy Association (AOTA) describes occupational therapy in the school system as a service to "enhance student's abilities to adapt to and function in educational programs" (AOTA, 1982, p.69). Goals related to the services provided must be directly correlated with the child's educational needs, and treatment must focus on enhancing student's abilities to learn and perform within the school environment (AOTA, 1982).

According to AOTA (1982), the role of occupational therapy by law is defined as "an education-related service that is necessary to allow handicapped students to participate in the least restrictive environment" (p.70-1). They identified five roles that occupational therapists play within the school system. These include:

1. Evaluating students with special needs to determine the need for occupational therapy services;
2. Participating in educational program planning in order to create goals that incorporate the child's needs within the educational context;
3. Implementing a treatment program that directly works to increase the student's functioning and abilities within the school environment;
4. Consulting with other disciplines within the school system and parents of the children in regards to occupational therapy services;
5. Managing and supervising school- based therapy programs (AOTA, 1982, p. 70).

Handwriting Programs

An example of a role designated for an occupational therapist in the school system is the provision of handwriting programs. A typical day for a school- based occupational therapist most likely includes treating children with handwriting difficulties. Elementary school children with learning disabilities, such as handwriting problems, are seen for occupational therapy to improve academic success. In this case, the role of the occupational therapist is to discover what causes the child's difficulty and what steps are needed to remediate and/or compensate for the problem. The occupational therapist will implement formal and informal assessments to determine whether the

problem lies in the child's perceptual functioning, gross or fine motor skills, the context of the environment, or a combination of many factors.

Direct treatment with the child may help to improve the child's body position or reduce physical barriers, while consultation with the teacher may improve the child's environment to increase success (AOTA, 1998). Muhlenhaupt (1985) describes the role of the occupational therapist within the school system when treating a child with handwriting problems. She explains that the therapist first observes the child in the classroom while he is writing. The occupational therapist watches for inadequate posture, strength, or upper body movements. At the same time the environmental issues need to be addressed such as the height of the furniture, the quality, size, and shape of the equipment being used and the demands of the task. The therapist then makes decisions after discussion with the teacher, the child, and the parents as to the need and the method of providing services. The remediation of handwriting problems may require various approaches and models to address the students needs.

Models of Service Delivery

Overview

To implement occupational therapy practice within the public school system, there are a few basic models of service delivery one could utilize. Pull- out therapy refers to treatments in a school space other that the child's typical classroom. Push- in therapy is defined as interventions utilized within the classroom environment. Pull- out therapy requires a therapist to use a direct approach to treatment, whereas push- in therapy allows the therapist to use a variety of approaches to intervention depending on the needs of the child.

Direct service is often required when the situation is such that the therapist's knowledge and training are needed directly in order to ensure safety and efficacy of the treatment. This method of intervention is usually done on a frequent and consistent basis, at least once a week (Blossom, Ford, & Cruse, 1988). Direct services can either be implemented in the classroom or in another setting (AOTA, 1989). However, no guidelines appear to be in place about how to select the treatment setting.

Monitoring, a form of indirect service, is defined as when the therapist is responsible for the creation of a program that meets a child's needs and for adapting the environment to help the child succeed, including the addition of any appropriate adaptive equipment. While working under the monitoring service model, a therapist also supervises classroom personnel responsible for carrying out the program and reassesses this program at regular periods of time. The school-based occupational therapist also meets with the child during the monitoring process on a weekly to monthly basis (Blossom et al., 1988; AOTA, 1989). Dunn (1991) explains that monitoring is used when the treatment program needs to be implemented in many of the child's environments. The therapist must ensure that the other caregivers implementing the specific plan are able to carry the program out safely and effectively. When using a monitoring approach to intervention, the occupational therapist is directly responsible for the outcome of the program (Dunn, 1991).

A therapist has different responsibilities when implementing consultation. The therapist enables others to identify and address the needs of the child. Although the therapist is not responsible for the outcome of the child's program, he or she is responsible for effectively collaborating with the person responsible for the child's

program. In consultation, the expertise of both parties is used to develop strategies or a specific program together (Dunn, 1991). In the classroom, the occupational therapist may train the personnel to implement a program and also ensure that the proper equipment is available and is set up properly (Blossom et al., 1988; AOTA, 1989). When consulting, the therapist initially may spend time with the student, mostly by observing the student in the classroom and the interaction between her or him and the teacher. In this provision model, after the consultation is complete, the therapist does not return to the classroom unless requested by the teacher (Blossom et al., 1988).

Rourk (1996) looks at the evolving trend of implementing these services throughout history. The first school-based occupational therapists to work in the public school system had previously treated children at residential institutions. In the residential institutions, the therapists used a direct service approach in an attempt to treat the student's underlying impairments. These institutions for students with disabilities were the norm until the Education of All Handicapped Children Act was enacted (Rourk, 1996). When the therapists from the residential setting began to work in the public school system, they carried over their practice of treating children in isolated rooms using their knowledge of direct service approaches to occupational therapy treatment (Rourk, 1996).

In the public school arena, occupational therapists requested separate space to conduct treatment of children outside of the regular classroom. A separate occupational therapy room was created in many schools, as space allowed, starting the trend of treatment implementation in broom closets, hallways, gymnasiums, or auditorium stages. Rourk (1996) explains that many school-based therapists soon realized that this pull- out service delivery was not accomplishing the goals of enhancing the child's educational

program. This pull- out system sometimes distracted the child, hindered the development of routines, and tended to worsen the child's academic performance in the classroom. Pulling the child out of the classroom often caused him to miss lessons and fragmented the day. This realization had an impact on the increased use of indirect approaches to occupational therapy services (Rourk, 1996).

In today's practice, often more than one approach is implemented when treating a child with a disability and, in certain cases, both direct and indirect service models are feasible for occupational therapy treatment within the public school system (Dunn, 1988). The approach a therapist takes in treating students of the particular school system is varied depending on the needs of the child, teacher, parent, and therapist combined. However, there are no guidelines in place regarding this choice, and little research has been done to determine which approach is best for a certain diagnosis or for attainment of a particular therapeutic goal.

The American Occupational Therapy Association (AOTA) has created parameters to aid the occupational therapist when choosing which approach is best. When setting priorities for the child's service delivery, the therapist must look at issues of health and safety, environmental adaptation needs, and the components that are hindering performance. Also, one must address the potential for improvement, the age of the student, the expertise of the educational personnel in assisting the child's unique needs, and the availability of the space (AOTA, 1989). Although these guidelines help a therapist to begin to reason effectively, they are still quite vague regarding how to determine the best approach. Dunn (1988) stresses the importance of research in

determining which models should be used to treat specific conditions and which characteristics must be present to justify the use of each model.

Research Regarding Service Delivery Models

Pull- Out versus Push- In Services.

A research article titled "Student's Preferences for Service Delivery: Pull- Out, In- Class, or Integrated Models" by Jenkins and Heinen (1989) focused on children's perceptions of extended services, such as occupational therapy. The authors of this study attempted to discover students' preferences about where and from whom they receive services for their learning disabilities. The researchers interviewed six hundred- eighty-six children from special, remedial, and regular education setting in grades two to five. The classrooms used either a pull- out, in- class, or integrated model.

Jenkins and Heinen (1989) defend the importance of this research due to the recent controversy regarding service delivery in the school system. They indicate that criticisms of a pull- out model include disrupting the classroom instruction, attaching stigmas and causing embarrassment to children being pulled out, failing to increase academic learning time, failing to produce transfer to the regular program, increasing cost, and being ineffective (Jenkins and Heinen, 1989). The authors interviewed children using a survey that focused on these issues.

A common theme for those that chose pull- out services indicated that pull- out is less embarrassing, whereas the reasoning for preferring in- class services were to avoid embarrassment of being pulled out and convenience (Jenkins and Heinen, 1989). Embarrassment played a larger role in the reasoning of older students than younger students. The type of program the children were currently in and the children's grade

level influenced the choice of one service delivery over another. Most of the student's currently receiving pull- out services indicated a preference for this model. However, those receiving in- class services were split evenly on preferences of model delivery. Of the older students currently receiving in- class treatment, more indicated they would prefer pull- out intervention (Jenkins and Heinen, 1989).

Jenkins and Heinen (1989) suggest that the children's opinions are not only influenced by their experience of either model or their age, but by a vast variety of perceptions. The children's opinions are influenced by their idea of effectiveness of each model, of the quality of the setting for learning, of the potential for embarrassment, and of convenience or because of the differences in the amount of work. The authors summarize that the most important finding is that children do have firm opinions of where they wish to receive services. As professionals continue to debate that one service should be implemented over another, Jenkins and Heinen (1989) argue that students should be asked about their preferences and that their opinions be respected because it is harmful to assume that children necessarily "see it our way".

A study by Cole, Harris, Eland, and Mills (1989) attempted to focus both on effectiveness of in-class versus out- of - class services and the opinions of professionals in the school system regarding these services. The investigators randomly assigned sixty-one preschool children to either the in-class or out-of-class setting. Cole et al. (1989) used two standardized tests to determine outcomes of the children's performance after receiving treatment in their allotted setting. They also used a teacher questionnaire to determine the staff's perceptions of both treatment approaches. This study did not consider the children's perceptions of the services they were receiving. Treatment in each

setting focused on motor skill intervention and pre- and post- test measures concentrated on these areas to determine a significant difference of success in one setting versus the other.

In this study, in- class therapy was defined as the approach in which occupational therapy or physical therapy staff provides treatment within the classroom that the child spent his or her day. Out- of- class services included those that were implemented in an isolated space such as a therapy room or another section of a room designated for services other than the classroom. Both groups received equal amounts of group or individual sessions in order to avoid added variables (Cole et al., 1989).

The results of pre- and post- testing reveal no significant difference between the two treatment approaches in improving motor skills, although the authors report slightly heightened scores of the in-class group on all three motor measures as compared to the children receiving out- of class therapy. The authors conclude that either model can yield improvement of skills for children receiving services. However, the addition of the questionnaire demonstrated a preference for in-class services for several reasons.

The questionnaire given to staff revealed that they favor the in-class approach because the use of services within the classroom facilitated academic focus on treatment and that the therapy also benefited other children. The staff expressed that the in-class treatments seemed to provide a greater benefit to children needing occupational therapy and physical therapy services versus out- of- classroom treatments. Staff reported that neither service yielded embarrassment for the children or distractions to other students. Cole et al. (1989) conclude that this study reveals that using in-class services may also facilitate communication between therapy and classroom staff and also increase teacher's

knowledge regarding motor skill treatment and ideas for interventions. The authors caution that the results of this study be reviewed cautiously due to the small sample size of both the interventions and the questionnaire (Cole et al., 1989).

Kellegrew and Allen (1996) describe the role of occupational therapy in a full-inclusion classroom as an appropriate way for children to achieve goals while keeping them in the least restrictive environment. A case study from the Moorpark Model is used to demonstrate the success in providing thorough occupational therapy services in the classroom. The authors differentiate between mainstreamed and full-inclusion classrooms by stating, "in mainstreamed settings, the student is brought to the services. In full-inclusion practices, the services are brought to the student (p.719)." The role of the occupational therapist in a full inclusion classroom is to provide intervention within the general education environment, including during class time, lunch hour, or recess. This treatment method allows the child to learn within the appropriate context and also facilitates social interaction with peers throughout the normal school schedule (Kellegrew & Allen, 1996).

The Moorpark Model is based on the full-inclusion program at the Moorpark Unified School District in Moorpark, California. The philosophy of this program is that students with disabilities have the right to be recognized as full members of the classroom environment (Kellegrew & Allen, 1996). In this school system, occupational therapy treatment is administered in the natural environment as much as possible. If direct service model approaches are necessary outside of the general classroom, the contextual environmental demands are incorporated so that the child will be able to generalize this information in the context of all settings (Kellegrew & Allen, 1996).

This program enforces the need for related services to be implemented within the context of the normal environment. Results show that general education students also benefit from special activities provided by related service interventions during normal classroom routines. Also, this method allows general education students to receive services without being classified as children receiving special education (Kellegrew & Allen, 1996). It seems as though each student can benefit from the integration of services in the general education classroom. In the specific case study of this model, results indicate that full inclusion improves academic success, socialization skills, and peer acceptance. This article presents a case study only, however, and lacks the research needed to prove the authors' point conclusively. The Moorpark Model emphasizes that least restrictive environment is most often the general education classroom, although they do not incorporate the children's perception of success or satisfaction in this inclusive setting.

Direct versus Consultative Models.

A study by Thress-Suchy, Roantee, Pfeffer, Reese, and Jennings (1999) focused on the perceptions of mothers, fathers, and teachers regarding occupational therapy services. The authors used a five point Likert scale and an open-ended response section to discover the trends in opinions of direct versus consultative services. Thirty- five mothers, eleven fathers, and fourteen teachers returned the questionnaire (Thress-Suchy et al., 1999).

The results of the survey reveal that both methods of intervention can be seen as effective. The opinion was that it was the amount of therapy the child received that made an impact rather than the setting or approach to treatment. In both models of delivery, the

areas of treatment that respondents felt made a difference in the child's needs were activities of daily living, fine and gross motor skills training (Thress-Suchy et al., 1999). In addition to these, teachers included providing help in the classroom, incorporating sensory integration in the classroom, and sharing information as important aspects of therapy.

This study demonstrates that perceptions of effectiveness may vary depending on the specific child's needs or the respondents' experience. The authors suggest that more effectiveness- based research is needed, but that opinion research is important in order to facilitate communication among therapists, teachers, and parents regarding the delivery model and approach that will be perceived as most effective for each child. There is no mention throughout this study, however, of the importance of incorporating the child's perception or opinion when deciding the approach to service delivery.

Case-Smith and Cable (1996) conducted a survey to determine how and why a therapist chooses one approach over another. The researchers asked questions regarding which methods were being used, how often, how the decision was made, and to discover variables associated with attitudes toward each method. The study asked the respondents to determine how much time was allocated for using two service delivery models. The authors labeled the models as direct/pull-out therapy and integrated/consultative therapy.

Results showed that 47% of the time therapists used the pull- out method of delivering services and 53% of the time an inclusive method was used. Attitudes about the advantages and disadvantages of the different models revealed that therapists' practice of these models is significantly associated with their personal or professional preference for a certain model. Time spent using the direct approach to service delivery

correlated to the beliefs of direct services being effective and enjoyable. Therapists who worked mostly under the consultative model had lower opinions regarding the importance or effectiveness of direct services.

Overall, therapists identified both positive and negative aspects of each delivery model and appeared to be convinced that most often a combination of service delivery is the most appropriate and beneficial way of treating children (Case-Smith & Cable, 1996). The author claims that although direct services are often implemented through a pull-out model (Case-Smith & Cable, 1996), respondents in the study viewed the practice of removing a child from a classroom to receive therapy as negative. 52% of respondents disagreed that children receiving a direct service provision were best served outside of the classroom.

Limitations of this study may have affected the results of responses. For example, although most participants stated they believed children should be kept in the classroom, no statistical analysis was done to determine how many actually practiced this belief. Results were limited to the percentage of therapists using direct versus indirect approaches. Relating to this idea, another limitation of the study is the vague definitions of terms. This study used direct service delivery to mean "pull-out" services and then changed the meaning of the term later in the article. This may allow for confusion as to the accuracy of percentages in determining how often each method is used and in what setting.

Open-ended questions may have provided a better description of respondents' viewpoints and the sample size was small (less that 10% of the school-based therapists contacted for the study). However, this study provides a good representation of the

variable use of service models and therapists' attitudes toward each (Case-Smith & Cable, 1996). It appears that there is no definite way that therapists determine which delivery option is best suited for a specific child. According to Case-Smith & Cable (1996), occupational therapists seem to rely on personal preference, availability of resources, and on their knowledge base regarding needs of a particular child.

Davies and Gavin (1994) studied the difference between individual versus group/consultation methods in treating preschool children with developmental delays. Instead of focusing on opinions, the researchers attempted to use measures to determine the effectiveness of direct versus consultative services. They found that little research has been done and results have not empirically shown that alternate treatment approaches, including monitoring and consultation methods, are effective.

In their study, eighteen preschool children with developmental delays were treated by either direct/individual therapy or group/consultation therapy. After comparing the initial assessment scores of fine motor, gross motor, and functional skill development with scores seven months after treatment, both groups improved in all areas. Due to the results of their study, Davies and Gavin (1994) concluded that there was no statistically significant difference between these treatment methods in improving the children's scores.

Robert Palisano (1989) conducted a similar study, comparing two methods of service delivery for students with learning disabilities. One group of students received group therapy using a direct intervention model and the other received group therapy using a consultative approach. The direct intervention was implemented in a therapy room conducted by an occupational therapist while the consultative approach was used

within the children's classroom. Both sessions included gross motor activities, sensory integration techniques, visual-perceptual, and motor skills (Palisano, 1989).

Comparison of children's results of scores demonstrated that both methods were effective in improving a child's performance. Interpreting the results is limited due to the small sample size and lack of control group (Palisano, 1989). Also, it is difficult to interpret what affected the improvement, such as direct versus consultative or pull- out versus in-classroom treatment. Because of the limitations of the study, it may be inappropriate to generalize this study to children with more significant learning disabilities or to children with physical limitations.

Theories to Guide Treatment in the Public School System

Because evidence is scarce regarding which approach is most appropriate when working with a particular child, a school- based occupational therapist must rely on theoretical knowledge to help justify treatment decisions when treating children with special needs. Each child is unique and complex in terms of his or her therapeutic needs. Occupational therapists are expected to incorporate theoretical constructs that include the environment as an influence on the person's behavior. In a school setting, it is essential that environmental factors are taken into account by the school- based occupational therapist in order to gather all information relating to the child's need for services.

This can be accomplished by assessing the environment and also asking for the child's input in regard to environmental factors. Involving the person receiving occupational therapy services is also a fundamental aspect of practice and has been receiving more attention recently. Only when the therapist gains knowledge of the

client's perspective can he or she be sure that they are providing the most effective treatment for this person.

Hall, Robertson, and Turner (1992) described a formal clinical reasoning process used in the Wake County Public School System in North Carolina to determine the appropriateness of service. This article states that the benefits to using this clinical reasoning process include the ability to determine what type of service would meet a particular child's needs.

The authors describe the clinical reasoning process as a means to solve complex problems that are difficult to address, such as when one is faced with inadequate or unavailable information about a child (Hall et al., 1992). Deciding which intervention model is best suited for which individual is definitely an undefined problem thus far in field of occupational therapy. The clinical reasoning process is used at the Wake County Public School System as a guide to structure treatment and service decisions. The authors stress that results of the process cannot be generalized to a specific treatment recommendation, but that the process itself can be taught to others to help guide decisions (Hall et al., 1992).

The clinical reasoning process includes a flow chart or decision tree in determining the type of service that would best benefit a child once it is decided that services are needed. Guidelines include ways to delineate the choice between direct, monitoring, and case consultation. For example, if a child's treatment requires therapeutic techniques specific to the skills of an occupational therapist and no other person could carry these out safely, then direct service is chosen. If a child requires more of a skills training program or if the child needs skills that the regular curriculum is not

providing, and someone else could carry over this training safely, monitoring is indicated. If adaptations are needed to carry out this training, or if the child only needs environmental adaptations or equipment, then case consultation is most appropriate (Hall et al., 1992). However, there is always an overlap between service types, indicating the need for flexibility in adjusting and determining the type of service provision needed.

As the clinical reasoning process is used in decision making, it allows teachers and parents to understand the need for occupational therapy in the school and demonstrates the value of all types of service models. The authors stress the need for testing to determine whether a multi-service approach is an appropriate means of therapy in the public school system. The article does not directly differentiate between pulling a child from the classroom versus keeping them in an inclusive environment (Hall et al., 1992).

Ecology of Human Performance Model

Occupational therapy theory suggests that the environment must play an essential role in treatment planning. Dunn, Brown, & McGuigan (1994) explain that behavior is a result of physical, social, temporal, environmental, and cultural factors. The theme of environmental importance is continuously apparent in occupational therapy literature, however, discussion about how to implement this theory is limited. The Ecology of Human Performance Model (EHP) can be used as a guide for therapists in considering the effect of context in treatment. The EHP framework considers the environment an important element that impacts on behavior.

That an interaction exists between human behavior and environment and that performance can only be understood in that particular context is a key premise to this

theory (Dunn, Brown, & McGuigan, 1994). For example, if a person has limited resources or abilities within the natural environment he may not find meaning in the environment or be able to perform within that setting. "The tasks that are possible are limited because the person is not able to use the resources that might be available to support performance in the context" (Dunn et al., 1994, p. 601). This statement reflects the importance of critically analyzing the setting in which the client will benefit most from treatment. A person may learn a new skill in the context of the therapy clinic, but be unable to use what they have learned in the everyday world. It is critical that a therapist acknowledges the importance of the context and decides treatment plans accordingly.

The authors suggest there are several steps in determining treatment needs. One must first attempt to alter the client's skills and abilities in the natural environment. Another option is to alter the context so that the patient can perform at his current skill level in the appropriate environment. In this intervention approach, one does not change the actual person or environment but instead attempts to find a match between the needs of the person and the benefits of a particular environment. Another option is to adapt the actual environment so that the person finds some success. The therapist either changes the context or the tasks to be performed by providing cues or reducing distractible aspects of the current environment (Dunn et al., 1994). Although this model may appear to imply that persons be treated in the natural environment exclusively, the authors suggest that research is important to determine outcomes when treating in both the natural and contrived context for individuals with particular conditions.

This theory may help the school- based occupational therapist discover the best environment for the child receiving services. Sometimes it may be difficult for a child to

generalize skills being learned in the therapy room to the actual classroom setting. At other times, children may not find that the classroom is a conducive environment to accomplish occupational therapy goals. Asking the child may be the first step in deciding which environment helps the child succeed in therapy.

Client-Centered Theory

Client-centered practice, also referred to as person-centered therapy, was first introduced by Carl Rogers in the 1940's and 1950's (Ryan, 1997). Rogers highlighted the importance of cultural values, the therapist-client relationship and interactions, and the client's active role in therapy. He believed that the quality of the therapist-client interaction was very important (Law, Baptiste, & Mills, 1995). Rogers intended his theory be used as a basis for psychotherapy (Brodley, 1986), but within the past two decades it has been brought into the health care practice in other ways (Law et al., 1995). Within the health professions, Canadian occupational therapists were among the first to employ the client-centered model by systematically adding some changes. These changes include the essentials of collaboration among the client and the therapist, the client's right to make choices regarding treatment, and the influence of the client's context in determining interventions (Law et al.). Both assessment and treatment focus on collaborative relations with the person receiving therapy in client-centered theory.

Law et al. (1995) define client-centered practice as:

> an approach to providing occupational therapy, which embraces a philosophy of respect for, and partnership with, people receiving services. Client-centered practice recognizes the autonomy of individuals, the need for client choice in making decisions about

> occupational needs, the strengths clients bring to a therapy encounter, the benefits of client-therapist partnership and the need to ensure that services are accessible and fit the context in which a client lives (p. 253).

Autonomy and choice focus on the fact that each client is unique and brings his or her own views to therapy. Clients are seen as experts about themselves, as they are the ones who know how their disabilities are affecting their activities of daily living. To help the client make choices about services, the therapist must present all the necessary information to the client in such a way that the person can understand (Law et al.).

It is important for the therapist to recognize and respect the patient's values and beliefs, and look at these beliefs when determining intervention. In reality, there is uncertainty about the extent to which therapists involve their patients in the planning of intervention (Brown & Bowen, 1998). Brown & Bowen conducted a study to determine whether or not therapists consider the consumer's choice and environment when creating a treatment plan. The researchers surveyed two hundred occupational therapists by presenting a case study for them to return with a treatment plan.

Results of this study determined that therapists fail to integrate the environment and the opinion of the client into the treatment plan (Brown & Bowen, 1998). They explain that "respondents identified more interventions aimed at changing the person than interventions aimed at changing the environment or making a person/environment fit (Brown & Bowen, 1998, p. 57). However, the small sample of returned surveys limits the validity of this study. The results may have differed with a larger and more diverse population.

Bowen (1996) suggests that the school system is one setting in which it is essential to involve the person in the decision of service delivery. She provides guidelines for proper implementation of client-centered theory explaining that it is important to involve the client in decision making from the evaluation through the treatment process. The recipients of occupational therapy services should be educated in terms that they understand so that the therapist can help create goals and decide which services best fit his unique needs and how these services should be carried out (Bowen, 1996). Any client, regardless of age, should have input in the type of treatment he will receive, where this will take place, and what goals are appropriate to address during intervention.

When treating children it is important to implement the client-centered theory. Although most children do not understand the technical aspects of the treatment being provided, they may have a sense of what feels best. A child may be able to tell his or her therapist which environment is most comfortable during treatment and why. One child may notice that the classroom allows him or her to understand what is being taught or worked on during therapy, while another may be able to express that the therapy room is best because it is easier to concentrate. By asking the children directly and giving them a voice in the treatment decision, the therapist may empower the children and have more justification of treatment decisions.

Research Regarding Client-Centered Theory

Klingner, Vaughn, Schumm, Cohen, & Forgan (1998) incorporated this notion of the importance of being client-centered within the school setting. They conducted a study on children's perceptions of the different service delivery models they had received. The purpose of the research was to determine the children's preference for

inclusion or pull- out services within the school system. Subjects in this study were thirty-two students, with and without learning disabilities, who had been exposed to both general classroom/ inclusive services and resource room/ pull- out services. The researchers evaluated which model enhanced learning and social interactions according to the students. Results indicated that the pull- out method was the children's choice overall, but many children indicated that inclusion was meeting both academic and social needs (Klingner et al., 1998).

The researchers found that although the children had opinions on the subject, they were not very emotional about the issue one way or another. Students believed that more learning took place and there was a greater emphasis on learning when in the classroom, although the work was more challenging (for some students this was positive, for others it was negative). In terms of academic versus social factors, more students said that pull-out was preferable for learning but inclusion was better for making friends (Klingner et al, 1998). The researchers suggest that the options of push- in or pull- out services should remain, and that each child's treatment should be based on the student's needs. Perception of which option is most appropriate should be one of several issues when implementing a child's treatment plan (Klingner et al, 1998). The child may have relevant input as to which model is truly "least restrictive" for achieving success in therapy and in academics.

Klingner and Vaughn (1999) summarized twenty studies that occurred over two decades addressing students' perceptions about inclusion efforts. The studies involved children both with and without learning disabilities and the students' opinions were "surprisingly convergent" in terms of service implementation within the classroom. Most

students did not find that special adaptations and accommodation were a hindrance to learning. The majority thought accommodations had the potential to promote learning for the entire classroom. Students have individual and distinct ideas of how they should be taught and how they learn best. The children want equal treatment, yet they also realize that some students have unique needs to succeed in the classroom. In summary, students with learning disabilities desire involvement in the same activity groups as their classmates, and their peers without disabilities agree.

While students' perceptions should not be the only determinant during decision making, the students' voices should be considered when planning educational adaptations, accommodations, and service implementation (Klingner & Vaughn, 1999).

Effectiveness of Implementing Client- Centered Treatment with Children

Some may argue that a child is too young or cognitively immature to make decisions regarding treatment settings. School systems have a curriculum that students are expected to follow, most often without having a voice in program planning. However, there is theoretically and scientifically based evidence that school- aged children have the cognitive capacity to provide input and make choices regarding their educational needs.

Piaget's theory of cognitive development suggests that by the age of seven or eight years, children are capable of logical thought (Wadsworth, 1996). Piaget named this period of cognitive development as the "concrete operational stage". The child's sense of autonomy is enhanced during this period. This is evidenced by an increased ability to evaluate oneself in terms of morality and by the ability to make decisions based on one's own will (Wadsworth, 1996). Children before this age accept authority as the ultimate rule without being able to evaluate the rules as being fair or suitable to their own personal

needs. Once children reach this "concrete operational stage" at the age of seven or eight, they continue to respect authority but are also able to critically evaluate the rules placed upon them. At this stage of development, students are able to understand the viewpoints of others and are able to exchange logical thoughts and discussions with adults (Wadsworth, 1996).

In 1970, Piaget emphasized the importance of incorporating students' interests and personal needs in the development of school curricula. He theorized that children demonstrate increased performance and success when they are allowed the opportunity to collaborate with others regarding their programs and expected outcomes (Piaget, 1970). When a student is allowed to incorporate his or her own will, personal needs, and interests in the activity, the motivation to engage in the activity will increase which in turn will enhance success (Piaget, 1970). Wadsworth (1996) explains that Piaget was an advocate for treating children as equals versus using an authoritarian approach to teaching. School- aged children should be allowed a voice in creating rules and programs in order to allow them to practice self-criticisms and self-discipline (Wadsworth, 1996).

An article by Brown (1999) enhances the credibility of Piaget's theory of cognitive development and the ability of children to make personal decisions regarding their needs. Brown (1999) discusses both the cognitive capabilities of middle school children and the need to reexamine school curricula in order to account for students' level of development. The author explains that the focus of middle school education is to expand self- awareness and a sense of uniqueness and competency. Children in middle school, from seven to twelve years of age, have developed a solid sense of self, according to Brown (1999). Megacognition begins to develop, whereas students know about and

have control over their own thinking (Brown, 1999). It is important to incorporate these skills into school activities to enhance refinement of cognitive development. The middle school curriculum should be set up in a way to allow for individualized thinking and decision- making to occur, because at this age children are cognitively able to make decisions, think about and evaluate outcomes, and develop rational conclusions (Brown, 1999). It can be argued that Brown would advocate for middle school children to be allowed the opportunity to collaborate in occupational therapy service delivery based on this literature.

Sameroff and Haith (1996) integrate numerous research studies and theories in their book titled, The Five to Seven Year Shift: The Age of Reason and Responsibility. They explain that the mind of a five year- old and that of a seven year- old are extremely different. There is a cognitive growth during these years leading to the development of self- understanding. Some would argue that school- aged children are unable to evaluate personal strengths and weaknesses and therefore, would be unable to make educated decisions as to which setting affords them the best performance during occupational therapy intervention.

Sameroff and Haith (1996) argue that although very young children see themselves concretely as being either "bad" or "good" at certain skills, that by the age of seven, children are able to be both self- critical and self- understanding. School- aged children are able to integrate many concepts and provide various examples when discussing their personal strengths and weaknesses (Sameroff & Haith, 1996). The authors also explain that school- aged children have the maturity to conceptualize their

thoughts and the thoughts of others. This enables them to communicate with adults effectively regarding their needs (Sameroff & Haith, 1996).

There is documentation and literature to defend the use of client- centered occupational therapy with children in the public school system. Because children are at various stages of cognitive development and many receiving services have learning disabilities, adults may need to adjust the method of collaborating with students versus older clients. Due to the research indicating the potential to discuss treatment intervention and service delivery methods with children, occupational therapists should take into account the students' ideas when determining service delivery settings.

Conclusions

The research available may be used to guide an occupational therapist when deciding which service delivery provision would best suit a student. However, there is insufficient research reflecting the difference of using a pull- out versus in-classroom approach when implementing direct treatment services. Although it seems as if most often the choice would be to keep the child within the classroom context, many therapists pull children out and treat them in a clinic setting within the school system. It is not known if therapists are consistent in providing services in the least restrictive environment, and whether in-classroom treatment is actually the least restrictive environment for therapy.

Further research is needed on this topic, specifically geared to treating certain disabilities. Also, research is needed to help decide when to use a direct, monitoring, or consultative approach to treat a child. The first step in identifying the implications and effectiveness of each method may be to ask the recipients of the service their opinions

on what works best for them. Because occupational therapy promotes the importance of the client's voice in treatment, asking the child his or her opinion on the services is one avenue to enhance the implementation of the client- centered approach. In asking the children directly, we may also begin to answer questions of which environment is truly the "least restrictive" in their eyes.

Chapter 3

Methodology

Research Questions

Do children prefer a direct, pull- out service delivery model or a push- in approach to occupational therapy for the treatment of handwriting delays? What is their reasoning behind their choice? These questions were answered through interview and data analysis. By interviewing children receiving both service models of occupational therapy within the public school system, the preference of one over another may help therapists determine the best treatment approach to implement.

Description of Subjects

Nineteen students participated in this study. The students were from the Auburn, Jordan- Elbridge, and Port Byron school districts in Upstate New York. All subjects were enrolled in public education and were currently receiving occupational therapy services through New Directions Therapeutics, Inc. This agency contracts with the public school systems in the counties of Cayuga, Onondaga, and Wayne to provide school-based occupational therapy services.

Eight girls and eleven boys, ranging in age from seven to eleven years old, participated in the interview. Of the nineteen subjects, five were primarily diagnosed as multiply disabled, four were labeled Other Health Impaired, three as Speech Impaired, two as mildly autistic, and two as learning disabled. One child was primarily diagnosed as having Attention Deficit Hyperactivity Disorder (ADHD), one as having Obsessive Compulsive Disorder, and one student was labeled post Traumatic Brain Injury. Nine of the participants were enrolled in special education classes, being integrated in regular classrooms for "specials" and/or specific academic subjects. Ten of the students were in

regular education classrooms for the entire school day. All were verbal and deemed capable of answering the interview questions by their occupational therapists.

All subjects were currently receiving occupational therapy in a combined service delivery approach of pull- out and push- in sessions for goals related to handwriting. Six children had IEP guidelines indicating the need for occupational therapy one time per week and thirteen children received services twice weekly. Only one IEP indicated that the child must receive one pull- out session and one push- in session per week, whereas all others indicated that either delivery model be used as appropriate. All therapists expressed they felt that the nineteen students had experienced both models on enough occasions to be able to answer the interview questions.

The participants were chosen by a chart review to randomly select approximately thirty students meeting specific criteria. The participants were between seven and eleven years old, were currently attending a public school system, and had received occupational therapy services in the last two years with goals related to handwriting skills. All students included in the study had been treated both in the classroom and in a separate therapy space within the school building for occupational therapy services. The children in this study had minimal to no physical disabilities. A demographic sheet was developed in order to obtain data (See Appendix A).

The school districts were sent a letter with information about the study (See Appendix B) and asked to return an informed consent form (See Appendix C). Consent was obtained from all school districts involved in this study. All parents of the children identified as potential subjects were sent letters about the study (See Appendix D). Nineteen of the children's parents gave informed consent for the interview to take place.

The children were also asked to sign the consent form before participating in the interview (See Appendix E).

Measurement Instruments

The researcher created the interview format and questions used in this study. The format consisted of both open-ended and forced choice questions in order to gather and analyze data. The interview incorporated an open- ended portion in order to allow the child to express his or her opinion without prompting from the researcher. Follow up questions facilitated a clearer explanation of the child's responses (See Appendix F).

A preliminary list of forced choice questions was developed based on the factors discussed in the literature. These questions relate to factors of receiving therapy both in the classroom and in a separate therapy space. The factors emphasized related to research regarding children's opinions of learning in a general classroom versus a resource room. Klingner, Vaughn, Schumm, Cohen, and Forgan (1998) identified factors relating to social, emotional, and academic needs of children. Some aggregate opinions relating the above factors to options of service delivery are that staying in the general classroom allows children to experience more friendships, receive more help, and learn better. However, this setting was thought by some to be too noisy, distracting, or embarrassing. Some reported the opposite opinion in regards to the same factors, stating they felt pulling children out for services allowed them to experience more friendships, more help, and a greater learning opportunity. Many thought that both settings had advantages and disadvantages and could not choose one setting over another (Klinger et al., 1998). As the researcher of this study developed survey questions, these factors were

incorporated, addressing social, emotional, and academic reasons for the children's opinions.

To enhance or refine the list of factors, therapists from New Directions Therapeutic, Inc. discussed their knowledge of factors expressed by children regarding services with the researcher. Although this list of factors is by no means inclusive of all possible opinions of a child, it is a starting point for discussing the topic. Questions addressed both positive and negative aspects of therapy in the classroom and in a separate space.

This interview was pilot studied using seven children with similar criteria to determine the appropriateness of questions in terms of wording and content. One question was restructured for clarity and all others were deemed appropriate from results of the pilot study. Ten adults were asked to review the questions for clarity and content before implementing the interviews. The Ithaca College Human Subjects Review Board approved this study following the completion of a research proposal (See Appendix G).

Description of Study

The children were interviewed during a time period that did not conflict with academic programs or "specials" such as gym, music, or art. Most interviews took place at the beginning of the child's therapy session. Each interview took approximately five to ten minutes to complete. The children were asked questions regarding their opinions of occupational therapy services both in the classroom and outside of the classroom. All answers were recorded on the interview sheet and kept in a confidential binder.

The researcher had initially planned to audiotape the interviews and record responses on paper to accurately gather all data. Following the first interview, the

researcher decided to discontinue this method of data collection as it created a distraction for the child, it increased the need for confidentiality, and recording responses on paper was accurate and complete. The interviews were conducted in a private location without the presence of the therapist.

Data Analysis

Each question was separated into categories of negative and positive factors of each method of service delivery. Descriptive statistics were used to obtain an aggregate opinion as to which service delivery is preferred and the common factors associated with this choice. Because the reliability and validity of the interview have not been established, results need to be interpreted cautiously.

Chapter Four

Results

Percentiles were compiled to determine the results of each question. Questions regarding opinions of the therapy room and of the classroom setting were grouped separately. When children were asked to identify their preference for in- classroom therapy versus therapy in the occupational therapy room, 100% of the children indicated that they prefer the therapy room versus staying in the classroom to receive services. When answering forced- choice questions related to both settings, the children varied in their opinions. Table 1 depicts answers relating to children's opinions of pull- out services.

Table 1

Percentage of Children's Yes/No Answers Regarding Pull- Out Services (n=19)

Interview Question	Yes	No
Do you like leaving class to have therapy with your OT?	94.7	05.3
Do you feel like you are able to get your therapy work done when you go to the therapy room?	84.2	15.8
Do you get embarrassed at all when your OT works with you in the therapy room?	05.3	94.7
Are you able to pay attention to your therapist in the therapy room?	94.7	05.3
Do you have fun when you have OT in the therapy room?	100.0	00.0
Does your therapist help you with your work when you are in the therapy room?	94.7	05.3
Is it noisy when you have therapy in the therapy room?	00.0	100.0
Would you like to have more OT in the therapy room?	100.0	00.0

Although all children expressed they would enjoy more occupational therapy services in the therapy room, one child expressed he did not like leaving class to have therapy and that he felt he was unable to complete his work when in the therapy room. Another child also expressed that he was unable to complete occupational therapy assignments in the therapy room, indicating a possible preference for therapy in the classroom. However, all children expressed that they felt that the therapy room was a quiet place to have occupational therapy and that they felt pull- out services were fun. Only one child indicated he became embarrassed when taken from the classroom for therapy. Results indicate that although all children indicate a strong preference for pull-out services, some were able to indicate negative aspects to this service provision.

Children's answers in regards to occupational therapy in the classroom were more varied. 63.2% of the nineteen children interviewed expressed they did not enjoy staying in class for occupational therapy services. 57.9% of the children did positively note that they were able to complete occupational therapy assignments within the classroom setting and that they did have fun when receiving push- in therapy. The ability to pay attention to the therapist in the classroom and the potential for embarrassment did not appear to be predominant factors in the children's preference for pull- out services. 78.9% of the children expressed they were able to pay attention and the same percentage indicated they were not embarrassed when the occupational therapist provided services within the classroom environment. 78.9% of the interviewees expressed that they felt adequate help was provided when the therapist provided treatment in the classroom. The level of noise, however, appears to influence the children's preference for pull- out services. 78.9% of the nineteen children expressed it was noisy when interacting with the

therapist in the classroom setting. Only 10.5% of the children would enjoy more occupational therapy in a push- in intervention approach. Table 2 depicts answers of children's opinions regarding push- in therapy services.

Table 2

Percentage of Children's Yes/No Answers Regarding Push- In Services (n=19)

Interview Question	Yes	No
Do you like staying in class and having your therapy there?	36.8	63.2
Do you feel like you are able to get your therapy work done when you stay in class for therapy?	57.9	42.1
Do you get embarrassed at all when your OT works with you in the classroom?	21.1	78.9
Are you able to pay attention to your therapist in the classroom?	78.9	21.1
Do you have fun when you have OT in the classroom?	57.9	42.1
Does your therapist help you with your work when s/he is in class with you?	78.9	21.1
Is it noisy when you have therapy in the classroom?	78.9	21.1
Would you like to have more OT in the classroom?	10.5	89.5

When cross- tabulating results to determine the impact of one answer in relation to another, no significant differences were found. For example, there was no correlation between the child stating he or she was not able to pay attention in the classroom and whether or not it was felt the classroom was too noisy. Other cross tabulations between

questions were similar in that there was no direct relationship between answers. The research is limited to descriptive statistic measures due to the limited number of participants in the study and the paucity of interview questions given.

Open- ended questions yielded the most significant results in terms of eliciting the true opinions of the children. Although these answers do not have statistical relevance, trends are evident in terms of the children's reasoning behind their answers. Twenty-three answers to the open- ended portion of the interview related to factors of play opportunity in the therapy room. Some quotes include the following: "I have more fun because there's games," "It's fun because I can go in the ball pit, and we can't do that in class," and "It's more fun, because I can play games and write on the board." Sixteen answers related to factors of inability to attend while in the classroom. Children expressed, "There are too many distractions in class...it gets tempting to talk," and "I can't get my therapy work done because kids sit next to me and disturb me in class." Four answers related to factors of embarrassment in the classroom. One child said, "I'm embarrassed because other kids stare at us in the room." Another said he is embarrassed in class because "all of my friends are there." Four answers were related to academic differences, such as the amount of work required in each setting, three were related to opportunities for help in the therapy room, and seven incorporated a variety of these factors or other factors in their answers. Although all open- ended answers are subject to interpretation, this is one way to identify common trends among the children in terms of their opinions. Although most children answered forced- choice questions with thought and confidence, follow- up questions allowed them to expand their answers. Open- ended

Chapter Five

Discussion

Research Questions Answered

The primary purpose of this study was to determine in which setting children prefer to receive occupational therapy services related to handwriting in the public school system. The research question, "Do children prefer a direct, pull- out service delivery model or a push- in approach to occupational therapy?" was answered in that all children indicated they prefer pull- out services. It is confirmed that the children surveyed enjoy pull- out services and would chose this delivery model over push- in when given the option.

When seeking an answer to the second research question, "What is their reasoning behind their choice?" results were varied. Trends were found as to why they preferred to be pulled out of the classroom. However, statistical significance could not be obtained. Answers to open- ended questions provided a better explanation of the child's opinions. Although some children could not accurately define why pull- out occupational therapy was their choice, most had legitimate responses as to the basis of their reasoning. The students most often related factors such as play or the ability to attend when discussing their preference for occupational therapy in a pull- out service model.

It is not surprising that children prefer the therapy room because of the increased play opportunities a pull- out model provides. Adults may perceive this reasoning as not important when determining treatment settings, however theories on play found in the literature defend play as an important factor in children's development.

Play Theory

Play has been an aspect of occupational therapy intervention from the beginning of the profession. As occupational therapy has changed with time, so has the theory

behind the importance of play. Many theories regarding play have emerged through the years, justifying the inclusion of play activities when treating children during occupational therapy sessions.

In this study, all children were being seen by the occupational therapist for handwriting problems. Although research was not aimed at discovering what methods were being used to teach handwriting skills, it is common for therapists to use rote exercises, such as worksheets, to meet these therapeutic goals. Using repetition and handwriting exercises is especially common in a classroom setting where a therapist is often working with a child at a desk, and limited space is available to provide play opportunities as a means of achieving goals. In a therapy space, the therapist is better able to use organized play tasks that work on the same skills needed for handwriting.

According to Bruner (1972) a child may learn better through play opportunities versus rote exercises. This theory of play suggests that play is a cognitive process that allows children to develop skills needed in adulthood. When engaging a child in organized play tasks, a child is able to practice skills in a safe environment without concentrating on the expected outcome of their actions. Bruner (1972) states that children require a flexible environment in which they are able to feel confident and safe in order to enhance their skills. This theory stresses that play is a primary method to facilitate the development of motor skills, such as handwriting, because it allows students to practice new skills and combine aspects of old skills in order to achieve new learning in contexts outside of the play environment (Bruner, 1972).

When a child is being treated for handwriting problems in the classroom through worksheet exercises, for example, the child may be primarily focused on completing the

worksheet successfully and feel insecure in trying out new ideas or strategies. Through structured play, a child may be practicing the same skills as during a work task. However, this is being accomplished with a feeling of ease because play is not seen as threatening, but as motivating and fun (Bruner, 1972).

Reilly explains that play is an important aspect of children's development, especially for those with disabilities, because it allows them to develop skills and to achieve in fulfilling their roles as student, son, daughter, brother, or sister. Reilly (1974) states that through play a child discovers a conflict between what is expected and what is unexpected. This conflict results in a child's curiosity as to how something works or how to solve a problem that arises during the play activity. This curiosity further motivates the child to continue playing and become competent in skills required to master the play task.

Reilly's theory can be directly applied to the analysis of why the children in this study indicated their preference for services in the therapy room due to the opportunity for play. Reilly discusses that children progress through stages of play development including exploratory, competency, and achievement behavior (Reilly, 1974).

Exploratory behavior is the first stage of play development that is seen in infancy and early childhood. This stage focuses on the child's interest in his or her new environment as one attempts to explore in search for rules. When a child in this stage is able to play in a safe environment, feelings of hope and trust in others and in the environment are fostered. Throughout the school years, the competency behavior stage emerges as children discover a need to interact and have an impact on the environment. The students practice new skills with concentration and persistence and search for feedback from others in order to enhance self- confidence and a feeling of mastery of

skills expected of them (Reilly, 1974). During the achievement behavior stage, children incorporate learning from the first two stages. As students mature, they strive to achieve as they gain a sense of success versus failure associated with expectations. Children in this stage of development compare themselves to a standard and a competitive element is incorporated, whether they are competing with others or with themselves (Reilly, 1974). Students participating in this interview were most likely experiencing the later two stages of play development.

A child receiving occupational therapy services in the classroom during the middle school years may be comparing his progress with that of his peers, according to Reilly's theory. Although the children in this study may not have associated this feeling with a sense of embarrassment, they may have associated this with why they prefer to learn through play activities in a safe environment, such as an isolated room.

Students with learning problems are constantly being challenged to succeed in a classroom setting and are being compared or comparing themselves to their peers. Children with fine motor difficulties struggle to achieve in the classroom throughout each day. Perhaps students with handwriting problems enjoy leaving the classroom to play in the therapy room simply because it provides them with a break from the stress of the classroom environment. A therapist providing in- classroom services, especially through rote exercises, may simply be adding to the pressure to succeed academically in the classroom. Through structured play activities that address handwriting skills, these students are able to practice new skills and are also provided an opportunity to escape the stressors experienced in the classroom.

Play as a Factor of Preference

Although various play theorists state that during middle childhood play is a means of developing skills, most school programs do not incorporate adequate play opportunity for children beyond the preschool years. In a study by Rothlein and Brett (1987) they discovered that parents were not interested in their children playing at school, but instead concentrating on academics as the children's school needs. Teachers in the study by Rothlein and Brett (1987) also expressed they felt play had little value in the school curriculum. Both teachers and parents indicated that they perceived play as a period of rest from work and that children did not require much play opportunity in school. The authors of this study suggest that the lack of written material regarding the importance of play in school-aged children's development may be related to this perception of play as invaluable.

Shevin (1987) conducted a literature review of special education sources and discovered that play was utilized even less in the special education versus general education setting as a means of skill development. In special education settings, play is most often used as a reward system for good behavior. Work is the focus and play is used as a time- filler or as a luxury versus as an educational component of the school day. Special educators most often use tools such as worksheets, pre- drawn art activities, and drills for teaching on a daily basis (Shevin, 1987). Although play theory suggests that children learn best through play activities, play is not readily being incorporated into the school day, according to research.

Perhaps the children in this study preferred pull- out occupational therapy services simply because this method allowed for a much needed opportunity to play. It may be

found that if push- in services involved elements of play, the children may perceive in-classroom occupational therapy in the same way as pull- out. If these children were experiencing classroom- based play activities more often throughout the general school day, they may better tolerate push- in therapy services whether or not they involved play at all. This study raises many questions as to the effectiveness of both occupational therapy services in various settings as well as to the teaching methods of children in general. All children may benefit from increased play opportunity throughout the school day in order to practice needed skills for success as their role as student.

In other studies discussed in the literature review regarding children's perceptions of service delivery methods (Jenkins & Heinen, 1989; Klingner et al., 1998), play was not found to be a predominant factor. In both studies, the authors were comparing the general education classroom versus the resource room and were not interviewing children in relation to occupational therapy services. Play is not usually a part of either the special education setting nor the general education classroom as discussed in the literature (Shevin, 1987). This interview focused on occupational therapy settings, where play is traditionally used in the pull- out method much more often than in the classroom setting. The difference in occupational therapy settings versus special education settings may account for play becoming a factor in this study and not indicated as a factor in other studies discussed in the literature.

Discussion of Other Factors

In this study, embarrassment was not a predominant factor in the students' preferences for therapy implementation when analyzing results of forced choice questions. However, some students did address factors of embarrassment during follow-

up questioning. Open- ended questions revealed that some children are embarrassed when their occupational therapist works with them in the classroom. Through forced choice answers, one child expressed he was embarrassed when being pulled out of the classroom.

These results are similar to those found by Jenkins and Heinen (1989). When asking children their preference for being educated in an inclusive setting versus in a special education setting, children emphasized factors of embarrassment in both cases. Some indicated that they became embarrassed when receiving help in the general education classroom and others expressed they were embarrassed when being pulled out of the classroom environment.

Although the sample size in this study was much smaller than the study by Jenkins and Heinen (1989), one may conclude that children do often feel embarrassed when receiving related services. However, the children's opinions differ as to which setting causes embarrassment. This finding emphasizes the importance of collaborating with students in order to determine their individual needs when deciding treatment settings.

In Cole, Harris, Eland, and Mills' (1989) study the teacher survey was related specifically to occupational therapy settings. The result of the teacher questionnaire disagrees with the children's opinions found in this study. The staff interviewed in the Cole et al. (1989) study indicated that neither service yielded embarrassment or distractions for the children receiving treatment. These were two factors identified by children preferring pull- out services in this study. Although both sample sizes were small, it is indicative that adults and children may view the least restrictive environment

differently. This finding is one more indication that collaboration with children is needed when determining the best setting for occupational therapy intervention.

Interpretation of Occupational Therapy Theories

As discussed in the literature review, a therapist must utilize occupational therapy theories when making treatment decisions, due to the lack of research regarding service delivery. The Ecology of Human Performance Model (EHP) is one theoretical model that may serve as a guideline when providing school- based occupational therapy, because the children in this survey clearly stated that the environment impacted their performance in therapy. Although the opinions varied in regards to each environment, all identified environmental factors in their reasoning for preferring therapy in a separate space. Whether they focused on the fact that the environment was more fun or less distracting, the environment played a role in their answers.

Dunn, Brown, & McGuigan (1994) discuss that the therapist must either alter the client's skills in the natural environment or change the physical environment in order to elicit success in therapy, according to the model. This study shows that the children are often able to identify how to alter the environment in order for therapy to be most beneficial. It may be that there needs to be more emphasis on creating a fun environment in the child's push- in session in order for them to enjoy treatment in the classroom and thus succeed. The therapist may need to alter the classroom session so there is less noise and less distraction. If embarrassment is a factor for the child when staying in class for therapy or when being taken out of the classroom, this emotional component may impact the success of treatment.

Because the environment does play such an important role in treatment, according to EHP and the results of the interview, it seems that by asking the child which environmental factors influence their success, a therapist can provide optimal treatment. The client- centered theory should also be utilized in the public school system. When being client- centered one can extract useful information for treatment planning, according to Law et al. (1995). This study suggests that even young children are capable of collaboration with the therapist and can identify logical reasons for their decision. Cognitive theories discussed in the literature review further defend the use of client-centered interventions in the school system (Wadsworth, 1996; Piaget, 1970; Brown, 1999; Sameroff & Haith, 1996).

There was some question as to whether this interview effectively extracted the true opinions of children, especially through forced choice questioning. This does not suggest that children are unable to collaborate, but indicates the importance of utilizing the proper approach when collaborating with children. Bower (1993) discusses children's abilities to make sense of their behaviors and the behaviors of others through telling stories. This may be why the children were better able to explain their thoughts regarding service delivery in an open- ended format versus a forced choice answer format. (Bower, 1993).

Children are less likely to communicate effectively and give accurate information when formal demands are placed on them, such as during a formal interview or during standardized testing, according to Bower (1993). Because children's language skills are different from adults' skills, interviewing methods used for children must differ from those used for adults. Interviewers should assess vocabulary and grammatical complexity

of statements made by children and adjust questions and comments accordingly (Bower, 1993).

Interview formats range from extremely structured to unstructured. A structured interview gives the interviewer maximum control over the child. Because of the nature of children, this format allows little opportunity for the interviewer to assess the meaning of questions and responses. When eliciting information about opinions or events, an unstructured format is more effective. An unstructured format encourages a child to describe their opinion in their own words. The child has the freedom to describe and meaning is easily inferred, according to Bower (1993). Bower's discussion regarding the importance of correct use of language and an unstructured format for interviewing is consistent with the results of this study, as open- ended questions yielded clearer results in comparison to the more structured, forced choice questions.

Interpretation of the Least Restrictive Environment

The difficulty is in determining if the reasons behind the children's opinions are valid and significantly relevant to influence a therapist's idea of what is least restrictive for the students. Because so many responses were thematic in expressing that the pull-out model allows for more fun, this may present a problem in treatment planning. One could argue that the environment in which the child is most motivated and having fun may be the least restrictive. In this environment, the ability to reach goals and facilitate an improvement of skills becomes easier. If a child is able to state that they are embarrassed or unable to pay attention to the therapist in the classroom due to noise, this may impact the therapist's decision to provide therapy in a separate space. For this child, occupational therapy in the classroom could be defined as the "most restrictive."

Osborne and Dimattia (1994) explained in the article, "The IDEA's least restrictive environment mandate: Legal implications", that the term "least restrictive" incorporates a continuum of environments depending on the child's needs. They also state that the law does not mandate that all children be mainstreamed in general education, but that children should only be pulled- out when absolutely necessary. As seen in this study, some children may feel it is necessary to receive treatment in a different space than the general classroom. This should be taken into consideration when determining the least restrictive environment for children receiving occupational therapy in the school system.

Collaborating with teachers and students may help a therapist determine which approach to use when implementing school- based occupational therapy. Utilizing opinions is necessary at this time, since no effectiveness studies found when reviewing the literature indicated a significant difference in the effectiveness of one approach versus another.

Impact of the Study

This study in no way determines which setting is most effective. The reader should review the results only as a method of discovering trends in opinions of children. The results of this study can be used as a method of eliciting discussion among law-makers, therapists, parents, and teachers regarding implementation of services. Until effectiveness studies can yield conclusive information, school- based occupational therapists may need to turn to the students to discover which of the approaches they are using is most effective and comfortable for them.

Limitations and Assumptions

This study was limited in terms of the subjects and the measurement instrument used. This study is limited to the children with common goals related to handwriting. It cannot be generalized to other populations receiving similar services. The small sample size of children interviewed also limits the ability to interpret results. Because this is a convenience sample of children receiving therapy services through New Directions Therapeutic, Inc., the results cannot necessarily be generalized to all children with similar criteria in other school systems.

The survey questions were at times unclear to the students. Because each question was presented to each child in the same manner, it was difficult to determine the accuracy of the yes or no answers. In general, students appeared to understand all of the questions and were able to consistently respond to the interviewer accurately. Two of the nineteen students had more difficulty answering the questions. The interviewer's confidence in the two children's ability to answer the questions remains uncertain. Both of these children were distracted and inattentive through a portion of the interview. Although they were able to provide answers to follow- up and open- ended questions, at times the follow- up answers were not consistent with the forced choice answers they had previously given.

The children had similar goals outlined in their Individualized Education Plan with at least one goal relating to the improvement of handwriting. However, the primary diagnoses and the educational settings of the children varied. Because of the small sample size, there is no way to analyze the data to determine if the assigned classroom or therapist had an influence on the children's opinions.

A question must also be raised regarding defining the terms push- in versus pull- out. Each child surveyed had experienced both settings of service delivery according to both the therapist and the documentation provided in the charts. The children interviewed were from different school districts and are seen by different therapists depending on which school they attend. This is significant in that each therapist may not only define the service deliveries they provide differently, but may implement the approaches differently as well. However, this variable is less likely to play a factor in the findings of this study as all therapists were taught concepts at New Directions Therapeutics, Inc. regarding service delivery.

Even in the small sample size of this study, it appears that different therapists provide both services in varying ways. The approach used in the settings seemed to influence the answers to the questions. As reported by the children, most therapists related to this study use games in a pull- out session more often than during a push- in setting. In some of the pull- out settings of the children interviewed, the therapy room was filled with large colorful balls, swinging equipment, and numerous games. In other pull- out settings, the room was simple and resembled more of a classroom environment. It is assumed that the classroom settings were also different in set- up and structure. Because of this variability, it may be impossible to determine a statistically significant reason behind the students' opinions and also which setting is most effective.

If a child received services more often in a therapy room versus in the classroom, he or she was more likely to have favorable experiences with this treatment and feel more comfortable with the approach with which they are familiar. By completing a record review, the researcher noticed a trend in frequency of service delivery. Each child had

documentation in the chart identifying the use of both in- class and pull- out therapy models, but by reading the therapists' daily notes it appeared that most children received pull- out sessions more than push- in. This also hinders one's ability to analyze data effectively.

The interview is limited in that it was created by the researcher and has not been studied to determine validity or reliability. Test- retest reliability would have ruled out the possibility of the students' affective state during the time of the interview as a contributor to the answers given. Also, a repeat of the interview taken place in a neutral environment would rule out the environment as a factor in the children's answers. Some interviews took place in the therapy room, which may have influenced the children's state of mind.

When creating the interview, some factors may have been left out that would be important to address. The last question asking for further opinions and follow-up questions attempted to compensate for this limitation. Asking a larger amount of questions in various ways would have enhanced the ability to analyze the data in terms of what factors influenced the students' opinions regarding delivery models.

Assumptions also need to be made when interpreting results of the study. Although the parents were asked to refrain from discussing the topic of the interview beforehand, there is no way to control for the possibility of the parent's input being reflected in the child's answers. It is assumed that the parent, the teacher, nor the therapist had discussed this topic with the child before the interview. An assumption must be made that all children answered the questions honestly and as completely as possible and that the children understood the questions and statements throughout the interview.

Future Research Needs

Future research is needed to further address the issues raised in this study. One needs to determine the impact of pull- out versus push- in occupational therapy on a child's learning. Effectiveness studies on this topic would enhance the clarity of what is truly "least restrictive" for a child.

A study regarding the effectiveness of handwriting intervention strategies is also suggested, since the efficacy of handwriting programs was not addressed in this study. In analyzing the results of this study, a question is raised as to how a therapist should address handwriting goals. One may question in a future study, "What is the outcome when attempting to improve handwriting through rote learning methods versus through structured play tasks?" Another question to follow is, "If one method is found to be more effective than another, would the treatment setting make a difference in the outcome?" This type of study would also help answer questions regarding the least restrictive environment for occupational therapy intervention relating to handwriting.

One needs to look further regarding the effectiveness and the correct approach to utilizing the client- centered approach in the school system. Although literature defends the ability to collaborate with students regarding their treatment plans, it is important to address through research how this is best implemented and whether it is truly effective.

A replication study with more controlled variables is needed to compare the results of this study. The method in which each service delivery model is carried out should be controlled in order to identify specific factors for the children's opinions. A study enrolling more subjects in a highly controlled environment would yield more significant findings in the future. One would need to control the variability of therapists,

classroom environment, and the children's equal experience with both methods of service delivery.

A comparison study would also be beneficial in the future. Comparing the children's opinions and the opinions of their parents or teachers would identify if there is truly a discrepancy between adults and children as to what is considered the best environment for learning.

Chapter Six

Summary

Upon completion of this study, it was discovered that the children interviewed had unique preferences in regards to the method of occupational therapy service delivery. Although all children said that they prefer the therapy room versus the classroom when receiving occupational therapy services, their reasons varied when asked questions related to both settings. The children interviewed voiced opinions based on common factors such as the importance of play opportunity and the ability to attend during occupational therapy intervention.

This study supports the premise that children have opinions regarding service implementation and that a client- centered approach is possible with children. A child's unique needs and preferences of service delivery should be considered by the school-based occupational therapist in order to determine what setting will best benefit each child. More effectiveness- based research is needed in order to complement the findings of this study and to provide more data for a therapist's decision- making in treatment planning.

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Appendixes

Appendix A

Demographic Data Form

CONFIDENTIAL

Child's Name:

Gender: Male Female

Parent(s) Name(s):

Address:

Telephone Number:

Age:

Diagnosis:

Handwriting Goals (general):

School/ School System:

Teacher:

Occupational Therapist Name:

Other Services:

How many years of OT services?

Is the child currently receiving services? Yes No
1 year ago/ 2 years ago

Received services in both settings? Yes No

Appendix B

Letter to the School Districts

December 1, 1999

Dear

I am a graduate student in the occupational therapy program at Ithaca College. As part of my degree requirements, I am in the process of completing my master's thesis. The subject of my thesis relates to occupational therapy services in the public school system. Specifically, I am interested in the perception of students about receiving therapy within the classroom versus in a separate therapy space. Current education laws are mandating treatment to take place in the least restrictive environment for the child, however there is little information regarding what this means for children with special needs. Asking children about their experiences with occupational therapy services in different settings is a beginning step in determining the most effective occupational therapy treatment for these children. This study provides benefits to both New Directions Therapeutic, Inc. and the school districts by giving them aggregate feedback on students' reactions to current occupational therapy practices within the school system.

I plan to conduct a short interview of approximately 20 children with occupational therapy goals relating to handwriting skills. In collaboration with my professor, Diane Long, and her staff at New Directions Therapeutic, Inc., I have identified children within your school system that would be appropriate for my study. Diane Long will be supervising me throughout this study, which is planned to begin around January 15, 2000 and be completed in March, 2000. With your permission to implement this interview, I will send a letter of consent and explanation of my study to the parents of these children. This interview will not interfere with the children's academic program and I will collaborate with the teacher and the therapist to find the best time to do the interview.

I have enclosed my Human Subjects Proposal and their approval of my study, which details my interview format and plan in more detail. Please review this and contact me at (607) 277-2553 or Diane Long at (607) 274-3093 with any further questions or concerns . Please return the attached form or, if you prefer, a letter agreeing to participate in the study by Friday, December 31, or as early as possible. I will share a summary of my results with your school district at your request.

Thank you for your time and cooperation.

Sincerely,

Sarah C. Gillis
Enclosure

Appendix C

School District Informed Consent Form

In-Classroom vs. Pull- Out Occupational Therapy Services:
The Opinions of Children within Three Public School Systems in Upstate New York

1. **Purpose of the Study:** To discover the opinions of children regarding the differences between occupational therapy services provided in the classroom versus in a separate therapy space.

2. **Benefits of the Study:** Because current laws are mandating treatment to take place in the least restrictive environment, it is important to discover what this means for children with special needs. Asking children about their experiences with services in different settings is a beginning step to determine the most effective occupational therapy treatments for children within the public school system.

   This study may give occupational therapists some insight on what children perceive as most helpful for them, which could impact service provision in the public school system. It may also provide benefits to New Directions Therapeutic, Inc. and the school districts involved by giving them aggregate feedback on students' reactions to occupational therapy practices within the school.

3. **What the Children Will Be Asked to Do:** The interview will take approximately 15 minutes to complete. The children will be asked questions regarding their opinions of occupational therapy services both in the classroom and outside of the classroom. All interviews will be audiotaped, provided parental and child permission. The researcher will also record the responses on paper. This method of gathering responses will allow for the analysis of data at the completion of the study.

4. **Risks:** There is little or no risk to a child participating in this interview. The child will not be removed from any academic programs for the interview or be pulled from any "specials" (such as gym, art, or music). The child may miss a small portion of a therapy session for that day. If the interview takes place during non-academic class time, the student may miss some social opportunities for that day. Each participant will be informed of the purpose of the interview and will be asked to answer some questions.

5. **If You Would Like More Information about the Study:** If you have any questions regarding this study, please contact Sarah Gillis at (607) 277-2553 or Diane Long at (607) 274-3093.

6. **Withdrawal from the Study:** The student can terminate the interview at any time, refuse to answer any questions, ask any questions, and discuss any concerns with the researcher throughout or after the interview.

7. **How the Data will be Maintained in Confidence:** To ensure confidentiality, each child will be assigned a number so that the child's name will not be recorded on the audiotape or on the response sheet. The interview will be conducted in a private location and the audiotape will be destroyed after data analysis is completed.

I have read the above and understand its contents. I agree to allow this study to take place within the school district, provided parental permission is obtained for all participants.

_____

Print or Type Name

_____ _____

Signature **Date**

Appendix D

Letter to Parents

January 1, 2000

Dear

I am a graduate student in the occupational therapy program at Ithaca College. As part of my degree requirements, it is necessary that I complete a research project. I am interested in learning how students feel about receiving therapy within the classroom versus in a separate therapy space. Asking children about their experiences with occupational therapy services in different settings is a beginning step to determine the most effective occupational therapy treatment for children within a public school system.

Please consider allowing your child to participate in a short interview about his/her opinions of OT services they have received in the school system. My professor, Diane Long, who is also the owner of New Directions Therapeutic, Inc., is supervising me. With her help, I have received permission to conduct my study at the school districts that contract with New Directions Therapeutic, Inc. Your child was selected at random from all children treated by therapists at New Directions Therapeutic Inc. based on the following: 7-11 years old, occupational therapy goals include handwriting skills, is currently receiving or has received OT services in the past 2 years, has been seen by the OT both in the classroom and outside of the classroom.

Every attempt will be made to be sure this interview does not interfere with your child's academic program. I will work with the teacher and the therapist to find the best time to do the interview. No personal or embarrassing questions will be asked and all responses will be kept confidential. The answers will be audiotaped for my research purposes, however I will be the only person listening to the tape and it will be destroyed at the conclusion of my study. The results will not be shared with anyone unless you indicate you prefer your child's answers to be shared with the therapist. My study has been approved by the Human Subjects Review Board at Ithaca College and by the school district.

Contact me at (607) 277-2553 or Diane Long at (607) 274-3093 with any questions or concerns. If you agree to allow your child to participate, please return the enclosed "Informed Consent Form" no later than January 15. The interview process will begin after permission is received. Please ask your child's permission to be interviewed before signing and have your child sign the form as well. It is important not to discuss the topic of the interview or the child's opinions before the interview is completed, since this could change the results of my study.

Thank you for your time and cooperation.

Sincerely,

Sarah C. Gillis
Enclosure

Appendix E

Parent/ Child Informed Consent Letter

In-Classroom vs. Pull- Out Occupational Therapy Services:
The Opinions of Children within Three Public School Systems in Upstate New York

1. **Purpose of the Study:** To discover the opinions of children regarding the differences between occupational therapy services provided in the classroom versus in a separate therapy space.

2. **Benefits of the Study:** Because current laws are mandating treatment to take place in the least restrictive environment, it is important to discover what this means for children with special needs. Asking children about their experiences with services in different settings is a beginning step to determine the most effective occupational therapy treatments for these children.

   This study may give occupational therapists some insight on what children perceive as most helpful for them, which could impact how one provides services in the public school system. It may also provide benefits to New Directions Therapeutic, Inc. and the school districts involved by giving them aggregate feedback on students' reactions to occupational therapy practices within the school.

3. **What the Children Will Be Asked to Do:** The interview will take approximately 15 minutes to complete. The children will be asked questions regarding their opinions of occupational therapy services both in the classroom and outside of the classroom. All interviews will be audiotaped, provided parental and child permission. The researcher will also record the responses on paper. This method of gathering responses will allow for the analysis of data at the completion of the study.

4. **Risks:** There is little or no risk to a child participating in this interview. The child will not be removed from any academic programs for the interview or be pulled from any "specials" (such as gym, art, or music). The child may miss a small portion of a therapy session for that day. If the interview takes place during non-academic class time, the student may miss some social opportunities for that day. Each participant will be informed of the purpose of the interview and will be asked to answer some questions.

5. **If You Would Like More Information about the Study:** If you have any questions regarding this study, please contact Sarah Gillis at (607) 277-2553 or Diane Long at (607) 274-3093.

6. **Withdrawal from the Study:** The student can terminate the interview at any time, refuse to answer any questions, ask any questions, and can discuss any concerns with the researcher throughout or after the interview.

7. **How the Data will be Maintained in Confidence:** To ensure confidentiality, each child will be assigned a number so that the child's name will not be recorded on the audiotape or on the response sheet. The interview will be conducted in a private location to ensure confidentiality and the audiotape will be destroyed after data analysis is completed.

I have read the above and understand its contents. I agree to allow my child to participate in this study.

Print or Type Name	**Child's Name**	
Signature	**Child's Signature**	**Date**

I give permission for my child to be audiotaped.

_____	_____	_____
Signature	**Child's Signature**	**Date**

__Please DO NOT share my child's answers with the therapist.
__Please share my child's answers with the therapist.
__I would like a copy of the summary of results.

Appendix F

Interview Format

INTERVIEW

1. You work with your OT _____. Sometimes you have occupational therapy in the classroom and sometimes you work in the therapy room. Is that correct?

2. Which do you like better, having OT in the classroom or in the therapy room?

3. Why do you like _____ better?

4. I am going to ask you some questions now and I want you to answer them the best you can.

Do you like leaving class to have therapy with your OT?	YES	NO
Do you like staying in class and having your therapy there?	YES	NO
-Follow up:		
Do you feel like you get more work done when you go to the therapy room?	YES	NO
Do you feel like you get more work done when you stay in class for therapy?	YES	NO
-Follow up:		
Do you get embarrassed at all when your OT works with you in the classroom?	YES	NO
Do you get embarrassed at all when your OT takes you out of the class for therapy?	YES	NO
-Follow up:		
Are you able to pay attention to your therapist in the classroom?	YES	NO
Are you able to pay attention to your therapist in the therapy room?	YES	NO
-Follow up:		
Do you have fun when you have OT in the classroom?	YES	NO
Do you have fun when you have OT in the therapy room?	YES	NO
-Follow up:		
Does your therapist help you with your work when s/he is in class with you?	YES	NO
Does your therapist help you with your work when you are in the therapy room?	YES	NO
-Follow up:		
Is it noisy when you have therapy in the classroom?	YES	NO
Is it noisy when you have therapy in the therapy room?		
-Follow up:		

Would you like to have more OT in the classroom? YES NO
Would you like to have more OT in the therapy room?
-Follow up:

Is there anything else you want to tell me about where you like to have your therapy?

Appendix G

Human Subjects Proposal

SARAH GILLIS

Research Methods 672-67000

Protocol for Protection of Human Subjects

Participating in an Interview

1. General Information about the Study

a) Funding. What are the sources of funding for the study, if any?

There is no outside funding for this study. The student will be responsible for all costs with help (as available) from graduate student funding and department funding for copying.

b) Location. Where will the study be conducted?

The study will be conducted in several school districts serviced by New Directions Therapeutics, Inc., a private therapy provider located in Auburn, New York. This agency contracts with the public school systems in the Cayuga, Onondaga, and Wayne counties to provide school-based occupational therapy services. Districts visited will be determined by the individual students selected at random for the study (and based on agreement to participate). The school districts will be notified with explanation of the study (see Appendix A and B).

c) Time period. When do the researchers plan to begin the study? When will the study be completed?

The time line of this study is as follows:

- provided Human Subjects approval is received, school districts will be sent letter describing study and asking permission to conduct interviews (see Appendices A and B) in December, 1999
- following school district permission reply, parental permission letters will be sent by January 1, 2000 (see Appendices C and D)
- interviews will begin upon receipt of parental permission (around January 15, 2000)
- completion of interviews by March 1, 2000
- data analysis to follow during March, 2000

2. Related Experience of the Researcher

The primary researcher of this study is an occupational therapy graduate student. Past experiences of the researcher include previous employment and volunteer work with children as well as clinical observation of this age group. Although no previous research has been done, the researcher has been exposed to education regarding proper interview style in class and practical experience in conducting interviews during Level II occupational therapy fieldwork. In this setting, the researcher was required to interview many clients in a skilled nursing facility, initially mentored by a supervisor.

For this study, Diane Long, a faculty member of the IC occupational therapy department, will supervise the student researcher. Professor Long is the owner of

New Directions Therapeutic, Inc. and has extensive experience in both teaching pediatrics and working with this population as a practicing occupational therapist.

3. Benefits of the Study

Current education laws are mandating inclusion or mainstreaming children with special needs in the general classroom. Provision of therapy services in naturally occurring environments (such as the child's classroom) within the school is also widely suggested in the law and literature. However, there is little information regarding the acceptance of this practice or the effectiveness of this practice for children with specific needs. Discovering the opinions of the children in regards to how occupational therapy services are delivered is valuable to therapists and the profession in general, as well as to the children who potentially receive their services.

Because there is little research determining the effectiveness of therapy in the classroom versus therapy outside of the classroom, a therapist often must use his or her best judgement to determine what is most appropriate. This study may give occupational therapists some insight on what children perceive as the most helpful for them, which could impact how one provides services in the public school system.

The study provides benefits to New Directions Therapeutic, Inc. and the school districts by giving them aggregate feedback on students' reactions to current occupational therapy practices within the school system.

Children participating in this study will have no direct tangible benefit except for the opportunity to talk with a caring adult about their experiences in therapy.

4. Description of Subjects

a) How many subjects will be tested?

Approximately 20 children will be interviewed for this study.

b) What are the salient characteristics of the subject population?

- age 7-11 years
- male and female
- attending a public school within the counties stated above
- have occupational therapy goals relating to improvement of handwriting skills (children with moderate or severe physical disabilities will excluded)
- are currently receiving or have received occupational therapy in the past 2 school years
- have been treated both in the classroom and pulled out of the classroom for occupational therapy services
- may or may not have other related services (speech or physical therapy)

5. Description of Subject Participation

The children will be interviewed during a period of time that does not conflict with academic program. Ideally, the interview will take place during an allotted occupational therapy session with the consent of the therapist, the appropriate school administrators, the parents, and the child. Each interview will be approximately 15

minutes. The children will be asked questions (see Appendix E) regarding their opinions of occupational therapy services both in the classroom and outside of the classroom. All interviews will be audiotaped (as allowed by the child and parent) and the researcher will also record responses on paper. This method of gathering responses will allow for the analysis of data at the completion of the study. The interview to be used will be pilot tested and if changes are made the researcher will resubmit Appendix E to the Review Board.

6. Ethical Issues – Description

a) Risks of Participation.

There is little or no risk of participation in this study. New York State Law explains that a child cannot be pulled from "specials" (such as gym, music, and art). The child will not be removed from any academic programs for the interview. If the interview does occur during therapy time, the child will miss a small portion of that session. If the interview takes place during non-academic class time, the child will miss some social opportunities that day.

I will inform each participant that the answers will not be shared with the therapist in any way that will identify the child. The student will be verbally informed of the purpose of the interview and will be asked if they are willing to answer the questions. The subject can terminate the interview at any time, refuse to answer any questions, and can ask any

questions or discuss any concerns with the researcher throughout the interview.

b) Informed Consent.

Each parent will be mailed a letter of consent describing the purpose and parameters of the interview (see Appendices C and D). The parent will be encouraged to ask the child's permission to be interviewed before signing, and there will be a space for the child to sign. The parent will also be asked not to elicit or suggest opinions on the topic before the interview to avoid skewing results. The child will also be asked for verbal consent by the researcher before the interview.

7. Recruitment of Subjects

a) Recruitment Procedures. How will the subjects be recruited?

The subjects will be selected randomly from those fitting the criteria (see description of subjects above). Potential subjects will be found by doing a record search of children receiving occupational therapy through New Directions. Approximately 30-40 files will be selected at random and the necessary school districts and parents will be contacted, in hope that 20 children will be available for the study. If sufficient agreements are not received a second record review will be done.

b) Inducement to Participate.

There will be no inducement to participate in this interview, except the promise to share the results if desired.

8. Confidentiality/Anonymity of Responses

To ensure confidentiality, the child's name will not be recorded on the audiotape or on the response sheet. Each child will be assigned a number so that the child's responses will be confidential. However, the researcher will keep a list of the names and numbers in a separate location so that data analysis can be compared to the child's profile and demographic information (age, gender, diagnosis, occupational therapy goals, etc.). The interview will be conducted in a private location to ensure confidentiality. The audiotape will be destroyed after data analysis is completed.

9. Debriefing

Debriefing is not necessary for the participant's of this study, as no deception is included in the study. Questions will be solicited at the end of the interview to clarify any aspect of the interview as necessary.

10. Compensatory Follow-up (if appropriate)

Compensatory follow-up is not necessary after the interview. The children will be informed that they could discuss the interview with their therapists if they feel the need or desire, or that I would share the results with the therapist only if they wanted me to. I

will also express that they can contact me at any time if they have further questions or would like to talk about the interview in the future.

11. Appendix A- letter to school district (see attached)

12. Appendix B- informed consent letter to school district (see attached)

13. Appendix C- letter to parents (see attached)

14. Appendix D- informed consent letter to parent/child (see attached)

15. Appendix E- interview format (see attached)

16. Appendix F- demographic data form (see attached)

questions provided opportunity to express a concrete example of why they preferred the therapy room versus the classroom for occupational therapy services.

Figure 1 represents a pie chart depicting the results of open- ended questions.

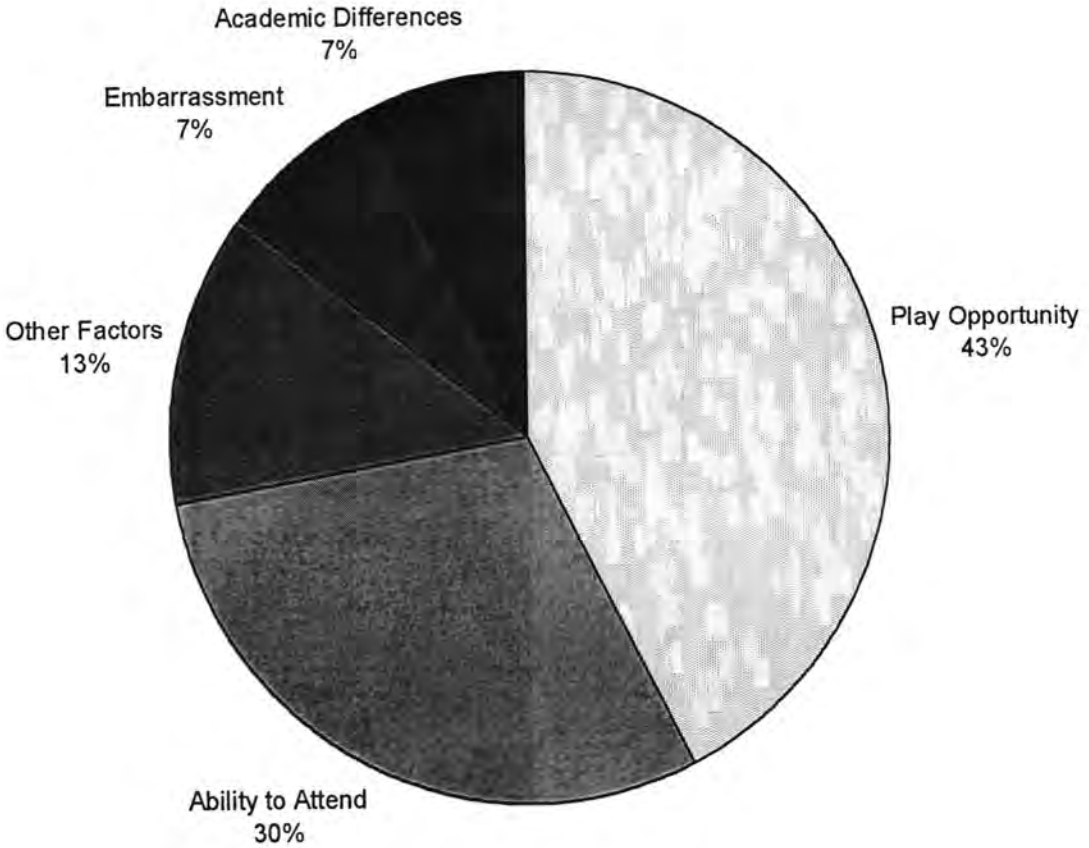

Figure 1. Results of open- ended interview questions.

Findings of this study indicate that children may have had difficulty expressing themselves clearly through forced- choice questions. However, they did indicate a clear preference for pull- out therapy. Answering yes or no to specific questions did not yield statistically significant evidence as to their reasoning. The follow- up questions enabled children to better express their opinions, as they explained that having opportunity for play and opportunity to attend were significant factors in their choice.