

A COMPARISON OF TEACHER AND PARENTAL
EXPECTATIONS FOR CHILDREN
WITH AUTISM

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CHAPTER I

INTRODUCTION TO THE STUDY

Quality of life is an issue that affects all children. Quality of life should be a right for each child in the world. In the United Nations Convention on the Rights of the Child (1989), several issues dealt specifically with children with disabilities. The convention recognized that children with disabilities should take pleasure in a full and worthy life with conditions promoting honor, independence, and an active partnership in the community (Rights of the Child, 1989). In addition, the convention recognized “the child’s right to special care appropriate to the individual’s condition” (Rights of the Child, 1989).

Quality of life is a person’s perception and confidence while taking part in socially respected roles that are seen by others as competent (Ruble & Dalrymple, 1996). Individuals with disabilities have seen progress in quality of life issues such as community involvement and self-determination in the last few years (McDonnell, Hardman, McDonnell, & Kiefer-O’Donnell, 1995). Researchers have stressed that happiness of individuals with autism should be a critical component of outcomes. For example, Halpern (1993) feels that quality of life should be utilized in examining a person’s outcomes. In addition, Rosen, Simon, & McKinsey (1995) have indicated that quality of life should be the framework for building programs, offering services, and assessing environments. Some quality of life indicators to consider when judging outcomes for individuals with autism can include: (1) participation in activities

with family and friends, (2) contact with family members as frequently as desired to include events and passages (birthday parties, weddings, funerals), (3) being active and comfortable in a familiar community (transportation, shopping), (4) working at a valued job to earn money, (5) learning about the world through successful experiences with supportive people (opportunity to try new activities and challenges), (6) taking responsibility for personal and home chores and contributing to the family, (7) making choices about purchases, and (8) having his/her own possessions to keep as desired (Ruble & Dalrymple, 1996).

The rights of children have been affirmed with numerous laws regarding children with special needs in the United States. As early as 1954, *Brown v. Board of Education* was a landmark case that set the stage for equality for minorities setting a precedence for educational equality for persons with disabilities as well. In the early 1970's the equal opportunity movement began to emerge. Litigation concerning free and appropriate public education (FAPE) occurred in cases such as *Pennsylvania Association for Retarded Citizens v. Pennsylvania* (1972) and *Mills v. Board of Education* (1972).

Public laws began to recognize persons with special needs in the mid 1970's. The first federal civil rights law passed by Congress that protected persons with disabilities was the Rehabilitation Act of 1973 (P.L. 93-112). Included in this act is Section 504 that prohibits agencies who receive federal funding from discriminating against persons with special needs in hiring, promotions, and accommodations (Yell, 1998).

The Education Amendments of 1974 (P.L. 93-380), addressing free and appropriate public education, procedural safeguards, least restrictive environment (LRE), and federal funding, targeted persons with special needs. These amendments were

changes to the Elementary and Secondary Education Act which allowed for funding to programs for children who were considered disadvantaged and students with disabilities.

Possibly the most important act signed into law was The Education for All Handicapped Children Act (EAHCA), P.L. 94-142. President Gerald Ford implemented this act in 1975. This particular event allowed the federal government to be involved with special education in ways of financial incentives, free and appropriate public education, least restrictive environment, evaluations without discrimination, and individualized education plans (IEP) for persons with special needs (Yell, 1998).

Acknowledging quality of life and rights for children with disabilities reiterates that having access to and receiving a free appropriate education, preparation for employment, and recreational opportunities is critical for these children in order to have successful social integration and individual development to the fullest extent possible. With the passage of Americans with Disabilities Act of 1990 (ADA), P.L. 101-336, persons with disabilities may no longer be discriminated in public buildings such as libraries, public restaurants, public transportation, and recreation programs. In addition, ADA emphasizes that employers must make “reasonable accommodations” for prospective employees to perform the basic responsibilities of the job.

Although previous legislation was geared toward assuring equal access and stopping discrimination of persons with disabilities, persons with autism have not benefited from these protections in the area of education until recently. Although recognized as early as the beginning of the 20th century, autism, a pervasive developmental disorder, was not categorized as a disability until the reauthorization of Individuals with Disability Act (IDEA) in 1990. This additional category, mandated by

law, now entitles children with autism to receive all legal benefits and acknowledges that this disability is a separate category within the IDEA disability umbrella.

What once was a rare disorder, autism is more prevalent today than ever before. Current studies estimate that the rate of autism is approximately 1 to 2 persons per 1,000 children (Huebner & Dunn, 2001; Rapin, 1997; Powers, 2000). In 1988, the prevalence rate was about 4.0 to 6.7 children per 10,000 (Huebner & Dunn, 2001). That is a 100-200% increase in diagnoses of autism.

There are numerous possible reasons for this rise in its identification and visibility. First, clinicians and researchers have proposed that the cause of autism is not related to parenting as was once assumed, but to biological and neurological factors. This new theory has motivated studies and encouraged research in the autism spectrum area. Medications, herbal remedies, sensory integration techniques, and developmental therapy are just a few of the many philosophies or research topics that continue to be investigated today (Aarons & Gittens, 1999; Greenspan & Weider, 1999; Rogers, 1998).

Second, in recent years, diverse treatment approaches have increased. For instance, the earliest recognized interventions developed by Ivaar Lovaas and his colleagues from the University of California Los Angeles developed a program that gained momentum and popularity in the mid 1990s. His treatment focuses on behavioral interventions that include reinforcement, punishment, and behavioral modification techniques (Lovaas, 1996). His idea of one-on-one behavioral methodology entails 40 hours a week training for individuals with autism. At the same time, researchers such as Bernard Rimland, from the Autism Research Institute in San Diego, and Eric Schopler, from University of North Carolina at Chapel Hill, have focused on a treatment that adapts

to the child's environment and does not dwell on extinguishing the behavior completely (Schopler & Mesibov, 1983).

Third, advocacy groups and parent support groups have increased in very recent years. According to Powers (2000), parents of children with autism often feel alone and embarrassed. These parents need strength and inspiration that can assist them in dealing with a child diagnosed with autism. Consequently, families participate in a variety of support organizations today. There are groups that provide resources for treatment, related services such as speech therapy programs and physical therapy ideas, and publications focused on families.

Finally, IDEA of 1990 helped to recognize developmental disabilities as a separate and unique disability not otherwise noticed in the school setting. Rapin (1997) feels that the rise in diagnosis for mild autism can be attributed to the DSM-IV having more specific criteria to which physicians can refer. In addition, more assessment instruments and diagnostic procedures have been developed for psychologists today than there were ten years ago (Gillberg, Steffenburg, & Schaumann, 1991; Volkmar & Lord, 1998). Environmental risks are also being investigated as possible factors in the increase of identification. These vary from toxins found in the environment to vaccinations given to infants and children. Hence, the increase in diagnosis has strong implications for education and family systems for children with autism.

The definitions of autism can be quite complex and diverse depending on the source of the definition. The federal regulations for IDEA (34 CFR 300.7(b)(1)) defines autism as:

“a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally

evident before age 3, that adversely affects educational performance. Characteristics include irregularities and impairments in communication, engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences" (U.S. Department of Education, 1994, p.41).

This educational model of autism stresses people-first language that emphasizes that the individual is a human being with a disability and not a disabled human being.

IDEA highlights the individual's abilities rather than the limitations. The U.S.

Department of Education considers a disability a condition and not a disease. An evaluation team comprised of school personnel makes this educational diagnosis. This team may include psychologists, speech pathologists, regular classroom and special education teachers, parents, occupational and physical therapists, and medical personnel.

The American Psychiatric Association presents diagnostic criteria for autism from a medical model. These diagnostic features, medical conditions, patterns, prevalence and characteristics can be found in the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV). The DSM-IV describes the essential features of Autistic Disorder as the "presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests" (American Psychiatric Association, 1994, p. 65). Compared to the educational definition, the medical model does not specify an unusual response to sensory stimuli. The DSM-IV diagnosis also differs from that of IDEA in that it does not have an educational component requiring the disorder to adversely affect educational performance of the student. In addition, developmental pediatricians, psychologists, and neurologists primarily make the DSM-IV diagnosis of autism.

The Autism Society of America (ASA) feels that autism, a neurological disorder that affects the functioning of the brain, is a complex developmental disability that typically appears during the first three years of life. ASA also reports that the disability interferes with the normal development of the brain in the areas of social interaction and communication skills. Individuals with autism usually exhibit difficulties in verbal and non-verbal communication and leisure or play activities (Advocate, 2000). This organization is typically an active group of parents and professionals that seek support and advice in terms of treatment, services, diet, behavioral interventions and recommendations from other parents and professionals in the field. They want their voices heard and are usually advocates in best practices for their child.

When discussing individuals with autism and pervasive developmental disorders, it is important to deconstruct common myths about autism and individuals with autism. First, persons with autism do not all have mental retardation. Approximately 25% of these children exhibit intelligence in the average range (Powers, 2000). In addition, more males are diagnosed with autism than females. However, males are usually higher functioning cognitively in general than females. Society also assumes that persons with autism have genius skills in certain areas. This is not always true. In fact, of all persons with autism, only about 10-15% will exhibit a splinter skill, or intra-individual differences in which they perform very well compared to other skills (Hardman, Drew, & Egan, 1999). For instance, a child may do exceptionally well at painting but have extreme deficiencies with abstract thinking.

Second, the underling assumption that persons with autism have a prodigious memory in all areas is not always the case. According to Jordan & Powell (1995),

individuals with autism can often recall established facts (such as a population, bus routes, history of a city), general categorical knowledge (about cities in general), and procedural knowledge (how to travel on the city bus route). However, they can have difficulty in episodic memory (recall of events that they experienced). This is primarily because persons with autism have difficulty remembering things that have happened to them. Temple Grandin (1995), a well-known adult and professor with autism, describes this as watching a video of her life and not actually being a part of it. She feels as if she is an outside person looking in.

Third, children with autism can learn to play, communicate, read, write, and do most other activities in the community. In addition, adults with autism can learn to live and work independently in society. With support, encouragement, and vocational training, adults with autism can hold employment, drive, shop for groceries, and attend college successfully (Advocate, 2000).

Persons with autism are all unique and it is more appropriate to consider the full range of characteristics than to create a single stereotypical profile of these individuals. Persons with autism are complete and full human beings, albeit with disabilities.

Problem Statement

With the IDEA of 1997, there are greater expectations for children with special needs. Congress has emphasized its focus on outcomes to assist children with special needs to become contributing and participating members of the community (Autin, 1999). In addition, legislation dealing with inclusion has had a major effect on how children with special needs are accommodated in the classroom. The current literature

reports that professionals' ability to work with a child relies upon the critical component that they can work with the families as a system (Gray, 1998; Prizant & Wetherby, 2000; Simpson, 1990).

While parents are struggling with the best education for their children, teachers are using instructional strategies that they learned as part of their teacher education programs (Blanton, 1992). An essential issue that is often overlooked is the contrast between parent and teacher expectations regarding the achievement of instructional outcomes for all children and more specifically for children with autism. Literature on expectations of parents of children with disabilities has found correlational evidence linking parents' expectations and involvement with future outcomes that children with disabilities achieve. For instance, Field and Hoffman (1999) present the important link between family involvement and a child's self-determination. Turnbull and Turnbull (1996) identified four components of families that affect self-determination thus affecting outcomes. These are family characteristics, family interactions, family functions, and family lifespan issues. Similarly, Kohler (1999) surveyed 25 families of children with pervasive developmental disabilities regarding services they receive. The findings show that because parents are the primary contact in the lives of their children, their opinions and expectations should have more importance than judgments or opinions of school personnel. In a similar study, Mutua (2001) discusses the importance of parents' beliefs and expectations of children with severe disabilities

Because today many children are increasingly being diagnosed with autism (Hardman, Drew, & Egan, 1999; Huebner, 2001; Lord & Risi, 2000), there are increased educational concerns about outcomes and quality of life. Teachers in both private and

public school settings influence these outcomes. In addition, parental expectations determine many aspects of a child's education. Therefore, it is important to examine and contrast parent and teacher expectations for children with autism.

If parent and teacher expectations are similar there may be a better chance of an effective collaborative relationship. However, if expectations are not similar, educational issues could be unresolved and result in conflict thus compromising the quality of the education for the child with autism. With increased diagnosis and no known cure for autism, educational placement and services are a major issue with regards to interventions and future success (Kellegrew, 1995; Simpson & Miles, 1998).

These studies point to the importance of understanding parent and teacher expectations about the development, instructional strategies, and future outcomes of children with autism. Understanding the developmental, instructional and future expectations of both parents and teachers of children with autism is important for potential success for these children. There is little research that relates these important influences.

Significance of Problem

For several decades, children with autism have not been understood. This has led to misdiagnosis, experimental treatments, and frustrated parents. The growing concerns for children with autism are numerous. Parents are struggling with educational choices such as continuum of services, related services, educational settings, and interventions. These challenges that parents experience are due to the increased number of diagnoses of the disability and the controversial philosophies regarding treatment. Autism is a low incidence disability in that it occurs in approximately 1 to 2 individuals per 1,000.

In addition, research indicates that there continues to be a missing link between the family system and educational system relationship (Dominique, Cutler, & McTarnaghan, 2000, Davern, 1999). However, teachers strongly believe that students with disabilities make significant progress with academic and social skills (Koegel, Koegel, Frea & Smith, 1995; Waldron, McLeskey, & Pacchiano, 1999). Therefore, it is important to address parental challenges and educational systems in terms of outcome and success for children with autism.

For children with autism, education is a lifelong process. Outcomes in the education for students with autism have been documented in various studies. For example, Cohen (1999) presented several specific follow-up studies that evaluated outcomes for children with autism. In each project, approximately ten percent of the children, who are now adults, in each project had “good” outcomes in terms of employment, no blatant behavior problems, and near-normal social life. In most of these research studies, it was reported that while these children may have achieved very close to normal functioning, most could not explain their deep emotions or show an interest in intimate relationships. Approximately 61-74 % of the individuals had “poor” or “very poor outcomes.”

Schopler (1991), for instance, provides a report that summarizes 250 research projects conducted by the Division of Treatment and Education of Autistic and related Communication Handicapped Children (TEACCH). In this report, treatment outcomes and parent involvement were considered a critical component in the collaboration process between family systems and schools. An outcome study conducted by Schopler & Mesibov (1983) supports the belief that individuals with autism who are involved in

programs that focus on daily living skills and knowledge will achieve better outcomes and be less likely to be institutionalized (8% versus 40%-78%). In addition, Howlin and Goode (1998), found that today only about 8% of persons with autism are institutionalized versus nearly 55% in the 1980's. According to Larkin & Gurry (1998), children with autism improved their attention capacity and behavioral outcomes over a two-year period with behavioral methods of treatment.

Forty-six individuals with autism were investigated by Ruble & Dalrymple (1996). In this study, outcomes were addressed in a new framework that consists of a person's strengths and challenges, other's perceptions of competence and self-perceptions of quality of life, and environmental stressors and supports. Exploration of new ways to define and broaden views of outcomes, specifically with autism, was targeted. In addition, the researchers emphasize that professionals need to communicate with parents the importance of competence and its relationship to quality of life. Although general knowledge about the course of the lives of persons with autism is sketchy, variables like education and employment are important in outcome studies (Lord & Venter, 1992).

Purpose

The purpose of this study, therefore, was to investigate and compare the expectations of parents and teachers with regard to the future outcomes of children with autism. Gray (1998), states that there is an absence of research on the relationships between families and professionals of children with autism. When we discuss the education of children with special needs, including children with autism, we must include

in that discussion the expectations of parents and teachers since research has consistently shown that both groups have an impact on the future of children.

Given that the diagnosis of autism is on the rise (Fleming, 1999), it is therefore necessary to have more information about different aspects related to the education of children with autism. It is essential that school systems help to bridge the gap between what parents feel is important for their children and what educators are actually providing.

Research Questions

The investigation of teacher and parent differences with regard to expectations will enhance teamwork and supportive relationships between these two groups (Stone & Rosenbaum, 1988). Wehman (1998), stresses the need for research in partnerships between parents of children with developmental disorders and professionals.

Children with exceptionalities, specifically children with autism, can learn, experience quality of life, and can be independent and productive citizens. Teacher and parent teamwork has been described as a critical component in educational success (Handleman, 1986). Therefore, it is important to investigate the future outcomes of children with autism and the differences in those outcomes between the parents and teachers.

In the response to the need for research these questions will be addressed:

1. To what extent do parents' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?

2. To what extent do teachers' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
3. To what extent do parents' and teachers' expectations differ between their ratings of likelihood and importance of the outcomes of children with autism

Definition of Terms

Autism: Although there are many definitions of autism, some of them very vague, there are common threads that run through all definitions. For this study, autism will be defined as a spectrum disorder, neuro-developmental in nature, in which the individual exhibits three core features: Lack of social interaction, impairment in communication, and repetitive or restrictive patterns of behavior (American Psychiatric Association, 1994).

Autism Spectrum: Individuals who share specific deficits similar to those associated with autism but who do not meet the full criteria of an autism diagnosis. This may include: Asperger's Syndrome, Rett's Syndrome, and Childhood Disintegrative Disorder (Wetherby & Prizant, 2000).

Asperger's Syndrome: An individual with a social impairment, limited use of gestures, clumsy body language, limited facial expression, inappropriate expression or peculiar and stiff gaze (Attwood, 1998). In addition, he/she may have restricted repetitive and stereotyped patterns of behavior and interests. The person may lack social reciprocity, but have no clinically significant general delays in language or cognitive development (Attwood, 1998; American Psychiatric Association, 1994).

Expectation: the act of preparing or envisioning (Mish, 1988).

Outcome: For this study, the term is used to describe a future achievement for each child (Ruble & Dalrymple, 1996).

Outcome Expectancy: The perception of the possible consequences of one's action (Schwarzer, 1992).

Pervasive Developmental Disorders: These types of disorders, such as autism, Asperger's Syndrome, and Rett's Syndrome, are characterized by severe and pervasive impairments in several areas of development such as: reciprocal social interaction skills, communication skills, or the presence of stereotyped behavior, interests, and activities (American Psychiatric Association, 1994).

Rett's Syndrome: An individual that has apparently normal prenatal and perinatal development along with apparently normal psychomotor development through the first 5 months after birth.. After the period of normal development, the individual will exhibit a deceleration of head growth, loss of acquired hand skills, loss of social engagement, appearance of poorly coordinated trunk movements, and severely impaired expressive and receptive language development with severe psychomotor retardation (American Psychiatric Association, 1994).

Limitations

Four of the parents in this study are part of an advocacy group. Therefore it is likely that they are parents who are very involved in the education of their children. This may result in higher expectations for this set of parents. This fact may limit the generalization of the findings to parents with similar involvement. In addition, the sample size for the teacher and parent population is relatively small. The participants were chosen by convenience sampling due to the fact that autism is a relatively rare disability. Due to this fact, caution should be used when generalizing the results from this study.

Organization of the Study

Developmental outcomes, classroom instruction, and future expectations are critical components of success for children with autism. The discrepancy between what parents and teachers feel is important and what expectations their children will likely achieve are important in this body of research. In Chapter I, the problem, purpose, significance, limitations and research questions were presented.

In Chapter II, the review of literature and general expectations of teachers and parents of children with autism are discussed as well as outcomes for these children. In addition, developmental outcomes and classroom interventions are presented. Relevant literature that provided the theoretical framework for this study will be addressed in Chapter II. This includes the history and general characteristics of children with autism.

Chapter III will present the methodology with regard to research questions, participants, and instrument utilized in this study. In addition, the rationale for the sample selection will be presented. Moreover, the procedure used and data analysis will be discussed. Chapter IV will present the results of the data analysis, and Chapter V will present the conclusion, summary, and recommendations of the study.

CHAPTER II

LITERATURE REVIEW

An overview of autism and description of characteristics for children with autism will be presented in this chapter. Additionally, this chapter describes the theoretical framework of expectancy theory and how it directly drives this study. In this literature review teacher expectations and parental expectations for children with special needs are also discussed. The purpose of the study was to investigate the differences in likelihood and importance ratings of teachers and parents of children with autism with regard to outcomes.

Expectancy Theory

A theory is a body of principles that describes a phenomenon. Theories are scientifically acceptable and allow one to understand facts as they relate to each other. Much research has been conducted on expectations and outcomes. Researchers have found that expectations are often positively related to future outcomes for children (Field and Hoffman, 1999; Mutua, 2001).

Expectancy theory is an approach to understanding better a person's expectations that will hence produce specific outcomes and the values a person places on those outcomes (Bandura, 1995). Individuals perform because of their expectations and act on their beliefs about the probable outcomes of performance. Outcome expectancies are a form of cognitive motivators for humans.

Even though outcome expectancy and efficacy expectation are related, they are not the same concepts. Outcome expectancy is a person's belief that certain behaviors will lead to certain outcomes. Efficacy expectations are the beliefs that one can behave in such a manner as to produce the outcomes (Bandura, 1977, 1992). A person can understand the likely consequences of some action but not be able to execute the action.

Expectancy theory recognizes that individuals' motivating influence of expectancies is also driven by self-efficacy. People do not pursue many services or treatments because they lack the self-confidence or self-efficacy to try them or request them. These motives are often related to past abilities or prior task performance (Feather, 1982).

Expectancy theory is enhanced when self-efficacy is included in the formula (Ajzen & Madden, 1986; deVries, Dijkstra, & Kuhlman, 1988; Schwarzer, 1992). Individuals do not feel that services or treatment options in areas of low perceived efficacy are worth taking into account. This is true no matter what their beliefs about a treatment philosophy or service. Self-efficacy beliefs hinder our expectations. A person's self-efficacy influences decision-making. Additionally, the stronger an individual's efficacy to fulfill educational requirements, the more interests they will possess and the more likely they will pursue different service and treatment options in education (Betz & Hackett, 1981; Matsui, Ikeda, & Ohnishi, 1989).

Watkins (1997) found that the variables that indicate parental involvement in the relationship to children's outcomes were communication with teachers and self-efficacy. Research does indicate that parental involvement and the expectations parents value do positively have an effect on a child's outcomes (Brookhart, 1998). A two-year study

looking at parental involvement among parents and teachers indicated that parental influences and expectations in the home environment positively impact a student's academic outcomes (Reynolds, 1992).

In this study, expectancy theory was used as a basis for the examination of parental and teacher expectations regarding outcomes for children with autism. In addition, this theory was used to understand the differences that parents and teachers hold for these constructs.

History of Autism

Autism, a developmental disability, became a recognized disability category in the Individuals with Disabilities Education Act (IDEA) of 1990. Although research and diagnosis on autism is increasing today, the condition is discussed as early as 1828. In the 1890s Leo Kanner and other researchers recognized that there were deficits in social interaction and communication in persons who exhibited intellect in skills that did not require social activities (Carrey, 1995). In addition, in 1911, children that were diagnosed as schizophrenic, who were socially withdrawn, were called "autistic" (Bleuler, 1950).

Leo Kanner (1943) used the word "autistic" to describe social interaction problems in the children he observed. He presented hundreds of case studies of children that showed a "disturbance of affective contact" and "unusual development of communication skills" (Kanner, 1943). Strange behaviors and odd sensory interests were also noted. Kanner's longitudinal studies still influence the field of autism.

The myths and misconceptions about autism during the 1950s have since been nullified. Researchers now know that autism is a biological disorder not psychological in nature. In addition, it is well known that autism is not specifically found in families with highly successful fathers as once thought. Child care practices and the parent-child relationship are no longer to blame. The idea of “refrigerator moms” causing autism is a phrase of the past.

In 1980, the Diagnostic and Statistical Manual-III first recognized pervasive developmental disorders, including autism. This marked a major change in research beginning with infantile autism. Researchers began to agree on diagnosis criteria for autism spectrum disorders. They used this diagnosis to explain the individuals they studied. This agreed diagnosis was then used to distinguish between childhood schizophrenia and autism (Huebner & Dunn, 2001). Today five or six genes are thought to contribute to autism (Leventhal, 1999). In studies on twins with autism, it is found that these genes are located in Chromosomes 7,13, and 15 (Bauman, 1999).

In autopsies of 6 individuals with autism, Bauman & Kemper (1994), found decreased number of cells and reduced cell size, which may reduce a person’s ability to integrate sensory information. Findings also suggest that the decreased functioning of the cerebellum may cause motor dysfunction. Hass, Townsend, Courchesne, Lincoln, Schreibman, & Yeung-Courchesne (1996) investigated 28 persons with autism and 24 normal controls using MRI comparisons. Ninety-six percent of persons with autism exhibited at least one sign of cerebellar dysfunction. Both of these studies suggest that sensorimotor problems will be evident in the characteristics of children with autism.

General Characteristics of Autism

Individuals with autism exhibit a variety of specific characteristics associated with pervasive developmental disorders. However, there is considerable variability among children with autism (Riccio, 1999). While some individuals may be bright and intelligent, others may exhibit lower intellectual functioning. Children with autism may be socially aloof or be socially responsive. They may exhibit high energy levels or be quite passive (Jordan & Powell, 1995; Mobley, 2000). It is important to acknowledge that while each child with autism is unique, there are traits that are important in diagnosing autism.

Autism is diagnosed in males four times as often as in females (Riccio, 1999). Basic features of a person with autism may include disturbances in the rate and appearance of physical, social, and language skills. They may also have abnormal types of reactions to sensations. An absence or delay in speech or language development may be observed. Individuals with autism can have somewhat unusual ways of relating to people, objects, places, and events. Finally, unusual ways of thinking are often expressed. Since there is no symptom in itself that is unique to autism (Johnson & Koegel, 1982; Ruble & Sears, 001), it is appropriate to consider the spectrum of possible characteristics.

There are six dominating characteristics of people with autism that are discussed in research. First, the learning characteristics of children with autism may develop unevenly within and across skill areas. They may have negative reactions to changes in routine and can have difficulty with unstructured time or waiting periods at school and in the home environment. Generalizing skills from one situation to another is difficult for some. These children do not solve problems well because they cannot make a plan to do

so. In addition, children with autism may struggle with abstract concepts or ideas. (Drew, Egan, & Hardman, 1999; Mobley, 2000)

Second, the concept of social reciprocity is often limited for children with autism. Social behavior can be described as the ability to relate to others in mutually reinforcing and reciprocal fashion, as well as, adapting social skills to the varying demands of social contexts (Mobley, 2000). Individuals with autism struggle in both of these areas. Problems developing attachments to significant others, unusual patterns of social response, unusual eye-gaze patterns, physical withdrawal, and negativism are some social deficits that can negatively affect the development of relationships (Seroussi, 2000; Siegel, 1996).

Children with autism tend to have unique characteristics with peer interaction. They may lack cooperative play skills, imitation play skills, and social exchanges. In addition, problem-solving and conflict resolution are skills typically acquired through peer play and consequently compromised in developing children with autism. They can exhibit problems relating to other people and lack emotional contact with others. For instance, a study conducted by Laushey & Heflin (2000) found that kindergarten students with autism did not increase self-initiated interactions with peers in an inclusive classroom unless a peer-buddy approach was implemented.

Similarly, Rieffe, Terwogt, & Stockmann (2000), investigated unique emotions among 23 children with autism. Their findings suggest that children with autism, aged 5-11 years of age, have difficulty predicting a typical emotion (happiness, fear, sadness, and anger). When asked to forecast the protagonist's emotion in a story, the children with autism did relatively poorer than two groups of children ages 6 and 10 years who do not

have autism. Research such as this study indicate that children in the autism spectrum rarely can explain other person's beliefs.

Unreasonable fears, inappropriate giggling or laughing, and odd use of eye contact are outward behaviors that are often displayed by individuals with autism. The inability to express or understand emotions and the difficulty understanding social cues inhibits children with autism from having social relationships with others. According to Jordan and Powell (1995), socially, educators can teach individuals with autism to hug, smile and hold someone's hand. However, neither educators nor teachers can teach them to feel emotions.

Third, these children have limited communication skills. Children with autism do not comprehend the power of communication. Many of the children diagnosed with the disorder do not speak or speak very minimally. Geis & Tomchek (2001), for example, discuss the weaknesses for giving and receiving communication verbally and non-verbally for children within the autism spectrum. They present the treatment principle of combining speech-language therapy with occupational therapy because of sensorimotor impairments for these children. Consequently, they also provide strategies that can be utilized within a joint therapy session to encourage communication.

Ogletree (1998) discusses the fact that persons diagnosed with autism can have a wide spectrum of communication difficulties. These can range from mutism to higher order interaction deficits. The different forms of communication that a person within the autism spectrum might utilize are described as well. For example, conventional forms are described as gestures and vocalizations. Drawing from the literature, Wetherby (1986) feels that requests and protests emerge first for a person with autism, followed by

social greetings (saying hello). Unconventional forms of communication are described as self-injurious behavior or damaging the physical environment. These forms of communication can function as attention-getting, escaping, or protesting.

Persons with autism tend to use the communication strategies available to them for instrumental rather than interactive purposes. They tend to rely of communication means that are pre-symbolic and therefore strongly tied to context information. They may scream or fall on the floor in attempts to communicate their needs.

The major deficit with communication for children with autism is with the specifics of social understanding and use of language. (Hubbard, 2001; Twachtman-Cullen, 2000). The timing and content of speech is extremely hard for them to grasp. The inability to understand long sentences and concepts is an obstacle for communication. Trouble with answering questions, paired with impaired verbal and nonverbal communication, make it extremely hard for these children to express their needs (Koegel & Koegel, 1995). Consequently, restricted modes of communication result in low spontaneously initiated conversations. Speech is often used as self-entertainment for these individuals.

Research confirms that individuals with autism need multi-modal modes or ways of communication. For instance, in a review of 16 empirical studies, Hwang & Hughes (2000), present interactive training results on early communication skills of children with autism. In this article, the authors indicate that children communicated with verbal and nonverbal modes, used imitative play, eye contact, and social behaviors for modes of communication.

In addition, Light, Roberts, Dimarco & Greiner (1998) present a case study in which a child's multi-modal system was natural speech, pointing, a dictionary and picture book, and computer software. Mirenda & Erickson (2000) reiterate that children also need a reason to communicate and some strategies to assist with different modes of communication such as computers, written or picture schedules, and voice-output devices.

In the educational setting there are numerous interventions and techniques that can be utilized to increase interaction skills. Concrete supports as augmentative strategies can be beneficial. For example, charts, calendars, schedules, choice boards, labels and printed signs, bulletin boards and picture/word cards can all be of assistance. Linguistic supports can include highlighted relevant information in the course curriculum. This can include social information, emotional readings/stories, feelings and reactions, and perspective-taking. In addition, simply reiterating verbal rules can be a useful technique. Whole language strategies to support growth in the social and communication areas would consist of dialogue scripts, role playing, interactive routines, replica play, and social stories. Positive play experiences with more capable peers and with adults typically serve to expand play activities into conventional forms (Schuler & Wolfberg, 2000).

Communication deficits can influence social behavior as well. Children with autism may have trouble signaling intention and conveying messages. Initiating and regulating turn-taking and affective expression can cause concern with peers. Adhering to rules governing rhythm, stress, and intonation can be hard for these children also (Jordan & Powell, 1995).

The fourth characteristic of children with autism is a restricted repertoire of activities and interests. Children with autism do not have many appealing choices for leisure time and independent activities. Because they resist changes in routines and display impaired sensory responsiveness, it is hard to determine activities in which they excel (Twachtman-Cullen, 2000). Additionally, their repetitive movements and self-stimulus behaviors frequently occupy much of their leisure time.

Fifth, children with autism may exhibit behaviors that some may consider problematic. Aggression and impulsiveness are commonly reported (Koegel, Koegel, Frea & Smith, 1995; Tsai, 1998). Screaming, running from adults, pacing, and over-excitability are also common characteristics (Shriver, Allen, & Mathews, 1999). The desire for things to be consistently the same or straight can also cause upheaval in their lives and actually shape the behavior of parents and teachers. For example, Fox, Dunlap, & Buschbacher, (2000) discuss that a family's actions are altered to accommodate a child with autism. Parents may give up career opportunities to spend time and energy that the child requires. The family may not attend church services because of lack of accommodations and can feel ashamed or criticized in their community settings. In addition, siblings may avoid having friends visit from lack of fear of behavior outbursts or tantrums. Parents of children with autism are constantly aware that there is potential for disruption of family activities, meals, and vacations.

Finally, children with autism often have sensory integration difficulties. Sensory experiences include movement, body awareness, sight, sound, and touch (Fisher, Murray & Bundy, 1991). Sensory integration is a concept developed from the work of A. Jean Ayres (1979). It is a process in the brain that organizes and interprets sensory

experiences. This integration provides a foundation for more complex learning and behavior in the future. The integration process for children with autism can become disorganized. Motor planning ability and adapting incoming sensations can be very difficult for them. When this process is disordered, numerous learning problems, development difficulties, and behaviors may become evident (Sensory Integration International, 1986).

Children who may be experiencing dysfunctional sensory integration display various signs. These may include: over sensitivity or under sensitivity to touch, movement, signs, or sounds; easy distractibility; activity levels that are unusually high or unusually low; inability to unwind or calm self; a poor self concept; difficulty with transitions; physical clumsiness; delays in speech, language, or motor skills; and delays in academic achievement (Ayers, 1979). Additionally, Huebner & Kraemer (2001) reiterate that persons with autism will exhibit sensory defensiveness. These can range from smell sensitivity (smelling to learn and explore), auditory input (singing or whispering to complete a desired task), and tactile defensiveness (message, hard pressure, or brushing the skin to engage).

Children with sensory integration dysfunction may exhibit feeding/eating difficulties. These may include issues with textures, flavors, oral-motor preferences and colors of food and drink (Mobley, 2000). As reported by Huebner & Kraemer (2001), children who are sensory hypersensitive may exhibit difficulty with chewing or may spit and cough frequently. These children may need to suck on an object between meals or gnaw on licorice or beef jerky. Thick foods and messaging around the face and mouth may be preferred before food consumption.

Parents' and Teachers' Expectations in the Education of Children with Autism

Recently, major educational reform has given emphasis to higher expectations for performance of all students. However, outcomes for students with special needs cannot be legislated. For example, in Illinois for the 1998-1999 school year, it was estimated that approximately 28% of the students with disabilities dropped out of school (Illinois State Board of Education, 1999). In addition, the law cannot ensure that parents and professionals work together. This is due at least in part to the mingled relationships between parents and teachers (Doninique, Cutler, Mc Tarnaghan, 2000). According to the research, in general, these relationships can reflect friction, pressure, and dissonance. The sources of this conflict may include parents trying to prove that they know their child best and the professional's lack of skills in working with family systems. When examining transcripts from focus groups consisting of parents and service providers. Sperry, Whaley, Shaw, and Berame (1999) found that the two groups did not always agree on best practice for children with autism. However, parent and teacher collaboration is essential.

Parents and teachers of children with autism have many important issues to share. Families often struggle with the complex reality of living with a child with autism and teachers often operate under constraints of education and limitations of the educational system (Doninique, Cutler, Mc Tarnaghan, 2000). In addition, the case study directed by Gerdtz (2000) looks at a student with autism and reinforcement of classroom behaviors. The researcher presents unique behavioral challenges for educators and parents. These include escaping from situations that involve change, avoiding work when expectations

are higher than performance ability, and destructive behaviors. His findings suggest that severe behavior problems decrease when relaxation techniques and self-monitoring methods are employed. Modifying the environment was also deemed helpful in this study.

According to Simpson & Myles (1998), if persons with autism are not motivated to engage in scholastic treatment programs, families cannot work on these programs at home. This lack of motivation creates difficulties with learning in general. Furthermore, these children have difficulty generalizing or transferring information to other settings, conditions, or people. This means that parents may need to spend large amounts of time on tasks, in the home and in the community, that have been performed correctly at school.

Teachers of special education are frequently the first to establish collaborative relationships among families, the community, and school systems (York & Reynolds, 1996). As educational services have moved away from a dictatorial situation where professionals were the experts, an increase of family involvement in decisions affecting the future for persons with disabilities is more apparent (Reiter, 2000). Moreover, persons with disabilities are more directly involved in decision-making regarding their curriculum and services than in the past. Additional examples of this movement toward family and community involvement are empowerment groups such as 'circles of support,' advocacy organizations, and the mandatory participation of community members in state developmental disabilities councils (MacFadder & Burke, 1991). School systems need to focus on learning and teaching results in combination with predetermined expectations and goals of students (Meyen & Skartic, 1995).

Educators are often unaware of the impact of their expectations on students (Obiakor, 1999). Teachers frequently must work with many children simultaneously which makes it very difficult to build knowledgeable relationships. In addition, family values and teacher values are not always the same. Teachers may not share family goals and family traditions may be unknown to the teachers.

Teachers do not always support educational changes (Minke, Bear, Deemer, & Griffin, 1996; Vaugh, Schumm, Jallard, Slusher, & Saumell, 1996). If teachers believe that students are not progressing both academically and socially they may not be supportive of an existing program (Fullan & Miles, 1992). This is particularly problematic when parents are not in agreement with the school's intervention practices or with teachers' beliefs.

Although teachers are well trained and have experience developing educational programs for individual students, they are not always involved in the effectiveness of programs. Therefore, there is no perceived need to change curriculum for specific outcomes (Knott & Asselin, 1999). Outcomes for individuals with autism are extremely variable. Innate linguistic and cognitive skills are two major factors that can affect outcomes. Cognitive abilities and language skills are considered the best predictors of outcome (Howlin, 1997; Shriver, Allen, & Mathews, 1999). While it is important for educators to be aware of excess demands for children with autism, underestimating their capability can do harm alike. A balance is important. Flexibility and personalized teaching arrangements are also needed to capitalize on future success.

Parents were the pioneers in starting special education programs in the school systems. It is critical that family members be seen as essential members of the

educational process (Fox & Williams, 1992). Although parents are expected to have a supporting role for the school's efforts many times they receive little support and are expected to provide little input. Research indicates that family systems must be acknowledged as valuable (Gray, 1998; Simpson, 1990).

Chapter II presented expectancy theory, the history and general characteristics of autism, as well as, the review of literature in which this study is based. Chapter III will present the methodology with regard to research questions, participants, and instrument utilized in this study. In addition, the rationale for the sample selection will be presented. Moreover, the procedure used and data analysis will be discussed.

CHAPTER III

METHOD

The purpose of this study was to investigate the extent to which differences exist on parent and teacher ratings of the importance and likelihood of achieving specified outcomes of children with autism. In this chapter, the method and procedures used to collect and analyze the data are described.

The research questions that guide this study are:

1. To what extent do parents' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
2. To what extent do teachers' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
3. To what extent do parents' and teachers' expectations differ between their ratings of likelihood and importance of the outcomes of children with autism?

Participants

Participants for this study were drawn from a population consisting of both parents and teachers of children with autism in 2 mid-western states. Through convenience sampling a total of 15 teachers and 25 parents were surveyed. The return rate for the parents was 46% while the return rate for the teachers was 56%.

Although this is a relatively small sample size and is chosen by availability, there is evidence that it is representative of the general population of parents and teachers of children with autism. Both parents and teachers come from a variety of school settings and the children associated with this study have a variety of diagnoses within the autism spectrum. The fact that, in the general population, there are small numbers of teachers of children with autism and of parents with autistic children makes the sample size in this study reasonable.

Teachers of Students with Autism

The sample of teachers was selected from both public and private schools in the rural and urban mid-west. The public school teachers teach in south central states. The private school teachers are located in the mid-west. All of the teachers work with children with developmental disabilities of all levels.

The private school, located in the mid-west, is a residential full-time school that houses children with developmental disabilities, the majority of whom have been diagnosed as autism. There are approximately 30 children, ages 5 through 21, living on campus. The setting has a seven-hour school day Monday through Friday.

The public school settings included rural and urban environments. One particular school in the study has five self-contained classrooms of children with autism or pervasive developmental disorders only. Other classrooms consist of children with severe and low incidence disabilities including autism spectrum disorders.

Parents of a Child with Autism

Responding to this study were parents in a national parent support group as well as parents who have children enrolled in public school settings. The children from these two groups of parents have been diagnosed with developmental disabilities such as mild to severe autism, Asperger's Syndrome, Rett's Syndrome, or pervasive developmental disabilities. All parents reside in mid-western states. These parents are not connected in any way with the teachers in the study. The students of the teachers and the children of the parents are not the same individuals.

Description of Participants

The first portion of the survey contained questions to enable the researcher to obtain demographic information of all the participants. Information elicited from parents included relationship to the child (mother, father, other), type of school placement (public or private), number of siblings, ethnicity, location of residence and the level of involvement in the classroom. Information elicited from teachers included gender of the teacher, type of school employment, years of teaching experience, ethnicity, location of school, and level of involvement of parent in the classroom.

On both surveys there were questions concerning individual children. The parents, on their survey, were asked about their own son or daughter. The teachers were asked to select any student and consider only that student when completing the survey.

Parent Demographics

This study included 25 parents of children with autism from public and private school settings located in two mid-western states. One father, 21 mothers, and 1 aunt

opted to participate in this study. In two cases the mother and father completed the survey together. Information about the parents who completed this survey is given in Table I. Of the 25 parent participants, 24 have their child enrolled in public school settings and none have their child enrolled in a private school setting. However, one parent reported the child is enrolled in both public and private schools. Nineteen parents reported that the

TABLE I
DEMOGRAPHICS OF PARENT PARTICIPANTS
N=25

<u>Relationship</u>		
Mother	21	(84%)
Father	1	(4%)
Other (Aunt)	1	(4%)
Both	2	(8%)
<u>Type of School Placement</u>		
Public	24	(96%)
Private	0	
Both	1	(4%)
<u>Number of Siblings</u>		
None	4	(16%)
1-2	19	(76%)
3-4+	2	(8%)
<u>Ethnicity</u>		
African American	4	(16%)
Asian American	1	(4%)
Caucasian	17	(68%)
Hispanic	3	(12%)
Native American	0	
<u>Location of Residence</u>		
Urban	17	(68%)
Suburban	4	(16%)
Rural	3	(12%)
<u>Level of Classroom Involvement</u>		
Daily	13	(52%)
Weekly	6	(24%)
Monthly	1	(4%)
Every 3 Months	0	
Every 6 Months	0	
Yearly	2	(8%)
None	3	(12%)

child with autism has 1-2 siblings and 2 parents reported that the child has 3 or more siblings in the household. Four of the parents have no other children. The majority of the parents are Caucasian (17). Four parents are African American, 3 are Hispanic, 1 is Asian American. No parent reported being Native American. Seventeen parents reside in an urban setting, 4 live in suburban settings, and 3 live in rural areas.

Classroom involvement was varied among the parents. Thirteen of the parent participants reported contact on a daily basis, 6 on a weekly basis, and 1 on a monthly basis. No parents reported having contact every 3 months nor did any parents report having contact every 6 months. Classroom contact once a year was indicated by 2 of the parents and no contact was reported by three parents.

Teacher Demographics

This study included 15 teachers of children with autism from public and private school settings located in two mid-western states. The demographics for the teacher participants are reported in Table II. Fifteen teachers from public and private schools opted to take part in this study. Of the 15 teachers, 14 are female. Fourteen of the teachers are Caucasian and 1 is African American.

Eight teach in public schools while 7 teach in private schools. Almost half of them (47%) have taught 5 years or less. Fifty-three percent have taught 6 years or more. Ten of the 15 teach in urban settings, 3 teach in suburban settings, and 2 teach in rural areas. Involvement by parents in their classroom was varied. Five reported parent/teacher contact on a daily basis, 3 on a weekly basis, and 5 on a monthly basis. Contact every 3

months was reported by 1 teacher and contact every 6 months was reported by 1 teacher.

No teachers reported yearly parent/teacher contact nor did any report no contact.

TABLE II
DEMOGRAPHICS OF TEACHER PARTICIPANTS
N=15

<u>Gender</u>		
Male	1	(6%)
Female	14	(93%)
<u>Type of School Employment</u>		
Public	8	(53%)
Private	7	(46%)
Both	0	
<u>Years of Teaching</u>		
1-5	7	(46%)
6-10	2	(13%)
Over 10+	6	(40%)
<u>Ethnicity</u>		
African American	1	(7%)
Asian American	0	
Caucasian	14	(93%)
Hispanic	0	
Native American	0	
<u>Location of School</u>		
Urban	10	(67%)
Suburban	3	(20%)
Rural	2	(13%)
<u>Involvement of Parents in their Classroom</u>		
Daily	5	(33%)
Weekly	3	(20%)
Monthly	5	(33%)
Every 3 Months	1	(7%)
Every 6 Months	1	(7%)
Yearly	0	
None	0	

Child Demographics

The parents, on their survey, were asked about their own son or daughter. The teachers were asked to select any student and consider only that student when completing the survey. The demographics given in Table III concern age, diagnosis, ethnicity, and any other disabilities, as reported by teachers and parents in this study.

Of the 40 children targeted, ages range from 4 through 21 years, with the majority of parents and teachers focusing on children from age 6 to 10. The ethnicity, reported by parents and teachers, included 5 children from African American backgrounds, 31 Caucasian backgrounds, 3 from Hispanic backgrounds and 1 from an Asian American background. There were no children reported to be from a Native American background.

Diagnoses indicated 10 children with mild autism, 13 with moderate autism, and 10 with severe autism, for a total of 83%. Asperger's Syndrome was reported in 6 of the children and Rett's Syndrome was reported only in 1 of the children, according to teachers and parents. Of the 40 children that were targeted, half had additional diagnosed disabilities.

Instrument

Adaptation of Instrument

The 20-statement instrument that was used in this study was adapted from Mutua (1999) with the purpose of collecting data about teachers' and parents' expectations and future outcomes for children with autism. An expectation is the act of preparing or envisioning an outcome (Mish, 1988). The term outcome is used to describe a future achievement for each child (Ruble & Dalrymple, 1996).

TABLE III
DEMOGRAPHICS OF TARGETED CHILDREN WITH AUTISM
N=40

	Parents	Teachers	Total
<u>Age</u>			
1-5	4 (16%)	1 (7%)	5 (13%)
6-10	17 (68%)	8 (53%)	25 (63%)
11-15	2 (8%)	3 (20%)	5 (13%)
16-20	1 (4%)	3 (20%)	4 (10%)
<u>Diagnosis</u>			
Mild Autism	8 (32%)	2 (13%)	10 (25%)
Moderate Autism	6 (24%)	7 (47%)	13 (33%)
Severe Autism	6 (24%)	4 (27%)	10 (25%)
Asperger's Syndrome	4 (16%)	2 (13%)	6 (15%)
Rett's Syndrome	1 (4%)	0	1 (3%)
<u>Ethnicity</u>			
African American	4 (16%)	1 (7%)	5 (13%)
Asian American	1 (4%)	0	1 (3%)
Caucasian	17 (68%)	14 (93%)	31 (78%)
Hispanic	3 (12%)	0	3 (8%)
Native American	0	0	0
<u>Other Disabilities</u>			
Yes	8 (32%)	12 (80%)	20 (50%)
No	17 (68%)	3 (20%)	20 (50%)

Parents and teachers were asked to rate how important it is for them that their child/student achieve the future outcome specified by each item derived from theory on autism. The responses were scored on a 5-point scale from highly unimportant (1) to very important (5). Likewise, with regard to likelihood of expectations, responses were scored on the same scale, a 5-point Likert-type scale ranging from highly unlikely (1) to very likely (5) (See APPENDIX C & D).

The original survey (Mutua, 1999) contained portions that addressed issues other than expectations that parents have about their children's future outcomes. The statements that did not fit the current study involved access to physical or human resources and

beliefs about education of children in general as well as children with disabilities. The portion that was used in this research was treated as a separate block of statements in the original research. Therefore the reliability and validity for the data were established independently, thereby available for this description.

This instrument was appropriate for this particular study since it was used in the recent past to investigate expectations for children with disabilities, including that of autism. The similar areas of adult responsibilities, community, and education were appropriate for this study and therefore used in this research. In addition, it presented future outcomes that are relevant and pertain to children with autism. The survey was adaptable, in that the first 20 statements were selected that were related to expectations for children with autism. The additional sections of the original survey were eliminated since they did not apply to the current study.

Evidence of Reliability

Since the survey used a Likert-type scale on the survey, Cronbach's Alpha was used to assess internal consistency. The data were determined to have a reliability coefficient of .90 for Importance of Expectations and .93 for Likelihood of Expectations. The reliability coefficient for the data as a whole was .91. These high alpha values indicate that the instrument and its parts measure the same characteristics. This is consistent with the reliabilities for importance and likelihood (.90 and .93, respectively) reported by Mutua (1999).

Evidence of Validity

Validity of the data must be evaluated within the purpose of the study. Since it is important in this study that the measures fit the theories for which the survey was designed, construct validity should be discussed. Although construct validity cannot definitively be established, several kinds of evidence was established for the survey upon which the survey in this study was based.

With respect to construct validity this instrument was considered to be valid for this particular study since it was used in the recent past to investigate expectations for children with disabilities including that of autism. The items included in this instrument were developed from constructs that have been shown through research and studies to relate to future outcomes for children with disabilities (Mutua, 1999). In addition, Mutua used exploratory factor analysis (EFA) to study the nature of the theoretical factors on expectations of importance and likelihood. She found that the survey was composed of factors with a high correlation and content equivalency across their ratings on importance and likelihood. These four factors were adult roles, importance of community and civil access, importance of educational attainment, and importance of personal fulfillment. These constructs fit the theory for which the survey was designed.

Rationale for Teacher and Parent Selection

The teachers that were asked to participate in this study were chosen based on convenience. Convenience sampling is a type of purposeful sampling (McLaughlin & Mertens, 1995) and it is often utilized with research conducted with special education populations. Because autism is a relatively rare condition (Drew, Egan, & Hardman,

1999), it can be a challenge to locate certified teachers that teach classrooms primarily with children with autism and pervasive developmental disorders. Therefore, teachers in both public and private settings were selected based on geographical location. That is, the schools were within 130 miles of the university where the research was conducted.

Selected parents were chosen from a national parent support organization. Parents in this organization are extremely eager to assist with research in the field of autism. This group was chosen due to accessibility and willingness to contribute. The parents in the public school setting were selected based on geographical location of the institution where the study was conducted. The parents lived within 130 miles of the university where the research was conducted.

Procedure

The researcher received permission from the public schools' superintendent and the private schools' director prior to conducting the study. In addition, an Institutional Review Board document was completed and submitted prior to the collection of data.

A survey was distributed to each teacher and each parent at the public schools by the researcher. They were instructed to return them to the researcher within two weeks. Stamped envelopes were provided if the teachers and parents wanted to mail the responses to the researcher. The parent support group surveys were distributed by the researcher at the monthly meeting organized by the group. The surveys were returned at the end of the meeting on that day to the researcher.

Data Analysis

Parents' and teachers' ratings of the likelihood and importance of outcomes for children with autism are the focus of this study. The relationships between the expectations were examined. The analysis was computed using SPSS 10.0 statistical package (SPSS, 1999). The research questions guided the data analysis.

Researchers often state the need for both statistical significance (such as alpha and p values), as well as, practical significance (such as confidence intervals). These should be complementary concepts (Cohen, 1990; Levine, 1993; Mclean & Ernest, 1998). Therefore, in addition to statistical tests, confidence intervals will be reported. This will allow the examination of the degree of variability in the corresponding population from which the sample was drawn. Although t-tests are used in this study, they do not allow inferences to be made about the other possible values of the population parameters. In addition, for research literature, particularly studies using meta-analysis, the reporting of confidence intervals is meaningful.

Question 1: To what extent do parents' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?

The relationship between likelihood and importance of outcome issues for parents was examined. A paired t-test was used to determine if the differences between the two constructs significantly differ from zero. The 95% confidence interval was calculated for each comparison. If the interval did not include zero, the results were considered to be significant. The data were examined for likelihood and importance differences as whole constructs and on an item-by-item level.

Question 2: To what extent do teachers' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?

The relationship between likelihood and importance of outcome issues for teachers was examined. A paired t-test was used to determine the differences between the two constructs significantly differ from zero. The 95% confidence interval was calculated for each comparison. If the interval did not include zero, the results were considered to be significant. The data were examined for likelihood and importance differences as whole constructs and on an item-by-item level.

Question 3: To what extent do parents' and teachers' expectations differ between their ratings of likelihood and importance of the outcomes of children with autism?

An independent-samples t-test was used to determine if the means, for each construct, of parent responses differed significantly from that of teacher responses. Levene's Test for Equality of Variances was calculated to see if the spread of the two groups differed. If the significance level for this test was low (less than 0.05) the separate-variance t-test was used. If Levene's Test showed that the variances were equal (the distributions have the same shape), a pooled-variance t-test was used. The 95% confidence interval was calculated for each comparison. The data were examined for likelihood and importance differences as whole constructs and on an item-by-item level.

The data analysis for this study were quantitative methods due to the scaled nature of the instrument. Chapter IV contains the results of the data analysis for the three research questions.

CHAPTER IV

RESULTS

This study used quantitative methods, utilizing a computer-generated analysis, to determine the expectations of teachers and parents on future outcomes for children with autism.

The specific research questions guiding this study were:

1. To what extent do parents' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
2. To what extent do teachers' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
3. To what extent do parents' and teachers' expectations differ between their ratings of likelihood and importance of the outcomes of children with autism?

The structured theoretical framework of expectancy theory as presented in Chapter II included self-efficacy, individual expectations, and consequences of those expectations. The expectation statements in the survey, referred to in Chapter III in the instrument section, that were rated by the participants in terms of importance and likelihood for that individual child, allowed the teachers and parents to express their values on each expectation and offer realistic views of those expectations for each statement.

In Chapter IV these findings will be discussed. Described in this chapter are the unique characteristics of the participants, the differences in parent importance and likelihood, and the differences in teacher importance and likelihood. Moreover, the differences between parent expectations of likelihood and importance and teacher expectations of likelihood and importance will be reported.

Research Questions

Parents' and teachers' ratings of the likelihood and importance of outcomes for children with autism are the focus of this study. Parents and teachers were asked to complete a survey about the importance of their child/student to achieve the future outcome specified by each item. The responses were scored on a 5-point scale from highly unimportant (1) to very important (5). (See Appendices C & D). Likelihood responses were scored in an identical manner. All means and standard deviations are based on the 5 point scales from the surveys. The relationships between the expectations were examined. The analysis was computed using the SPSS 10.0 statistical package (SPSS, 1999). The reliability for the data on this survey for all the participants was .92. The reliability for the data of parents and teachers was .93 and .91, respectively. This is consistent with the research study of Mutua (1999). The three research questions guided the data analysis for this study.

Research Question 1

The first research question explored the extent that parents' expectations differ on

the ratings of likelihood and importance of the outcomes of children with autism.

A total of 25 parents were surveyed in this study. The means and standard deviations for all the responses to statements regarding importance and likelihood are given in Table IV.

The means for the category of importance ranged from 1.58 for statement 13 (...take care of parent in old age) to 4.96 for statement 2 (...attend school). The standard deviations for this category ranged from .20 for statement 2 (...attend school) to 1.59 for

TABLE IV
MEANS AND STANDARD DEVIATIONS OF PARENTS' EXPECTATIONS

Statement	Importance				Likelihood			
	<u>M</u>	<u>SD</u>	<u>MIN</u>	<u>MAX</u>	<u>M</u>	<u>SD</u>	<u>MIN</u>	<u>MAX</u>
My child with autism will be...								
1. ...happy and satisfied	4.72	.54	3.0	5.0	4.16	.99	1.0	5.0
2. ...attend school.	4.96	.20	4.0	5.0	4.84	.37	4.0	5.0
3. ...get married.	3.38	1.40	1.0	5.0	2.92	1.35	1.0	5.0
4. ...own a house.	3.56	1.26	1.0	5.0	3.16	1.25	1.0	5.0
5. ...support network of friends.	4.68	.56	3.0	5.0	3.80	1.19	1.0	5.0
6. ...religion of choice.	3.92	1.19	1.0	5.0	3.72	1.43	1.0	5.0
7. ...accepted in the community.	4.56	.65	3.0	5.0	4.04	.79	2.0	5.0
8. ...secure financial future.	4.68	.48	4.0	5.0	4.04	.93	1.0	5.0
9. ...safe from physical harm.	4.92	.28	4.0	5.0	3.84	.90	2.0	5.0
10. ...highest education possible.	4.68	.75	2.0	5.0	3.92	.95	2.0	5.0
11. ...help with household chores.	4.44	.77	2.0	5.0	4.28	.84	1.0	5.0
12. ...socially responsible/law abiding.	4.64	.49	4.0	5.0	4.16	.90	1.0	5.0
13. ...take care of parent in old age.	1.58	.78	1.0	4.0	1.96	1.12	1.0	5.0
14. ...participate in citizenship activities.	3.44	1.12	1.0	5.0	3.04	1.10	1.0	5.0
15. ...live independently..	4.40	.65	3.0	5.0	3.36	1.19	1.0	5.0
16. ...time to play/watch games.	4.40	.71	3.0	5.0	4.28	.74	3.0	5.0
17. ...hold a job/vocation.	4.64	.57	3.0	5.0	3.92	1.00	1.0	5.0
18. ...have own children.	2.96	1.59	1.0	5.0	2.76	1.48	1.0	5.0
19. ...use community services.	4.24	.72	3.0	5.0	3.92	.86	2.0	5.0
20. ...be successful in school.	4.60	.71	3.0	5.0	3.88	1.20	1.0	5.0
Total	83.17	9.36			73.83	14.12		

statement 18 (...have own children). The statement (2) with the highest mean (4.96) had the smallest standard deviation (.20). The statement with the largest standard deviation (1.59) had the second lowest mean of 2.96 (18).

For the category of likelihood, the means ranged from 1.96 for statement 13 (...take care of parent in old age) to 4.84 for statement 2 (...attend school). The standard deviations for this category ranged from .37 for statement 2 (...attend school) to 1.48 for statement 18 (...have own children). The statement (2) with the highest mean (4.84) had the smallest standard deviation (.37). The statement (18) with the largest standard deviation (1.48) had the second lowest mean (2.76).

A paired t-test was used to determine if the differences between the two constructs significantly differ from zero. The 95% confidence interval was calculated for each comparison. If the interval did not include zero, the results were considered to be statistically significant (Huck & Cornier, 1996). The results of the t-test are shown in Table V.

The data were examined for likelihood and importance differences as whole constructs and on an item-by-item level. The difference between the means of the total importance and total likelihood responses were significant at .01 level. That indicates that the parents differed significantly in their importance and likelihood expectations of outcomes for their children.

There were five differences between importance and likelihood that were statistically significant at the .01 level. For statement 5 (...support network of friends), statement 8 (...secure financial future), 9 (...safe from physical harm), 10 (...highest education possible), and 18 (...have own children) the means for importance were higher

than the means for likelihood. However, except for 18 the standard deviations were higher for likelihood. This indicates a wider range of responses for likelihood than there were for importance.

TABLE V
RESULTS OF PAIRED-SAMPLE T TEST FOR IMPORTANCE AND LIKELIHOOD
RESPONSES OF PARENTS

Pairs	Mean Difference	Std. Error of Mean Difference	95% Confidence Interval of the Difference		t	df	Sig.(2-tailed)
			Lower	Upper			
I1 & L1	.56	.22	.11	1.01	2.59	24	.016*
I2 & L2	.12	6.63	-.02	.26	1.81	24	.083
I3 & L3	.46	.27	-.10	1.02	1.70	23	.102
I4 & L4	.40	.26	-.13	.93	1.55	24	.134
I5 & L5	.88	.26	.34	1.42	3.38	24	.002**
I6 & L6	.20	.23	-.28	.68	.87	24	.395
I7 & L7	.52	.20	.11	.94	2.59	24	.016*
I8 & L8	.64	.21	.21	1.07	3.09	24	.005**
I9 & L9	1.08	.19	.69	1.47	5.66	24	.000**
I10 & L10	.76	.21	.33	1.19	3.61	24	.001**
I11 & L11	.16	.19	-.23	.55	.85	24	.405
I12 & L12	.48	.17	.12	.84	2.75	24	.011*
I13 & L13	-.38	.22	-.84	.09	-1.68	23	.107
I14 & L14	.40	.26	-.33	.93	1.55	24	.134
I15 & L15	1.04	.28	.46	1.62	3.72	24	.001**
I16 & L16	.12	.15	-.18	.42	.83	24	.417
I17 & L17	.72	.22	.27	1.17	3.27	24	.003**
I18 & L18	.20	.24	-.29	.69	.84	24	.409
I19 & L19	.32	.22	-.14	.78	1.45	24	.161
I20 & L20	.72	.24	.22	1.22	2.98	24	.007**
ITOTAL & LTOTAL	9.33	2.83	3.49	15.18	3.30	23	.003**

Note. I denotes statements concerned with importance and L denotes statements concerned with likelihood.

*p < .05. **p < .01.

Differences in the responses for importance and likelihood for statements 1 (...happy and satisfied), 7 (...accepted in the community), and 16 (...time to play and watch games), were significantly at the .05 level. For all three of these statements the means for the importance responses was higher than the means for the likelihood responses. However, the standard deviations for likelihood were greater than the standard deviations for importance for these statements.

Research Question 2

The second research question investigated the extent that teachers' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism. A total of 15 teachers were surveyed in this study. The means and standard deviations for all the responses to statements regarding importance and likelihood are given in Table VI.

The means for the category of importance ranged from 1.73 for statement 18 (...have his/her own children) to 5.0 for statement 9 (...safe from physical harm). The standard deviations for this category ranged from .00 for statement 9 (...safe from physical harm) to 1.45 for statement 6 (...religion of choice). For statement 9 (...safe from physical harm), all teachers responded with a rating of 5, which is the highest possible rating.

For the category of likelihood, the means ranged from 1.53 for statement 13 (...take care of parent in old age) to 4.93 for statement 2 (...attend school). The standard deviations for this category ranged from .26 for statement 2 (...attend school) to 1.33 for

TABLE VI
MEANS AND STANDARD DEVIATIONS OF TEACHERS' EXPECTATIONS

Statement	Importance				Likelihood			
	<u>M</u>	<u>SD</u>	<u>MIN</u>	<u>MAX</u>	<u>M</u>	<u>SD</u>	<u>MIN</u>	<u>MAX</u>
My student with autism will be...								
1. ...happy and satisfied	4.60	.63	3.0	5.0	4.13	.92	2.0	5.0
2. ...attend school.	4.93	.26	4.0	5.0	4.93	.26	4.0	5.0
3. ...get married.	2.67	1.22	1.0	5.0	1.93	1.33	1.0	4.0
4. ...own a house.	2.07	1.28	1.0	4.0	1.80	1.26	1.0	4.0
5. ...support network of friends.	4.47	.92	2.0	5.0	3.73	1.22	1.0	5.0
6. ...religion of choice.	3.40	1.45	1.0	5.0	3.33	1.23	1.0	5.0
7. ...accepted in the community.	4.87	.35	4.0	5.0	4.07	.96	2.0	5.0
8. ...secure financial future.	4.33	.82	2.0	5.0	3.60	.99	1.0	5.0
9. ...safe from physical harm.	5.00	.00	5.0	5.0	4.20	.41	4.0	5.0
10. ...highest education possible.	4.80	.77	2.0	5.0	4.20	1.26	1.0	5.0
11. ...help with household chores.	4.87	.35	4.0	5.0	4.47	.64	3.0	5.0
12. ...socially responsible/law abiding.	4.73	.59	3.0	5.0	3.87	1.13	1.0	5.0
13. ...take care of parent in old age.	2.13	1.19	1.0	5.0	1.53	1.25	1.0	5.0
14. ...participate in citizenship activities.	3.80	.77	2.0	5.0	2.73	.96	1.0	5.0
15. ...live independently..	3.93	.92	2.0	5.0	2.40	1.30	1.0	5.0
16. ...time to play/watch games.	4.60	.63	3.0	5.0	4.27	.88	2.0	5.0
17. ...hold a job/vocation.	4.67	.72	3.0	5.0	3.40	1.30	1.0	5.0
18. ...have own children.	1.73	.96	1.0	5.0	1.80	1.15	1.0	4.0
19. ...use community services.	4.60	.83	2.0	5.0	4.00	.76	3.0	5.0
20. ...be successful in school.	4.47	1.13	1.0	5.0	4.07	1.10	1.0	5.0
Total	80.42	8.05			68.46	11.07		

statement 3 (...get married). The statement 2 (...attend school) with the highest mean (4.93) had the smallest standard deviation (.26).

A paired t-test was used to determine if the differences between the two constructs significantly differ from zero. The 95% confidence interval was calculated for each comparison. If the interval did not include zero, the results were considered to be statistically significant. The results of the t-test are shown in Table VII.

The data were examined for likelihood and importance differences as whole constructs and on an item-by-item level. The difference between the means of the total importance and total likelihood responses were significant at .01 level. That indicates that the teachers differed significantly in their importance and likelihood expectations of outcomes for their students.

There were eight differences between importance and likelihood that were statistically significant at the .01 level. For statement 5 (...support network of friends), statement 7 (...accepted in community), 9 (...safe from physical harm), 12 (...socially responsible/law-abiding), and 13 (...take care of parent in old age), statement 14 (...participate in citizenship activities), statement 15 (...live independently), and statement 17 (...hold job/vocation) the means for importance were higher than the means for likelihood. However, the standard deviations for all of these statements were higher for likelihood than they were for importance.

The differences in the responses for importance and likelihood for statements 1 (...happy and satisfied), 8 (...secure financial future), and 10 (...highest education possible), and statement 19 (...use community services) were significant at the .05 level. For all four of these statements the mean for the importance responses was higher

than the mean for the likelihood responses. However, except for statement 19, the standard deviations for likelihood were greater than the standard deviations for importance for these statements.

For statement 2 (...attend school), all teachers gave importance the highest rating, a 5. Having no variability for this construct meant that the standard error of the difference is zero. This makes the t statistic impossible to compute.

TABLE VII

RESULTS OF PAIRED-SAMPLE T TEST FOR IMPORTANCE AND LIKELIHOOD RESPONSES OF TEACHERS

Pairs	Mean Difference	Std. Error Mean Difference	95% Confidence Interval of the Difference		t	Df	Sig.(2- tailed)
			Lower	Upper			
I1 & L1	.47	.19	.06	.88	2.43	14	.029*
I2 & L2	a						
I3 & L3	.33	.25	-.21	.87	1.32	14	.207
I4 & L4	.27	.27	-.31	.84	1.00	14	.334
I5 & L5	.73	.21	.29	1.18	3.56	14	.003**
I6 & L6	.07	.33	-.64	.78	.20	14	.843
I7 & L7	.80	.22	.32	1.28	3.60	14	.003**
I8 & L8	.73	.25	.20	1.27	3.00	14	.010*
I9 & L9	.80	.11	.57	1.03	7.48	14	.000**
I10 & L10	.60	.24	.10	1.10	2.55	14	.023*
I11 & L11	.40	.21	-.06	.86	1.87	14	.082
I12 & L12	.87	.19	.46	1.28	4.51	14	.000**
I13 & L13	.60	.19	.19	1.00	3.15	14	.007**
I14 & L14	1.07	.27	.49	1.64	4.00	14	.001**
I15 & L15	1.42	.29	.80	2.06	4.91	13	.000**
I16 & L16	.33	.18	-.07	.73	1.78	14	.096
I17 & L17	1.27	.21	.82	1.71	6.14	14	.000**
I18 & L18	-.07	.23	-.56	.42	-.29	14	.774
I19 & L19	.60	.21	.14	1.06	2.81	14	.014*
I20 & L20	.40	.24	-.10	.90	1.70	14	.111
ITOTAL & LTOTAL	11.93	2.18	7.22	16.64	5.47	13	.000**

Note. I denotes statements concerned with importance and L denotes statements concerned with likelihood.

* $p < .05$. ** $p < .01$. a. The t-statistic cannot be computer because the standard error of the difference is zero.

This statement, involving the attendance at school, is the most stable statement on the survey. It was consistently given a high level of importance with little variability among those surveyed.

Research Question 3

The third research question examines the extent that parents' and teachers' expectations differ between their ratings of likelihood and importance of the outcomes of children with autism. Group statistics for each statement is given in Appendix E. In addition, the means and standard deviations for importance responses and for likelihood responses are given in Tables VIII & IX, respectively. The descriptions for importance and likelihood means and standard deviations have been addressed within the research questions 2 and 3.

An independent-samples t-test was used to determine if the means, for each of the two constructs, of parent responses differed significantly from that of teacher responses. Levene's Test for Equality of Variances was calculated to see if the spread of the two groups differed (Appendix F). Along with the values and the two-tailed significance for each statement, a 95% confidence interval was calculated for each comparison. The data was examined for likelihood and importance differences as whole constructs and on an item-by-item level.

Since the significance levels for importance statements 7 (...accepted in community) 9 (...safe from physical harm), 11(...help with household chores), 14(...participate in citizenship activities), and statement 18 (...have his/her own children) were low (less than 0.05) on the Levene's Test for Equality of Variances, the separate-variance t-test was used for these items (Appendix F). For the other statements a pooled-

variance t-test was used. There was statistical significance for four statements using the independent sample t-test (Table X). Two of the statements, 4 (...own his/her own house) and 18 (...have his/her own children) were statistically significant at the .01 level. The other two statements 3 (...get married)and 11 (...help with household chores) were statistically significant at the .05 level.

There were no likelihood statements for which the Levene's Test showed a statistically significant spread between the two groups (Appendix F). Therefore, for all the likelihood statements a pooled-variance t-test was used. The results are shown in Table XI. One of the statements, 4 (...own his/her own house), was statistically significant at the .01 level. Three statements, 3 (...get married), 15 (...live independently), and 18 (...have his/her own children), were statistically significant at the .05 level.

TABLE VIII

MEANS AND STANDARD DEVIATIONS OF TEACHERS' AND PARENTS'
IMPORTANCE RESPONSES

Statement	Parent		Teacher	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
My child/student with autism will be...				
1. ...happy and satisfied	4.72	.54	4.60	.63
2. ...attend school.	4.96	.20	4.93	.26
3. ...get married.	3.44	1.42	2.27	1.22
4. ...own a house.	3.56	1.26	2.07	1.28
5. ...support network of friends.	4.68	.56	4.47	.92
6. ...religion of choice.	3.92	1.19	3.40	1.45
7. ...accepted in the community.	4.56	.65	4.87	.35
8. ...secure financial future.	4.68	.48	4.33	.82
9. ...safe from physical harm.	4.92	.28	5.00	.00
10. ...highest education possible.	4.68	.75	4.80	.77
11. ...help with household chores.	4.44	.77	4.87	.35
12. ...socially responsible/law abiding.	4.64	.49	4.73	.59
13. ...take care of parent in old age.	1.56	.77	2.13	1.19
14. ...participate in citizenship activities.	3.44	1.12	3.80	.77
15. ...live independently..	4.40	.65	3.93	.92
16. ...time to play/watch games.	4.40	.71	4.60	.63
17. ...hold a job/vocation.	4.64	.57	4.67	.72
18. ...have own children.	2.96	1.59	1.73	.96
19. ...use community services.	4.24	.72	4.60	.83
20. ...be successful in school.	4.60	.71	4.47	1.13

TABLE IX

MEANS AND STANDARD DEVIATIONS OF TEACHERS' AND PARENTS'
LIKELIHOOD RESPONSES

Statement	Parent		Teacher	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
My child/student with autism will be...				
1. ...happy and satisfied	4.16	.99	4.13	.92
2. ...attend school.	4.84	.37	4.93	.26
3. ...get married.	2.92	1.35	1.93	1.33
4. ...own a house.	3.16	1.25	1.80	1.26
5. ...support network of friends.	3.80	1.19	3.73	1.22
6. ...religion of choice.	3.72	1.43	3.33	1.23
7. ...accepted in the community.	4.04	.79	4.06	.96
8. ...secure financial future.	4.04	.93	3.60	.99
9. ...safe from physical harm.	3.84	.90	4.20	.41
10. ...highest education possible.	3.92	.95	4.20	1.26
11. ...help with household chores.	4.28	.84	4.47	.64
12. ...socially responsible/law abiding.	4.16	.90	3.87	1.13
13. ...take care of parent in old age.	1.96	1.2	1.53	1.25
14. ...participate in citizenship activities.	3.04	1.10	2.73	.96
15. ...live independently..	3.36	1.19	2.40	1.30
16. ...time to play/watch games.	4.28	.74	4.27	.88
17. ...hold a job/vocation.	3.92	1.00	3.40	1.30
18. ...have own children.	2.76	1.48	1.80	1.15
19. ...use community services.	3.92	.86	4.00	.76
20. ...be successful in school.	3.88	1.20	4.07	1.10

TABLE X
RESULTS OF INDEPENDENT-SAMPLE T-TEST FOR IMPORTANCE
RESPONSES OF PARENTS AND TEACHERS

Pairs	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		t	df	Sig.(2-tailed)
			Lower	Upper			
I1	-.12	.19	-.50	.26	-.64	38	.528
I2	-.03	.07	-.17	.12	-.37	38	.717
I3	-1.17	.44	-2.07	-.28	-2.66	38	.011*
I4	-1.49	.41	-2.33	-.66	-3.61	38	.001**
I5	-.21	.23	-.68	.2	-.92	38	.364
I6	-.52	.42	-1.37	.33	-1.23	38	.225
I7	.31	.16	-.01	.63	1.93	37.7	.061
I8	-.35	.20	-.76	.07	-1.70	38	.097
I9	.08	.06	-.03	.23	1.45	24	.161
I10	.12	.25	-.38	.62	.49	38	.631
I11	.43	.18	.06	.79	2.39	36.1	.022*
I12	.09	.17	-.26	.44	.54	38	.593
I13	.57	.39	-.05	1.20	1.86	38	.071
I14	.63	.30	-.25	.97	1.20	37.1	.238
I15	-.47	.25	-.98	.04	-1.88	37	.068
I16	.20	.22	-.25	.65	.90	38	.374
I17	.03	.21	-.39	.44	.13	38	.898
I18	-1.23	.40	-2.05	-.41	-3.04	37.9	.004**
I19	.36	.25	-.15	.87	1.44	38	.157
I20	-.13	.29	-.72	.45	-.46	38	.647

Note. I denotes statements concerned with importance.

* $p < .05$. ** $p < .01$.

TABLE XI

RESULTS OF INDEPENDENT-SAMPLE T-TEST FOR LIKELIHOOD
RESPONSES OF PARENTS AND TEACHERS

Pairs	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		t	df	Sig.(2-tailed)
			Lower	Upper			
L1	-.03	.31	-.66	.61	-.09	38	.933
L2	.09	.11	-.13	.32	.85	38	.401
L3	-.98	.44	-1.88	-.09	-2.22	37	.032*
L4	-1.63	.41	-2.19	-.53	-3.32	38	.002**
L5	-.07	.39	-.86	.73	-.17	38	.866
L6	-.39	.45	-1.29	.51	-.87	38	.390
L7	.03	.28	-.54	.59	.10	38	.925
L8	-.44	.31	-1.07	.19	-1.41	38	.166
L9	.36	.25	-.14	.86	1.46	38	.153
L10	.28	.35	-.43	.99	.80	38	.432
L11	.19	.25	-.33	.70	.74	38	.465
L12	-.29	.32	-.95	.36	-.91	38	.369
L13	-.43	.39	-1.21	.36	-1.10	37	.277
L14	-.31	.34	-1.00	.39	-.89	38	.377
L15	-.96	.40	-1.77	-.15	-2.39	38	.022*
L16	-.01	.26	-.54	.51	-.05	38	.959
L17	-.52	.37	-1.26	.22	-1.43	38	.162
L18	-.96	.45	-1.86	-.06	-2.15	38	.038*
L19	.08	.27	-.47	.63	.30	38	.768
L20	.19	.38	-.58	.96	4.91	38	.627

Note. I denotes statements concerned with importance.

* $p < .05$. ** $p < .01$.

SUMMARY

This study investigated 25 parent and 15 teachers with regard to expectations and future outcomes for children with autism. The majority of the parents responding were Caucasian mothers whose children with autism are in public schools.

The majority of the teachers were Caucasian females teaching in urban settings. The settings were almost evenly divided between public and private schools. Approximately one-half of the teachers have been teaching five years or less.

In this study, the majority of children were Caucasian and in the 6-10 year old range. Within the autism spectrum, 83% have been diagnosed with mild, moderate, or severe autism with 15% Asperger's Syndrome and 3% Rett's Syndrome. For reporting parents, the majority of children had no other disabilities while for reporting teachers, the majority of children had other disabilities.

For each of the research questions, statistically significant differences were found using t-tests. For parents as well as teachers, expectations for importance and likelihood differed significantly for several statements. When comparing parent and teacher importance statements and comparing parent and teacher likelihood statements, significant differences were found for several of the statements.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of this study was to investigate the extent to which differences exist on parent and teacher ratings of the importance and likelihood of achieving specified outcomes of children with autism. This chapter provides a summary of the methodology, conclusions, implications for theory and practice and suggestions for future research.

Summary of Methods

This study investigated parent and teacher expectations for children with autism with regard to future outcomes. The participants represented a sample of parents who have children diagnosed within the autism spectrum in public school settings. The teachers represented a sample of certified teachers who are employed in public and private school settings. All participants are located in one of two mid-western states. Twenty-five parents and fifteen teachers with informed consent agreed to participate. All 40 participants completed a demographic section and all participants responded to all 20 statements on the survey. No participants requested to be removed from the study.

Utilizing expectancy theory, the researcher was able to examine future outcome expectations for children with autism. This theoretical framework was important because the motivation behind the theory is based on past abilities or prior success on given tasks.

Expectations, outcomes, history, and characteristics of children with autism are set in the literature of Chapters I and II.

Parental and teacher expectations about future outcomes for children with autism guided the research questions for this study. The research questions that guided this study were:

1. To what extent do parents' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
2. To what extent do teachers' expectations differ on their ratings of likelihood and importance of the outcomes of children with autism?
3. To what extent do parents' and teachers' expectations differ between their ratings of likelihood and importance of the outcomes of children with autism?

The statistical procedures used to analyze the data included both descriptive and inferential methods. These included determining the means and standard deviations and performing paired and independent sample t-tests. The 95% confidence interval was calculated for each comparison. The data were examined for likelihood and importance differences as whole constructs and on an item-by-item level.

The paired t-test compared the differences between importance and likelihood for each participant group. An independent-sample t-test was used to determine if the means of parent responses differed significantly from that of teacher responses, for both importance and likelihood.

The 20-statement instrument that was used in this study was adapted from Mutua (1999) with the purpose of collecting data about teachers' and parents' expectations and future outcomes for children with autism. Parents and teachers were asked to rate how

important it is for them that their child/student achieve the future outcome specified by each item derived from theory on autism. The responses were scored on a 5-point scale from highly unimportant (1) to very important (5). Responses for the likelihood category were scored in an identical manner.

Research Question 1

The participants in this study included 25 parents of children with autism. All have their child enrolled in public school, with one also attending private school. Twenty-one of the children have siblings. The majority of the parents are Caucasian and live in an urban setting. Seventy-six percent of the parents have daily or weekly contact with the teacher and twelve percent report no contact with the teacher.

The means and standard deviations of parents' responses are given in Table IV. The mean of the total responses for importance was 83.17 compared to 73.83 for likelihood. Although parents may value a particular outcome, they can feel as if their child will struggle with attaining it. The total standard deviation for importance was 9.36 compared to 14.12 for likelihood. This may be a result of the broad spectrum of skill level for children within this study. In addition, the broad array of diagnoses could contribute to the likelihood responses.

For both categories for importance and likelihood, the lowest means were for statement 13 (...take care of parent in old age), 1.58 and 1.96 respectively. Because of the fact that most of the parents (63%) who responded in this study have children aged 6-10 years, parents of younger children may not feel a child this young could actually care for them when they are old and therefore it is not important. In addition, most of the

children have siblings (84%) which may mean that parents are relying on the siblings to burden the responsibility of caring for them when they are old. Consequently, parents may feel that the likelihood that their child will care for them is not an option. This may be due to the fact that since diagnosis is usually assessed at a very early age, professionals have reiterated and stressed that the child will need to be cared for possibly throughout adulthood. They do not feel that role reversal is possible.

For the importance category, the mean was the highest for statement 2 (...attend school), 4.96 respectively. Parents value education and realize that school systems are important for their child in order to learn the necessary skills in order to be successful in the community. The services and programs available in schools are deemed important and needed according to these parents. Moreover, there is a direct connection between expectations of parents and services that they seek for their children (Carnie & Orelove, 1998; Mutua & Dimitrov, in print) In addition, the mean was the highest for likelihood for statement 2 (...attend school), 4.84 respectively. All of the children in this study are currently enrolled in a school setting and therefore likely to remain in school. It is interesting to note that the highest and lowest means were the same statements for both importance and likelihood.

A paired t-test was used to determine if the differences between the two constructs significantly differ from zero. The 95% confidence interval was calculated for each comparison. If the interval did not include zero, the results were considered to be statistically significant. The results of the t-test were shown in Table VI in Chapter IV.

There was a statistically significant difference for the total importance and total likelihood responses for parents [$t(23) = 3.30, p = .003$]. Parents feel, as a whole, that the

importance of the outcomes is greater than the likelihood of those outcomes. Based on the results, parents of children with autism may have difficulty maintaining their optimism about a variety of outcomes for their child.

There were seven statements for which the differences between importance responses and likelihood responses was statistically significant at the .01 level. These were statement 5 (...support network of friends), statement 8 (...secure financial future), and statement 9 (...safe from physical harm), statement 10 (...highest education possible), statement 15 (...live independently), statement 17 (...hold a job/vocation), and statement 20 (...be successful in school). The three statements that were statistically significant at the .05 level were statement 1 (...happy and satisfied), statement 7 (...accepted in the community), statement 12 (...socially responsible/law abiding).

While there was no significant difference between importance and likelihood of their children attending school, there was a statistical significant difference with regard to receiving the highest education possible as well as being successful in the school. Based on this finding, there is an apparent belief on the part of the parents of these children with autism that achievement and long term attendance is questionable. It is possible that many of the parents are not familiar with the curriculum or they do not understand the types of interventions carried out in the school systems. Physically being in school appears to be the highest expectations for the parents.

When determining the importance of their children being safe from physical harm, parents' responses were extremely high. However, they rated the likelihood of this happening significantly lower. This surprising result could be an indication of the doubts the parents have about their children being able to protect themselves.

Several of the significant statements deal with adult responsibilities. Although parents deem it important that their children be accepted in the community, be financial secure, be socially responsible, live independently, and hold jobs, they do not believe that it is likely that this will actually occur. Some reasons for this difference may be because of the unique and sometimes disruptive behaviors children with autism may exhibit. In addition, behaviors and lack of particular skills may interfere with jobs, earning a living, and being an active member in the community (Green, 1996).

There was a discrepancy between importance and likelihood for the issues of being happy and satisfied as well as having a supportive network of friends. This indicates that parents desire their children to have personal fulfillment in their lives, but they may not experience it. The lack of social skills and communication may be at least in part a cause.

There were numerous items that were not statistically significant. The parents reported that their feelings on importance and likelihood were similar in several statements. In statement 3 (...will get married) and statement 4 (...have his/her own house) and statement 18 (...have own children), there was not a statistically significant difference between importance and likelihood. In addition, parents' responses indicated that their views on community involvement were similar for importance and likelihood. These are evident in statement 14 (...participate in citizenship activities) and statement 19 (...use community services). Expectations about belonging to a religion, statement 6, (...religion of own choice), shows no statistical significant difference as well. In statement 13 (...taking care of parent in old age) and statement 11 (...help with household chores), there were no significant differences. Finally, parents feel that

statement 16 (...have time to play and watch games) is similar for importance and likelihood.

Research Question 2

The participants in this study included 15 teachers of students with autism. Fifty-three percent of the teachers teach in public schools and forty-six percent teach in private schools. All of the teachers are female except for one male. Most of the teachers are Caucasian, and teach urban settings. Teaching experience was the highest in the ranges from 1-5 years (46%) to over 10+ years (40%). Fifty-three percent of the teachers report having daily or weekly contact with parents and thirty-three percent report monthly contact with the parents. Yearly and no contact were not indicated by any of the teachers.

The means and standard deviations of teachers' responses are given in Table VII. The mean of the total responses for importance was 80.42 compared to 68.46 for likelihood. Similar to the importance and likelihood categories for parents, the total means for importance was greater than the total means for likelihood regarding teachers. The total standard deviation for importance was 8.05 compared to 11.07 for likelihood. Hence, the range for responses was larger in the likelihood category reflecting that actual future outcomes for students with autism are varied.

The highest mean (5.00) for the importance category of teachers was statement 9 (...safe from physical harm). Teachers indicated that the most important expectation for their students is that they are safe in society and will experience no bodily harm. The second highest mean for the importance category and the highest mean for the likelihood category was for statement 2 (...attend school), 4.93 and 4.93 respectively. Because of

the fact that all of the participants are employed as teachers in the field, this is valued and obviously a likely outcome for students with autism.

For the importance category, the mean was the lowest for statement 18 (...have own children), 1.73 respectively. Teachers do not feel that having children is an important aspect in life for a student with autism. Teachers most likely feel that basic academics, daily living skills, and communication skills are more critical than raising children. Furthermore, statement 13 (...taking care of parent in old age) had a low mean at 2.13 respectively as well as the lowest in the likelihood category, 1.53 respectively. This indicates that teachers do not think that a student with autism should concentrate on taking care of other adults such as parents and probably would not have the appropriate skills to do so.

In addition, the mean was the highest for the likelihood category for statement 2 (...attend school), 4.84 respectively. All of the children in this study are currently enrolled in a school setting and therefore likely to remain in school. It is interesting to note that the highest and lowest means were the same statements for both importance and likelihood. Furthermore, the high means and low means were on extreme ends of possibilities for responses.

A paired t-test was used to determine if the differences between the two constructs significantly differ from zero. The 95% confidence interval was calculated for each comparison. If the interval did not include zero, the results were considered to be statistically significant. The results of the t-test were shown in Table IX in Chapter IV.

There was a statistically significance for the total importance and total likelihood responses for teachers. Teachers feel that the importance of the outcomes is greater than

the likelihood of those outcomes. Like the parents of children with autism, teachers of students with autism have difficulty maintaining their optimism about outcomes.

There are eight statements for which the differences between importance responses and likelihood responses were statistically significant at the .01 level. These were statement 5 (...support network of friends), statement 7 (...accepted in the community), statement 9 (...safe from physical harm), statement 12 (...socially responsible/law abiding), statement 13 (...take care of parent in old age), statement 14 (...participate in citizenship activities), statement 15 (...live independently), and statement 17 (...hold a job/vocation). The four that were statistically significant at the .05 level were statement 1 (...happy and satisfied), statement 8 (...secure financial future), statement 10 (...highest education possible), and statement 19 (...use community services).

The only education related significant difference for teachers was the statement about the students attaining the highest education possible. There was no significant difference between likelihood and importance of the students being successful and attending school. This indicates that teachers are positive about their students' success in the classroom and feel as if they will attend school. Unlike the parents, the teachers are knowledgeable about interventions and for the most part believe that these techniques and methods will work for the students.

Many of the statistically significant differences of the responses by teachers address adult responsibilities and community support. Teachers believe that it is important that their students be accepted in the community, have a secure financial future, socially responsible, participate in citizenship activities, live independently, hold

jobs, and use services available in the community. However, they are not convinced that their students will attain these goals. It is possible that teachers are aware of the scarcity of some support services such as quality group homes, employment services, and collaborative organizations and agencies. In addition, teachers may acknowledge that there is a lack of appropriate leisure activities available for adults with autism.

Other possibilities for the discrepancies are the gaps in the knowledge about and involvement in transitions into adulthood and adult services. In a study by Knott & Asselin (1999), it was determined that even secondary special education teachers have little experiences dealing with the employment issues and transition planning. This is particularly disturbing since these same teachers rated vocational preparation and job training as an important area of education. Since the teachers in the current study teach students across many age levels, including elementary age, they may have a limited exposure to these issues. Therefore, they may not be aware of all the possibilities in the community. In addition, teachers that teach young students are not required by the law to prepare a transition plan at this stage.

Teachers also may believe that the environment in their classrooms the most nurturing for the students. The concern for such a nurturing environment is also evident in the statistically significant responses for the statement concerning safety of the student. For these students, the classroom is often perceived as a haven from outside dangers and threats. Teachers may often consider themselves protectors of children with special needs.

According to these teachers, children with autism have trouble developing friendships and maintaining those relationships. It is likely that they see the lack of

communication skills in their classroom daily and observe first hand the challenges of social skills for some their students. This area also relates to the issues of being happy and satisfied. Contentment is also based on these quality of life issues such as friends and independence, and safety.

As noted in Chapter IV, statement 2 (...attend school) was given a rating of 5 for all teachers. Although this prevented the computation of a paired sample t-test, it is however, an important finding. This statement, involving the attendance at school, is the most stable statement on the survey. The means for the responses for this statement were among the highest and the variability was among the lowest. This is a basic component of a free and public education for all children according to federal law.

Like that of parents, there were several expectations that showed no statistically significant differences between importance and likelihood for teachers. Statement 3 (...get married), statement 18 (...have own children), and statement 11 (...help with household chores) were rated similarly. Additionally, statement 16 (...time to play and watch games) and statement 6 (...religion of choice) were not significant between importance and likelihood.

Research Question 3

Since the two groups were drawn from different populations, an independent-samples t-test was used to determine if the means, for each construct, of parent responses differed significantly from that of teacher responses. Levene's Test for Equality of Variances was calculated to see if the spread of the two groups differed. If the significance level for this test was low (less than 0.05) the separate-variance t-test was

used. If Levene's Test showed that the variances were equal (the distributions have the same shape), a pooled-variance t-test was used. The 95% confidence interval was calculated for each comparison.

Sample size is always a concern in research studies. When comparing responses of parents and teachers it should be noted that there are 25 parents and 15 teachers. However, there is statistical research that points to the acceptability of the ratio of parents and teachers in this study. As long as the ratio is less than 1:8 the t-test remains robust with respect Type 1 error (Delaney & Vargha, 2000; Sawilowsky & Hillman, 1992).

The first construct examined the issue of importance as expressed by the responses of both parents and teachers. There were four statistically significant differences as a result of the t-test. Two of these, statement 4 (...own a house) and statement 18 (...have own children), were significant at the .01 level while two, statement 3 (...get married) and statement 11(...help with household chores), were significant at the .05 level. For all of the statements except for statement 11, the parents articulated a higher degree of importance than did the teachers. The importance for statement 11 was greater for the teachers.

The three statements that the parents ranked as higher represent the hopes of most parents for their children. Teachers do not see the students in a home and family environment on a daily basis. However, concerning the statement about household chores, the teachers commonly include the skills as part of the classroom curriculum for special needs students with low incidence disabilities. Therefore, this would be a critical issue for teachers. For parents, there are often other people in the family that can assist with these duties other than the child with autism.

The second construct examined the issue of likelihood as expressed by the responses of both parents and teachers. Szatmari, Archer, Fisman, & Streiner (1994), demonstrated that there is little agreement between parents and teachers concerning the severity of autism. This study reinforces those results in that there were four statistically significant statements. One of these, statement 4 (...own a house), was significant at the .01 level. Three of these, statement 3 (...get married), statement 15 (...live independently), and statement 18 (...have children) were significant at the .05 level. For all these significant statements, the parents ranked them of higher likelihood.

Teachers see these students struggling on social and emotional levels which is the foundation for successful marriage and rearing children. Connected to the issue of establishing a family is the issue of establishing a home base and living without help. Parents want this for a variety of reasons including their eventual relief from responsibility. Parents and teachers see the children in different settings. Consequently, the characteristics of each setting could be responsible for the discrepancies between what parents and teachers feel are possible for children with autism. This research study confirms the findings of Szatmari et.al.(1994) concerning the importance of environment.

There were several statements that no statistical significance was found for both parent and teacher responses for the importance and likelihood categories. First, in the area of importance, there was not a significant difference in statement 1 (...being happy and satisfied), statement 2 (...will attend school), statement 5 (...network of friends), statement 6 (...religion of choice), statement 14 (...participate in citizenship activities), statement 8 (...secure financial future), statement 9 (...safe from physical harm), statement 12 (...socially responsible/law abiding), statement 16 (...have time to

play/watch games) statement 17 (...hold job/vocation) and statement 19 (...use community services). On these expectations, for both parents and teachers, no statistical difference was found in the area of importance.

Second, in the area of likelihood, several statements were not statistically significant between the parents and teachers. These included school and job issues, such as statement 1 (...attending school), and statement 10 (...highest education possible), statement 20 (...successful in school) and statement 17 (...hold a job/vocation). Community involvement issues like in statement 14 (...participate in citizenship activities), statement 19 (...use community services), statement 7 (...accepted in the community) and statement 6 (...belong to a religion of choice) were not found to be statistically different in terms of likelihood. Furthermore, social issues such as statement 5 (...network of friends), statement 12 (socially responsible/law abiding) and statement 14 (...time to play/watch games) were not significantly different between parents and teachers. Finally, statement 8 (...secure financial future), statement 9 (...safe from physical harm), statement 11 (...help with household chores) and statement 13 (...take care of parent in old age) were not statistically significant in terms of likelihood for the two groups.

Implications

The purpose of this study was to investigate the extent to which differences exist on parent and teacher ratings of the importance and likelihood of achieving specified outcomes of children with autism. It is critical to look at parents and teachers as separate entities as well as examining the commonalties and differences between the groups.

This study was based on expectancy theory. Therefore, the conclusions are important because this study involves the highs and lows of expectations for the two groups of participants.

This study sends a strong message about the doubts on the part of parents and teachers about the safety of children with autism. According to Davern (1999), parents of children with disabilities expressed extreme concerns about their children's protection and safety in a series of focus groups. If parents, as a whole, do not feel that their children will be safe, parental decisions will be based on that. This may include keeping the child away from community activities. In addition, parents may be over protective, hence limiting independent-type skill development for these children (Powers, 2000). This may be an indication that, on the part of the teachers, a stronger safety-based curriculum is needed for students. Additionally, more practical experience in the community may be necessary.

There was a commonality between parent responses and teacher responses concerning the likelihood of performing adult responsibilities and participating in community services. Research indicates that when the only influential people in a child's life do not believe that he or she has potential to achieve an outcome, it is unlikely that the outcome will be realized. For example, if a parent and teacher perceive that a child has social difficulties then their perceptions may increase the undesirable behavior and the child may see him or herself in that light (Donohue, Weinstein, Cowan, & Cowan, 2000).

One cannot overlook the influence of parents on their children, particularly those with special needs. A child's development is critically influenced by judgments that

parents make. Parental expectations not only predict children's self-perceptions but they also have been shown to predict actual achievement (Eccles, 1983; Entwisle & Baker, 1983; Phillips, 1987; Reynolds & Gill, 1994). Thus, parental influence has a tremendous impact on a child's future.

Longitudinal studies have shown that teachers' perceptions of a child's ability are predictive of later achievement of that child (Alexander, Entwisle & Dauber, 1993; Alvidrez & Weinstein, 1999). Furthermore, if teachers do not have confidence about the student, the student may feel like he or she cannot be successful on given tasks. This relates to the expectancy theory emphasizing what children believe about themselves will impact their self-concept.

Wolery & Winterling (1997) defined curriculum as an organization of content assessment and instruction that is based on a conceptually consistent foundation. However, most available curricula for children with autism do not conform to this description. One of the goals for teaching children with autism is to reduce behaviors that interfere with learning. Once that has occurred their curriculum resembles the curriculum for students with similar skills (Olley, 1999). In this study, the extent of the discrepancies in the responses reflects a need to examine the curriculum. If the teachers do not think an outcome is likely they may limit their efforts and the constructs may be marginalized. It would logically follow that teachers may not follow through with goals and objectives in the IEPs. The fact that the law requires it is not always an indication that this mandate will be carried out.

In addition to a robust curriculum, there is a need to examine social skills instruction. There is research that indicates that children with autism can attain social

skills that were deemed impossible in the past (Harchik, Harchik, Luce, & Sherman, 1990; Harris, Handleman & Alessandri, 1990; Krantz & McClannahan, 1993; Stahmer, 1995). The teachers in this study were not at all confident that students would achieve positive social outcomes for their students with autism (for example, ...socially responsible and ...network of friends). This implies that the expectation level of the teachers should be higher.

In addition to curriculum issues, the results of this study have implications for referral of services. If teachers feel that adult responsibilities and community supports are not likely to make a difference in the life of the student, they may not make efforts to obtain information from agencies or communicate available options to parents. The critical component is that the teachers are typically the primary source of these referrals.

In this research study, there were significant discrepancies within the importance categories and likelihood categories between that of parents and teachers concerning outcomes. It is important that both groups fully understand the nature of autism as well as understand the necessity for collaboration. Any incompatible ideas must be comprehended by each group (Stone & Rosenbaum, 1988). If parents and teachers do not agree on the likelihood of future outcomes, chances are they will not have the same long-term goals. Teachers may concentrate on areas they feel that are students are likely to achieve, whereas parents may wish to have their children learn about a different area. For example, parents may want instruction in the area of daily living skills when teachers may feel that their time is better spent working on skills dealing with community involvement. In addition, if parents and teachers have different values about outcomes, conflicts or poor communication between the two may arise.

Future Research

Although children are given standardized tests to diagnose autism, these tests are often only used to determine eligibility for services (Klin, Carter, & Sparrow, 1997). Few of these tests are used to describe patterns of strengths and weaknesses for curriculum development (Lord, 1997). In essence, teachers might be limited in sources for curriculum development and information for specific children in their classroom. Hence, there is a need to research the relationship between particular curricula and teacher outcome expectations.

Another possible suggestion is to interview teachers and parents to investigate why they answered the way they did on this survey. Such qualitative information may help to determine factors for expectations. In addition, it might clarify any possible bias that might occur when participants tried to separate importance from likelihood.

Pairing the parent and the teacher for the same child could make the findings more powerful and more specific. Looking at this team that has a common focus, one child, would make predictions of outcomes more concrete.

One could look at special education teachers who teach students with other disabilities and compare the two groups. This would give insight into differentiating expectations according to severity of the disability. Additionally, one could examine the nature of the teacher preparation programs and compare the programs that are focused on mild disabilities, to that of severe disabilities in terms of what is expected of the student. Davern (1999), in her study about parents' perspectives on personnel attitudes and

characteristics, suggested that teacher preparation programs should provide more guidance in development of adult skills and accommodating diversity in the classroom.

One could also compare responses between mothers and fathers with regard to future outcomes for their children. This would allow one to see if expectations differ between the mothers and fathers and if so, how much and in what areas. In addition, a researcher could conduct an analysis to investigate differences in mild, moderate, and severe autism expectations. This would allow one to see what discrepancies exist, if any, on expectation outcomes for the different groups in terms of severity.

Since autism is a low incidence disability, sample size was considered appropriate. However, more information could be obtained with a larger sample, however difficult that might be. Increasing sample size may result in finding statistically significant differences between importance and likelihood outcomes.

Concluding Comments

The views of both parents and teachers have validity. These groups see children in different settings and affect the children in different ways. The critical issue for children with and without autism is the need for collaboration and communication between the parent and teacher. Confused relationships can be detrimental to the child's learning. There needs to be congruence between beliefs and practices. What parents and teachers expect from their children and students are interrelated and are hard to separate. The parent, teacher, and the child form a triangle that is impossible to break apart and all the parts are supported by each other.

One cannot ignore quality of life issues when conducting this study. Children with autism are children who often have communication, interaction, and behavior difficulties. With these challenges, children with autism may not be able to voice their own thoughts and feelings to others. It is critical that professionals, as well as parents, allow children with autism to make their own choices and express their desires and interests.

Traditionally a good outcome has been defined as having a normal social life, as well as, achieving independence (Gillberg & Steffenburg, 1987; McEachin, Smith, & Lovaas, 1993). If these traditional criteria were used many children with autism would be considered to have poor outcomes in their lives. Lord & Venter (1992), argued that another important aspect of outcome is happiness of people with autism. Further, Rosen, Simon, & McKinsey (1995), have recommended that the quality of life be the real guiding framework for programs and services. Ruble & Dalrymple (1996), suggest that a good outcome be expressed in terms of the interaction between the person and the environment.

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APPENDICES

APPENDIX A

PARENT DEMOGRAPHICS

Parent Demographic Information

The following questions will help me know you, your family, and your child. Please write your responses below.

1. My child is : (Circle one) Male Female
2. The age of my child is: _____
3. My child is currently enrolled in: (Circle one)

 Public School Private School Both Public and Private Schools

Why did you place your child in this setting(s)?

4. Circle the diagnosis of your child:

 A. Autism B. Asperger's Syndrome C. Rett's Syndrome

 1. Mild

 2. Moderate

 3. Severe

5. Does your child have any other disabilities? If so describe below.

6. What is your relationship with the child?

Mother
 Father
 Other _____

7. Your racial background is:

African American Caucasian Hispanic Native American

Other (specify) _____

8. City of residence:

Urban
 Suburban
 Rural

9. How many children in your family? _____

10. At what age was your child diagnosed? _____

11. What type(s) of intervention methods is your child receiving?

12. Name three strengths that your child exhibits?

1.

2.

3.

13. Name three weaknesses your child exhibits?

1.

2.

3.

14. What age was your child when you first suspected that he/she had developmental difficulties? _____

Please explain what the nature of the difficulty.

15. Describe the role of your involvement in the classroom? (Circle one)

Contact on daily basis

Contact on a weekly basis

Contact once a month

Contact every 3 months

Contact every 6 months

Contact once a year

No Contact

APPENDIX B

TEACHER DEMOGRAPHICS

Teacher Demographic Information

The following questions will help me know you and your school setting. Please write your responses below as you think about children with autism in your classroom.

1. I am : (Circle one) Male Female

2. The range of age of the students you teach is: _____

3. I currently teach in: (Circle one)

Public School

Private School

Both Public and Private Schools

Why did you decide to teach in this setting(s)?

16. Circle the diagnosis of the students in your classroom :

B. Autism

B. Asperger's Syndrome

C. Rett's Syndrome

4. Mild

5. Moderate

6. Severe

17. Do your students have any other disabilities? If so describe below.

18. How long have you taught children with autism? _____ - years

19. Your racial background is:

Caucasian

Hispanic

African American

Native American

Other (specify) _____

20. School Location:

Urban

Suburban

Rural

21. How many students in your classroom(s)? _____

22. What type(s) of intervention methods do you use in your classroom(s)?

23. Name any unique strengths that any of your students exhibit?

24. Name any unique weaknesses that any of your students exhibit?

25. Describe the role of the majority of the parents in your classroom? (Circle one)

Contact on daily basis Contact on a weekly basis Contact once a month

Contact every 3 months Contact every 6 months Contact once a year

No Contact

APPENDIX C

PARENT SURVEY

Parent Survey

Each item below describes an expectation some parents have about their child's future outcomes. On the *left* tell me first how important it is for YOU that your child with autism to achieve this outcome. On the *right* tell me how likely you think your child will in fact achieve this outcome.

Importance to me...		Likelihood ...
1=Highly Unimportant 2=Somewhat Unimportant 3=Slightly Important 4=Important 5=Very Important		1=Highly Unlikely 2=Somewhat Unlikely 3=Slightly Likely 4=Likely 5=Very Likely
	1. My child with autism will be happy and satisfied.	
	2. My child with autism will attend school.	
	3. My child with autism will grow up and get married.	
	4. My child with autism will own his/her own house.	
	5. My child with autism will have a support network of friends.	
	6. My child with autism will belong to a religion of his/her own choice.	
	7. My child with autism will be accepted in the community.	
	8. My child with autism will have a secure financial future.	
	9. My child with autism will be safe from physical harm.	
	10. My child with autism will have the highest education possible.	
	11. My child with autism will help with household chores.	
	12. My child with autism will be socially responsible/law-abiding.	
	13. My child with autism will take care of me when I am old.	
	14. My child with autism will participate in citizenship activities.	
	15. My child with autism will live independently.	

	16. My child with autism will have time to play/watch games.	
	17. My child with autism will hold a job/vocation.	
	18. My child with autism will have his/her own children.	
	19. My child with autism will use community services.	
	20. My child with autism will be successful in school.	

APPENDIX D

TEACHER SURVEY

Teacher Survey

Each item below describes an expectation some teachers have about their student's future outcomes. On the *left* tell me first how important it is for YOU that your student with autism to achieve this outcome. On the *right* tell me how likely you think your student will in fact achieve this outcome.

Importance to me...		Likelihood ...
1=Highly Unimportant 2=Somewhat Unimportant 3=Slightly Important 4=Important 5=Very Important		1=Highly Unlikely 2=Somewhat Unlikely 3=Slightly Likely 4=Likely 5=Very Likely
	1. My student with autism will be happy and satisfied.	
	2. My student with autism will attend school.	
	3. My student with autism will grow up and get married.	
	4. My student with autism will own his/her own house.	
	5. My student with autism will have a support network of friends.	
	6. My student with autism will belong to a religion of his/her own choice.	
	7. My student with autism will be accepted in the community.	
	8. My student with autism will have a secure financial future.	
	9. My student with autism will be safe from physical harm.	
	10. My student with autism will have the highest education possible.	
	11. My student with autism will help with household chores.	
	12. My student with autism will be socially responsible/law-abiding.	
	13. My student with autism will take care of their parents when they are old.	
	14. My student with autism will participate in citizenship activities.	
	15. My student with autism will live independently.	
	16. My student with autism will have time to play/watch games.	

	17. My student with autism will hold a job/vocation.	
	18. My student with autism will have his/her own children.	
	19. My student with autism will use community services.	
	20. My student with autism will be successful in school.	

APPENDIX E

GROUP STATISTICS

Group Statistics

	ROLE	N	Mean	Std. Deviation	Std. Error Mean
I1	1.00	15	4.6000	.6325	.1633
	2.00	25	4.7200	.5416	.1083
L1	1.00	15	4.1333	.9155	.2364
	2.00	25	4.1600	.9866	.1973
I2	1.00	15	4.9333	.2582	.0667
	2.00	25	4.9600	.2000	.0400
L2	1.00	15	4.9333	.2582	.0667
	2.00	25	4.8400	.3742	.0748
I3	1.00	15	2.2667	1.2228	.3157
	2.00	25	3.4400	1.4166	.2833
L3	1.00	15	1.9333	1.3345	.3446
	2.00	24	2.9167	1.3486	.2753
I4	1.00	15	2.0667	1.2799	.3305
	2.00	25	3.5600	1.2610	.2522
L4	1.00	15	1.8000	1.2649	.3266
	2.00	25	3.1600	1.2477	.2495
I5	1.00	15	4.4667	.9155	.2364
	2.00	25	4.6800	.5568	.1114
L5	1.00	15	3.7333	1.2228	.3157
	2.00	25	3.8000	1.1902	.2380
I6	1.00	15	3.4000	1.4541	.3754
	2.00	25	3.9200	1.1874	.2375
L6	1.00	15	3.3333	1.2344	.3187
	2.00	25	3.7200	1.4295	.2859
I7	1.00	15	4.8667	.3519	.0909
	2.00	25	4.5600	.6506	.1301
L7	1.00	15	4.0667	.9612	.2482
	2.00	25	4.0400	.7895	.1579
I8	1.00	15	4.3333	.8165	.2108
	2.00	25	4.6800	.4761	.0952
L8	1.00	15	3.6000	.9856	.2545
	2.00	25	4.0400	.9345	.1869
I9	1.00	15	5.0000	.0000	.0000
	2.00	25	4.9200	.2769	.0554
L9	1.00	15	4.2000	.4140	.1069
	2.00	25	3.8400	.8981	.1796
I10	1.00	15	4.8000	.7746	.2000
	2.00	25	4.6800	.7483	.1497
L10	1.00	15	4.2000	1.2649	.3266
	2.00	25	3.9200	.9539	.1908
I11	1.00	15	4.8667	.3519	.0909
	2.00	25	4.4400	.7681	.1536

	ROLE	N	Mean	Std. Deviation	Std. Error Mean
L11	1.00	15	4.4667	.6399	.1652
	2.00	25	4.2800	.8426	.1685
I12	1.00	15	4.7333	.5936	.1533
	2.00	25	4.6400	.4899	.0980
L12	1.00	15	3.8667	1.1255	.2906
	2.00	25	4.1600	.8981	.1796
I13	1.00	15	2.1333	1.1872	.3065
	2.00	25	1.5600	.7681	.1536
L13	1.00	15	1.5333	1.2459	.3217
	2.00	24	1.9583	1.1221	.2290
I14	1.00	15	3.8000	.7746	.2000
	2.00	25	3.4400	1.1210	.2242
L14	1.00	15	2.7333	.9612	.2482
	2.00	25	3.0400	1.0985	.2197
I15	1.00	14	3.9286	.9169	.2450
	2.00	25	4.4000	.6455	.1291
L15	1.00	15	2.4000	1.2984	.3352
	2.00	25	3.3600	1.1860	.2372
I16	1.00	15	4.6000	.6325	.1633
	2.00	25	4.4000	.7071	.1414
L16	1.00	15	4.2667	.8837	.2282
	2.00	25	4.2800	.7371	.1474
I17	1.00	15	4.6667	.7237	.1869
	2.00	25	4.6400	.5686	.1137
L17	1.00	15	3.4000	1.2984	.3352
	2.00	25	3.9200	.9967	.1993
I18	1.00	15	1.7333	.9612	.2482
	2.00	25	2.9600	1.5937	.3187
L18	1.00	15	1.8000	1.1464	.2960
	2.00	25	2.7600	1.4799	.2960
I19	1.00	15	4.6000	.8281	.2138
	2.00	25	4.2400	.7234	.1447
L19	1.00	15	4.0000	.7559	.1952
	2.00	25	3.9200	.8622	.1724
I20	1.00	15	4.4667	1.1255	.2906
	2.00	25	4.6000	.7071	.1414
L20	1.00	15	4.0667	1.0998	.2840
	2.00	25	3.8800	1.2014	.2403

APPENDIX F

LEVENE'S TEST

Levene's Test for Equality of Variances

	F	Sig.
I1	1.075	.306
L1	.010	.922
I2	.534	.469
L2	3.293	.077
I3	.655	.423
L3	.005	.946
I4	.021	.887
L4	.146	.705
I5	3.554	.067
L5	.102	.752
I6	1.270	.267
L6	.754	.391
I7	12.424	.001
L7	1.265	.268
I8	2.945	.094
L8	.229	.635
I9	5.946	.020
L9	1.957	.170
I10	.519	.476
L10	1.469	.233
I11	10.630	.002
L11	.892	.351
I12	.156	.695
L12	.366	.549
I13	1.525	.225
L13	.010	.920
I14	4.276	.046
L14	.062	.804
I15	.502	.483
L15	.401	.530
I16	.814	.373
L16	.133	.717
I17	.141	.709
L17	2.335	.135
I18	8.759	.005
L18	2.487	.123
I19	.021	.886
L19	.133	.718
I20	1.236	.273
L20	.834	.367
Total I	1.428	.240
Total L	.857	.361

APPENDIX G

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 2/19/02

Date : Tuesday, February 20, 2001

IRB Application No. ED0179

Proposal Title: A COMPARISON OF TEACHER AND PARENTAL EXPECTATIONS FOR CHILDREN
WITH AUTISM

Principal
Investigator(s) :

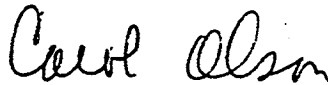
Julie Ivey
5711 Pecan Hill Court
Stillwater, OK 74074

N Kagendo Mutua
229 Willard Hall
Stillwater, OK 74078

Reviewed and
Processed as: Exempt

Approval Status Recommended by Reviewer(s) : Approved

Signature :



Carol Olson, Director of University Research Compliance

Tuesday, February 20, 2001
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX H
CONSENT FORM

PARENTAL/TEACHER CONSENT FORM

I, _____, hereby authorize or direct, Julie Ivey, or associates or assistants of his or her choosing, to perform the following treatment or procedure.

Procedure:

1. This research study, A Comparison of Teacher and Parental Expectations for Children with Autism, is being conducted at Oklahoma State University. The primary investigator is Julie Ivey, who is a doctoral student in Special Education.
2. This study will consist of the administration of a survey concerning expectations for children with autism for parents and teachers. The completion of the survey will take about 10 minutes.
3. Your responses are anonymous.

Benefits:

This study is to investigate the expectations of parents and teachers for children with autism. This can impact teacher education and assist in building relationships between parents and teachers.

Confidentiality will be protected by having all completed forms locked in file for only the direct investigator and associates to examine. There will not be a way for the examiner to identify what participant completed which survey.

"I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director."

I may contact Julie Ivey or Dr. Kagendo Mutua at (405) 744-8005. I may also contact Sharon Bacher, IRB Executive Secretary, 305 Whitehurst, Oklahoma State University, Stillwater, OK 74078; telephone number (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____ Time: _____ (a.m./p.m.)

Signed: _____
(Signature of participant)

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it.

Signed: Julie Ivey
Project director or authorized representative

VITA ²

Julie Kathryn Ivey

Candidate for the Degree of

Doctor of Philosophy

Thesis: A COMPARISON OF TEACHER AND PARENTAL EXPECTATIONS FOR CHILDREN WITH AUTISM

Major Field: Educational Psychology

Biographical:

Personal Data: Born in Houston, Texas, January 12, 1971 to Johnny and Kay Sciacca. Married to Marcus Ivey, December 17, 1994. Daughter, Kathryn Anne Ivey born November 3, 1997.

Education: Graduated from Bay City High School, Bay City, Texas in May 1989; received a Bachelor of Arts degree in Psychology with a minor in Criminal Justice from Southwest Texas State University, San Marcos, Texas, in May 1993; received a Master of Science degree from Our Lady of the Lake University with a major in School Psychology in San Antonio, Texas, May 1995. Completed the requirements for the Doctor of Philosophy degree with a major in Educational Psychology- Special Education at Oklahoma State University, Stillwater, Oklahoma, August 2001.

Experience: School Psychologist Intern at Judson Independent School District, San Antonio, Texas from 1994-1995; Instructor at Park College in Oceanside, California in 1996; School Psychologist at San Marcos Unified School District, San Marcos, California from 1995-1998; Instructor at Chatahooche Technical Institute in Marietta, Georgia in 1997; Teaching and Research Assistant for Oklahoma State University in Stillwater, Oklahoma from 1999 to present.

Professional Memberships: American Educational Research Association, Autism Society of America, Council for Exceptional Children, National Association of School Psychologists.

Professional Organizations: California License for School Psychologists, Texas License for School Psychologist

Name: Julie Kathryn Ivey

Date of Degree: August, 2001

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: A COMPARISON OF TEACHER AND PARENTAL EXPECTATIONS
FOR CHILDREN WITH AUTISM

Pages in Study: 114

Candidate for the Degree of Doctor of Philosophy

Major Field: Educational Psychology

Scope and Method of Study: The purpose of this study was to compare the expectations of parents and teachers with regard to the future outcomes of children with autism. Participants in the study were 25 parents and 15 teachers in mid-western states. The parents had a child and the teachers had a student diagnosed within the autism spectrum. Each participant completed a demographics and inventory regarding the importance and likelihood of their child achieving given expectations. Means, standard deviations, paired t-tests and independent-samples t-test were calculated.

Findings and Conclusions: The total means for importance was greater than the total means for likelihood regarding responses of teachers and parents. There was a commonality between parent responses and teacher responses concerning the likelihood of performing adult responsibilities and participating in community services. Parents and teachers of children with autism expressed extreme concerns about their children's protection and safety. For teachers, there were statistically significant differences between importance and likelihood for issues of safety, adult responsibilities, and friendships, with importance rated higher than likelihood. For parents, there were statistically for importance and likelihood for issues of safety, adult responsibility, and success in education, with importance rated higher than likelihood. Comparing beliefs between teachers and parents, teachers felt household tasks were more important. Parents felt that owning a house having children and getting married were more important and more likely than did teachers.

ADVISOR'S APPROVAL _____