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**THE PUBLIC EDUCATION OF STUDENTS WITH AUTISM SPECTRUM
DISORDERS IN NORTHEAST OHIO: THE EXAMINATION AND
COMPARISON OF CURRENT PRACTICES TO THE PERSPECTIVE OF
PARENTS AND PROFESSIONALS**

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at the

CLEVELAND STATE UNIVERSITY

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**THIS DISSERTATION HAS BEEN APPROVED
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DEDICATION

This dissertation is dedicated to my family and friends for their patience and support through this journey.

To Brian and Greta, who at all times remind me what life is all about and have been there for me when I had to write and work and could not be there for you. Thank you for your encouragement and making this achievable.

To my Mom and Dad who truly made this possible. You were always there when I needed direction, and you always reminded me that I had the ability to complete any task that I put my heart into. You taught me to believe in myself. Thank you for teaching me to value opportunity, hard work and education. And to my brother Justin who is always there for me and has been my biggest cheerleader through the years.

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For all of their insights and support, I thank the committee.

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JOCELYN M. GEIB

ABSTRACT

This study examined the perceptions of professionals and parents of children with autism regarding quality indicators of successful educational practices in Northeast Ohio and compared this information to current literature trends. The study used questionnaires and interviews to look at these topics and compare them to the perceptions of stakeholders. Results indicate that stakeholder perceptions are similar to those promoted in the literature. Parents and professionals perceived methodology based interventions that are individualized and delivered by highly trained and qualified personnel to be the most important components of an educational program for students with autism. Barriers to delivering these services in Ohio included school financing and public school policy. Results of the study were consistent with current literature in most respects, with the exception of defining a particular methodological intervention for students. Stakeholders believed a variety of methodology based interventions were most effective to meet individual student needs.

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CHAPTER I

INTRODUCTION

Autism Spectrum Disorders (ASDs) is a pervasive developmental disorder (PDD) marked by profound deficits in social, language, and cognitive abilities. The term ASD is commonly used to refer to the broad umbrella of behaviorally defined disorders or PDD by the Diagnostic Statistical Manual IV (DSM-IV). These disorders have complex and variable symptoms along with multiple suggested etiologies, none of which have been confirmed. These disorders are life-long developmental disabilities and the symptoms typically occur during the first three years of life. Children with this diagnosis manifest with mild to severe symptoms that interfere with social interaction, communication, and behavior (Noland, 2004). Presently, there is no biological marker for autism, thus it has historically been defined in terms of behavior (Bryson, 1998). Kanner (1943) was the first to identify a unique group of children with an apparent failure to establish “affective contact”. Kanner provided a description of the prototype of autism, often referred to as “classic” autism. This categorical conceptualization of autism prevailed for close to four decades. More recently, the definition has been extended to incorporate the notion of a continuum of related disorders, now referred to as pervasive developmental disorders (PDDs), of which autism is the most extreme form (Bryson, 1998). Current diagnostic

symptoms attempt to capture the marked variation in the presentation of ASDs by requiring overt evidence of impairment in the domains of functioning including socialization, communication and imagination (Bryson, 1998). While ASDs are considered to be a neurological condition, an unequivocal theory for intervention for ASDs is currently lacking (Webster, Feiler & Lovell, 2004).

Prevalence and Etiology

Prevalence rates of ASDs are currently estimated at 1 in every 110 births (autismsocietyofamerica.org, 2011). Autism is no longer considered rare, occurring more commonly than all other developmental disabilities, and several childhood cancers (autismsocietyofamerica.org, 2011). As the numbers of children with ASDs have continued to increase, the etiology of this disorder is still largely unknown. Uncertainty remains regarding the nature of reported increases in ASD prevalence rates, including whether the growth reflects environmental/genetic factors, better diagnostic capabilities and professional awareness, or both. Recent advances point to the importance of genetic factors and early environmental conditions. It is estimated that approximately 1 to 1.5 million Americans have some form of ASD and 1 percent of the population between the ages 3-17 are considered to be on the spectrum. Higher prevalence rates, with an average increase of 10-17% percent per year over seven years, have also been reported in the public school system by the annual report of the Special Education Child Count (Noland, 2004). Based on recent Department of Education statistics from 1991-1992 to 2007-2008 school years there was over a 20 fold increase in the number of students with ASDs served in special education programs throughout the country, from 15,580 students in 1991-1992 to 337,795 students in 2008 (retrieved from

<http://www.fightingautism.org/idea/autism.php>). These increasing trends are commensurate with diagnostic rates internationally (Webster, 2003). Taken together, these trends pose difficult decisions as to how to provide optimal services and delivery of services for this expanding student population in our nation's educational institutions.

Despite the uncertainties related to the etiology of the disorder, current estimates suggest that educational personnel in public schools across the nation are likely to encounter children with autism in their public school buildings. Thus, the need for better methods to identify students on the spectrum and provide autism specific educational intervention programs appropriate for this growing group of children are in high demand. State and local governments are struggling to provide such educational services that will meet the pervasive and varying needs of students in our public schools with ASDs. Correspondingly, the intensity and quality of services recommended are often difficult to provide due to financial constraints, staff attrition and training related issues, as well as limited knowledge base regarding ASDs and related intervention approaches. As a result many public school programs have faced increased criticism and costly litigation issues from families with children with ASDs concerned that their children are not receiving appropriate services and interventions for their child (Mandalawitz, 2002). Decisions are further complicated by the institution of federal policy such as that of the No Child Left Behind Act 2002 (NCLBA), which mandates research-based methodology be used to teach. The act also mandates special educators to focus their time, attention, and monies on implementing policies that may ultimately not provide outcomes for the special education population which it was designed to help.

Currently, many school districts nationally and in the state of Ohio have been involved in costly lawsuits that end in a loss for the educational institution. Such litigation often yields outcomes that find the school's educational programming for the student with ASDs not appropriate as determined by The Individuals with Disabilities Education Act (IDEA) or considered to be Free Appropriate Public Education (FAPE). More often than not, it is the methodology based intervention, or lack thereof, that is the area of contention relating to the school district's loss. Consequently, many school districts in the state of Ohio are stuck paying for expensive private school programs for students with autism that cost the district upwards of \$80,000 per year per students as well as the costs of transporting the student each day. Additionally, many school districts, such as Cleveland Municipal Schools, and Shaker Heights Local School District, have multiple students in private programs costing the district hundreds of thousands of tax payer dollars to private institutions.

This issue of educating these students is further complicated by a 2004 initiative by the State Board of Special Education that provides parents of children with ASDs up to \$20,000 per academic year for private educational services if they so choose to opt out of sending their student to the local public school. The voucher program is growing by 50 percent per year, serving 734 Ohio families in 2007, diverting more than \$11 million of public education money to private providers (Kroll, J, 2008). State lawmakers created the program as the number of children with diagnosed with the disorder was rising and school districts were complaining of not having qualified staff to teach the diverse group of students. Many complaints have been filed through the state of Ohio that purport that

the scholarship program disproportionately provides assistance to the affluent, and in support centers that only a select few can access, and is not accountable to taxpayers.

Another such example is that of a private autism center, The Step by Step Academy, in Franklin County that consumed 50 percent of the public money spent on treatment for autism in 2008, even though it served just 4 percent of the children (Price, 2008). The Academy also billed \$180,000 to treat one child while another family waiting many years for a Medicaid waiver to help pay for services, received just \$64 from the state.

Even more concerning is that often times parents are left shopping for an appropriate school district, moving around, falling into debt, and many families end in divorce, all while attempting to find appropriate educational and intervention for their child with autism (Segal, 2004). A study conducted by Wolf, Noh, Fisman, and Speechley, 1989, indicated that the conditions associated with parenting a child with ASDs provide all the characteristics to produce one of the most stressful life events. Similarly, numerous empirical investigations have suggested that parenting developmentally disabled children has an adverse impact on parents' well-being and can often lead to divorce (Wolf, 1989). Another related issue is that those students with ASDs in areas with more poverty and rural areas that do not have access to additional services are at the greatest disadvantage because there are no scripted or mandated educational services for student with ASDs leaving the allocation of services in the hands of the financially strapped districts that are already burdened by having to cut basic educational costs.

The price of education continues to soar, and state funding is decreasing. This is especially concerning because it is estimated that 9,127 students in the state of Ohio have a diagnosis of ASDs in 2006, nearly 50 times more than in 1995 (Price, 2008). It is a growing need to support this expanding population of students and for public schools to accept some of the burden by educating themselves and providing appropriate educational interventions for these students.

Problem Statement

Recent interest by heightened public awareness of ASDs as well as changes in legal provisions in working with these students has generated a sense of urgency within the public school institutions nationally to identify and provide educational programming to students with ASDs that produces qualitative outcomes in a cost effective manner.

As the price of educating students with special needs in the state of Ohio continues to rise specifically for educating students on the autism spectrum, and school budgets continue to decline - it becomes obvious that this situation of educating this expanding population of learners needs to be addressed. Public schools in the state of Ohio need not only the most up to date empirical research surrounding educational and therapeutic interventions for student with ASDs, but also to understand what components make a program successful. These services need to become more uniform so that all students despite their location in the state have equal access and opportunity for appropriate educational interventions. Furthermore, educators need to be informed of the characteristics and components of a successful educational program for students with ASDs as currently there is no curriculum, structure, or universal methodology that is known to work best with this population. In particular, educational administrators that are

responsible for this population have limited research and knowledge of the components of a program from the perspective of the families and professionals who experience these programs. This information is critical considering the variability amongst students on the spectrum, making most of the research that focuses on program outcomes insignificant. Educational institutions need not only the most up to date empirical research surrounding educational and therapeutic interventions for students with ASDs, but also to understand what components make a program successful. Families with a child on the autism spectrum often experience emotional stress, anxiety, fear and guilt (Gray, 1994). These families may have to rearrange their lives to accommodate the educational needs of their child (Midence & O’Meill, 1999). Therefore education administrators need to understand how to appropriately educate this population in their neighborhood schools in a manner that provides quality and researched-based outcomes as supported by those who have experienced such quality education. A surplus of research exists that suggests types, frequency and intensity of intervention; however, research that defines what is important to those who experience or provide the intervention has not received the same level of research prominence. Identification of characteristics of a successful program from the experience of those who live it will allow schools to create successful programs so that individuals with ASDs can lead a higher quality of life, and families of students with ASDs can feel that they can trust that the public school system is providing their child with an appropriate education. Such a structure to programming would reduce the likelihood of expensive lawsuits, the placement of a child in a private program far from home and decrease the risk of providing students with ASDs subpar educational service that does not allow them to meet their potential.

Recent legislation over the last decade has no doubt strengthened parental rights to express preferences and make choices regarding the provision of services made to address a child's special educational needs (Whitaker, 2007). Parental experience and perceptions of educational services clearly have the potential to critically influence and shape the future of educational services for children on the autism spectrum (Whitaker, 2007). Thus, in considering the future and provision of educational services for students with ASDs consideration must be taken for the accumulated experience of key stakeholders and service providers (Webster, 2004).

Purpose of the Study

The purpose of this study was to identify quality indicators of successful educational programs derived from the perspective of parents of and professionals who work with students with ASDs and to provide a framework for educational programs for students with autism.

A comprehensive review of current literature regarding types and delivery models of education for children with ASDs, the variability of service provisions, as well as current litigation related to the education of children with autism both locally and nationally was examined. Information gathered during the literature review was used to inform the design of a questionnaire and interview questions that were conducted with parents and professionals that work with or have a student with ASDs in either public or private school. Data and information were collected regarding what these groups of people believe to be quality indicators and characteristics of a successful educational program for students with ASDs. Questions generated inquired about aspects of programming that this group of parents and professionals found to be the most important

and successful qualities with regard to educating this group of students. A questionnaire was used to gather basic demographic information so that participants can be screened for their presentation of qualifying characteristics. Structured interviews were conducted to allow for examination regarding their perceptions of the educational needs of students with ASDs, their feelings regarding their experiences with the structure and programming of both public and private educational programs, and the perceived and observable outcomes of students enrolled in an educational program. Information gathered from structured interviews with this group of stakeholders including parents of a child with ASDs and professionals that work with students with ASDs were analyzed to better understand trends regarding what this group of people finds to be important components in working with this group of students. The data from these interviews with stakeholders was used to make a comparison of information gleaned from these questionnaires and interviews against current research. This comparison helped to determine if those people that experience the education of this population first hand were experiencing similar ideas and beliefs as is promoted in the most current literature regarding the education of this population. Information gathered provided insight into feelings regarding stakeholder's experiences with the programming of both public and private educational programs, and the perceived and observable quality indicators that lead to successful outcomes of students enrolled in an autism educational program.

Research Questions

Through the lens of grounded theory, these questions guided the research:

1. What do professionals who work with people with ASD, and parents of people with ASDs believe to be the educational needs of these students?

2. What components of an ASD program do parents and professionals find to be the most important to a successful educational program for students with ASDs?
3. What types of methodological interventions do parents and professionals consider to be most important in meeting the educational needs of students with ASDs?
4. Do the qualities of a successful educational program for students with ASDs as suggested by a diverse group of parents and professionals parallel those qualities currently promoted in the literature?

By learning about what professional and parents define as successful in terms of providing educational programming for students with ASDs; consumers can begin to better understand the application of this information. Information gathered looked closely at the needs of the students and current methodological research trends as they relate to this population.

The results of this study provided information that identified characteristics and structure of a successful educational program for students with ASDs from the perspective of parents and professionals that work with this population. Such information provided educational administrators a structure for developing successful programs for students on the spectrum.

Importance of the Study

As the population of students on the autism spectrum continues to grow, the need for public schools in Ohio to develop quality programming for these students is warranted. However, currently there is a lack of such quality programming as evidenced

by the increasing numbers of students with ASDs being served in private school programs and the growing number of due processing hearings throughout the state that are initiated by families of students with ASDs due to the family dissatisfaction with programming being offered. School districts throughout the state do not have the knowledge base, time, or resources to educate their staff to create such intensive, specific, and specialized classrooms in their buildings. This problem is further complicated by the vast amount of research and interventions being marketed that all promote different intervention practices. Therefore, schools are left providing highly variable and less than adequate programs for this population. They will continue to do so until an educated and financially able family challenges them. Students that are being educated in more affluent communities frequently have the means to provide appropriate programming; however, the majority of students across the state in rural and urban areas are at the greatest disadvantage in that they receive the most lacking services. The overall intent of this study was to yield information relative to quality indicators of a program for students with ASDs from the perspective of stakeholders that can potentially inform public school program development.

Currently, there is an abundance of research as it relates to outcomes of methodological interventions used with children with ASDs as well as intervention comparative studies; however there is very little, if any research as it relates to appropriate interventions for students on the spectrum from the viewpoint of those who provide the interventions or from family members reporting their perceived outcomes. This study offers unique insight into educating students with autism in public schools in Ohio in that it looked at current research related to methodological interventions as well

as parents and professional perceptions of appropriate programming. Furthermore, this study offers information that can be used to help structure educational programs and offer potential implications for developing and implementing comprehensive public school programming for students with ASDs. Thus, schools and counties across the state can have a practical look at how they can educate students with ASDs in their home schools in a successful manner to avoid costly litigation and the costly placement of students in private programs. Even more important, information provided can be used to better understand the clinical, global and perceived outcomes of educational interventions for students with ASDs from the perspective of those who observe qualitative changes of students.

Limitations

The limitations of this research study were as follows:

1. The data collection method involved administering self-report questionnaires and face-to-face interviews by participants. Various factors influenced participant responses on each instrument. Presence of an unfamiliar third party interviewer during interviews may have influenced responses during sessions. Participant attitude and views towards the educational programming of people with autism may have been biased as a result of a positive or negative experience and may have changed throughout the data collection process.
2. Cultural factors such as cultural or religious ideologies and personal belief systems which were not addressed may have also influenced responses.
3. Specific educational needs may have varied with the presentation of symptomology of the student with ASDs.

Definitions

Autism Spectrum Disorders (ASDs): Autism Spectrum Disorders (ASD), also known as Pervasive Developmental Disorders (PDDs), cause severe and pervasive impairment in thinking, feeling, language, and the ability to relate to others. These disorders are usually first diagnosed in early childhood and range from a severe form, called autistic disorder, through pervasive development disorder not otherwise specified (PDD-NOS), to a much milder form, Asperger syndrome. They also include two rare disorders, Rett syndrome and childhood disintegrative disorder (Bryson, 1998).

Individualized Education Plan (IEP): Each public school child who receives special education and related services must have an Individualized Education Program (IEP). Each IEP must be designed for one student and must be a truly *individualized* document. The IEP creates an opportunity for teachers, parents, school administrators, related services personnel, and students (when appropriate) to work together to improve educational results for children with disabilities (Bryson, 1998).

Evaluation Team Report (ETR): The comprehensive evaluation that is used to gather information to assist in determining whether a child has a disability and determining the type and amount of services the child may need and inform the child's IEP and educational needs. The assessment uses a variety of tools and standardized measures and is conducted every three year (Bryson, 1998).

Applied Behavior Analysis (ABA): The science of applying experimentally derived principles of behavior to improve socially significant behavior. ABA takes what we know about behavior and uses it to bring about positive change (Applied). Behaviors are defined in observable and measurable terms in order to assess change over time

(Behavior). The behavior is analyzed within the environment to determine what factors are influencing the behavior (Analysis) (Siegal, 2004).

Due Process: An impartial due process hearing is a formal, administrative procedure that is held to resolve disagreements. Disagreements may be about the identification, evaluation, or placement of a child, or the provision of a free appropriate public education. (FARP) to your child. An impartial due process hearing may be requested by parents, the school district, or other public agencies (Bryson, 1998).

Discrete Trial Teaching (DTT): Discrete Trial teaching is a specific method of teaching used to maximize learning. It is a teaching technique or process used to develop many skills, including cognitive, communication, play, social, and self help skills. It is just good teaching. The teaching strategy involves:

1. Breaking skills into the smallest steps
2. Teaching each step of the skill intensively until mastered
3. Providing lots of repetition
4. Prompting the correct response and fading the prompts as soon as possible and
5. Using positive reinforcement procedures

A therapy session uses repeated trials (or presentations) with each trial having a distinctly identifiable beginning, middle and end. So the trial is "Discrete" in that it is distinct and it has clearly identifiable steps and a conclusion. Each step of a skill is mastered before new concepts are presented (Siegal, 2004).

Treatment and Education of Autistic and related Communication-handicapped Children (TEACCH): TEACCH is an evidence-based service, training, and research program for individuals of all ages and skill levels with ASDs (Siegal, 2004).

CHAPTER II

REVIEW OF LITERATURE

Autism Spectrum Disorders are no longer considered to be low incidence because they are diagnosed more than any other developmental disorder. Subsequently, autism awareness has exploded in the media and has gained the attention of people both nationally and internationally. Attention has been equally amplified in research in various disciplines including clinical, medical and educational. Research has focused on, not surprisingly, etiology and intervention approaches primarily. Similar to the attention in the media and research fields, the education of this population of students has also been also been intensely attended to. Families hoping for the best outcomes for their children with ASDs have looked to their local school districts for the support and careful attention that their student may need. Conversely, the schools (many of which are under financial constraints and in the process of cutting staff) have responded by attempting to provide appropriate services for this most intensive need group. The focus on methodology based intervention for students with ASDs have prompted families, and educators to analyze what comprises a Free Appropriate Public Education (FAPE) that the student may need to make meaningful progress. This controversy surrounding FAPE of the heterogeneous group of students has led to many court cases, some of which have

made it as far as federal court and even the Supreme Court. Nonetheless, the controversy surrounding what is an appropriate education for students with ASDs continues to be scrutinized and has led many schools and families to interpret service provisions. Research has provided some information to help answer these questions. What follows is a review of literature relative to these primary issues of characteristics educational program, methodology based instruction, inequities in education, and finally a review of legal proceedings that have shaped the response of schools to the population of students with ASDs. This review of literature will serve to provide a framework for understanding what is happening both nationally and in Northeast Ohio regarding the allocation of services of students with ASD. This information was used to develop instrumentation to gather data from parents and professionals that work with this population so that information gathered from those experiencing the education of these students could be compared to what is actually being provided.

Characteristics of Effective Programs

Team approach.

While no model or curriculum exists nationally for an appropriate and scientifically proven educational program for students on the spectrum, several studies site characteristics associated with programs that have been viewed as successful. Family involvement and cooperative planning are often cited as critical components of a successful ASD program. Effective programming for children on the spectrum requires a concerted team approach between school district personnel and families (Connecticut State Department of Education, 2005). Both federal and state laws require that families participate in the development of the Individualized Educational Document (IEP) for a

student. The notion is to gather information from the team to assist in the future planning and implementation of an IEP. Consistency across members of both informal and formal teams is essential because without consistency, children may fail to generalize and make gains in skills. Another component of an effective program is that of parent training. This is often cited as an effective means of helping family members teach new skills and embed skills into daily routines that build the independence of the student. Family training is also used frequently to teach behavioral management techniques so that families may safely manage challenging and maladaptive behaviors. The past 30 years have brought about a very obvious increase in family involvement; however the involvement can vary from family to family (Williams & Wishart, 2003).

Individualized and intensive programming.

Another component of educational programming for students with ASDs cited frequently in the literature is individualized and intensive programming. Children with autism often represent a heterogeneous group requiring individualized and highly individualized programming and interventions. Dunlap (1999) posited that a critical key to success is to match specific practices, supports, and services with each student's unique profile and the individual family's characteristics. Such individualized programming and family sensitivity serves to assure family fidelity and engagement in the educational process. Additionally, program intensity is another individualized component of education programming that must be considered on many levels, including duration of education weekly, the environment in which the teaching occurs, and the educational validity of the interventions provided (Report of the Connecticut Task Force on Issues for the Education of children with Autism, 1998). Considerable debate has

surrounded the number of hours per day considered appropriate for education children with ASD in the public schools. Although, there is great variability in the numbers of hours per week (20-45 hours) across comprehensive model programs for children with ASD, it is the conclusion of the National Research Council Report for Educating Children with Autism (2001) that intensive instructional programming for at least 25 hours per week is critical for the majority of children with ASD.

Emphasis on core deficit areas.

For students with ASD, most successful programs in the literature often emphasize programming focusing on the major areas of deficit including communication, social skills, behavior management, as well as academic skill building (Siegal, 2004). Individuals with ASD have needs in the areas of communication including pragmatics, semantics, syntax, and phonology. Thus, consistent and frequent opportunities to build expressive and receptive language skills across a variety of environments are often observed in successful programs. Similarly, an emphasis on social skill development with typical peers and adults is often a component of educational programming for this population of students.

Developing a program for students in the public school system that will maximize each individual child's ability is, no doubt, a challenge. The program must be cost effective enough to institute in a public school system, and yet yields qualitative changes for this diverse population that teachers and parents can be satisfied with. It is important to understand and consider the types and variation of methodology based interventions and related research of these methodologies that are currently being practiced with this population.

As the population of students with ASDs continues to grow, consequently, several promising behavioral, therapeutic, educational, and pharmacological interventions have been developed in the past few decades to provide intervention services for this group of students. Although these behavioral, educational, and therapeutic interventions have been demonstrated to be helpful for many individuals with ASDs, there is currently no cure or unified treatment for the disorder. These educational and therapy options for students with ASDs emanate from different theoretical perspectives, all of which endorse some successful outcomes for children (Howlin, 1998). Most treatment approaches promote outcomes that vary hugely from marked improvements to very little or no improvements. Thus, several factors render ASDs especially vulnerable to intervention approaches that make bold claims, yet are inconsistent with established scientific theories and unsupported by research (Herbert & Sharp, 2001).

Autism is typically diagnosed during the preschool years and, is often understandably devastating for parents and families. Unlike other disabilities, the effects of autism are pervasive, typically affecting most domains of functioning including communication, socialization, adaptive behavior, and learning. Therefore, parents are typically motivated to attempt any promising treatment, rendering them vulnerable to promising cures (Herbert et al., 2003). Similarly, the unaffected physical appearance of children with autism may contribute to the proliferation of unsupported treatments. The normal appearance of children with autism may lead parents and educators to be convinced that there must be a completely "normal" child inside the typical exterior. In addition, autism comprises a heterogeneous spectrum of disorders, making it difficult to identify potentially effective treatments because is a great deal of variability in response

to treatments. What follows is a review of the most popular methodologies and questionable intervention approaches for children with ASDs that are being practiced in educational settings.

Methodology Based Interventions

Despite scientific data to the contrary, a variety of educational therapies are marketed and utilized by consumers of autism treatment. These treatments are often defined as “methodologies” in that they are structured and use specific processes and systems to remediate the needs of a child with autism or related disability. Currently, a variety of popular treatments are promoted as producing dramatic results. Despite inconclusive research, and small case study outcomes lacking application to larger populations, many treatment designs implemented are of little benefit, ineffective, do not take the individual into account, and some can even be potentially harmful. Even the most promising treatments for ASDs rest on an insufficient research base, and are promoted as “cures” or evidenced-based practice (EBP) despite the fact that very little evidence exists to support the method. Common used methodologies for individuals with autism are still rather new in their application. Some common methodologies are considered to be EBP. For the purpose of this study, EBP can be defined as the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual student. It means integrating individual clinical/educational expertise with the best available external clinical/educational evidence from systematic research (Sackett D, 1996). EBP is using the best research evidence available to assist in the decision making process for student planning. The best

evidence is usually found in clinically relevant research that has been conducted using sound methodology.

Public schools have more recently considered using research based methodology as the numbers in schools have become more concentrated. Both IDEA and the No Child Left Behind Act (NCLB) both include the incorporation of EBP and scientifically- and research-based instructional programming. Research conducted initially consisted of small case studies and single subject research designs yielding outcomes that cannot be generalized to this diverse group of kids. More recently, studies of larger scales have been conducted; however, few take into consideration the baseline functioning of these individuals, or matched control groups. Therefore, while current research is more robust and findings are able to be applied to some degree to educational institutions, we still are lacking quality research that truly considers the spectrum of the disorder, the ability to generalize findings to this population universally, and allows us to apply the term evidenced-based to these methodologies with certainty.

In reviewing current research related to ASDs and common methodology-based approaches, few studies focus on comprehensive assessment of the individual child which can help to define the spectrum of characteristics related to the disorder, different learning styles, developmental trajectory, or intrinsic motivation of the individual to learn, regulate behavior, and communicate. Therapists and teachers in clinical and educational programs rarely consider the fact that one methodology may not be applicable to all children with ASDs. Equally, most methodologies that are studied focus on comparisons of methodology based interventions in case studies for the purpose of promoting one individual treatment design for all individuals with ASDs yielding

positive outcomes for a particular single subject in which the subject made significant gains, but are often ineffective for all kids with ASDs. More often than not, studies such as this do not mention the individual learner's baseline assessment, or prior level of functioning; a key component in determining gains and outcomes of applied treatments.

Of the four most popular methodology-based interventions for individuals with ASDs: Floor Time, Sensory Integration, TEACCH, and Applied Behavior Analysis, none are reflective of an individualized intervention plan. Many of the research studies analyzing treatment designs hypothesize about potential treatment outcomes describing implications and outcomes related to skills and knowledge gains operating on the assumption that these treatment designs will have similar effects on all individuals with ASDs (Herbert et al., 2003). However, there is a great deal of variability in response to treatments. Thus, if a treatment has been applied, improvements may appear to be attributed to treatment, whereas the treatment may have elicited little or no effect. Similarly, one method may be beneficial in eliciting positive outcomes relative to one of the three core deficits, but fail to address the other one or two deficits. While many studies claim being scientifically verified, in reality they lack empirical support. Many therapies that are currently being promoted are pseudoscientific in nature, and are said to produce high success rates (Maurice, 2003). Thus, it is not surprising that the history of ASDs treatment is replete with fad therapies, repeated cycles of false hopes, millions of dollars spent, and numerous children deprived of an effective treatment (Maurice, 1996).

Four Core Methodologies Practiced

Currently there are four popular treatment approaches for the purpose of educating and providing intervention for children with ASDs. While there are various

approaches, these four approaches are commonly marketed internationally as comprehensive methodology based approaches that focus on one of, or a combination of, increasing communication, decreasing behavior, and increased learning for individuals with autism. Moreover, as the number and variety of therapies increase, it appears that professionals are less and less inclined to provide families with strong data based advice to help them make informed choices among the various therapies that are specific to their child's defined areas of need (Maurice, 2003). All approaches available assume that application of that methodology and the learning outcomes of that intervention is motivation enough to sustain and continue gains made by implementation of such therapies. Of these four approaches, all of them promote application of their specific technique in isolation of any other methodology approaches and none consider the learner's baseline status and developmental level (see Table 1).

Table 1.

Methodology Based Interventions Comparison

| Methodology | Strengths | Weaknesses |
|---------------------|--|---|
| Floor Time | Builds Motivation Communication focused Child centered Parent training | Poor behavior management Not a comprehensive approach |
| Sensory Integration | Prepares child to learn Build intrinsic motivation | Poor behavior management Not a comprehensive approach Poor generalization Lack of parent involvement |
| TEACCH | Systematic instruction Builds vocational and employability skills Capitalizes on visual strengths Easily replicated Individualized | Poor behavior management Not a comprehensive approach Lack of communication focus |
| ABA | Data driven Empirically researched Comprehensive Reduces maladaptive behaviors Builds functional skills | Not easily generalized Costly Intensive |

Floor Time.

Floor Time is a therapeutic methodology used to facilitate learning, and development for children on the autism spectrum. It was developed by Dr. Stanley Greenspan in the late 1980s. The basic premise is that children with autism learn to communicate when they are engaged at their own level, and by things that interest them. The treatment is based on spontaneous communication initiated by the child, where the caregiver follows the child's lead and promotes the scaffolding of interactions utilizing affect cues that elicit a challenge, soothe, and encourage the child further (Greenspan, 2003). Essentially, the adult follows the child's lead utilizing affectively toned interactions through gestures and words to move the child through a symbolic ladder by first establishing a foundation of shared attention, engagement, simple and complex gestures, and problem solving to engage the child in their world of ideas and abstract thinking (Greenspan, 2003). Proponents of the Floor Time model purport that the therapy does not just mean following the child and commenting on what he or she is doing, but rather it is the active process of interacting in a continuous and rapid back and forth manner at all the levels the child is capable of, from sensory motor, preverbal exchanges, and problem solving, to symbolic play and abstract conversations. The general purpose is to strengthen each of those functional developmental capacities which together form the foundation for higher order abilities. The Floor Time model is one that considers ASDs to be one in which the individual with ASDs has such profound deficits in interaction, socialization, and communication that it is the teacher, therapist, or parent to engage them at a level in which they are comfortable and familiar. Floor Time is currently a widely practiced therapeutic technique in many public pre-schools and school

aged programs nationwide and there are training programs in which therapists and teacher can be certified Floor Time trainers (Greenspan, 2003).

While Floor Time is one of the most frequently used therapeutic interventions for children with autism, current research in the area of Floor Time use and effectiveness is limited to small case studies and single subject research designs. One such study conducted by Stanley Greenspan himself (2003) uses a single subject design and promotes findings that suggest clinical outcomes for this one subject who received treatment be applied similarly to all participants with ASDs. The study looked at the increase in communication and play of one youngster with ASDs following the use of Floor Time as a therapeutic model. However, information was not included regarding the baseline functioning of this child, nor did it take into account the variability of people with ASDs in considering the application of such intervention. Similar research conducted by Solomon, Necheles, Ferch, and Bruckman (2007) focuses on an intensive Floor Time Training program for sixty parents with children with autism. The focus of the training and program was for the parents to provide 15 hours of Floor Time Therapy in 1:1 interaction with their child for duration of 8-12 months. Outcomes of the study were measured via pre and post rating of video tapes by blind raters using the Functional Emotional Assessment Scale that measures social, communication, and behavior development. Results of the study translated clinically to yield 45.5 percent of children made good to very good function development progress.

Floor time can be a very positive intervention for children with autism, and we can assume that since the child is doing something of interest, adding to his self-selected activities will tend to be naturally very reinforcing. What is reinforced is not just the

activity, but acceptance of the adult's involvement in the activity. Over time, this can increase both play, communication, and interaction (Siegal, 2003). However, there are also several shortcomings regarding Floor Time as a methodology such as it assumes that the child's interest will be diverse enough to expand cognitive learning to include a variety of skills and it does little to address maladaptive behaviors, or adaptive behavior and life skills training.

Sensory Integration Therapy.

Sensory Integration Therapy (SIT) is a therapeutic methodology used to facilitate learning, developed in the 1960s by an occupational therapist (Herbert et al, 2004). The treatment model is based on the theory that children with ASDs suffer from sensory-motor deficits and in order to learn they must receive SIT therapy as a means of "preparing" the student to learn (Herbert et al, 2004). In other words, SIT is providing pre educational instruction to facilitate learning. SIT is said to be an effective means for improving the sensory processing capabilities of the brain (Maurice, 1996). Professionals and families that prescribe to SIT feel that children with ASDs possess deficits in interpreting and modulating sensory input, as well as a deficit in the part of the brain that initiates purposeful behavior (Herbert, 2004). SIT, is traditionally applied in individual learning sessions, whereas the therapist prepares the student to learn by attempting to reduce underlying deficits through sensory integration (Maurice, 1996). In attempting to facilitate integration, treatment involves engaging the child in full body movements designed to provide vestibular, proprioceptive, and tactile stimulation (Herbert et al, 2004). Activities that are used to promote such stimulation include joint compression, jumping, swinging, spinning, and applying brushes to various parts of the body, (Smith,

1996). Proponents of sensory based activities believe that these types of activities correct the underlying neurological deficits present in many individuals with autism (Herbert et al., 2004). Outcomes of SIT purport to yield increased attention to task, and decreased behavioral concerns eliciting an increased learning curve. However, most of the claims regarding outcomes are not clinically researched or scientifically proven.

Although it has been promoted for many years and is widely used in the public schools, SIT has been the subject of relatively little rigorous research (Maurice, 1996). Few studies have produced findings to support the efficacy and application of SIT for treating children with ASDs. Research in the area states that although children may find SIT activities pleasurable, these activities do not provide substantial evidence of any long-lasting skill gains in the child's behavior or learning outcomes. There are some aspects of SIT that consider the desire of an individual learner to engage in pleasurable activities, such as allowing the child to choose a preferred activity. However, the transfer of positive outcomes and increased motivation to engage elicited from SIT is assumed and not scientifically proven to transfer to other domains of functioning (Herbert et al., 2004). In summary, SIT produces few qualitative outcomes for individuals with autism, other than perhaps being motivating and exciting to children on the spectrum. SIT lacks consideration of maladaptive behaviors in different environments, academic skills training, adaptive behavior or life skills training- all important skills for the future functioning of a person with ASDs. While comprehensive educational programs may benefit from consultation with knowledgeable professionals to provide guidance about potential interventions for children with ASDs - such intervention must not be a substitute for core educational curricula in combination with other methodology based

interventions that focus on the individual child and increasing their intrinsic motivation to learn, communicate, and regulate behaviors (Herbert et al, 2004).

TEACCH.

A third methodology based approach frequently employed by professionals working with individuals with autism is Teaching Education to children with Autism and Communication Handicaps (TEACCH). TEACCH is a university-based project founded at the University of North Carolina at Chapel Hill in 1970. TEACCH programs have become among the more widely used intervention programs for autism, specifically in educational environments (Whinfell School, 2006). Project TEACCH incorporates behavioral principles in treating children with autism, but differs from Applied Behavior Analysis (ABA) in several primary ways (Herbert, 2004). They are both similar in that they use systematic instruction, data collection, and successively shaping and changing behavior to teach children on the spectrum. However, TEACCH methodology focuses on maximizing the skills of children with ASD while emphasizing their strengths, as opposed to attempting to cure them (Whinfell School, 2006). A TEACCH program is designed to provide a structured learning environment in which children with ASDs can develop skills including vocational skills. The TEACCH model has its underpinnings in the theory of ASDs in which all people with ASDs are considered to be rigid and can only function in a highly predictable and structured routine.

In a TEACCH classroom each student has an individual workstation where they engage in completing various tasks. For example, activities could include visual-motor activities completing an assembly task, sorting objects by color, shape, and size, as well as completing basic academic tasks (Peeters, 1997). TEACCH employs a structured

teaching approach based on visual learning and an environment to cue behavior (Jordan, 1999). This approach assumes that all individuals with autism are visual learners. While TEACCH focuses on the motivation of the learner, rather than the individual learning styles of the student, it does focus on motivation of the learner. For example, a TEACCH program capitalizes on a student's interest, even though the area of over focus may be peculiar from a typical person's perspective. The intent is to increase their motivation and understanding of what they are doing (Whinfell School- Autism, 2006). These strategies enhance effort to work positively and productively, rather than coercing and forcing them in directions that do not interest them and that they cannot comprehend (Herbert et al., 2004). A large downfall of this methodology is that it emphasizes independent work skills, and does not address other areas of functioning such as communication and maladaptive behavior (Siegal, 2003).

TEACCH methodology is one of the most widely practiced educational interventions in schools; however, to date only two treatment outcome studies have investigated the effectiveness of project TEACCH. Dawson and Watling (2000) reviewed studies that used objective behavioral measures in investigating the efficacy of TEACCH for autism. Outcomes of the study pointed to the fact that only one of the four studies had more than 5 participants and none included a comparison group. A similar study conducted by Schopler, Mesibov, and Baker (1982) focused on the effectiveness of the program for the TEACCH. The authors collected data via self-reports, a questionnaire from 348 families whose children were currently enrolled in a TEACCH program. Age range of the individuals receiving treatment was from 2 years to 26 years, with a range of cognitive and communicative abilities. The majority of the respondents indicated that the

program was advantageous, however many had difficulty qualifying the individual outcomes that generalized to the mainstream environment. Also, the institutionalization rate of individuals involved in the treatment was estimated at 7%, as compared to the rates of 39-75% of reported individuals with autism in the general population (Schopler et al, 1982). Nonetheless, this study is marked by subjectivity and multiple methodological weaknesses. These include a heterogeneous sample of participants with autism, as well as the absence of a control group and standardized assessment measures in collecting baseline and outcome data. In addition, not all individuals included in the sample group had a diagnosis of ASDs.

TEACCH produces some positive behavioral outcomes, such as decreased self-stimulatory behaviors in some children, as well as compliant structured work behaviors in many children with ASDs, it lacks an individual component that would allow teaching, and learning to be specific to each child. Implementation of TEACCH programming may be initially motivating for the individual with ASDs in that they are better able to organize and orient within a variety of environments; however it is not individually motivating to sustain attention to learning and growth over time. Similarly, the TEACCH program assumes that individuals with ASDs will be motivated to complete pre-vocational and vocational type tasks by the completion of the tasks themselves. The TEACCH methodology does not utilize any formal reinforcement or preference assessment for the students which it serves- over time many students in TEACCH programs exhibit increased maladaptive behaviors due to boredom (Smith, 1996). While the methodology is often promoted as being applicable to any individual with autism, with minimal individual modifications specific to that learner, it is lacking very important

foundational components including a focus on communication, an appreciation of sensory motor deficits within this population, and most importantly individual learning styles and preferences. Without the consideration of such components, individuals with autism may not be motivated to continue to learn, regulate behaviors, or communicate because learning opportunities are under external control leading to decreased intrinsic motivation to learn, communicate, and manage behaviors.

Applied behavior analysis.

A fourth methodology widely practiced as an intervention for individuals with autism is that of Applied Behavior Analysis (ABA). ABA is an approach to behavior modification rooted in the experimental analysis of behavior, in which operant conditioning and other learning principles are used to change problematic behavior (Herbert, 2004). ABA involves the breakdown of any skill into small, discrete skills, taught in a highly structured and hierarchal manner (Maurice, 1996). Central to the successful application of this method is differential reinforcement (Herbert et al, 2004). That is, the teacher, therapist, or parent, learns how to systematically reward or reinforce a desired behavior, and prompt, redirect, or discourage maladaptive behaviors (Maurice, 1996). Also, central to the ABA approach is data collected on skill acquisition that is frequently analyzed to determine skill gain and learning curves with respect to the individual child's learning.

Research conducted by Lovass, McEachlin, and Smith (1987), studied the outcomes of ABA in a treatment group in comparison to a control group. The authors reported on 9 children who received 19 hours per week of a 1:1 ABA programming for 2 years, and 5 control children who did not receive ABA intervention. Four of the 9

children in the experimental group made significant gains in IQ, relative to 1 of the 5 children in the control group, although none of the participants achieved completely average functioning. This study did not take into account baseline functioning differences between the experimental and control groups, or the many domains of functioning commonly associated with ASDs.

Literature in the area of ABA undoubtedly suggests significant improvements of the primary domains that are affected by autism. Rogers (1998) noted that many studies of behavioral interventions have focused on a single discrete symptom, and that such interventions have often been shown to be quite effective for limited targets (Herbert et al, 2004). Moreover, ABA is promoted as being used with individuals across the spectrum, and has been shown to produce gains in cognitive, communicative, and social skill functioning. Lovaas (1987) reported dramatic results of children with autism in an intensive ABA program. Following 2 years of intensive intervention, 47% of the experimental group was determined to have cognitive scores within the normal range (Herbert, et al, 2004). Lovaas described these children as having been “cured” from autism. However, this study does not take into account baseline scores of cognitive functioning, similar to many studies focusing on implementation of ABA which are often tainted by inadequacies when applied generally to the autism population. (Dawson, 1997).

Many ABA critics purport that the use of ABA and behavior modification in any form is a violation of the uniqueness and individuality of the person with ASD, making the application of the methodology potentially damaging to their mental health and overall stability (Dawson, 1997). Critics of ABA also charge that the rigid structure does

not build social skills, allow for generalization of skills learned, and that children tend to become more rote in their responses and less spontaneous in adapting to real-world situations. Despite the many criticisms, most current research supporting ABA promotes it as the only methodology that works with children during their early years (Lutzker, 2005). Likewise, ABA in comparison to all methodologies promoted with individuals with ASDs is supported by the most empirical research (Siegal 2003). Several studies have shown that intensive instruction using the methods of ABA can result in dramatic improvements for children with ASDs: successful integration in regular schools, completely normal functioning for some, reduction in maladaptive behaviors for most, and skill development for almost all (National Standards Report, 2009). No other treatment for ASDs offers comparable evidence of effectiveness (Maurice, 1996). Despite its challenges, ABA has proven to be an extremely useful instructional technique for improving the educational outcomes and minimizing the future cost of providing services for children with ASDs (Downs et. al, 2003).

In comparison to other popular methodologies for individuals with autism, ABA is one that does, to some extent, take into consideration an individual's motivation to learn in that many programs use extrinsic rewards, extracted from motivational assessments, and reinforcement inventories to increase appropriate behaviors, while decreasing inappropriate maladaptive behaviors. Thus, similar to the application of the TEACCH method, the use of ABA in teaching individuals with autism often causes children's learning curves to plateau because they are satiated by the application of extrinsic rewards. Such a structure to teaching may produce compliant students; however, rote memorization of facts does not lead to deep comprehension or intrinsic

motivation to engage in the functional application of skills learned rote. Contingent extrinsic rewards such as primary reinforcers (i.e. food item), or secondary reinforcers (i.e. tokens, breaks and verbal praise) do not foster intrinsic motivation of students to engage in learning. Such a learning environment is teacher controlled and allows minimal opportunities for child preferences and individual learning styles. ABA in its most strict application does not take into consideration individual learning styles; rather, the approach is structured and applied in a way that supports a curriculum that is delivered consistently amongst individuals with autism. A strength of the methodology that sets it apart from other methodologies is that ABA is able to address all core deficit areas of ASDs and as well as important skill areas such as adaptive functioning, community based instruction, life skills training, and academic skills. ABA is the only of the four methodologies discussed that addresses all areas of need with this group of individuals. It is consistent, clear, concise, and produces data that can be analyzed, and used to troubleshoot areas of need for each specific individual.

Discrete trial teaching. When discussing Applied Behavior Analysis it is also important to describe the relationship of discrete trial teaching. ABA is a science that studies how principles of behavioral conditioning can be applied to learning. Discrete trial training is a method of training that is consistent with principles of ABA (Siegel, 2003). Discrete trial training is just one way of using behavioral methods. Discrete trial training is a behavioral teaching procedure that has been shown to be effective in that it breaks down information so that children with autism can learn. However, neither ABA or DTT implies what to teach, rather they are the instructional method that are often used interchangeably, but should not be. Discrete trial instruction was pioneered by Dr. Ivar

Lovaas at UCLA with his graduate students (Siegel, 2003). It is a curriculum based on the idea of clearly defined, repeated trials to teach a target skill. Each skill that is learned is seen as a small building block that can be expanded to be a more normal skill as opposed to being atypical, repertoire of behaviors. According to this theory, each specific skill needed to be explicitly taught. Again, while DTT is often used in place of ABA it is in actuality one instructional method within the science of ABA.

Summary of methodologies.

In many educational and clinical institutions nationwide, educators and therapists regularly prescribe to an eclectic or single unified treatment design, methodology, or intervention approach for addressing the primary diagnostic characteristics related to autism: decreased communication, maladaptive behaviors, and impaired learning. Most choose an approach based on preference, accessibility, and personal financial status. Similarly, current research presented to consumers is often limited to small case studies focusing on the efficacy of one single intervention approach in relation to another intervention approach to address all three core deficits. Treatment approaches seldom take into consideration a child's individual learning style or motivation as it relates to learning, self-regulation of behaviors, and increased communication, and almost never takes into consideration the family's preference or ideas of what they would like to see for their child. Currently, there are no data to support the contention that any one particular method of treating ASD is more likely than the others to produce the optimal outcome (Siegal, 2003). Weak research designs plagued by numerous other methodological errors make the field of autism research open in that many studies require replication with better research design and increased subject number. Accordingly,

finding a treatment design for children with ASDs is more complex than deciding that a child needs to be plugged into Program A, and then they will overcome autism (Siegal, 2003).

Methodology based interventions that are employed in isolation may elicit positive behavior, communicative, and even educational benefits. However, if individual learning styles, based on an individual's motivation to regulate behaviors, communicate, and learn are not taken into consideration, an approach may not be effective long term. Such a methodology may show an initial increase in learning, due to the early extrinsic motivation of the individual following positive changes; however, longitudinally learning curves may decrease due to lack of motivation to continue to learn relative to that individual. Thus, utilizing a multi-methodology approach that is developed with a clear understanding of the fundamentally different ways that individuals with ASDs learn is primary in developing an educational program. An understanding of the individual learner in combination with consideration for individual learning styles and motivation to learn, the quality of life, would substantially increase the learning curve for those with ASDs. Given that kind of educational intervention that focuses on individualize programming employing a multi-methodological approach to learning, a framework may be established for school administrators as well as researchers that may lead to best practice in relation to individual learning styles, individual developmental trajectories, and motivation (Ilse, 2004). However, even when best practices are established implementing appropriate programming can be difficult especially due to the financial constraints of districts in Ohio who have limited financial support to access appropriate training.

Inequities in Intervention

Autism knows no racial, ethnic, social boundaries, family income, lifestyle, or educational levels and can affect families and children equally. While there are promising treatments available for individuals with ASDs, many inequalities exist in relation to race, and socioeconomic status and the combination of the two in terms of access to quality services for individuals with ASDs. With the plethora of treatments available to families of children with ASDs, parents and educators face a decision as to what type of therapy or intervention is suitable for each child. Therapy is not prescriptive, but rather a choice, it is often not funded by insurance and many families are left making decisions as to whether or not to provide treatment, what kind of treatment, as well as frequency, duration, and intensity of such services. Consequently, most families look towards their local public schools to provide appropriate educational interventions. This dynamic is complicated by what the law dictates that schools must provide children with disabilities. Ohio law indicates that schools must place children in the Least Restrictive Environment (LRE), meaning that to the greatest extent possible students must receive instruction with typical peers in the mainstream. Additionally, federal law indicates that educational institutions must provide a Free Appropriate Public Education (FAPE). These laws simply stated indicate that students with special needs do not need to receive the finest instruction available; rather they need to only be provided with an education that will allow them to make meaningful progress in their local public school. Thus, students with ASDs by law only need minimal services to make progress within their local district within the mainstream. This allocation of services is problematic for three reasons. First, it is contrary to what is promoted in the research literature indicating that children with

ASDs need intensive and specific intervention to meet their potential. Secondly, this dynamic is concerning because it puts students in districts with more poverty and less funding at a greater disadvantage because they will receive the minimum amount of services that allows for FAPE. Finally, these laws ignore that fact that research has shown that with specialized instruction; sometimes from an alternative placement children may be able to meet their maximum potential. Unfortunately, these decisions are also closely related to socioeconomic status in that most services end up being the financial responsibility of the family. Thus, those families that are financially secure are able to purchase quality services for their child with ASDs that cost upward of \$70, 000.00 annually. However, those families with a lower socioeconomic status are at a much greater disadvantage in relation to accessing appropriate treatment for their child. Research to date clearly suggests the importance of early, intensive, and quality intervention for individuals on the spectrum and the impact on the child's long term development and contributing member of society. Additionally, more recent research has suggested that the financial obligation of an adult with ASDs is tremendous, costing well over \$300,000.00 annually for those who have not received intervention. Most adults with ASDs that did not have quality intervention services do not have adaptive behavior, functional communication, and life skills- this further supports the need and potential obligation of society to provide appropriate treatment for this growing population of adults with ASDs.

While every child diagnosed with autism has the right to educational services provided by their local school district, IDEA establishes the minimum requirements schools must provide. For states to receive federal funds, they must meet the eligibility

funding criteria of IDEA. States may exceed the requirements and provide more services if they determined that they can. They cannot, however, provide less, nor have state regulations, or practices that contradict the guidelines of IDEA. This again, placing those students from a lower socioeconomic status that attend a public school with minimal funding at a disadvantage in that more often than not students in these districts that are predominantly minority students are receiving the minimum amount of interventions and therapies. Such students often receive services that are nominal and considered to be cost-effective in a district that is financially strapped.

Research in the area of health care equity, autism treatment, and educational practices related to autism, practices discreetly, rather than in combination. For the most part, research related to ASDs is considered to be a relatively new area of research and the increased prevalence and awareness regarding the disorder have led researchers to focus on the most overt and pressing issues. As such, etiology is of primary interest to the research community, and best practices of treatment are secondary. The issues of equitable access to treatment and education of people with ASDs are not as much of a pressing area of research that is being investigated.

Various treatment and educational approaches for people with ASDs are developed with a very didactic approach to skill and knowledge acquisition in the ASDs population, however, these approaches are characterized by claims of being scientifically proven, and when in reality they lack empirical support. This type of research that promotes methodologies as evidenced-based that truly have little evidence complicates the field of research that looks to find a unified treatment design for individuals with ASDs. As this type of flawed research continues to muddy the research waters in finding

a treatment plan that will work with this diverse population, educational institutions and healthcare organizations including insurance companies will continue to provide less than adequate services to those with ASDs. Consequently the only children that will receive quality therapy and intensive treatment will continue to be the affluent and wealthy that have the means to provide abundant high quality interventions and related support services. This makes the issue of having quality and consistent practices in the school so important.

Research conducted by LaViest (2005) outlines the increased and renewed attention to racial and ethnic inequalities in health status and access to quality healthcare. LaViest (2005) analyzes the most complex problems facing health disparities and the confounding factors of race and socioeconomic status. This area of research has begun to evolve with increasing attention to efforts to explain such disparities. LaViest (2005) explains that although research literature on health disparities has begun to mature, there are still existing problems that severely complicate research efforts to understand racial disparities in healthcare. The first of such complications includes health and racial segregation in which America remains highly segregated along racial lines, which can lead to different environmental and social risk exposures. A second problem is that typically data collected by health disparity researchers is large and geographically diverse. Therefore, it is difficult to statistically adjust for most confounding variables, and also lacks the psychosocial variables that are of great interest in understanding disparities in healthcare. A third problem is that most large scale epidemiologic community studies that includes important psychosocial variables, lack sufficient numbers of racial minorities to conduct race disparities research. A fourth and final

problem outlined in the article is that often researchers use race and socioeconomic status interchangeably. Thus, racial minorities are more likely to have low socioeconomic status compared with Caucasian people. Furthermore, the overlap between race and socioeconomic status complicates efforts to determine whether it is, race and social class or race and social class that produce disparities in health status. Research conducted by LaViest supports the theory that individuals with ASDs who come from a lower socioeconomic status, specifically those of racial minority are at a greater disadvantage in accessing treatment.

Similar to LaViest (2005), research conducted by Larsson, Heidi, J., Eaton, William W., Madsen, K.M., Vestergaard, A.V., Agerbo, E.D. (2005), explores the association between prenatal factors, parental psychiatric history, socioeconomic status, and risk factors of ASDs in a case controlled study. Results of the study showed statistically significant association between risk of autism and weight for gestational age, parity, and number of antenatal visits, parental age, or socioeconomic status. Findings suggest that prenatal environmental factors and parental psychopathology are associated with the risk of autism. Thus, in contrast to previous studies, this article adjusts for information about socioeconomic status. In the unadjusted analyses, the risk of ASDs was higher for those with less parental wealth. However, after researchers adjusted for other variables, socioeconomic status-measure by either parental wealth or maternal education did not have a significant effect. Adjustment for socioeconomic status did not have any influence on the association between perinatal factors and autism. Thus, according to the study socioeconomic factors play little or no role in the etiology of ASDs in America where access to health care and quality education is unequally

available for those of lower socioeconomic status. Such research supports the theory that autism is not more prevalent in lower socioeconomic communities, thus supporting the fact that prevalence of autism is not related to race, ethnicity, and or socioeconomic status, and that the disparity in access to health care does not become critical in this community until a child has a diagnosis and the need for intervention is present.

Research conducted by Dyches, T. T., Wilder L.K., Sudweeks, R. R., Festus E. O., Algozzine, B.S. (2004) discusses multicultural issues regarding ASDs and issues surrounding autism and multiculturalism, specifically autism within cultural groups and multicultural family adaptation based on the framework of pluralistic societies in which some cultural groups are a minority with the dominant culture. This study suggests that because most current research regarding treatment for individuals with ASDs have been conducted with populations that are predominantly homogenous, and because most research has failed to identify students with autism according to culture, limited data are available to help researchers and practitioners ensure that appropriate services are provided to these students. Such limitations may reflect a lack of awareness of cultural issues and ways that those issues affect students with autism and their families. This study brings into question current research as it relates to multicultural communities. The authors state that evidence indicates that multicultural students have more difficulty with the academic and behavior customs of the school culture than do students of the dominant culture. The researcher's examination of multicultural perspectives in autism demonstrates that ethnic diversity may affect the services available for students with autism, stating that students with multicultural backgrounds and autism are challenged on at least four dimensions: communication, social skills, behavioral repertoires, and culture.

This article outlines the lack of multicultural research in relation to treatment for individuals with autism and as a result students from a diverse background may be receiving less than adequate services.

As outlined in a review of current literature surrounding inequities in healthcare, which are compounded by race and socioeconomic status, puts those of a diverse background at the greatest disadvantage in accessing appropriate treatment of autism spectrum disorder. Therefore, those individuals with autism who come from lower socioeconomic status backgrounds are at the greatest disadvantage in that they are offered minimal, if any treatment. Many of these families depend on their local school programs to provide much needed and appropriate services for their families that will allow these children to lead healthy and productive lives as members of their family and community.

Litigation and Case Law

The challenges of educating children with ASDs are increasingly impacting public schools. Associated with this issue is providing an appropriate education including a program with appropriate instructional methodologies, particularly given the debate within the academic community that have increased dramatically in current year. As academic expectations and autism diagnoses have continued to increase, parent to district conflicts surrounding intervention, specifically methodology based instruction and programming for students with ASDs has grown significantly. To date, there have been many legal cases on the instruction of students with ASDs. It is important to consider the historical and current case law concerning methodology disputes to clearly understand current practices with students with ASDs. To provide a context for these cases, a review

of the underlying statutory framework of the Individuals with Disabilities Education Act (IDEA) is critical. The Individuals with Disabilities Education Act (IDEA) is a United States federal law that governs how states and public agencies provide early intervention, special education, and related services to children with disabilities. It addresses the educational needs of children with disabilities from birth to the age of 21 (Bevilacqua, S. and Norlin, J.W., 2008). The IDEA is considered to be a civil rights law. However, states are not required to participate, but if they do not they receive significantly less funding. As an incentive and to assist states in complying with its requirements, IDEA makes funds available to states that adopt at least the minimum policies and procedures specified in the IDEA regarding the education of children with disabilities. Since its inception, all states have chosen to participate. The IDEA was formerly known as the Education for All Handicapped Children Act but has grown considerably since. IDEA became a federal standard by an act of Congressional adoption in 1975 but has been amended many times following. The IDEA was most recently amended in 2004, which was a significant update. The purpose of special education, IDEA 2004 clarifies Congress' intended outcome for each child with a disability: students must be provided a Free Appropriate Public Education (FAPE) that prepares them for further education, employment and independent living.

IDEA guarantees to every child with a disability the right to FAPE. According to federal regulations FAPE is defined as an education and related services that are provided at the public expense, under public supervision, and direction, without charge, and includes an appropriate preschool, elementary, and secondary school education in the state involved. It mandates that these educational services are provided in conformity

with an individualized education program (IEP) that meets the requirements of the state guidelines.

To look at cases historically that have precluded this state of programming for students with ASDs, it is best to look back at the case of *Board of Education v. Rowley* (1982). In this case there was a dispute over the delivery of interpreter services for a child who was profoundly deaf, the U.S. Supreme Court set for the defining standard for determining FAPE as a two-part test. First, has the state complied with the procedures set forth in IDEA? And second, is the individualized education program developed through the Act's procedures reasonably calculated to enable the child to receive educational benefits? If these requirements are met, the state has complied with the obligations imposed by Congress and the courts can require no more.

The *Rowley* court declined to establish a fixed rule for determining the educational benefit that must be conferred, and did conclude that, "while an IEP need not maximize the potential of a disabled students, it must provide 'meaningful' access to education, and provide 'some educational benefit' upon the child for whom it is designed (Gallegos, E.M. and Shailenberger, J.M., 2008). Consequently, some circuits have since interpreted this standard to require that an IEP offer "meaningful benefit" and "more than a trivial of de minimis educational benefit" to be "gauged in relation to the potential of the child at issue" (Gallegos, E.M. and Shailenberger, J.M., 2008). The determination in the *Rowley* case has placed the burden on the courts with determining whether a district's proposed IEP is reasonably calculated to provide a FAPE. If they determine that it is, the district has satisfied the IDEA's requirements and the court will not second-guess the district's methodology choice (Gallegos, E.M. and Shailenberger, J.M., 2008).

Following the Rowley cases several methodology cases involving children with hearing impairments have influenced the methodology based case law outcomes, and guided federal court decisions in numerous methodology cases concerning children with ASDs. Advocates that promote the use of a specific methodology based educational instruction for a student posit that certain methodologies offer the best approach for children with this specific disorder. Court case *Gill v. Columbia 93 Sch. Dist.*, 32 IDELR (8th Cir. 2000) ruled that because a 7 year old child with ASDs made progress under the school district educational methodology, the 8th U.S. Circuit of Appeals denied the parents' reimbursement request for cost of providing in home ABA programming for their child. Similarly, *Steinmetz v. Richmond Community Sch. Corp.*, 33 IDELR 155 (S.D. Ind. 2000) ruled that a district court held that the district's proposed IEP offered FAPE to a 5 year old student with autism, despite the fact that the home-based ABA program advocated by the parents may have been a better program (Gallegos, E.M. and Shailenberger, J.M., 2008). Contrary to these two cases that ruled on behalf of the school district, *Ramsey Bd. of Educ.*, 4 ECLPR 466 (NJ, 2002) ruled that the district failed to offer FAPE in the least restrictive environment to a 3 year old with ASD. The proposed placement was based on the child's disability, rather than his unique needs, and offered limited interaction with nondisabled peers (Gallegos, E.M. and Shailenberger, J.M., 2008). The child's current in-home ABA program and private school preschool placement provided the student with the high cognitive and low social guidance that he needed. The judge ordered the district to reimburse the parents for the preschool tuition and costs of ABA therapy. Similar to this case, *Portsmouth Sch. Dist.*, 4 ECLPR (NH, 2003), concluded that the district failed to include adequate levels of programming in a 3-

year-old's IEP, an impartial hearing officer held. The school only provided half of the agreed upon ABA therapy and was therefore responsible for the parents' costs for supplemental services. The court ordered the district to reimburse the parents at the rate of \$2,200 per month for the period of time during which the student should have received the ABA service.

Generally court cases surrounding methodology based instruction for students with autism are related to ABA therapy, similar cases that focus on employing a specific methodology have occurred that focus on alternative methods of education. *J.P. by Popson V. West Clark Community Schools*, 38 IDELR 5 (S.D. Ind, 2002) ruled that parents of a 5-year-old with autism failed to prove that the ABA discrete training approach was the only reasonable method for educating their son. Rather, the U.S. District Court, Southern Indiana concluded the child made progress under the district's IEP, which used a variety of techniques and included a structured classroom environment. Similarly, *Pitchford ex rel. M. v. Salem-Keizer Sch. Dist. No. 234*, 35 IDELR 136 (Or., 2001) ruled that that the district's TEACCH based curriculum afforded the student educational benefit. In *L.B. and J.B. ex rel. K.B. v. Nebo Sch. Dist.*, 37 IDELR 123 (D. Utah, 2002), ruled that the district's special education preschool met the FAPE and LRE requirements for a child with ASDs according to the U.S. District Court, District of Utah (Gallegos, E.M. and Shailenberger, J.M., 2008). The court refused to engage in a comparison of methodologies with the parents, who argued in favor of a private preschool placement. Similar to this case, *Board of Educ. of the Monroe-Woodbury Cent. Dist.*, 4 ECLPR 425 (SEA NY, 2003) ruled that a state review officer upheld the district's program developed for a 3-year old with ASD, ruling that the

decision not to include a specific teaching methodology did not make the child's IEP inappropriate (Gallegos, E.M. and Shailenberger, J.M., 2008).

The cases above are vast in their conclusions relative to supporting methodology based interventions in the school environment. While districts generally are given considerable leeway in deciding the appropriate educational methodology for students with disabilities, if the underlying placement does not address a child's individual needs, a FAPE violation will result. Such unique needs of the individual child should be constructed broadly to include academic, social, health, emotional, and physical needs. Moreover, a program and curriculum that is cognizant of the most researched based empirically designed methodologies and can use a combination of methodologies based on the learner's needs is ideal in that such a program has the greatest potential to provide an educational that is thoroughly appropriate, then that is legally defensible. Such a program must also consider other variables that will make such a program solid such as certified and trained staff; a team of professionals, proper IEP's that are individualized based on the learner, and staff that are knowledgeable about behavior and communication, and instructional approaches that are considerate of a multitude of methodologies.

As noted by this review of literature surrounding educational programming for students on the autism spectrum many inequities in the types and quality of those students with ASDs receive. These inequities in programs have prompted many parents to challenge their local school district in pursuit of a quality and even specific methodology based intervention for their child. While most research to date focuses only on quantitative data relative to student learning curves following the application of a

specific, or lack-there-of a methodology based intervention, there is minimal qualitative research that yields information from those that experience the interventions first hand. This study proposed to provide information regarding what parents and professionals find to be those most important components, including methodologies, of educational programming for students with ASDs. Information gleaned offers public school administrators valuable information in developing quality programming for students on the autism spectrum in an attempt to both educate students in their district appropriately and to avoid costly litigation and outsourcing of students with autism to pricey private institutions.

Summary of Literature

From the literature it can be seen that many trends exist relative to the education of students with ASDs. There is, no doubt, a wide range of educational and intervention options for students with ASDs emanating from varying theoretical perspectives; all of which claim some degree of effectiveness and some claim they are evidenced based with little evidence to back them. A review of current research and case law illustrates that much of the current debate of educating this population of students involves the types of methodologies being employed by the educational setting. While studies reviewed are weak with methodological errors, ABA continues to be the strongest empirically researched methodology for the population of students with ASDs. Despite the growing body of research supporting ABA as a preferred and empirically researched methodology for working with this population a closer look at related case law and studies of students receiving services in low poverty areas report little if any methodology based intervention, and minimal ABA intervention in the educational environment. While we

are learning from the literature characteristics such as early intervention, intensity of services, parental involvement are unquestioned characteristics of an effective program- we still do not deeply understand the perceptions and experiences of those who provide the intervention or the families who experience educational intervention for their student with ASD. This study will compare the experiences of families and professionals working with children with autism and compare these views to current literature outlined above. Information gathered from this comparison will allow for the views of the consumers and providers of educational programming to inform potential service delivery which remains splintered, inconsistent, and inequitable.

CHAPTER III

METHODOLOGY

The purpose of this study was to identify the perceived characteristics of quality educational programs for students with ASD by examining the perspectives of both parents of students with autism and the professionals who work with students with ASDs and to compare their experiences to what is being promoted in current literature surrounding the education of students with ASDs.

While studies have examined the best methodology based interventions and successful components of programs derived from student outcomes, current research does not answer the question of how parents and professionals perceive and negotiate quality indicators of educational programs. This study attempts to gain a deeper understanding of successful student educational programming, from the perspective of those experiencing it by gathering information from parents and professionals. Information gleaned from this group of participants was compared to current literature in the area of education and autism.

Qualitative Research

Bogdan and Biklen (1998) note that qualitative researchers have concern for participant perspectives, purporting that individual accounts are of primary consideration

for this type of research. However, most studies relative to the educational programming for students with ASDs look only at student outcomes from a quantitative perspective. Such research often yields insignificant results due to the lack of matched participants and homogeneous groups of participants relative to socioeconomic status. People across the autism spectrum are a diverse and heterogeneous group making it particularly difficult to use studies that focus on outcomes and generalize them to the ASD population. Few studies to date consider the perspective of the family members of those being served, or the professionals serving this population and their perceptions regarding quality indicators in programs and perceived successful outcomes. The definition of success can be studied in more depth through a qualitative study because of the inductive and naturalistic nature of qualitative study.

While a quantitative study may be able to survey and indicate whether a therapeutic intervention or educational program was successful or not, this qualitative study further analyzed reasons why parents and professionals feel components of a program are successful. It was decided that in order to gain a robust understanding of parental and professional views of their ideas of quality indicators of a program for students with ASDs a qualitative study was necessary. Qualitative data allows for a detailed view of program characteristics as opposed to having student outcomes analyzed. In this study parents and professionals reported on what they believed to be quality program indicators and why. The characteristics of the program were analyzed through the variety of methods used and allowed participants to discuss, and move toward a deeper meaning of success through the process. As quantitative studies seek more to test theories and establish facts and relationships between variables, this study was more

concerned with developing an understanding of what those who know people with autism define as important. This study has characteristics of a phenomenological approach in terms of what characteristics affect the phenomenon of successful or unsuccessful educational programming through the experience of participants (Bogden & Biklen, 1998). This study was not testing any one specific theory but rather attempted to gain a deeper understanding of successful and unsuccessful educational programs through perceptions of both parents of students with ASD and professionals who work with students with ASDs.

Grounded theory.

A review of literature reveals that current data relative to the education of students with ASDs is inadequate and insufficient. When current theories are not substantiated, grounded theory can be especially helpful in analyzing the phenomenon from the experiences of those who have lived it. Grounded theory does not begin with a particular framework, rather it begins with the data and uses the data to discover and develop a theory. Such research is both exploratory and descriptive and exhausts the element of a participant's lived experience of the phenomenon. Participants in the study all had experienced the process and the development of the theory subsequently helped to explain practice and provide a framework for further research (Creswell, 2007). A key idea is that Grounded theory development does not come "off the shelf", but rather is generated or "grounded" in the theory in data collected by those who have experienced the process (Strauss & Corbin, 1998).

Grounded theory was used for this study because it is the study of experience from the perspective of those who live it, and the mode of inquiry is inductive (Merriam,

2002). The study analyzed data through the analysis of the words of the parents and professionals as a means of providing an understanding and a sense of ‘intimate’ understanding of the experiences of those who live the phenomenon (Midence & O’Neil, 1999). Such an approach to gathering data allowed for a rich picture of parental and professional views. Grounded theory is an open-ended and flexible approach that allows the researcher to follow clues and ideas as they develop and therefore important to this study in that it will allow for the voices of the participant relative to the education of students with ASD, to be heard .

Research Design

The research study was qualitative in design. The study included the following elements in order to look at the education of children with autism from the perspective of parents and professionals who have experienced it. Research conducted in this study used a grounded theory approach to focus on the experiences of parents and professionals participating in varying educational programs for students with ASD. The general intent of the research was to better understand the qualities that make an educational program successful for this population of students as experienced by those who live it and compare this data with current research trends in this area. Moreover, this study attempted to identify the specific qualities and interventions that make an educational program successful and compared these qualities to current literature promoting effective teaching for students on the autism spectrum.

Setting and Participants

Study participants were comprised of a group of sixteen participants including eight parents of school-age children with autism (students ages 6-12 years old) in

northeast, Ohio and eight professionals that currently work with students on the autism spectrum in an educational setting, either private or public (grades K- 6th) in northeast, Ohio. Professionals and parents selected were chosen to represent different educational options, both public and private, in northeast Ohio. Of the eight parents and professionals two from each subgroup were chosen to represent four of the five primary ways in which students with autism are educating in northeast, Ohio. These educational service delivery models included: regular public school classroom, a specialized public classroom for students with autism, a classroom for students that have multiple disabilities, and a county led program for students with special needs, all in northeast, Ohio. A fifth option that was not be targeted is the Ohio autism scholarship program which was not used for this study due to the extreme variability of service delivery.

Participants were chosen using convenience sampling with maximum variation based on location and type of services provided/received and selected to represent a diverse group of parents and professionals representing the four types of educational settings and interventions from varying socioeconomic backgrounds. Participants were identified and asked to participate by the researcher based on knowledge and convenience.

Maximum variation of participant selection.

Selection of participants was chosen to represent a diverse group of parents and professionals connected with the four of the five primary educational settings for students on the autism spectrum in northeast Ohio. Currently, the majority of students enrolled in their local public school receive intervention and education in one of five ways. Students can attend their local public school and be enrolled in a classroom for students with

autism that uses either a specific educational methodology or a more eclectic approach to serving students with ASDs. Another public school option is for a student to be in a classroom described as a classroom for students with multiple disabilities meaning that students in the classroom have more pervasive impairments affecting more than one area of functioning (i.e. cognitive, mobility, communication, or vision). A third public school option is that of a specialized school classroom or program in a larger district or managed by the county.

A fourth and final public option for educating students on the autism spectrum is that of selecting the Ohio Autism Scholarship Program (OASP). This particular option allows parents to choose to withdraw their child from the local school district services and in turn receive up to \$20,000.00 per calendar year from their local school district to cover the costs of therapies and educational instruction that the family has paid for so long as the services are indicated on the student's IEP. This option puts the parents in control of accessing services for their child, however once they make this selection they may not receive any other services or support from their local district for that academic year. This option varies greatly in terms of the provision of service as the family ultimately decides how to use the \$20,000.00 to educate their child. Because this option is so variable relative to the provision of services, this option was not used as an area in which participants were drawn.

A fifth manner and non-public manner in which many students in northeast Ohio receive educational intervention is by a non-public private program or school that is paid for by the local school agency. Approximately 10-15% of students in northeast Ohio receive services via private agencies paid for by the district of their residence. One

example of a private program in northeast Ohio is that of the Cleveland Clinic Center for Autism located in Cleveland, Ohio. This non-public charter school provides educational services for students with ASDs in a year-round school program. Another non-public charter school in northeast Ohio is The Monarch School located in Shaker Heights, Ohio. This is also an intensive educational program for students on the spectrum. Both of these programs use strategies specific to children with autism, but are not bound by the state curriculum for educating students and they are in an environment with only children on the spectrum. The decision to send a student to a non-public school program is often a difficult one for a local district in that they must first determine that they are not able to provide FAPE in their home district. More often than not, students are sent to these programs because either the district is not able to manage the student, or the family has sought legal representation to help coerce the local district to move their child to a private program. Typically, private educational programs often cost upward of \$70,000.00 per calendar year plus the cost of transportation.

Procedures

Participants identified in this study were contacted and asked for their participation in the study. Following the approval of the prospectus hearing for the current research study, a request for permission to conduct the study was submitted to the Institutional Review Board (IRB) at Cleveland State University. Upon full approval from Cleveland State University IRB, all participating parents and professional were provided the following items: a letter explaining the purpose and procedures of the study and confidentiality of participating in the study (Appendix A). The participants were asked to sign a consent form that described the research activities as well as possible benefits and

risks of participating in the research study (Appendix A). Interviews were audio taped to allow for later transcription and analysis. In the case of the present study, the guarantee of confidentiality was given to the participants. Due to the researchers' visibility in the local autism community and affiliation with organizations that promote behavioral intervention with students with autism, a research assistant was utilized to conduct the interviews to avoid any bias or influence on subject responses. A research assistant with graduate coursework and experience in qualitative research and knowledge and experience with children on the autism spectrum was used to conduct interviews. The research assistant selected had qualitative research experience and ASD content knowledge which allowed them to have the capacity to effectively manage the participants' responses within the context of the questions. The research assistant was trained by the researcher relative to the interview questions and how to probe responses when open-ended questions are posed. During the pilot phase of the study trialed interviews were videotaped to allow for the researcher to review the research assistants interview skills and provide feedback accordingly. The assistant also signed a confidentiality statement (Appendix A).

Instrumentation

Methods of data collection of this study included a semi-structured face-to face interview with parents and professionals regarding their feelings and experiences relative to the educational programming supporting in a specific educational environment as well as a brief questionnaire which gathered demographic information. Interview questions asked were open ended to allow the participants to openly dialogue about their experiences and identify what they felt to be characteristics of successful educational programs. A single piloted measure was taken as a means to gather rich thoughtful data

from the participants. The pilot study included a face validity interview in the form of a focus group which allowed for further validation of the questionnaire and interview protocol.

There are numerous studies published outlining the stress and effects on parents with children with special needs and the countless duties that they are responsible for. Divorce rates for families with a child on the autism spectrum have been estimated at upwards of 80% (Maurice, 2003). Similar, levels of stress and burnout have been documented for special educators due to the abundant work load and intensity of their daily job duties (Mills, 2008). For this reason, it was decided to do one measure of data collection as opposed to asking this already stressed and busy group of individuals to volunteer to engage in two or more lengthy activities. Many parents and professionals that work with children with ASDs are very limited in time and it was thought that one longer interview session that would allow the researcher to gather data relative to their thoughts and experiences would be sufficient to compare against current research trends. Furthermore, many parents and professionals are very decisive and clear in what they believe to be important for their child or student with ASDs and therefore, it was thought that additional opportunities to discuss this may, perhaps not give any additional information, but it was understood that it would allow for higher reliability of the study. To that same end, member checks were conducted within two weeks of the interview. In member checking, the researcher solicited participants' views of the credibility of the findings and interpretations (Merriam, 1988). Lincoln and Buba (1985) consider member checking to be the primary technique for establishing credibility (Cresswell, 2004). According to Stake (1995), participants should be asked to examine the researcher's work

to provide any alternative language or interpretations (Cresswell, 2004). For the purposes of this study, participants were given a transcript of their interview within two weeks of the interview by the research assistant and were asked to review it and add anything that they felt that was not included and to also modify anything that they felt was not representative of their beliefs.

Questionnaire.

A brief questionnaire (Appendix B) was utilized to gain basic demographic information and previous experience with autism educational programming. The questionnaire was used to gather information about components of the specific educational program (public or private), and methodology based interventions utilized.

Interview.

Both parents and professionals were interviewed face-to-face and asked a series of open ended questions regarding their perceptions of successful components of autism educational programs. Interviewees were asked questions by a research assistant to allow for the families to be as open as possible to yield rich responses. The research assistant was utilized to avoid any potential biases related to the presence of this researcher who is involved in many local autism groups, presents locally at conferences, and has worked in a variety of educational and clinical settings in northeast Ohio over the past twelve years. Interviews took place in a mutually agreed upon location that was convenient for the participants and were in the presence of the research assistant only to protect the subject's identify as well as for increased comfort level in answering questions.

A semi-structured interview instrument was created based upon a review of literature but was also open-ended enough as not to lead the participants in their

responses (see Appendix C). The protocol was piloted and modified accordingly prior to the initiation of the interviews. The interview consisted of 10 questions that attempt to elicit personal feelings and attitudes toward autism educational programming specifically their thoughts about specific components and potential outcomes. Participants were asked a series of questions regarding the following: level of support to home, types of methodology based interventions, intensity of programming, core deficit areas, intensity of programming, and having a team approach (Appendix C). They were also asked about their thoughts on current research in the area of autism programming and the importance of specific components as part of a comprehensive program. The interview protocol included basic open ended broad questions, and also offered probing questions to gather more detailed information. The research assistant was trained how to ask questions in a non-leading manner to allow the participants to openly respond using a true grounded theory structure. Following the pilot the researcher reviewed videotapes and provide the research assistant with feedback regarding the probing of questions. The audiotapes of the interviews were transcribed within a two week period and returned to the participants to ensure accuracy and validation of their responses. The research assistant conducted these member checks.

The interview protocol was developed and then pilot tested to refine the interview questions and the procedures further. A focus group with the pilot participants included a face validity interview. Participants in the pilot study were selected based on convenience, and access. Based on the results of the pilot test final interview questions were determined.

Pilot Study

A pilot study including a test interview, a face validity questionnaire, and a focus group was conducted prior to the finalization of the research instrument. Pilot test participants consisted of four participants, two parents (one with a child in a public school and one with a child in a private program) and two professionals (one who teaches in a public program and one that teaches in a private program). Test interviews were conducted to ensure that the interview questions were structured in a manner that yielded quality data. The pilot was conducted specifically to test aspects of the research and to allow necessary adjustment before final commitment to the instrument design was made. The pilot interviews were videotaped so that the researcher could observe the interactions and probing questions from the research assistant. Feedback and questions were modified accordingly. The participants were asked to complete the short demographic questionnaire and then they were interviewed using the semi-structured interview protocol (Appendix C). Following the completion of the interview and questionnaire, the participants were asked to complete a face validity questionnaire (Appendix D) and then participate in the focus group. The entire process took around an hour. During the focus group the participants were engaged in a discussion regarding their responses to the face validity interview to obtain feedback on their thoughts about the interview protocol design. Upon completion of the questionnaires, interviews and focus group, data gathered from the interview was content analyzed using open-coding to determine if themes emerge relative to the intent of the instrument design. Further analysis was conducted regarding feedback obtained from the face validity interview and focus group

to determine the validity of the testing instruments. Interview protocols were refined based on information gathered during the pilot study.

Data analysis.

According to Merriam, theory identification is a process of identifying a core category, or the main conceptual element through which all others are connected (Merriam, 2002). Following the transcription of the interviews the interview data was analyzed. During the first phase of data analysis the data was labeled by examining the transcripts line by line to conceptualize the ideas, themes, or concepts reported by the participants. Data was then analyzed to highlight key categories relevant to the research questions using an open, axial, and selective coding procedure (Merriam, 2002). Open coding was conducted first to find components identified as successful programs and to gain a deeper understanding of the themes, which were given provisional names. Themes were incorporated into a chart. Axial coding was used to further analyze statements and find main topics/themes into columns identified by the researcher to be the best match. The selective coding process was used to identify core categories from the integrated categories and to relate other categories to the core categories which emerged. This stage involved validating those themes and relationships and refining and further developing the established categories.

Validity and reliability.

The pilot study including the focus group and the face validity questionnaire served to strengthen the validity of the research instruments including the questionnaire and the interview protocol. Peer examination by the dissertation committee and doctoral student peers also assisted with the content validity of the study throughout the course of

development. Dissertation committee members viewed reports of the findings as they were being produced and were asked for feedback. Additionally, field notes were collected and analyzed to assure that information gathered was consistent with data analysis and findings. Upon completion of the sixteen interviews and they were transcribed within a two week time period. Once they were successfully transcribed, member checks of data by participants by the research assistant provided validity to the study as well as for capturing the perspectives of parents and professionals. Participants were requested to review and comment on transcripts of their interview and to offer any additional interpretation.

Data Analysis

The analysis procedure in grounded theory research in this study was that of a constant comparative method of data analysis. This strategy of Strauss and Corbin (1990) was applied to gain an understanding of parents and professionals linked to autism programs and their experiences with successful programs. The goal was to identify underlying themes that emerged from the subject's descriptions of their experiences and ideas surrounding autism educational programming.

Merriam (2002) indicates that with qualitative inquiry "...you seek to discover and understand a phenomenon, a process, the perspectives and the worldviews of the people involved, or a combination of these...data are inductively analyzed to identify the recurring patterns or common themes that cut across the data" (p. 6). Information gleaned from this study served to provide detailed information surrounding the phenomenon surrounding educational programming for students on the autism spectrum. Furthermore, information gathered provided important information for educators,

administrators, parents, therapists, and other professionals working to provide interventions to this specific population.

The data for this study included: questionnaires and interviews and member checks. These data allowed for triangulation of the study, allowing participants to see from different viewpoints the characteristics of successful educational programs for students with autism. Data was analyzed in a content analysis method to look for distinct patterns which fell within the framework of indicators of successful programs. This information was further analyzed against current interventions supported in research for students with ASDs.

Finally, a comparison of information gleaned from these questionnaires and interviews against current research relating to the education of people with autism was made to determine if those people that experience the education of this population first hand are experiencing similar ideas and beliefs similar to those being promoted in the most current literature regarding the education of this population.

Summary

The methodology, procedures, participants, instrumentation and data analysis for this study were described in this chapter. Interviews, questionnaires, and member checks were used to explore the perceptions parents and professionals who work with students with ASDs to determine what they view to be the quality indicators of a child with ASDs in the educational environment. Reliability and validity measures were described which included a pilot study with a focus group and face validity interview as well as member checks. Data analysis procedures were described. Information gleaned from the data analysis was then compared to current literature in the area of education and ASDs to

determine if what is being promoted in the literature is consistent with what those experiencing this phenomenon determine to be quality indicators of an educational program for students with autism.

CHAPTER IV

RESULTS

Chapter IV provides description of the findings from the analysis of the data collection relative to this study. The data includes the questionnaire and the transcripts from the participant interview. The results are discussed in accordance with the research questions: 1) What do professionals who work with people with ASDs, and parents of people with ASDs believe to be the educational needs of these students?; 2) What components of an ASDs program do parents and professionals find to be the most important to a successful educational program for students with ASDs?; 3) What types of methodological interventions do parents and professionals consider to be most important in meeting the educational needs of students with ASDs?; 4) Do the qualities of a successful educational program for students with ASDs as suggested by a diverse group of parents and professionals parallel those qualities currently promoted in the literature?

Participants

Following the completion of the pilot, which was conducted as a means of gathering information about the reliability and validity of the interview protocols and questionnaire as well as a means of proper training and feedback to the research assistant

prior to the final study, recruitment of study participants was conducted. All of the four of the pilot participants thought that the questions included on the interview related to the purpose, and none of the participants listed questions that they thought should be removed or revised. Similarly, they did not suggest any additional questions that they thought should be added. All of the participants believed the directions were understandable. The final data collection procedures were not modified in any way between the pilot study and final interview protocol and questionnaire. The pilot was helpful in allowing for training and feedback for the research assistant, as well as for testing the usefulness of the questionnaire and interview protocol prior to selection of the final study participants.

Participants in the final study were chosen by convenience by the researcher to represent a diverse group of parents and professionals. The participants were selected to represent a subset of the population of parents and professionals in northeast Ohio. The goal of the research was to identify an understanding of the education of students with ASDs in northeast Ohio. The researcher carefully selected participants to represent a variety of stakeholders from urban, rural, and suburban areas. Participants were also carefully selected to represent differing perspectives to include those familiar with public schools, those most familiar with private schools, and those that have accessed both. Participants were sought out by the researcher given the researcher's knowledge, affiliations, and connections within the local special education community. Participants were identified via their affiliations with their school and affiliation with related colleagues and other professionals in the area. The questionnaires were used to gather

basic demographic information to gain a better understanding of the background of the participants as well as to confirm their eligibility criteria for participation in the study.

An analysis of the questionnaires confirmed that parents and professionals from each of the four primary educational settings (i.e. public school, public school specialized program, charter school, charter non-public) in northeast Ohio for educating children with autism were selected. The participants were chosen using theoretical sampling to represent an equal yet diverse group of parents and professionals from northeast Ohio.

Professionals.

Included in the study were eight professionals that all have intervention specialists' licenses and have been employed as teachers for students on the autism spectrum for at least the past five years. Two of the teachers teach in a rural setting, two teach in an urban setting, and four teach in a suburban setting. Two of the teachers are employed in a private setting, while six teach in a public setting. All the teachers are female and all have had some training on teaching children with autism in addition to their coursework leading to their degrees. Analysis of the classroom composition of the participants revealed that three teach in classrooms with students of varying disabilities, two teach in resource classroom, two in a classroom for students with autism, and one of the teachers is an inclusion teacher. Further analysis of the classroom composition for the participants revealed that three of the teachers have six to eight students in their classroom, and three have three to five students on the autism spectrum in their classroom, while two of the teachers have only one to two students with autism in their classroom. All but one of the participants had received some level of methodology-based autism specific training through their employment, and three had received only one

methodology-based training. Six of the eight have received training in applied behavior analysis, while three of them have received training in TEACCH methodology, and one of each of technology and verbal behavior. None of the professionals is a member of an autism organization.

Table 2.

Professional Demographics

| Professional | Place of Service | Training | Methodology | Number of Students |
|---------------------|-----------------------------|--|--------------------|---------------------------|
| Prof 1 | Public/resource | ABA, TEACCH Floortime | ABA, TEACCH | 6-8 |
| Prof 2 | Public/varying disabilities | TEACCH | TEACCH | 3-5 |
| Prof 3 | Private/inclusion | ABA | ABA | 6-8 |
| Prof 4 | Private/autism only | ABA | ABA Floortime | 6-8 |
| Prof 5 | Public/inclusion | None | Technology | 1-2 |
| Prof 6 | Public/inclusion | Behavior Management Verbal Behavior | ABA TEACCH | 6-8 |
| Prof 7 | Public/varying disabilities | ABA | ABA | 3-5 |
| Prof 8 | Public/varying disabilities | TEACCH | TEACCH | 3-5 |

Parents.

Included in the study were eight parents of children on the autism spectrum. Participants in this subgroup were selected with consideration to represent a diverse group of parents with children with autism receiving varying models of education. Of the eight parents, two were males and six were females. Five of the parents have completed or have at least some college level education, whereas two parents have master's degrees and one reports not having additional education past high school. All of the parents have only one child with autism spectrum disorder and only one of the parents report having another child with a reported disability. Two of the parents interviewed have a six year old; three of the parents have a seven year old, one of the parents have either an eight year old, eleven year old or a twelve year old.

The parents were also asked about the educational and therapeutic services that their child on the spectrum receives. An analysis of this portion of the questionnaire provided information relative to the study. Five of the parents have a child that attends public school while three of the parents in the study have a child that attends a private program for students with autism and related disabilities. The classroom composition of the students of the parents interviewed include four students that attend a classroom for students with varying disabilities while three students attend a classroom for students with autism only. Parents were also asked to report their child's degree on the spectrum as well as the methodology that is used in their child's classroom if they knew. They also indicated the grade of their child, as well as the number of additional therapies that their child receives. None of the parents interviewed reported being affiliated with any local or nation autism groups.

Table 3

Parent Demographics

| Parent/Gender | Child Place of Service | Degree on the Spectrum | Classroom Methodology | Age of Child |
|----------------------|-------------------------------|-------------------------------|--|---------------------|
| Parent 1 Female | Private/varying disabilities | Moderate | Sensory Integration | 7 |
| Parent 2 Female | Public/varying disabilities | Moderate | ABA | 12 |
| Parent 3 Female | Public/autism only | Moderate | ABA TEACCH | 7 |
| Parent 4 Female | Public/varying disabilities | Moderate | Other | 8 |
| Parent 5 Male | Public/varying disabilities | Moderate | ABA | 7 |
| Parent 6 Female | Public/autism only | Mild | ABA TEACCH Sensory Integration Floortime | 11 |
| Parent 7 Female | Public/Mainstream | Moderate | None | 6 |
| Parent 8 Male | Private/autism only | Moderate | ABA | 9 |

Following the completion of the questionnaire and the interviews, data collected including audio tapes of the interviews were transcribed. All participants were given a copy of their interview transcription to allow for their review and to gather additional interpretation for validity of results. These member checks of data by participants were completed by the research assistant to provide reliability to the study as well as for validity of capturing the perspectives of parents and professionals. Participants were asked to review and comment on transcripts of their interview and to offer any additional interpretation. Information gathered during the member checks were added to field notes and analyzed during the coding phases.

Data Analysis

Following the transcription of the interviews, the data were analyzed. During open coding, the first phase of data analysis, the data were labeled by examining the transcriptions and field notes line by line to conceptualize the themes reported by the participants. Data yielded twenty-five key categories relevant to the research questions. Axial coding was then conducted to further analyze the themes from open coding to identify central themes and secondary themes relative to the research questions (Merriam, 2002).

Open coding was conducted first to find components identified as successful programs for students with ASDs and to gain a deeper understanding of the themes, which were given provisional names (Table 4). Themes were incorporated into a chart and analyzed for frequency of occurrence by subject. Axial coding was completed to further analyze interviews and field notes and to find primary and secondary themes identified by the researcher. Categories were created according to research questions and

analyzed via frequency of occurrence of theme by research question, by participate (either parent or professional), and by participate affiliation of public verses private setting. The selective coding process was used to identify core categories from the integrated categories and to relate other categories to the core categories that emerged. These core categories were analyzed further by looking at themes against subject, research question, and affiliation with current educational setting. Categories were first set up according to frequency of occurrence within the interviews. (Tables 4).

Table 4.

Categories by Frequency of Occurrence in Interview

| Category | Frequency by Parent | Frequency by Professional |
|-------------------------|----------------------------|----------------------------------|
| Teacher/Professional | 6 | 3 |
| Intervention Type | 2 | 1 |
| Individualized Services | 7 | 5 |
| Staff Ratios | 5 | 4 |
| Support (to family) | 2 | 1 |
| Training (of staff) | 6 | 6 |
| Combination Methods | 4 | 6 |
| ABA | 5 | 5 |
| Floortime | 2 | 2 |
| Research | 3 | 3 |
| Money/Finances | 6 | 6 |
| Communication (Therapy) | 6 | 6 |

| | | |
|-----------------------------|---|---|
| Structure (of intervention) | 5 | 5 |
| TEACCH | 2 | 4 |
| Behavior Intervention | 3 | 6 |
| Social Skills | 3 | 4 |
| Independence | 0 | 2 |
| Intensity (of services) | 5 | 6 |
| Family Support | 1 | 2 |
| Team Work | 3 | 0 |
| Data (Decisions) | 4 | 2 |
| Consistency | 2 | 1 |
| Sensory | 0 | 1 |
| Private School | 3 | 1 |

Research Questions

Research question 1.

Parent and professionals beliefs about the educational needs of students with autism

The purpose of research question 1 was to identify the perceptions of both parents and professionals when describing the educational needs of students with autism spectrum disorders. Professional and parent perceptions were analyzed via response to interview questions 1 and 2 on the interview protocol (Appendix C).

Parent Perceptions. Using a grounded theory approach to review the data during open coding core themes emerged. Data analysis using a constant comparative method

indicated three primary trends emerged when parents were asked to indicated what they believed to be the educational needs of students on the autism spectrum. The core theme that emerged from the data was individualized education. Parents indicated that the vast needs of students on the spectrum are so pervasive and vary from student to student that the needs for this population are unique to each particular student. Seven of the eight parents indicated that the educational needs of students with ASDs are vastly different and warrant an education according to specific needs rather than being consistent across the population.

Parent 1 summarized the perceptions of the parents that referenced individualized needs when asked, “What do you consider to be the most important components of a successful education program for a child with autism?” she replied:

“Individual components are important ...depending on what...what the child needs. Because there is such a wide variety of needs. It really needs to be...individualized. You know, it’s a case by case basis. The needs are too various and different that it’s hard to give one answer. There really cannot be a cookie cutter approach....you know....like, oh, your kid has autism, then you need to do this certain thing”.

Parent 4 referenced the need for “individualized differentiated instruction” meaning that curricula should be modified for each particular student’s learning needs. Parent 8 described individualized services relative to her child:

“For her, they make it pretty individual....for her... individualized for her. That’s what’s perfect. So, I’d say do whatever works for the child”.

Parent 2 indicated the need for individualized services, but referenced the fact that she does not believe it happens in public schools:

“I would think that the other thing that’s critical is...is the structure...of the educational program. It has to be ...individualized. I mean...they all know that but the reality is that it doesn’t often happen...the way that it should.”

Other parent perceptions were similar in their response to research question 1 indicating the needs for students on the autism spectrum are not prescriptive, rather individual. This notion reflects the research by Dunlap (1999) which indicates that a critical key to success is to match specific practices, supports, and services with each student’s unique profile and the individual student characteristics. Individualized programming and educational supports serve to assure that student specific needs are being strengthened and that there is engagement and progress in the educational process.

A second theme that emerged from the data relative to what parents find to be the education needs of students with ASDs is communication. Six of the parents who were interviewed mentioned that communication intervention is one of the critical educational needs of students with ASDs. These parents believe that establishing and building expressive communication is a primary need for students with ASDs. Many of these parents perceive communication impairments as a reason why behaviors occur frequently and sometimes intensively in this group of students. They reference the fact that if proper communication intervention is an intensive and integrated piece of the educational process,

students will thrive in other domains of development and education. Parent 2 indicated that communication was the primary component to the educational process for students from her perspective. She stated:

“The reality is that what matters most for our kids is communication. And it needs to be based, for many of our kids, on this component. That is the big area of need.....some are more quirky...and some have very little communication. This is important for learning or even being in the school environment”.

Parent 3 also indicated the need for communication:

“Obviously the communication piece like speech therapy and all that...I think it’s really important, I mean just from my personal experience.”

Many of the parents that referenced communication mentioned this as the most important piece to their child’s learning process. Parents also viewed social language and social skills to be part of the communication needs for students with ASDs. One of the parents indicated that impaired social skills are the primary reason that her child is not excelling in school despite having average cognitive scores. Her belief is that if communication skills improve, the educational process could be maximized for her child. Another parent, Parent 2 indicated that communication and social skills are important for life skills long term:

“I also think it’s really important for the kids to have some type of social skills.....training, or I guess they need to be exposed to real world situations...you know going to a restaurant...movie theater.....knowing what’s appropriate and not appropriate...in social settings because

obviously the goal at the end of the day is for them to be functional members of society without the social problems...to have communication. Which is really important. You know they're not going to be able toyou know... they said you know...you see a child laying on the ground at the mall...it's okay but if you see a sixteen or seventeen year old kid laying on the ground....at the mall, it's just you know. And then, obviously the communication.”

The idea that communication is a critical need of students with ASDs from the perspective of parents in this study is consistent with the Diagnostic Statistical Manual of Mental Disorders IV which indicates communication impairment as one of the key diagnostic criteria for a person with ASDs. Therefore, parents are considering treating one of the primary diagnostic criteria for students with ASDs as an educational need or function of the educational process for their children. Parents interviewed perceive communication impairment as a barrier to learning for students with ASDs and consequently one of the largest educational needs.

A third and final core theme that emerged from interviews relative to the data is the need for students with autism to be educated by professionals that are skilled and trained specifically to work with this unique and diverse population. Of the parents interviewed, six of the eight indicated the need for appropriate staff that are highly skilled and have been afforded opportunities for training. The perception of the parents that staff that work with their students must be appropriately trained, experienced, and employ strategies specific to the population was echoed by families in both interview questions 1 and 2 and

frequently mentioned in interview question 4 which specifically references the difference between public and private schools. Parent 5 described staffing as the most important component to the education of a student with ASDs:

“So, I think the one thing that we have truly learned is that in the public school setting;the difference that makes or breaks the success of the child really is the staff. So.....a classroom environment is only as good as the teacher leading it, and the teacher leading it is dependent on her staff in the room to make the room successful....”

Parent 4 also talked about the need for a trained teacher:

“I would say a well-trained teacher...is the most important with you know up to date.....interventions and you know...I guess you can have all good materials in the world but if they’re a crappy teacher (laugh). So, you know...someone who is trained and is able to interpret the IEP and tune into the kid, zone into their needs.....so, yea, I think the teachers play the best assess...biggest asset...the most important.”

Parents interviewed indicated specific qualities linked to staff that are appropriately trained. Two parents indicated that staff that is adequately trained is often more “motivated” to meet the individual needs of the students with whom they work. The idea that they have the tools from being appropriately trained directly links to their motivation to understand fully and know the potential of the students. Another quality mentioned by Parent 6 and Parent 7 was the ability of staff to be team players. Parent 6 indicated “...it just matters. When everyone is trained right, there is a team approach to what’s happening around you”. Parent 7

also indicated this dynamic “Well, training is also important. So, like making sure everyone works together...like a team”. It was the belief of these two parents that when appropriate and trained staff are in place, a team approach is more likely to occur. The assumption in this scenario is that when staff are trained, a team approach is taken with the students and subsequently students’ needs are addressed. Parent 4 indicated that when staff are more properly trained, they are more “confident” in their own skills and in turn work more closely and are more communicative with the family because they have “nothing to hide”. Finally, two of the parents that mentioned staff training as an important component also mentioned the staff ratio for students with autism. Neither of the parents indicated a preference for an appropriate student to staff ratio, they only cited the ratio of staff as an important educational need. Parent 8 indicated the need for trained aides “Yeah. There’s not enough of them (aides). Not enough of them and not enough of them trained to work with the kids (with autism)”. Parent 3 also asserted that public school lack trained staff and better ratios when compared to private schools:

“I think there is away more.....with a regular school there is an increase in finding people who are less trained., I think there is an increase in finding people who are less aware...because of money or just the particular personality traits of who they hired...or why they are there. I mean and.....so as I have found that people are more in tune in the private school. They are more trained. They are more interested...and especially the continuing ed. stuff as well....and more staff.”

Both of these parents linked public school finances and funding as a reason for appropriate, or lack of appropriate, student to staff ratio in the schools. Parent 1, who had her son in a public school and subsequently moved him to a private school, indicated that staffing and finances of the public school he was in was a reason for removing him:

“But again, public schools you’re restricted by money...of course. It all boils back to money. And, they didn’t have enough aides. Not enough aides to give Sam what he needed and I would have had to pursue a legal battle if I wanted to get him another aide. So, we pulled him (from the public school).”

This idea of public school finances and money was echoed by many parents when referencing untrained staff and understaffing during interview questions 3 and 4.

The perception of many parents, which will be described further in research question 3, was that public schools have fewer resources, less money, and subsequently staff with far less training and support than the private programs for students with ASDs. Parent 8, who also has a child in a private program had a similar idea to parent 1 with regard to the training in public schools being linked to finances and were at a greater disadvantage than private schools:

“It depends on the program. Public school...they...uh....they don’t have the resources. Which means that they are not well trainedbecause education for these kids needs to be so specialized and individualized they don’t have the personnel to even cover it (the appropriate education)”.

Parent 8, similar to other parents interviewed, mentioned training and the link to the financial disadvantage of the public school programs educating the population of students with ASDs. This assertion of the lack of public school funding affecting the education of students with ASDs was echoed by most all of the participants and is also supported in the literature.

Data gathered regarding the educational needs of students on the spectrum yielded core themes including the need for individualized education, the importance of communication intervention as a primary educational component, and appropriate staff training for professionals working with students with ASDs. All of these core themes and secondary themes are aligned with what is being promoted in current literature.

Professional Perceptions. Professional perceptions of the educational needs of students with ASDs were examined via interview questions 1 and 2. Data were analyzed specific to each question. Review of questions 1 and 2 yielded three core themes including: Intensity of services, behavior management, and communication. Other secondary trends emerged include: individualized education, staff training, and structure of the classroom. The core theme that emerged from the data was the need for intensity of services. Of the eight professionals interviewed, six of them indicated the need for intensive services for students with ASDs. These six professionals perceive educational services that are intense in terms of frequency and effective use of student time to be critical to meeting the needs of the students with ASDs that they serve. Four of the six indicated that the intensity of services are directly linked to a one-to-one student to staff ratio, indicating that less than this ratio may not be conducive to meeting student needs.

Again, similar to the parent interview responses, many of the professionals linked the intensity of services to the cost of such intensity, again citing public schools in Ohio at a disadvantage because of state, local, and federal budget cuts. These professionals reference intensity of services being necessary because the students with ASDs need repetition of learning targets and frequent services in a one to one setting. Professional 2 summarized the need for intensive services, but referenced the public schools inability to provide such services:

“If you’re talking about a private autism school that is totally focused on autism then...then....I mean, if you have the resources to do something that intensive like that....that’s ideal. Because they are 100% of the time on that one student....so, they can offer, you know, a much better comprehensive and intensive program that’s going to really be streamlined into the needs that your child has and they have the staff to get it done”

This particular professional equated the students’ needs directly to the need for intensive services. Many of the professionals interviewed believe this phenomenon of the need for intensive services to be directly linked to the finances available.

“If you are in a district (public school) I do feel like they can serve those kids (with autism) effectively if you have the right team of people and if you have the right support within the district that you work for. But, there is a wide range of students in a public setting in special ed., where they just don’t have the numbers....the staff for the specific needs of the student....they just can’t afford to do it. Where in a private program there are more...more people to do it effectively.”

Professional 3 also commented on this dynamic:

“So I think the intensity of services and a lot of times the experiences of the teachers, I think you’re going to get...you’re going to get more of that in a private school because the public schools just can’t fund it. For Michael we know that he gets school, whatever 25 or 30 hours a week, but he needs....more. We have a tutor with him, you know, 2 hours a day after school....and speech therapy. So, we know he needs this.....if you don’t advocate for your child, I think the district will give you the bare minimum program...and the bare minimum services.”

The idea of program intensity is another individualized component of education programming which is also reflected in the current literature that indicates that intensity must be considered on many levels, including duration of education weekly, the environment in which the teaching occurs, and the educational validity of the interventions provided (Report of the Connecticut Task Force on Issues for the Education of children with Autism, 1998). Considerable debate has surrounded the number of hours per day considered to be appropriate for educating children with ASDs in the public schools. There is great variability in the numbers of hours per week (20-45 hours) recommended. It has been the conclusion of the National Research Council Report for Educating Children with Autism (2001) that intensive instructional programming for at least 25 hours per week is critical for the majority of children with ASDs. None of the participants either parents or professionals noted a particular amount of time or duration when referencing the importance for intensity of services.

Another core theme that emerged during interviews was communication deficits and subsequently intervention for the students that they serve. Professionals perceived communication as the keystone to learning. Professional 2 described communication as a “critical” component of an educational program:

“You know, communication...communication is critical...critical to learning, critical to understanding in the classroom...you know, following directions, making friends...keeping friends. Even letting someone know you need help...or that bathroom. Communication, or speech and language is everything to these kids. It’s just where we start...you can’t do anything unless you have good communication..and intervention.”

Some professionals referenced it as “speech therapy”, others more globally by indicating “language” or “communication” as being a significant need of students with ASDs. Professional 1 indicated “Well...the main need for the kids I know that are autistic is just the need for lots of language therapy...you know to work on their communication”. Other professionals linked communication to “social skills” and the idea that students with autism need communication intervention to address underlying social skill deficits that are holding them back from being more independent individuals, developing and maintaining relationships, having the opportunity for potential competitive employment, and even accessing the community.

“...I think that, our kids need more social skills training and support with their language...I mean our hope is for our son to get a job one day..... and you need to talk to people...your boss.”

While described differently by professionals, communication was a common theme throughout the interviews. Some of the professionals linked communication to school funding. Similar to parents in the study, professionals indicated that public schools are lacking resources and financial support leading to appropriate staff training and intensity of services, Professional 6 indicated that public schools really lack the ability to provide social skills training to this population:

“I think a lot of times private doesn’t, in my experience there isn’t quite as much social skills benefit as there can be in the public school in a private setting”.

For the most part, professionals indicated communication is an area of need. These professionals reference more global language skills rather than social skills. Professional 3, who currently works in a private setting, summed up the importance of communication for most of the professionals that referenced communication:

“I mean, I think communication is the most important because without communication I think that we see behaviors andthey’re misinterpreted; but communication, they need to be able to express their wants and their needs and ...whatever....it kind of goes on and ties with their independence, whatever they can be independent and us helping them to be as independent as possible”.

Professionals generally cited communication a minimum of two to three times during the brief four question interview further validating the theme of communication as an educational need of students with ASDs.

A third and final core theme that emerged was the need for students to receive behavioral intervention or support. Of the professionals interviewed six of the eight indicated behavior intervention as an important educational need for the students that they work with. Some of the professionals who referenced behavior described it as applied behavior analysis, while others spoke about it more globally by referencing behavior management. These professionals indicated that students with autism require specialized instruction to manage behaviors that needs to be supported by an over-arching methodology. Two of the six professionals that cited behavior management perceived ABA as the methodology in which students with ASDs should learn; they indicated that students with ASDs require this type of intervention primarily because they do not learn via traditional educational methods, rather they are “wired” to learn differently. One professional indicated this idea during the interview:

“They (students with autism) just don’t learn the same way that most typical kids learn....they have different ways they learn...maybe visually, maybe by watching...or with hands on activities, manipulatives....like it’s just not the same, you know. “

The notion of the need for methodology-based intervention is consistent with the research indicating that specific, data driven educational approaches are necessary for educating this group of students. However, unlike the most robust research

that indicates that one particular methodology is most important, only three of the professionals referenced ABA as an educational need for students.

There were two secondary themes that emerged from data relative to the educational needs of students with ASDs from the perspective of professionals. The secondary themes included appropriate training for staff, and a classroom structure that is specific to the population of students.

A secondary category that emerged from the data is that of that the students with ASDs need to work with staff that are qualified and have appropriate training. This response was also echoed throughout the interviews of both subject groups. Over half of the professionals interviewed cited training a minimum of one time, most mentioned it at least one additional time during the interview. Professional 1 indicated that:

“...and there are some (staff) that aren’t trained with these types of students or whatever. They just look at them as....they’re kinda scared of them so they don’t really know how to work with them and they treat them differently....just because they don’t know any better because they haven’t had the training. They might say things that are a little different than other people but I’s like every other student, whether it’s autism or not....but, they just learn differently and for that reason special training needs to happen”

This idea was again supported by Professional 6 that indicated:

“I think in the public setting they have some limitations regarding sometimes staff training as from my experience, I’ve seen some benefits to private programs, but it comes down to the staff and their training and the

school commitment to staff training that makes a difference for the students”.

Another secondary theme that emerged during data analysis was that of having a structure to education. The term having “structure” was used very loosely, but it was mentioned frequently during interview questions 1 and 2. Professional 2 referenced structure relative to TEACCH, “it gives you a framework for setting up your classroom structure...which is key”. Professional 6 also referenced structure in reference to methodology-based interventions, “ABA gives you a structure to what it is you are doing everyday”. While Professionals 7 and Professional 8 referenced structure more vaguely, “I think structure is important”, or “(they) need a highly structured program”, and “a classroom that is structured to meet their needs.” None of the professionals gave a description of what they meant when they indicated that students on the autism spectrum need a “structured” environment. Nonetheless, the term “structured” was mentioned a total of eleven times during questions 1 and 2 on the interviews.

Summary. When asked what the needs of students with ASDs were to parents and professionals, there were some consistencies and some differences between the two groups of stakeholders. Themes that emerged that were consistent between the two groups included the notion that students with ASDs need communication intervention to develop their language abilities to enhance their learning as well as their independence.

A second core theme that emerged from the data from both groups of parents and professionals included the need for individualized and specific education based on student needs, rather than a diagnosis. Both of these core themes are supported by

current literature surrounding the education of students with autism. There have also been court cases which interpret FAPE to consider the need for individualized services.

Another core theme to emerge from both groups was the need for highly trained and experienced staff that can best understand the depth and global nature of deficits for this population. Both groups had six participants that cited the financial strain on the public schools and subsequently the inability for public schools, at times, to be able to afford training for staff. Specific to the parents were the themes of having qualified staff, which can also be linked with training, a methodology-based structure, and two parents specifically referenced ABA as a prime methodology. These parents both have students in a private autism program currently. Specific to the professionals were the subcategories of behavior modification as a means to provide a framework in which to teach, the overall structured of the program, and intensive services. All the core themes that emerged while analyzing data from research question 1 are supported in the literature. It becomes obvious, however, that parents and professionals, both stakeholders in educating students with ASDs, have slightly, but not vastly different ideas about what the educational needs of this population are. Contrary to the literature and most of the case law surrounding the education of students with autism, few of the participants mentioned methodology as being the primary need or indicator of success. None of the participants mentioned any of the methodology-based interventions besides ABA in reference to interview question 1.

Research question 2.

Components of a successful ASD Program

The aim of research question 2 was to identify the perceived components of an educational program for students with ASDs from the perspective of stakeholders.

Question 1 looked at discovering the needs of students with ASDs from this group of parents and professionals, while research question 2 looked at discovering the components that the participants observed to make a program for students with autism successful. Interview questions 1 and 2 were used to elicit responses to this research question.

Parent listed components of success. When parents were asked about the components that they felt equate to success for students with autism, six of the eight indicated individualized programming and instruction. This response mirrored the response in research question 1. Most of the parents indicated that those students that experience success in learning do so because the education was individualized based on their own personal strengths and needs. Parent 6 summarized the ideas of many parents:

“I really think it depends on the child. Some people get caught up in methodology....I think that is important... whatever is used, including methodology should not be...it should not be generalized to all children like....cattle or branded. Like, ‘this is our philosophy or strategy and materials and we’re buying into it for every kid’. I think every kid is different. I think they need to assess the child individually and build off the child’s strengths. So, build off of the particular child not.....not Moe next to him, not Joey that they had last year. The particular child’s

strengths. Like, I just.....I mean like with my son, it's just....he's not just like everyone else with autism”.

Given that many parents indicate individualization as an important component to the education of students with autism this core theme was analyzed further. All six of the parents that indicated the need for individualized instruction also mentioned the need for trained staff.

Trained staff was the second most mentioned theme during the interviews. Most parents referenced the need for adequately trained staff to provide these individualized services. Using a constant comparative method of data analysis to reference data against current literature, one phenomenon that developed was the notion that many parents do not feel that individualized services are the expectation, rather an exception. Despite the enactment of IDEA, which clearly spells out the need for an Individualized Education Plan (IEP) for each student with special needs, parent responses infer that by indicating the need for individualized services that they are not occurring. In other words, given that many parents perceive individualized instruction a component of successful programs for students with ASDs, this dynamic indirectly infers that individualized programming is not a given rather a particular component of a successful program or educational plan for some students, rather than all students as IDEA and the implementation of IEP's purports. Further analysis of parental responses to interview questions 1 and 2 reveal that those parents that cite the need for individual instruction also mention the lack of funding associated with public schools and subsequent limitations. The pairing of individualized services

and school budget sheds light on the public versus private school debate suggesting that possibly private schools are better able to provide individual instruction because they have more funding to provide the staffing and training necessary to provide this type of intervention. Parent 4 indicated, “they (the schools) just use a cookie cutter (to develop intervention). They cannot afford it, they just can’t provide what’s really necessary”. Case law both in the state of Ohio and in federal court includes a multitude of cases that reference the fact that student educational programs were not individualized thus leading to out of the district placements.

Trends that emerged from the data relative to research question 1 strongly coincide with the responses to research question 2. As such, a third core theme that emerged was that parents indicated that an educational need for students with autism is to have intensive services, accordingly, these same parents also indicated that a successful component for any child with autism is one which employs intensive services. None of the parents or professionals described in any detail what the training of staff would entail, which could be anything from an in-service to a specialized degree and years of experience. Nonetheless, most participants mentioned the need for specially trained staff more than one time during their interview. While most of the parents mentioned the need for appropriately trained staff, most of the literature mentioned the need for staff training only relative to learning methodology- based interventions, which again not all parents thought was a significant need for students with ASDs.

Finally, when parents were asked what they believed to be components of a successful program for students with autism, a secondary theme that emerged was that of having intensive services. Two of the parents indicated the need for year-round school because a gap in services allows for too much “regression”. Parent 4 summarized her thoughts about the need for intensive services and appropriate staff:

“So I think the intensity of services and a lot of time the experiences of the teacher, I think you’re going to get....you’re going to just get better progress for your kid....just think, experienced and trained staff. Makes sense, doesn’t it?”

When referencing intense services, two of the families indicated that “extended school year services” were warranted, meaning that they believed a full school year program is a necessary component of an educational program for students with ASDs (which is varying from the traditional 180 day school year).

Interviews analyzed relative to research question 2 about components of a successful program for students with autism revealed core themes of the individualized education and appropriate staff training. A secondary theme also emerged including that of an intensive program for students. In reviewing the parent responses to what they believe are important components for a successful education for students with ASDs, contrary to the literature and case law that supports the literature that methodology is the primary concern when considering the education of students with autism, only two of the parents indicated methodology as the most important component to a successful program, and both

of these particular parents have children in private programs (Gallegos, E.M. and Shailenberger, J.M., 2008). In terms of educational components that are important in making a program successful for students with autism, all of the components that parents perceived as important were also reflected in the interviews with the professionals.

Professional listed components of success. Professional interview questions 1 and 2 were analyzed to determine what they believed were components of a successful educational program for students with autism. Professionals' perceptions of students' needs generally fell in the primary areas of intensity of services and individualized educational planning. Similar to the parent responses, individualized education is perceived as one of the most important components of education for students with ASDs according to the professionals interviewed. Of the professionals interviewed, five cited individual instruction as a response for either interview question 1 or 2. Two of the professionals cited individualized education in reference to low student to staff ratios as opposed to specialized and specific goals and objectives. Additionally, these professionals referenced the need for individualized services in terms of the need for one-to-one student to staff ratios. Student to staff ratios were also referenced by four of the professionals when discussing the need for intensity of services.

When asked about successful components of a program for students with autism, professionals also listed the intensity of services as a strong indicator of success. Some of the professionals talked about intensity and structure interchangeably. They indicated that a classroom that was highly structured and intensive was necessary for a student to be able to thrive. In this regard, intensity was perceived by this group of professionals as

one-to-one student to staff ratios and effective use of student time. One professional indicated that intensity was “using each teachable moment” as valuable. Professional 7 indicated that intensity meant services provided were a full calendar year, rather than having the summers off. The same professional indicated that intensity was important because staff are focused “100% of the time on the situation they are dealing with”. Yet, professional 8 interpreted intensity as being an extension of school services to home:

“It is important to use each teachable moment, but again it comes back to the family too...and what their goals are, and it has to be very comprehensive. So, if you’re going to be doing something in school that’s intensive...you need to be able to have a family that’s on board and follow through... or otherwise what you’re doing in school isn’t going to be carried over and vice versa”.

This idea was reflected by Professional 6 that described intensity as using “student time wisely and effectively at school”, but also ensuring that “the family has the tools to work with their child” on “skills” at home as well.

One other noticeable trend in the data from interview questions 1 and 2 was the mention of the need and implementation of some sort of behavior management and support. Two of the professionals mentioned ABA as the preferred and important methodology for students with autism. Three of the professionals indicated “behavior management” and “managing student behavior” as important. One of the professionals mentioned behavior management in terms of a sort of prerequisite to learning.

Additionally, three of the professionals mentioned the need for appropriate training for

staff as an important component of a successful educational program. Professional 8 summarized the necessity of both training and intensity:

“Part of it is the programming, but a large part of it is also the staff that’s working with the students...and their knowledge and training about autism and about delivery of services. I would say intensity of services typically means depending on the severity of the child. It needs to be fairly intense most of the time.”

Most of the professionals interviewed perceived staff training and behavior to be important indicators of a successful program for students with autism. Contrary to the literature, none of the professionals simply listed a methodology in isolation, even the few that did mention ABA did so more loosely, and in conjunction with other perceived indicators.

Summary.

When asked about what they perceive to be the components of a successful program for students with autism, both parents and professionals had many similar beliefs. Individualized education was the most mentioned perceived trend identified by both groups. A second common theme for both groups was that of the need for intensive services to support the global needs of this group. Intensity was interpreted differently by subgroups. The term intensity was perceived as meaning services that are one-to-one, while others interpreted intensity as meaning offering very little unstructured time, and yet others interpreted it as meaning year round school. Nonetheless, this was a common perceived component of a successful program for students with ASDs. A core theme for parents interviewed was the need for training of staff to insure that they are properly

trained to work with this diverse group of students. Professionals also indicated the need for training; however, it was not cited as frequently for professionals as it was for parents. Two additional perceived components were noted more frequently by professionals than for parents, which included the need for behavior management and the need for a classroom/educational structure. Both parents and professionals cited public school finances and funding as a barrier to providing these necessary components.

All of the perceived trends identified as primary components of a successful program for students with ASDs are supported in the most current literature and research about educational practices for students with ASDs. However, unlike the literature and case law that cites methodology as the most important component of an educational program for students with autism, this study did not yield similar ideas from the perceptions of stakeholders. While some of the parents and professionals listed the need for behavior management and a couple mentioned the need for ABA, most of the professionals and parents interviewed did not make mention of ABA or methodology based interventions for students with autism when discussing their perceived ideas about the educational needs and components of a successful program for students with a ASDs.

Research question 3.

Methodological interventions important to the education of students

The aim of research question 3 was to get a sense of parents and professionals beliefs about the role of methodological interventions for students with ASDs. The majority of literature surrounding ASDs and intervention and education directly relates to the type of methodology. Literature to date is most favorable with regard to ABA as an empirically supported methodology for ASDs (Herbert, J.D. & Sharp, I. R. (2004). Case

law involving schools and families with a child with autism is overwhelmingly disputing the type of methodology used in school programs; most often the methodology is ABA. This question and the overarching phenomenon being investigated in this study is in reference to whether or not stakeholders view methodology as a critical component of the education of this population of students as being promoted in the literature. More specifically, this research aims to better understand the type of methodologies, if any, this group of stakeholders finds to be part of a successful educational program for students with ASDs. Interview questions 1 and 2, and predominately interview question 3 inquired about the methodological debate from the perspective of parents and professionals that are linked to this population.

Parent suggested interventions. Interview question 3 inquired about parents' thoughts and feelings regarding methodology-based interventions. Of the parents interviewed, five of them believe that ABA is the one methodology that must be part of an educational program. These parents indicated that ABA or DTT as crucial to the education of their child and for all students on the autism spectrum. Two of these five parents referenced ABA as a primary means of educating students with ASDs, two of them also indicated that the TEACCH method can also be viewed as helpful for structuring the classroom and for teaching independent work.

When asked about methodology-based interventions, six of the eight parents referenced ABA as an important methodology for students on the spectrum. The remaining two parents did not indicate ABA as the primary methodology. All but one parent believed a combination of methodologies based on individualized needs as most appropriate. Five parents indicated that ABA was important, but the application and use

of ABA should be based on child specific needs and used in combination with other methodologies. One of these parents referenced TEACCH methodology as important, and one other parent listed Floortime as an important methodology that they used with their child during pre-school. None of the parents interviewed mentioned the need for sensory integration as a part of the educational process, which is divergent from the literature that supports the notion that sensory integration is an important part of an educational program for students with ASDs.

Parent 4 perceived methodology based intervention as appropriate for students on the spectrum, but she does not believe in a one size fits all approach. She described her thoughts regarding the need for individual decisions surrounding methodologies:

“I really think it depends on the child. I don’t....I mean there are some people that get very caught up with, no names in this city, but.....like some, you know pedagogical institution or ABA...It’s gotta be ABA or Floortime...it’s got to be Floortime. I just think that....I just think....it shouldwhatever methodology is used should not be ...it should not be generalized to all children.”

While this parent strongly believes that one methodology is not good for all.

Parent 3 described the primary and specific need for ABA:

“We feel that ABA and Discrete Trials is important. I mean TEACCH has its place, but I think for children with autism, I mean just from our personal experience it seems like the ABA and Discrete Trials just help more. Part of it is the programming, but a large part of it is also the staff that’s working with the students.... and their knowledge and training

about autism and about delivery of services. I would say intensity of services typically means depending on the severity of the child. It needs to be fairly intense most of the time.”

Parent 5 is also supportive of ABA and described it as an important component:

“ABA is how you have to go, honestly, I...I’ve seen...I’ve seen the data... I’ve done some research, although maybe not as much as most, and... ABA is the only way...It’s the only methodology that...at least in my son’s case that you should use.”

Consistent with the literature, parents perceive methodological interventions as important for students in the educational setting. Also consistent with literature in the area of methodologies, ABA is the one intervention that parents believe plays an important role. Six out of the eight parents interviewed cited ABA as a methodology that should be part of an educational program for students with autism. However, the case law has been inconsistent in outcomes with regard to disputes surrounding the necessity of ABA for students.

All parents in this study indicated that methodology based interventions were important to educating youngsters with ASDs. The majority of parents indicated that a combination of methodologies including ABA was most ideal. This perception is consistent with current literature, but can be interpreted by school district administration relative to FAPE and the idea of what may be considered “meaningful progress” which may not always be idealistic. Six of the eight parents interviewed mentioned school finance at one point during the interview. This is not surprising considering the cost for one-to-one intensive services. Trained staff is costly and according to many school

districts, not necessary because they can prove that a student is making meaningful progress without this sort of intensive methodology-based education. Consistent with the parents, the professionals also believed that methodology based interventions are important to the education of students with ASDs.

Professional suggested interventions. Professionals interviewed had very similar beliefs about methodology-based interventions as did the parents. All of the professionals interviewed believe that methodology-based interventions are necessary for the educational programming for students with ASDs. Six of the eight mentioned ABA at some point when describing best practices and necessary components of an educational program. All of these professionals believed that while ABA is an important component, a combination of methodologies is more individualized and most appropriate for this population. Four of the professionals also mentioned TEACCH as a supportive, but not a comprehensive component of a successful educational program. Two of the professionals mentioned Floortime as a communication strategy and appropriate methodology to use in accordance with other methodologies, but primarily with preschool-age students. Professional 2 believed that a combination of methodologies with a strong emphasis on ABA and DTT was most effective:

“I’ve mostly used only ABA and Discrete Trial Teaching...but, TEACCH has been one component. I feel like those two (methodologies) have worked best...I think it is beneficial for setting up the classroom environment, setting up independent work systems and teaching with structure in place...so like environmentally; and then DTT is literally what

you feel like you're doing in the moment constantly using that in every area.”

Professional 5 perceived more of an eclectic use of methodologies as being most appropriate and spoke a bit differently regarding interventions than Professional 2.

“I think there's...those are all well research based umm...philosophies and that you cannot take one particular system and be 100% cure for all students and meet all the student's needs. I don't think that's going to necessarily be the mostyou're aware of those particular methodologies and you make...you know you figure out....because you also have to deal with the what the parent has learned works with their student. And some are very much... supportive of the sensory (methodology)...not only necessary but effective...and then they (the students) need sensory breaks, even if you are not interested in that. So, to respond to that...I would say that the best is to know all about all of them (methodologies) and apply it to each individual according to their own personal needs. I don't think that you can successfully educate a student with autism without using these methods. They...they don't learn in the typical manner. Hence, the reason they need to individualize instruction...and so these methodologies are available to give guidance in order to develop that instruction for each student.”

While all the professionals agreed that methodology is important to the success of the child, they each listed a different combination of methodologies as important.

A closer analysis revealed that all eight used the term “individualized” when responding to interview question 3, which inquired about what they think about methodology-based interventions in the school. This indicates that they believe that best practice would likely consider the child’s specific needs verses endorsing a specific methodology despite research that promotes an all ABA approach.

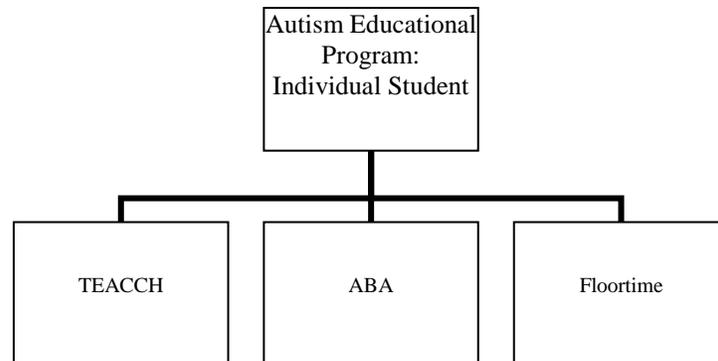


Figure 1. Parent and Professional Suggested Methodologies. This figure illustrates the combination of methodologies that parents and professionals suggested as being important to an educational program.

Private vs. public viewpoint. In this study, there were four participants that are involved in private settings for students with ASDs. Either they have a child that attends a private autism specific school, or they are a professional that is employed by an autism specific school. Data were analyzed during open coding to better understand the relationship between those associated with private settings and perceptions and ideas of this subgroup verses those participants that have a public school background. One parent and one professional from the subgroup with a private background indicated that ABA/DTT was the one and only ideal methodology for this population. Those affiliated with private programs also indicated the limitations of public schools due to finances and related issues, such as lack of resources for training. Professional 3 indicated “they (the

public schools) don't have the resources, or staff. Maybe they (the staff in public schools) want the training, but they aren't allowed." Parent 1 indicated "Public schools...they...they don't have the resources. This means they are not well trained." Of those participants affiliated with private programs, two of the four were able to list at least one other methodology that they believed to also be of benefit to the educational process for students with ASDs. Two of the four ultimately believed a combination of methodology- based interventions is best, but that the combination must include ABA/DTT.

Private vs. public option. Interview question 4 specifically asked participants what they believed to be the most appropriate option for students with autism in reference to the public verses private options. Five of the eight of the professionals and five of the eight parents believed educational placement to be an individualized decision, that neither public nor private placements were always better. Two of the professionals and two of the parents indicated that private is always better, and one of each of the professionals and parents indicated that they believed public to always be the best option. All of the professionals indicated that money and school finances are a limitation to providing a successful program in the public schools. This notion was also reaffirmed by the parents. All of the parents cited public school finances to be a factor in determining if a school program was successful for a student with ASD or not. In general, parents and professionals believed the placement of the student to be an individual decision based on the particular school resources and training. Professional 6 spoke of this dynamic:

"My experience has mostly been all private, so...I think that for the most part a child can be successful in either one (private or public school), it's

just that a lot of times public might be tied down by kind of more rules, things that they can or can't do and ummm....aides that maybe aren't allowed to get as much training as you could do in a private setting. So.....that can hinder things. I think kids tend to do better in private....but, I think a lots of times private doesn'tin my experience there isn't quite as much social skills benefit as there can be in the public (school). And like I said with the public, I think that training sometimes....it's not even allowed outside of schools sometimes for aides or paraprofessionals, that they sometimes want to learn more but they are kind of bound by certain rules. So that kind of makes it harder for the teacher.”

Professional 3 had a similar response:

“I actually have experience in both (public and private) soI think that if a child can be served in a public education, I think that we should always try...we're always striving to do in a public education, I think that we should always try.....we're always striving to you know....for independence....for always striving to mainstream the children and to be with their peers....to their typical peers they have thatengagement. I think that sometimes it's necessary for a child to be in a private clinical setting based on behaviors and academics ...and you know.... their skills level. I think that working in the clinical setting you're always, you know again...trying to mainstream them. But, I think they are both effective. I think they're both good. I think again, it's individually based on thaton that specific student. But I think they both, given the...given the program

...I think they are both really good though we should always strive for public”.

Professional 8 also made a similar statement when referencing the pros and cons of a public program:

“I think that each (school) has its own unique....gift. I think that. ...I mean like for example, if I am....comparing my school with the Cleveland Center for Autism, I think that they offer a specialization that is very unique and very important. It can help students excel, especially academically. I think that the public school can give another perspective where it’s giving the students into typical situations....providing more socialization opportunities providing more really life opportunities.”

Contrary to Professional 8 and Professional 3, Professional 4 indicated that private is typically better for a student with ASDs, likely due to finances:

“If you’re talking about a private autism school that is totally focused on autism then...then...I mean if you have the resources to do something like that ...that’s ideal. Because they are focused 100% of the time on that one situation that you’re dealing with. So.....they can offer, you know a much better comprehensive program that’s going to be really streamlined into the needs that your child has and your family have because they...you’re already coming into a place where there is an understanding that doesn’t have to be explained like in a public school setting.”

Many of the parents had similar beliefs as the professionals on this particular question. The two groups were evenly matched in their responses relative to the

decision for public vs. private. Similar to Professional 4, Parent 7 also echoed the idea that a public school setting is not as accommodating as a private school as a result of not having the same financial structure:

“Public school...they ...they don’t have the resources. Which means that they are not well trained....because it is so specialized and individualized....they don’t have the personnel even to cover it”.

Parent 1 perceived their particular public school as a right choice for their child; however, he focused on the direct relationship with school finances and the impact on the student and ultimately his perception was that it is a case by case decision for each student:

“So, we are pretty happy with the public school and have never really considered too heavily private (school) as an option. You know, we do recognize if...other parents have had different impressions of other schools....and have gone that route. And, we hear different things about privateso, I don’t think it is so much private versus public, I think there’s a range of qualities.....in between them there is an overlap....I think again on average probably the best private schools are better than the best public....but, there’s certainly some private schools....that are worse than the best public schools. So, we think we’re in one of the better ones (public school). And, many people have moved to the area...or thought of moving to the area. I think that you know...in general probably private has some more resources to work with on abut it comes down to individual case by case.”

Parent 1 also indicated that finances and subsequently inequalities directly affect the quality of education for students with ASDs:

“I think in general from my personal experiences you’re more inclined to find...how do I say this...people who are more aware and sensitive to the particular needs that go along with these children...in a private school because I feel like they are more specialized...they are more focused, they don’t have ulterior motives like test scores. You know politics is there but its minimalistic compared to a regular ed. school. I think there is way morewith a regular ed. school there is an increase in finding people who are less trained. I think there is an increase in finding people who are less aware, because of money or just the particular personality traits of who they hired...or why they are there. I mean and ...so as I have found that people are more in tune in the private school. They are more trained. They are more interested by far and large and especially with the continuing ed. stuff as well. I think the mission is more driven in a private school. In regular ed. in public schools, I’m just finding that there are way too many excuses frankly.....It’s budget. It’s staff. It’s ...lack of patience, lack of training. So, I think that a major... major inequality is what’s surrounding these kids; where they live, where they go to school. I mean, I face it constantly....the school, the neighbors, the public. I think that is huge inequality.” Public school...they ...they don’t have the resources. Which means that they are not well trained ...because it (the

education) is so specialized and individualized they don't have the personnel even to cover it".

Summary. Most of the parents and professionals truly believe that the private versus public school debate is a very individual decision. All of the interviewees cited school finances and resources as a factor that might be holding public schools back. This in particular links to the research that indicates that there are inequities in the education of students with ASDs based on the particular school district in which a student may be enrolled. Some of the participants believed that these inequities in educational provisions are a primary reason that a child would be better served in a private school. Additionally, some of the barriers in a public school that are directly linked to school finances are specific to Ohio due to its system for financing schools through a levy system that is based on voters.

Research question 4.

Data versus the current literature

Data vs. literature. Consistent with the literature supporting methodology-based interventions, all the parents and professionals interviewed in this study indicated that methodology-based interventions are important to the educational success of a child with autism. The majority of participants, thirteen out of sixteen, indicated that a combination of methodologies and individualized programming is ideal. Similarly, thirteen out of sixteen mentioned ABA as a component of a successful program for students with ASDs. Only one subject mentioned the need for sensory integration, and several, a total of six participants,

listed TEACCH methodology, another favorable method of intervention. A total of three participants listed Floortime as a support method of intervention. Overall, the perceived beliefs of the participants relate to what is being promoted in the current literature that ABA and DTT is the primary teaching tool that is being researched, promoted and analyzed. Contrary to the literature is the fact that most of the research and case law advocating for ABA and DTT discuss the use of the methodology in isolation and with great intensity. Participants also frequently discussed the need for intensive and individualized services, only three of the participants mentioned ABA in isolation.

A primary theme that emerged from the data is the need for individualized services. The idea of individualized services is the backbone of IDEA; however, the continued and frequent mention of this as a quality indicator for programming for students with ASDs implies that perhaps these participants perceive that individualized services are not the standard, rather an advantage. Nonetheless, parent and professional beliefs about the need for individualized services parallel research by Dunlap (1999) that posited that a critical key to success is to match specific practices, supports, and services with each student's unique profile and the individual family's characteristics. Dunlap (1999) posited that individualized programming and family sensitivity serves to assure family fidelity and engagement in the educational process. Parents and professionals in this study also mentioned the need for intensive services; however, none of the participants defined intensive services, and only one subject listed the need for family support. Literature is inconsistent relative to what defines intensive services. There is an ongoing debate regarding the number of hours per day considered appropriate for

educating children with ASD in the public schools. Although there is great variability in the numbers of hours per week (20-45 hours) across comprehensive model programs for children with ASD, it is the conclusion of the National Research Council Report for Educating Children with Autism (2001) that intensive instructional programming of at least 25 hours per week is critical for the majority of children with ASD.

Additional secondary themes or characteristics that emerged in the data relative to interview question 2, which inquires about the perceived components of a successful educational program for students with autism, included the need for communication intervention, highly structured environment, a low student to staff ratio, and having highly skilled and trained staff. All of these components are promoted in the current literature surrounding the education of students with ASDs. Participants interviewed directly linked staff training, student to staff ratios, and availability of “resources” to school financing.

School financing was subsequently also listed as a barrier to public schools providing appropriate and successful educational programs for students with autism. This debate is consistent with the literature surrounding inequities in education and healthcare. While FAPE establishes the need for a free appropriate public education for all students, including those with ASDs, it does not guarantee the best education, rather only an education in which a student can make “meaningful progress”. Outlined in the review of current literature surrounding inequities in healthcare, which are compounded by race and socioeconomic status, those of a diverse background continue to be at the greatest disadvantage in accessing appropriate treatment of autism spectrum disorders. As the literature points out those individuals with autism who come from lower socioeconomic

status backgrounds are at the greatest disadvantage in that they are offered minimal educational services to meet FAPE. Conversely, those students in more suburban and/or affluent communities have a great advantage of having a more comprehensive program because of adequate school finances. As the parents and professionals in this study point out, often school districts that are dealing with state and federal school budget cuts cannot provide the appropriate staff to student ratios, necessary training, technology and best practices that other schools in more suburban and affluent communities can afford.

While many families depend on their local school programs to provide much needed and appropriate services for their students with ASDs, the families and professionals in this study perceive the public schools at a disadvantage when compared to private educational institutions. This funding dynamic is specifically linked to the state of Ohio and the way in which it funds schools, which has been ruled unconstitutional for over the past decade. This dynamic of more urban and rural districts getting fewer services was perceived by participants in this study to directly put students with ASDs at the greatest disadvantage.

A final theme that emerged in the data that is also reflected in the literature is that of communication. The perception that communication is an educational need for students with ASDs is consistent with the literature that promotes that the education for this population should address the core deficits of those with ASDs, which includes communication disorders and language delay. Consistent with the research promoted by the Connecticut Department of Education, individuals with ASD have needs in the areas of communication including pragmatics, semantics, syntax, and phonology. Thus, consistent and frequent opportunities to build expressive and receptive language skills

across a variety of environments are often observed in successful programs. Similarly, an emphasis on social skill development with typical peers and adults is often a component of educational programming for this population of students.

Summary

In summary, parents and professionals generally agreed that children with autism have certain educational needs including the need for individualized educational services and the need for intensity of services as well as trained staff. Secondary themes that emerged from the data include the need for communication intervention and methodology-based instruction. Both parents and professionals describe successful programs for students with autism to be closely linked to the areas of need (Figure 2). Therefore, the core components that parents and professionals perceived to be part of a successful program include individualized education, highly trained staff, and intensive services. Another core theme that emerged when participants were asked to list components of successful educational program for students with autism include a strong communication intervention component, behavioral supports and methodology based interventions. Responses from participants were similar to current literature in some respects such as the need to address core deficit areas, the need for methodology based intervention, and the need for individualized and intensive services. Contrary to the literature, which strongly suggests that the methodology is the primary component of an educational program, participants listed this as an important component, but not the most important component. Nonetheless, the majority of participants indicated that methodology was a necessary part of the educational process and part of a successful program. Current literature indicates that ABA is the only methodology that is

empirically supported and proven to show the best outcomes. While most participants in this study perceived ABA to be an important educational component, participants in this study perceived a more individualized approach when considering methodologies to be more ideal.

A final theme that emerged was the impact of public school finance on the education of student with ASDs. Most all of the participants cited public school finance as being a barrier to providing an education that could be defined as “successful”. While most of the participants agreed that the choice between public and private education for students with autism is an individual decision, eleven out of the sixteen participants indicated that public schools have fewer resources and fewer opportunities for training, which was one of the described needs of students with autism. The notion that services need to be individualized and that the focus on this in subject responses, ultimately, questions the integrity and implementation of FAPE and IDEA which prescribe individualized education. One theme that was not mentioned by either parents or professionals during this study was the need for academic skill building and differentiated instruction.

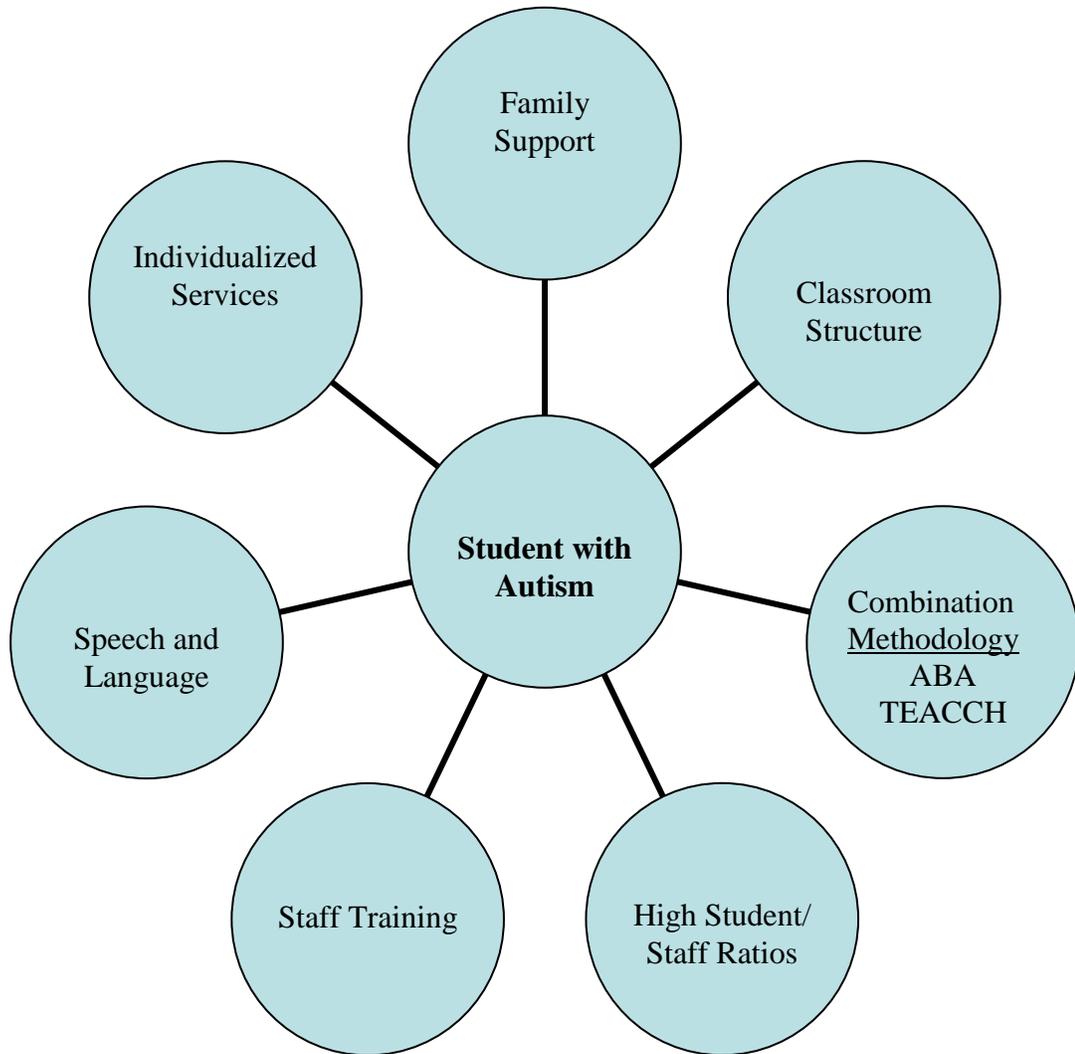


Figure 2. Autism Program. Diagram of the perceived components of a successful educational program for students with autism.

CHAPTER V

SUMMARY AND DISCUSSION

This study investigated the perceptions of parents and professionals regarding the education of students on the autism spectrum in northeast Ohio and compared this data against current literature surrounding the education of this population. The following discussion will summarize the results as well as focus on implications of developing an educational program for students on the autism spectrum that is deemed to be successful in the eyes of the stakeholders and considers current research in the area. Limitations and delimitations of this study as well as recommendations for future research will be discussed.

Summary of Results and Educational Needs

Individualized services.

Participants in the study generally agreed that the most important need for individuals with ASDs is not a particular need; rather students benefit most from an educational program that is individualized based on their specific strengths and weaknesses. Parents and professionals both felt that students with ASDs also require intensity of instruction. While the description of intensity varied amongst participants, one professional described intensity as the need for “year round education as opposed to

the typical 180 day school year”. Another professional described intensity as having the students engaged “100% of the time” not allowing for any “down time”. Two parents in the study described intensity as having a student to staff ratio of one-to one to allow for individualized services.

Parents and professionals believed that individual and specific programming is important to the educational process of students with ASDs. The majority of professionals interviewed believed that the students they serve on the autism spectrum should be based upon individualized areas of weakness and strategies should be developed to address each student’s needs accordingly. This idea was upheld in the court case *Ramsey Bd. of Educ., 4 ECLPR 466 (NJ, 2002)* that ruled that the district failed to offer FAPE in the least restrictive environment to a three- year-old with ASDs. The proposed placement was based on the child’s disability, rather than his unique needs, and offered limited interaction with nondisabled peers (Gallegos, E.M. & Shailenberger, J.M., 2008). IDEA also indicates the need for individualized services as part of an educational program for a student with special needs. Both professional and parental perceptions and court cases similar to the Ramsey case substantiate the idea that stakeholders believe that the education of students with ASDs should be individualized and that education should be based on the student’s needs rather than the diagnosis. Therefore, primary to a successful program for students with ASDs is specific and individualized planning and programming to meet student individual needs. This notion is also mandated through IDEA and is supported by the National Research Council (2001) that defines individualized services as ‘best practice’ and linked directly to individual student assessment. In other words, the idea that good assessment drives comprehensive

treatment and subsequently individualized programming is currently considered to be best practice and the expectation in education. This information was supported through data in this study.

Methodology-based intervention.

Participants also generally agreed that methodology-based interventions were required to meet the needs of students with ASDs. This notion is supported by the literature by Kirk (2004) and Williams and Wishart (2003) that promotes the need for methodology-based interventions for this group of students. Only two of the participants indicated ABA as the only methodology that should be utilized with this population, despite the fact that ABA is the most empirically supported methodology. In general, most of the participants agreed that a combination of methodologies is most effective in working with this population to meet their specific needs. Over half of the participants specifically mentioned ABA as part of a comprehensive program.

A review of current literature including Siegal (2004) and Whitaker (2007), and case law regarding education of students with ASDs revealed that methodology-based intervention is a frequently mentioned topic (Gallegos, E.M. & Shailenberger, J.M., 2008). As suggested in this study the most popular treatment methodology is ABA. Similarly, ABA is the most scientifically proven EBP/methodology (Herbert et al, 2006). This idea of ABA being the most effective EBP is also supported by the National Research Standards Project conducted by the National Autism Council in 2004. The project outcomes report provides comprehensive information about the level of scientific evidence that exists in support of the many educational and behavioral treatments currently available for individuals with ASDs. Most of the case law surrounding autism

and education is linked to methodology-based interventions, specifically ABA. Other popular methodologies that are supported by more limited research that were mentioned within this study are TEACCH, Floortime, and sensory integration. Thus, outcomes of this study very much reflect what is being promoted in current literature, however, this research acknowledges the need for ABA, but in combination with other methodologies. The idea that ABA and related behavior based methodologies has the most research support, however other EBP such also have evidence for their support is supported by the National Standards Project, 2009.

Participants interviewed in this study unequivocally believe that methodology-based interventions are an important and necessary component to an educational program for students with autism. Most of the participants believed that ABA is an important methodology that should be a part of a comprehensive program for students. Contrary to the literature, most participants believed that a combination of methodologies that are individually selected based on a particular student's needs is most effective. Besides ABA, participants also frequently mentioned TEACCH methodology and some mentioned Floortime. Only one of the participants mentioned sensory integration as a methodology. Most all of the participants in the study indicated the need for a combination of methodology-based intervention. Most believed that ABA was one important methodology to consider. The importance of using ABA in an educational program is consistent with literature surrounding the education of students with ASDs. While the literature is robust and significant findings have been promoted and replicated with regard to ABA as an EBP and model for intervention, case law has not consistently yielded outcomes favorable to ABA. *The Portsmouth Sch. Dist., 4 ECLPR (NH, 2003)*

case concluded that the district failed to include adequate levels of programming in a 3-year-old's IEP. The school only provided half of the agreed upon ABA therapy and was therefore responsible for the parents' costs for supplemental services. The court ordered the district to reimburse the parents for the period of time during which the student should have received the ABA service. Contrary to the Portsmouth case, *J.P. by Popson V. West Clark Community Schools*, 38 IDELR 5 (S.D. Ind, 2002) ruled that parents of a 5-year-old with autism failed to prove that the ABA discrete training approach was the only reasonable method for educating their son. Rather, the U.S. District Court, Southern Indiana concluded the child made progress under the district's IEP, which used a variety of techniques and included a structured classroom environment. These sorts of cases that have similar backgrounds with different outcomes are common in the state of Ohio and can be interpreted differently based on interpretation of FAPE and meaningful progress supported by data. Nonetheless, outcomes of the study suggest the need for methodology-based intervention, specifically a combination of EBP including ABA as part of a successful program for students with ASDs. This research varies from the literature such as that of the National Standards Project that promotes ABA and behavioral methodologies as the most empirically supported EBP because according to participants in this study a combination of methodologies is best. Stakeholders who have students with autism, or work with them may believe that restricting a student to one particular method may not allow for the individualization of intervention that participants in this study find to be primary to educating this group of students.

Communication intervention.

Another theme that emerged in the data was the need for students with ASDs to have communication intervention. Participants believed that this core deficit area is an area that grossly impacts students' ability to learn. Most participants believe that communication is how students understand, by building their receptive knowledge for classroom tasks and routines such as understanding and following directions. Participants also believe communication to encompass the students' ability to express themselves, either for the purpose of communicating a basic need, or as complex as carrying on a conversation, and everything in between such as subtle social skills. The idea that communication is a necessary component of an educational program for students with ASDs is supported in this study as well as within the literature (Siegal, 2004).

Communication intervention is extremely important to the educational success of students with ASDs. A program that emphasizes increasing expressive and receptive language skills is important as language is directly linked with overall learning. Closely related to communication is the need for an educational program to emphasize behavior management so that student learning may be maximized and interfering behaviors can be reduced. Additionally, appropriate behavior and communication abilities impact a child's ability to access the community and to be an active partner not only in the educational environment, but also in their home and community environments.

Highly trained staff.

There were also many themes that emerged from the data relative to the staff that work with this population of students. Most all of the parents and only three of the professionals cited the need for students with ASDs to have highly trained and motivated

staff working with the students. One parent indicated that “the program is only as good as the staff working there”. Others again referenced the need for a one-to-one student to staff ratio. All but four of the participants listed the importance of having highly skilled and trained staff working with this heterogeneous group of students.

A successful program should have highly trained and skilled staff and opportunities for ongoing training and support. Additionally, low student to staff ratios should be established so that students, for the most part, can work one-to-one with a staff member. Training should be specific to students with autism and should include a variety of best practices and methodologies so that staff can make informed decisions based on student’s needs and their depth of knowledge about autism. Training opportunities should be ongoing and allow for not only learning about current research, but also opportunities for guided practice, feedback, and modeling with a highly skilled clinician or educator. Such training will also allow staff to be equipped with knowledge and understanding about this population. As mentioned by participants in this study, having staff that are highly skilled may directly impact overall staff morale and motivation.

Intensity of services.

A successful program for students with ASDs as described by participants in this study should also include intensity of services provided. Intensity can be described as year round services that maximize student learning and engagement and minimize unstructured time. According to Siegal (2004), descriptions of model programs, programs reporting positive outcomes, and some of the limited outcome research all agree that “intensity” is important. Siegal posits, however, that there is not agreement on what constitutes intensity of treatment. Similar to this research, Siegal describes common

definitions of intensive services as being an index- number of hours of one-to-one instruction, how dense the number of interactions per hour, how many responses are elicited, number of hours of overall participation in paid treatment or planned activities, or number of hours children do not engaged in repetitive or nonfunctional activities. Siegel's research in the area of defining intensity yielded a broad description of intensity of services in which some parents reported 50 or more hours per week in activities planned for the child. Other parents in this study described intensity as offering little opportunity for them to experience the regressive comfort of repetitious acuity, staring into space, or mental downtime of any sort. In conclusion, Siegal describes intensity as an intensity of intervention that accrues through all the meaningfully engaged activities a child experiences, not just those with paid therapists or those that take place within the walls of a school or in a little schoolroom (Siegal, 2004). This idea was reflected within this research.

Public vs. Private School Education

The idea that school finances restrict the educational potential of this population of students was a significant factor in participants' responses as to what they believe to be the best option for educating students either privately or publically. When asked about the public verses private educational option for students with ASDs, 8 out of 16 agreed that it is an individual decision based on the student and the public school district. One parent summed it up when he said, "Possibly the best public schools are better than some of private schools...and vice versa". Many reasons were cited as to why a private school may be better

than a public school such as addition resources, motivation of staff, administrative support, and intensity of services.

Overall, participants in this study believe that there is no unified approach to educating this population of students, rather most of the educational decisions should ideally be made with the particular child in mind. Individual decisions regarding a student such as the least restrictive environment, “meaningful progress”, methodology-based instruction, location of services, and support services is the educational teams’ decision and should be made on a case by case basis. One resounding perception of participants interviewed is that public schools in northeast Ohio are limited by financial constraints and our current funding mechanism for special education.

Parent vs. Professional Perceptions

Overall, parent and professional perceptions were very similar with regard to the emerging themes from interviews. Professionals more frequently cited the need for behavior modification within the educational program, whereas parents more frequently cited the motivation and qualifications of staff needing to be considered when establishing the educational needs for students with ASDs. These differences are likely impacted by their personal perceptions and ideas about the education of these students. Other than these two differences between the subgroups, all other emerging themes were overlapping between the two subgroups. Themes that emerged throughout the interviews were consistent with current literature in the area of educating students with autism. However, most of the literature to date is hyper-focused on methodology-based interventions, which

was mentioned frequently in this study, but was not found to be the primary theme.

Successful Educational Program

Participants in this study generally agreed about what comprises a successful education program for students with ASDs. Core themes throughout the transcribed interviews were reviewed relative to the research questions. Using the data it became clear that parents and professionals believe that students with ASDs are educated best in a school that emphasizes meeting each individual student's needs. Highly individualized programming delivered by highly skilled and trained staff that addresses the core deficit areas including communication and behavior is most successful. Participants in the study also believe that methodology-based interventions including a combination of methods based on the learners' needs are ideal. Methodologies included in programming should include ABA as well as some structural components of TEACCH. All of the themes from this study are promoted in the current literature, however in this study that takes the stakeholders perceptions into account, individualized education was the most frequently mentioned trend, which is contrary to current literature that focuses on methodology based interventions.

Barriers to successful educational programs.

Ohio school finance structure. Data gathered from parent interviews indicate that there are several perceived barriers that exist to providing an appropriate and successful educational program for students with autism. Given that participants in this study were invited to discuss their feelings and thoughts about the education for students

with ASDs, trends emerged that shed light on potential barriers to educating this group of students in the public schools.

Many of the participants cited the fact that school finances, chiefly public school finances, are limited by funding and politics. Participants generally believe that school finances hinder the schools ability to provide specialized instruction by having limited opportunities for training, lower intensity of services and that funding can even impact motivation. Parent 4 described this dynamic:

“...Special ed. teachers...I think that they ...they don't step up to the plate for other reasons. So, I think that's a huge thing because when you're a Special ed. teacher those parents count on you...to focus on that kid....and advocate...and it's very disappointing when the people...the few people that are the go to(s) and the lean on(s) that know these kids well,...that have dedicated their profession, all of the sudden they are sitting like this...with their mouth taped and their hands behind their back....in a meeting. Because they don't ...you know, their job, their paycheck...what have you, their reputation....that is the inequality in the school that impacts the education of all kids with special needs.”

The notion that public schools are negatively affected by school finance issues was mentioned throughout the interviews with participants. Restrictions due to finances were responses to all interview questions.

Given that almost all of participants interviewed referenced public school finance when discussing issues such as staffing and the public verses private school debate, it became clear that the way in which public schools in Ohio are funded is a barrier for

successfully educating students with ASDs. Using a constant comparative method to link data and emerging trends to events and literature, the theme of individualizing education and the relationship to school finances mirrors the literature that discusses the vast inequities in education not only for special needs students, but even more so for those special needs students from lower social economic areas. Federal law indicating that schools must provide FAPE, illustrates that students with special needs do not need to receive the best instruction available; rather, they need to only be provided with an education that will allow them to make “meaningful progress” in their local public school. According to the literature, this allocation of services is problematic because it is contrary to what is promoted in school law through IDEA and NCLBA that warrants EBP that are scientifically proven and individualized are intensive services to help students meet their potential (Siegal, 2004). Children with ASDs need intensive and specific intervention based on assessment to meet their potential. Students in lower socioeconomic classes with less funding are at an even greater disadvantage because they have limited resources to allow for needed supports. However, the law is to be enforced consistently amongst districts despite funding.

This issue of school funding in Ohio is not a new issue, nor is it specific to autism; however, the history and current state of funding is, nonetheless, a barrier to educating students with ASDs. In 1991, the Ohio Coalition for Equity and Adequacy of School Funding, an alliance of more than 500 school districts, filed a lawsuit on behalf of a public school student Nathan DeRolph in the Northern Local School District in Perry County, Ohio. The lawsuit claimed that by relying heavily on local property taxes to fund schools, the state failed to provide a "thorough and efficient" educational system, as

dictated by the Ohio Constitution. In 1997, and in several other rulings since, the Ohio Supreme Court declared Ohio's school funding system inequitable and ruled it unconstitutional, directing the legislature to enact a "complete, systemic overhaul." While concessions have been made and modifications suggested, the way in which Ohio funds schools remains unconstitutional and inequitable. As cited in the literature section in this research, inequities that exist in healthcare that grossly impact those from lower socioeconomic backgrounds also impacts them two-fold in their local education system. In northeast Ohio, the per-pupil expenditure ranges from \$9,395 in Garfield Heights Local School District to \$19,508 in Beachwood City School District. This broad and vastly different allocation of monies available to students in different districts no doubt impacts the way that students with disabilities learn. The education for students with autism, that learn differently than mainstream students, needs to be individualized and staff working with this population require specific training. When funds are limited, this training is unlikely. Inequities in school funding pose many barriers to successfully educating this group of students. As an option for parents the Ohio Department of Education has implemented the Autism Scholarship Program (ASP) to help reduce the financial disparities, however the ASP also poses inequities.

Autism scholarship program.

The ASP was initiated in 2007 as a way for families to provide needed services to their child with ASDs according to their own preferences and needs. The ASP through the ODE grants public school districts the ability to give families with a child diagnosed with ASDs a total of \$20,000 per calendar year to provide services to meet IEP related goals and objectives outside of the local school district. Using this program families

select to withdraw their child from their home district and select providers from a directory of approved providers to implement the students IEP. The idea of this program was a good one in that parents are empowered to individualize their child's services from selected providers that they feel will work best with their child. While the idea of this program is a good one in that families can seek out highly skilled staff to provide very individualized services, the allocated funding is very limiting. The twenty thousand dollars to provide instruction to a student with autism is extremely low. Considering that specialized programs charge upward of \$75,000 per year, \$20,000 does not allow for even a half time program, let alone weekly therapies and academic instruction. Therefore, while the idea of the ASP is good, the funding allotted for enrolling in the program again limits those families with greater financial constraints because they cannot afford to supplement the intervention and \$20,000 likely does not pay for even a part time educational program.

School administration.

Another barrier to educating this group of students that is not linked to financial constraints was mentioned by Parent 4 in the study that referenced the fact that "...even if the teacher wanted to say something, they sit there with their hands behind their back". This scenario described by Parent 4 illustrates the potential limitations of public schools in educating students with ASDs. Often times in the schools, school boards, unions, and administration dictate what happens or does not happen in a classroom. While often the intentions of these power sources are positive; however, administration may not understand the scope of the needs of this growing population and the potential long term costs of not educating this population appropriately. Thus, teachers can be limited by

administration or do the minimum that their job requires because they are protected to do so. These sorts of barriers in the public schools, most certainly impacts the students.

Lack of unified mission.

One final barrier to educating a student in the public school is the lack of overall mission. Often, districts lack an overall mission or plan for educating students with ASDs. Furthermore, staff attrition issues and high rates of teacher burnout impact the overall sustainability of a unified plan or long term effect of staff training, including methodology based intervention training.

Discussion

Grounded theory.

In recent years there has been a significant increase in the number of studies investigating parental views about the educational process for children with special needs. However, few have focused specifically on children with ASDs and all have relied on samples of parents drawn from the membership of parent support organizations. The current study was based on an arguably more representative cross-section of participants. This qualitative study used a grounded theory approach to investigate the experiences of parents of a child with autism and professionals that work with children on the spectrum. Examining the educational needs and the effectiveness of an educational program for students with autism in northeast Ohio can be difficult and challenging due to the variability of students with autism and the educational variance between districts. Additionally, in this study, the personal experiences of the stakeholders as well as their personal beliefs about what is “successful” or important for educating this population were confounding elements. This study provides some insight into the factors that are

associated with parent and professional satisfaction and those experiences and perceptions that contribute to dissatisfaction and concern. Nonetheless, this study can provide some useful information for creating a successful educational program for students with ASDs that may yield quality outcomes for this expanding group of students. Data collected is supportive of research and literature that suggests the need for EBP based on individualized student assessment that considers educational best practices.

Educational needs.

The overwhelming impression gained from responses to questions posed in this study was that stakeholders believe there is a need for individualized programming for students with ASDs. The interviews in this study highlighted the need for better educational and comprehensive programming for students with ASDs that is based on assessments, best practices and EBP specific to students with ASDs. This study has provided interesting insights into the experiences of stakeholders working through the educational process with students on the spectrum. The findings from this study are of interest for addressing the educational needs of students with ASDs in a manner that considers the perceptions of stakeholders as well as current literature, research, and related case law. Parents and professionals believe individual educational services that consider the individual learner to be primary for educating students with ASDs. Participants in the study also believe intensity of services, notably year round services with low student to staff ratios, to be important factors in the educational process. A trend that was consistent between both groups, but more notably in the parent group, was the need for highly skilled and trained staff with ongoing support and readily available resources.

Core deficits were also identified as areas of need with regard to the education of students with autism. These deficits included communication and behavior interventions. Behavior intervention or modification is a need that was identified as part of the education of students with ASDs. Methodology-based interventions were also identified as a necessary part of a comprehensive program; however, contrary to the current literature, a combination of methodologies would be considered to be best practice.

Most of the literature to date emphasizes specific methodologies, particularly ABA as the most empirically supported EBP and supported methodology for educating students with ASDs (National Standards Report, 2009). While participants in this study found ABA to be an important piece of a comprehensive educational program, it was not found to be exclusive. Most all the participants agreed that ABA in combination with other methodologies including TEACCH is most appropriate. Litigation in the area of the education and students with autism has increased dramatically, yet outcomes have been inconsistent. Financing such an intensive and individualized program in which highly trained staff can utilize methodologies within the classroom, can be, as participants indicated in the study, costly. For this reason, public schools seem to struggle the most in providing a successful program according to many stakeholders. However, public schools have been able to provide services so long as the student makes “meaningful progress”, which to some families is simply not acceptable. Subsequently, litigation involving public schools and families arguing about what constitutes FAPE continues to be a current trend. This dynamic of funding impacting the quality of education of students with ASDs is of particular concern in urban and rural districts where greater financial constraints and subsequently inequities exist.

A program for students with ASDs, to be successful, should consider the thoughts of stakeholders including parents and professionals. While participants in this study may not be a large group of stakeholders, information gleaned from the personal interviews proves to be valid in that themes emerged, both between and amongst subgroups. Furthermore, research to date has overwhelmingly been about particular methodologies using quantitative analysis. Little to no research to date focuses on the perceptions of stakeholders that are involved in the process and have experienced satisfaction as well as dissatisfaction. Information gathered can be considered to be most valuable throughout the state of Ohio.

Application of findings to Ohio schools.

Results from this study are specific to Ohio and the manner in which Ohio funds education, which has been deemed unconstitutional since 1994. The use of school levies, which are determined by voters, allows for larger inequities in education. These inequities are impacting the education of students with special needs with even greater inequities in areas in which the per-pupil expenditure is at the state minimum of just over nine thousand dollars. However, given that the lifetime cost estimate to care for a child with ASDs is close to one million dollars, with planful and direct changes to the educational system, a cost savings may stretch across the lifespan to taxpayers if children with ASDs receive quality intervention at an early age and through school age years that utilizes educational best practices including assessments leading to individualized programming that considers EBP. With appropriate intervention and education, people with ASDs can better reach their potential and possibly develop skills necessary for independent living and competitive employment, avoiding the possible need for costly residential and related support services. Similarly, providing appropriate services for

students with ASDs may yield long term cost savings to districts by avoiding costly due process cases, the need for long-term one-to-one ratios, and possibly lower staff attrition rates. In larger urban or suburban districts, consortium programs may allow for programming to be highly specialized and unified in which districts or groups of districts and combine resources to allow highly specialized staff and intervention. One step that schools have initiated to better assess students over time is value added assessments.

Value-added assessment is a way of analyzing assessment data that can measure teaching and learning. Based on a review of students' assessment gains from previous grades, researchers can predict the amount of growth those students are likely to make in a given year. Thus, value-added assessment can show whether particular students have made the expected amount of progress, have made less progress than expected, or have been stretched beyond what they could reasonably be expected to achieve. Using the same methods, one can look back over several years to measure the long-term impact that a particular teacher or school had on student achievement. Student performance on assessments can be measured in two different ways. Achievement describes the absolute levels attained by students in their end-of-year tests. Growth, in contrast, describes the progress in test scores made over the school year. Such a system to assessing students on the spectrum consistently over time can also serve to better assess student progress leading to an overall understanding of teaching and learning styles that can be individualized for a particular student as well as assess teacher performance. However, as with any assessment interpretation would need to be made with caution considering the number of variables that cannot be controlled for. Such a solid assessment process

over time may allow for better tracking of student progress and related curricular modifications, which, if done correctly can also yield a long term cost savings.

Implications

If public school agencies wish to educate the growing and vastly heterogeneous population of students with ASDs successfully, it is best if they begin to consider the described needs from the perspective of stakeholders as well as current research and literature. This study while reasonably restricted offers valuable insight to school administrators', teachers, and parents about how to best serve students with ASDs in Ohio, as well as insight into possible best practices for educational programs beyond Ohio. Information from this study paired with EBP and empirically supported methodologies with educational best practices is likely to best serve this growing population of students in Ohio.

Educational programming for students with autism is a growing topic that is being researched globally. However, most research focuses on program outcomes and determining student needs. Little, if any, research aims to better understand student needs and key components of an educational program from the view of stakeholders. Information deduced from this study can be used by public school administrators as well as private school agencies to better understand stakeholder's perspectives and subsequently how to develop and sustain a successful and appropriate educational program for students on the ASDs, and most importantly, one that is legally defensible. Considering the fact that there has been a tremendous increase in cases in which the educational programming for students with ASDs is being disputed, there needs to be changes with the educational process. While information provided in this study may not

offer information to change the “unconstitutional” manner in which schools are funded in Ohio, this study does offer information regarding stakeholders’ perceptions which can be used to inform program development for students with ASDs.

Given that the prevalence of ASDs has increased from one in 10,000 in 1996 to one in 150 currently, the numbers of students with ASDs in our educational systems are growing at a rate that school administrators would be remiss if they did not begin to standardize our programming in some manner in the state of Ohio. Information gathered from this study purports that it is the public schools that struggle most in providing services. Stakeholders in this study view private programs to be ideal. However, most private programs cost upward of \$75,000 and students are typically transported away from their local community to receive services. To increase the ability to maintain students in their local school districts and to make school districts somewhat consistent despite financial inequities, it would be best to develop a statewide guide and curriculum to educate students with ASDs. Such a manual has been implemented and utilized in the state of Connecticut since 2005. The statewide guide offers a comprehensive approach including EBP to educating students on the spectrum and, most importantly, offers a statewide mission and philosophy to connect districts and families. Such a structure and supportive mission that considers the individual child would be beneficial to educating the population of students with ASDs in the state of Ohio.

Results of this study offer unique insights as to what parents and professionals find to be critical components of an educational program with autism that could be utilized in developing a statewide plan for educating this population of students. Taking these components into consideration when developing a district program would serve to

strengthen the overall program and also allow for individualization of student programming so that learning can be maximized. Ideally, the program would be based upon information from current research surrounding, consider information gleaned from this study, and would comprise of individualized programming based on assessment, EBP and educational best practices. It was the perception of most participants in this study that despite the enactment of IDEA and the development of IEP plans, individualized services are perhaps still not occurring from their perspective. Such a plan for a comprehensive system of educating this group of youngsters would include individualized planning. Additional supports would include high student to staff ratios and staff would be highly trained in EBP/methodology-based interventions including behavior modification, specifically ABA and TEACCH. Training opportunities would be ongoing. Services would be highly individualized and based upon assessment and each individual learner's specific needs and strengths. The program would offer intensity of services to include using student's time wisely, as well as extended school year services. Student programming would emphasize core deficit areas including maladaptive behavior and communication. A system wide structure would be in place for classroom schedules, set up, and overall structure. There would be a parent training support system to allow for frequent quality communication between home and school. While such a program may be costly to initiate considering the funding necessary for initial and on-going comprehensive assessments, appropriately training staff, purchasing necessary resources and materials for the students, as well as funding for appropriately staffing such class, would yield a long term cost savings.

Most all participants in this study referenced school finances as a barrier to educating students with autism. Funding a program that allows for individualization of services and successful outcomes is costly, but the long term cost savings may potentially be worth the initial financial commitment. It has been speculated that caring for a child on the autism spectrum before the age of age 18 is roughly over \$300, 000. These costs can increase even more if these children grow into adults that need intensive support services such as residential placement, community and vocational support, and ongoing therapies and pharmacology interventions. Currently, these expenses fall onto the taxpayers. For this reason, it is hypothesized that information gathered in this study can be considered when developing a comprehensive, individualized, and intensive program for these students at an early age that can allow these students to maximize their potential, limiting their need for such costly supports as adults.

Limitations of the Study

Characteristics of design and methodology that set parameters on the application or interpretation of the results of this study, including the generalizability and utility of findings are the result of the methodology design. When interpreting the results of this study, the following limitations should be considered:

1. The history of the parents and professionals background and experiences with the educational process was not gathered or considered.
2. The sample of participants was selected via convenience and may represent a more homogenous group than exists in the greater population.

3. The data was limited to include only one interview. Expansion of data collection to include field notes, artifacts, and observations would allow for richer data.
4. Specific cultural factors or beliefs of participants in the sample were not addressed and may impact the participants' perceptions of what they believe to define "success".
5. Functioning level of the children of the parents in the study were not considered and may impact their perceptions of needs and success.
6. Additionally, the instrument was used only in this study, and despite face- and content-validity verification, caution must be taken in interpreting the results until the instrument is used more frequently.
7. The level of student support services and program offerings varies from school district to school district, and it may be unclear whether comparisons made by participants were consistent.
8. Although the main findings are supported by other research – both qualitative and quantitative – generalization from the present study is not possible.
9. Possible bias resulting from the self-selection of participants and personal history in the educational system in northeast Ohio are also possible limitations, albeit they were mitigated by the use of the research assistant during the interviews.
10. As in other studies of this kind, greater attention to the reliability of categories and trends is also required. Turpin et. al. (1997) make a number

of other important recommendations about conducting qualitative research.

Delimitations

When interpreting the results of this study, the following delimitations should be considered relative to the limitations and help to explain the boundaries of the study.

These listed characteristics limit the scope of the study, define the boundaries of the inquiry as determined by the conscious exclusionary and inclusionary decisions that were made throughout the development of the proposal:

1. The sample was a convenience sample to insure that participants would meet participation criteria and to insure that follow up with participants could be established.
2. A small sample size was used to allow for rich data to be collected and analyzed timely and effectively. A larger sample can be drawn to move toward greater generalizability of the population.
3. The sample was limited to only parents and professionals as they were determined to be the most invested stakeholders and therefore yield the most robust data.
4. The history of the parents and professionals' background and experiences with the educational process was not gathered or considered as it was not deemed to be an important part of this study relative to the research questions.
5. The data was limited to include only one interview because it was determined that further analysis or interview may lead to excessive data

which would make it more difficult to find trends. One interview would yield raw and explicit information from participants that truly reveals their beliefs and perceptions.

6. Functioning level of the children of the parents in the study were not considered because it is subjective determination that may not impact the data and outcomes relative to this study.
7. Study instrumentation was used only in this study because it is specific to this study. It was determined to be valid following face- and content-validity verification
8. Possible bias resulting from the self-selection of participants and personal history in the educational system in northeast Ohio was considered, but determined to be a possible benefit to the study given the researchers knowledge of the educational system in Ohio and how this knowledge can help generate more connections and lead to deeper interpretation.

Future Research

1. Focus the study on a unique subject population. The population referenced (students with autism) is a highly heterogeneous group and results and subject responses may be unique to individual subject experiences. A case study method may prove useful to study individual parent experience more closely, though this study gave a clear view of the general parent and professional perceptions of the educational needs leading to success of students on the autism spectrum.

2. Demographics and number of parents and professionals can be expanded to determine if generalization to the greater population can be established.
3. Student to staff ratios for both the parents and professionals can provide information regarding the intensity of educational programming for this population which may provide insight into perceptions of success.
4. Studying the professional development and employment of specific methodologies by district in northeast Ohio would allow for a closer look at the level and degree of methodology-based instruction in the area.
5. A study of successful programming could be completed to see if there are aggregate positive outcomes and educational provisions and parent/professional perceptions.

Conclusion

Public School personnel may be tempting to respond to the very high levels of satisfaction and outcomes reported by parents whose children are in autism-specific private schools and place students in these programs, despite the high costs to districts. On the other hand, it may be easier to continue to provide the “minimum” educational services to show “meaningful progress” for students with autism. However, in the context of a national policy and legislative framework which promotes a Free Appropriate Public Education and individualized educational plans for each student, it becomes clear that it is the duty of our local school districts to provide appropriate services to this rapidly expanding group of students. With pressure on local and state government spending, any dramatic changes in the programming whether it is federal, statewide, or local appears to be out of reach. Nonetheless, the challenge for local school administrators and school

boards is to ensure that this substantial population with heterogeneous needs is educated in the most effective and comprehensive manner possible. If done appropriately, these educational programs can be a long term cost savings and truly impact the lives of the students and families served.

To develop an appropriate program for students with autism that considers the outcomes of this study, one of the most important provisions to afford would be to develop the understanding of technical skills of staff so that they are better able to recognize and address the ASDs-specific needs of these students, coupled with the allocation of the additional resources to enable them to do so. Additionally, centrally-managed ASDs-specific support services offering student-focused support in the core deficit areas and methodology-based intervention have been shown to be effective and well received in private school agencies and should be considered a first of these challenges. The capacity and willingness of public schools to address the diverse, complete and often challenging needs of students with ASDs are likely to be well received by stakeholders that have a vested interest in ensuring success for this population. A sensitive indicator of the success, or otherwise, of any measure put into place to safeguard the best interests of all students with special needs in our public schools.

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APPENDICES

APPENDIX A
CONSENT FORMS
PARENT FORM

My name is Jocelyn Geib, and I am doing research on educational programs for students with autism in northeast Ohio. I can be contacted at: jocelyngeib@yahoo.com or (330)524-661 at any time.

You are invited to participate in a research study about autism that is being conducted by Jocelyn Geib, doctoral student at Cleveland State University because you are a parent of a child with autism. The purpose of this research is to explore the educational interventions for students with autism.

The interview and focus group will be conducted by Amanda Hills. Ms. Hills is a research assistant in this project. She has completed coursework regarding this type of research and she has an extensive background working with children on the autism spectrum. Ms. Hills has recently completed a course to provide her with knowledge to be an effective researcher. Ms. Hills will also be receiving guidance and supervision from the primary researcher in this project. Ms. Hills has worked with the primary researcher in the clinical setting for the past three years. Should you like to contact Ms. Hills she can be reached at (330) 963-8600.

There are two data collection sources for this research that you may be asked to engage in. First, there is a focus group in which you will participate in a brief interview and then you will be asked to share your thoughts about the questions in the interview in a small group that will be videotaped. This will be a small group in which you will be asked to openly discuss your opinions. The videotape will be used solely for the purpose of training the research assistant. Your opinions will not be evaluated in anyway, rather your open opinions will be valuable as part of this study. The interview and discussion group should take around an hour to complete. It is important to note, that those of you participating in the focus group your confidentiality cannot be guaranteed due to the presence of the other participants. However, we hope that consideration and discretion be considered by everyone participating.

The second activity that you may be asked to participate in is that of a brief questionnaire and interview. Questions will inquire about your knowledge, experience, and satisfaction with various services and treatments available for individuals with autism. These interviews will be audiotaped in order to transcribe responses for better analysis. It is my hope that information from this research study will contribute to a better understanding of educational interventions for this population. The completion of both the questionnaire and interview should not take longer than approximately 30 minutes to complete.

Your responses within the focus group, the questionnaire and interview will be kept completely confidential. However, complete confidentiality cannot be guaranteed for those participating in the focus group due to the presence of the other participants. For the interviews, only this researcher and the interviewer will have access to your response. No identifiable information will be collected which means that no one will be able to link you to your responses or information. Your interview will be transcribed and you will be asked to review your document/information prior to submission. All data, audiotapes, and transcriptions will be coded so that there is no identifiable information on the document. All data will be stored in a locked cabinet and computer data will be password protected so that your information will be completely confidential. Upon transcription of audio/video recordings the recordings will be destroyed. Data and information retained will be kept for seven years and then destroyed.

Participation is voluntary and you may withdraw at any time without penalty. Any data collected from you prior to withdrawal will be destroyed and will not be included in the research. You may also refuse to answer any questions you do not want to answer and still remain in the study. You may feel that the risk of sharing personal information regarding your child with autism and their educational experience with an unfamiliar person and that these discussions will be audiotaped; however, all information gathered will be confidential and proper protection will be in place. Please be assured that your candid and open opinions

are welcome and will not be critiqued or judged in anyway. The benefits of participation would be the contribution to the field of study of the education of students with autism and potentially provide information to make the allocation of services for students with autism better. An additional benefit is that you will receive a \$5.00 gift card for a coffee/beverage of your choice and a snack.

Should you have any questions, please contact me at (330) 524-0661 or my advisor Dr. Brian Harper at (216) 687-2000.

I understand that if I have any questions about my rights as a research subject I can contact the CSU Institutional Review Board at (216) 687-3630.

There are two copies of this form. If you agree to participate, please sign below on each form. After signing, keep one copy for your records and return the other copy to the researcher as instructed. Thank you in advance for your cooperation and support.

By signing below, I also certify that I am at least 18 years or older.

I give consent to be videotaped (focus group only)

I DO NOT give consent to be videotaped (focus group only)

I give consent to be audiotaped

I DONOT give consent to be audiotaped

Name (Print)

Signature

Date

PROFESSIONAL FORM

My name is Jocelyn Geib, and I am doing research on educational programs for students with autism in northeast Ohio. I can be contacted at: jocelyngeib@yahoo.com or (330)524-661 at any time.

You are invited to participate in a research study about autism that is being conducted by Jocelyn Geib, doctoral student at Cleveland State University because you are currently a professional that works with children with autism. The purpose of this research is to explore the educational interventions for students with autism.

The interview and focus group will be conducted by Amanda Hills. Ms. Hills is a research assistant in this project. She has completed coursework regarding this type of research and she has an extensive background working with children on the autism spectrum. Ms. Hills has recently completed a course to provide her with knowledge to be an effective researcher. Ms. Hills will also be receiving guidance and supervision from the primary researcher in this project. Ms. Hills has worked with the primary researcher in the clinical setting for the past three years. Should you like to contact Ms. Hills she can be reached at (330) 963-8600.

There are two data collection sources for this research that you may be asked to engage in. First, there is a focus group in which you will participate in a brief interview and then you will be asked to share your thoughts about the questions in the interview in a small group that will be videotaped. This will be a small group in which you will be asked to openly discuss your opinions. The videotape will be used solely for the purpose of training the research assistant. Your opinions will not be evaluated in anyway, rather your open opinions will be valuable as part of this study. The interview and discussion group should take around an hour to complete. It is important to note, that those of you participating in the focus group your confidentiality cannot be guaranteed due to the presence of the other participants. However, we hope that consideration and discretion be considered by everyone participating.

The second activity that you may be asked to participate in is that of a brief questionnaire and interview. Questions will inquire about your knowledge, experience, and satisfaction with various services and treatments available for individuals with autism. These interviews will be audiotaped in order to transcribe responses for better analysis. It is my hope that information from this research study will contribute to a better understanding of educational interventions for this population. The completion of both the questionnaire and interview should not take longer than approximately 30 minutes to complete.

Your responses within the focus group, the questionnaire and interview will be kept completely confidential. However, complete confidentiality cannot be guaranteed for those participating in the focus group due to the presence of the other participants. For the interviews, only this researcher and the interviewer will have access to your response. No identifiable information will be collected which means that no one will be able to link you to your responses or information. Your interview will be transcribed and you will be asked to review your document/information prior to submission. All data, audiotapes, and transcriptions will be coded so that there is no identifiable information on the document. All data will be stored in a locked cabinet and computer data will be password protected so that your information will be completely confidential. Upon transcription of audio/video recordings the recordings will be destroyed. Data and information retained will be kept for seven years and then destroyed.

Participation is voluntary and you may withdraw at any time without penalty. Any data collected from you prior to withdrawal will be destroyed and will not be included in the research. You may also refuse to answer any questions you do not want to answer and still remain in the study. You may feel that the risk of sharing personal information regarding your professional career and the education of students with autism with an unfamiliar person and that these discussions will be audiotaped; however, all information gathered will be confidential and proper protection will be in place. Please be assured that your candid and open opinions are welcome and will not be critiqued or judged in anyway. The benefits of participation would be the contribution to the field of study of the education of students with autism and potentially provide information to make the allocation of services for students with autism better. An additional benefit is that you will receive a \$5.00 gift card for a coffee/beverage of your choice and a snack.

Should you have any questions, please contact me at (330) 524-0661 or my advisor Dr. Brian Harper at (216) 687-2000.

I understand that if I have any questions about my rights as a research subject I can contact the CSU Institutional Review Board at (216) 687-3630.

There are two copies of this form. If you agree to participate, please sign below on each form. After signing, keep one copy for your records and return the other copy to the researcher as instructed. Thank you in advance for your cooperation and support.

By signing below, I also certify that I am at least 18 years or older.

- I give consent to be videotaped (focus group only)
- I DO NOT give consent to be videotaped (focus group only)

- I give consent to be audiotaped
- I DONOT give consent to be audiotaped

Name (Print)

Signature

Date

APPENDIX B
QUESTIONNAIRES
FOR PARENTS

Introduction: The purpose of this questionnaire is to collect information from parents involved in this research study to find out about your perceptions of the education of your child with autism. This is a brief questionnaire asking for your basic demographic information and information about the education of your child. Because you are a parent, we are interested in your thoughts on this issue. The data will be used in an effort to learn more about educational practices for students with autism and your experiences and perceptions of this. Your response will be confidential. The survey should take you about 10 minutes. Once you are completed you will be interviewed in greater detail by an interviewer.

Demographic information:

Are you a: Male Female

Are you: Single Married Divorced Widowed

Highest Degree Earned GED High School College Masters PhD

How many children with autism do you have: 1 2 3 4+

Do you have any other children with disabilities: No Yes If yes, what other disabilities: _____

Where does your child with autism fall on the spectrum:

Mild Moderate Severe

Age of your child with autism: 6 7 8 9 10 11 12+

Grade of your child with autism: K 1st 2nd 3rd 4th 5th 6th

Do you live in a mostly rural suburban urban community?

Does your child attend a public private educational facility?

Is your child mostly in a classroom for only students with autism students with varying disabilities mainstream

Does the classroom that your child attends daily employ any specific or methodological interventions for students with autism? ABA TEACCH Sensory Integration Floortime Other

Does your child receive services relative to their diagnosis outside of their educational facility? No Yes

If yes, how many other services 1 -2 3-4 5 or more

Has your child ever attended a private facility for children with autism? No Yes

Have you ever received any formal training on how to work with your child with autism:

Yes No If yes, please list:

Are you a member of any local or national autism related groups: Yes No

If yes, please list:

FOR PROFESSIONALS

Introduction: The purpose of this questionnaire is to collect information on parents and professionals involved in this research study to find out about your perceptions of the education of children with autism. This is a brief questionnaire asking for your basic demographic information and information about the education of children with autism. Because you are a professional working with students with autism, we are interested in your thoughts on this issue. The data will be used in an effort to learn more about educational practices for students with autism and your experiences and perceptions of this. Your response will be kept confidential. The survey should take you about 10 minutes. Once you are completed you will be interviewed in greater detail by an interviewer.

Demographic information:

How many children with autism do you teach: () 1-2 () 3-5 () 6-8 () 8+

Grade(s) of the students with autism that you teach: () K-2nd () 3rd-5th () 5th-7th

Are you a: () Male () Female

Are you: () Single () Married () Divorced () Widowed

Highest Degree Earned () GED () High School () College () Masters () PhD

Do you teach in a mostly () rural () urban () suburban community?

Is the facility in which you are employed a () private () public educational facility?

Is the classroom in which you teach for () only students with autism () students with varying disabilities () inclusion () a resource room

Does your classroom employ a specific methodology for teaching children with autism?
() ABA () TEACCH () Sensory Integration () Floortime () Other

Have you ever received any formal training on how to work with children with autism:

() Yes () No If yes, please list:

Are you a member of any local or national autism related groups: () Yes () No

If yes, please list:

APPENDIX C

INTERVIEW PROTOCOL

PARENT

Introduction: *(To be read to the participant)* The purpose of this interview is to collect information about the perceptions of parents with a child with autism of the educational process in northeast Ohio for students with autism. This is a short interview asking for your feelings and thoughts regarding educational practices, methodology based interventions, and current research trends relative to intervention of students with autism. Because you are a parent of a child with autism, we are interested in your thoughts on this issue. The data will be used to begin research on the education of this population and hopefully inform current educational practices. Your response will be confidential. This interview should take no longer than 30 minutes. A snack and a \$5.00 gift card for a coffee/beverage of your choice will be provided as a "thank you" for your participation.

Directions: Please answer the following questions.

1. What do you consider to be most important components of a successful educational program for a child with autism?
 - a. *Are there other components that you did not list, but are still important?*

2. What do you feel makes an educational program for students with autism successful?
 - a. *Probe: Do you think: individualized services, intensity of services, and a focus on communication, behavior, and socialization are important? How/Why?*

3. What are your thoughts and feelings regarding methodology based interventions for student with autism?
 - a. *Probe: If the respondent does not mention the four core methodologies: Are you familiar with (mention those not discussed): ABA/DTT, Floortime, Sensory Integration, TEACCH? Do you feel that these interventions are of importance to the educational process of this population?*

4. What are your thoughts regarding public and private school programs for students with autism, do you feel that one is better than the other and why?
 - a. *Probe: Do you feel that inequities in education for this population exist? How?*

Other comments or questions:

PROFESSIONAL

Introduction: *(To be read to the participant)* The purpose of this interview is to collect information about the perceptions of professionals that work with children with autism of the educational process in northeast Ohio for these students. This is a short interview asking for your feelings and thoughts regarding educational practices, methodology based interventions, and current research trends relative to intervention of students with autism. Because you are a professional that works with this population, we are interested in your thoughts on this issue. The data will be used to begin research on the education of this population and hopefully inform current educational practices. Your response will be confidential. This interview should take no longer than 30 minutes. A snack and a \$5.00 gift card for a coffee/beverage of your choice will be provided as a "thank you" for your participation.

Directions: Please answer the following questions.

1. What do you consider to be most important components of a successful educational program for a child with autism?
 - a. *Probe: Are there other components that you did not list, but are still important?*

3. What do you feel makes an educational program for students with autism successful?
 - b. *Probe: Do you think: individualized services, intensity of services, and a focus on communication, behavior, and socialization are important? How/Why?*

4. What are your thoughts and feelings regarding methodology based interventions for student with autism?
 - a. *Probe: If the respondent does not mention the four core methodologies: Are you familiar with (mention those not discussed): ABA/DTT, Floortime, Sensory Integration, TEACCH? Do you feel that these interventions are of importance to the educational process of this population?*

5. What are your thoughts regarding public and private school programs for students with autism, do you feel that one is better than the other and why?
 - a. *Probe: Do you feel that inequities in education for this population exist? How?*

Other comments or questions:

APPENDIX D

FACE VALIDITY INTERVIEW - FOCUS GROUP

(2 Parents and 2 Professionals)

Introduction: *(To be read to the participant)* I am going to ask you some questions about children with autism. Because you are in this selected group of participants, I am interested in your responses to the interview questions, but also the interview questions themselves. The information you provide will be used along with the information from others to refine this interview protocol. When you are completed with the interview, I will ask you to complete a short questionnaire about the questions that you were asked. I will then ask you to participate in a small group of peers to discuss your answers for about 15 minutes. The entire process should take around an hour.

Your participation will provide insight into this research and provide the researcher with information to refine the research study. You are encouraged to be as open and honest as possible as your responses are not being judged rather utilized in this research process. Information will be confidential, however there is a potential threat to your confidentiality in that there are other group participants. Our hope is that each group member including yourself will be respectful and discrete regarding information, names, and identities of other participants in this group.

At this time the interview will be conducted.

Directions: Thank you for participating in the interview. Please complete the following questions about the interview. When you are finished I will ask you to participate in a brief group with your peers to discuss your answers on this survey.

1. What do you think was the purpose of the interview? *(If the respondent does not identify the purpose being about the education of students with autism, share the purpose with them.)*
2. Do you think the questions included on the interview relate to the purpose of this study? () Yes () No *If no, please explain?*
3. Are there questions that you think should be removed from the interview? () Yes () No *If yes, what were they?*
4. Are there questions that you think should be revised? () Yes () No *If, yes, what were they and how should they be revised?*
5. Given the purpose of the interview, are there questions that you thought would be asked but were not? () Yes () No *If yes, what were they?*

6. Is the introduction section clear and understandable?
 Yes No *If no, how could they be improved?*

7. Do you have any other suggestions or comments about the survey?
 Yes No *If yes, please share them with me.*

8. Were there any questions that you thought I would ask that were not included? If yes, what were they?