

Effects of Learning and Communication

Disabilities in Children with Autism

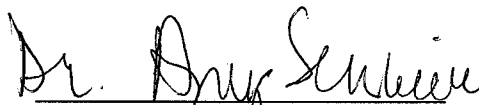
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A handwritten signature in dark ink, appearing to read "Dr. Amy Schlieve", is written over a horizontal line.

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Abstract

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Autism is a complex developmental disorder that affects an individual in areas of social interaction and communication (*All About Autism, 2004*).

According to the National Institute of Mental Health (NIMH), autism is one of five disorders considered a Pervasive Developmental Disorder (PDD). These disorders are characterized by “severe and pervasive impairment in several areas of development” (*What is Autism?, 2004*). These impairments have great variability in levels of functioning and in clinical symptoms (*NIMH, 2000*). Autism affects approximately 1 in 250 births, and that number is rising. According to the U.S. Department of Education, it is growing at a rate of 10-17 percent per year (*All About Autism, 2004*).

Educating children with autism is a challenge. Specific and individualized attention must be given to the needs of the child and the disorder. The curriculum needs to address a wide range of skill development. These skills include academics, communication and language skills, social skills, self-help skills, leisure skills, and behavior issues (*Education Overview, 2004*). This paper is documentation of literature discussing the specific characteristics of autism and its effects on literacy.

Children with autism are individuals. Each child has strengths and weaknesses. The first chapter in this paper examines the characteristics and needs typical and specific to autism. A child with autism has difficulty understanding how communication works (*Behavioral and Communication Approaches, 2004*). Due to this, literacy is often slow to develop and may even be absent in children with autism. The second chapter in this paper focuses on reading, writing, and communication.

This paper concludes by examining teaching styles found to be successful for children with autism. Teaching to the individual learning style of the student may make an impact on whether or not the child can attend to and process the information that is presented (*Edelson, 2003*).

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Chapter One

Introduction

The purpose of this paper is to examine the characteristics and needs that are typical and specific to children with autism. Autism is considered to be a severe disruption in the normal developmental progression that occurs during the first three years of life. The effects of autism lead to disabilities and impairment in language, cognitive abilities, play and social interaction and also in adaptive functioning (*What is Autism?*, 2004). These delays and disabilities all cause children to fall further and further behind their peers as their literacy skills develop. The exact cause of autism is unknown. There is some evidence however; that shows there are some physiological causes like neurological abnormalities in particular areas of the brain.

Effects of Autism on Communication

Children with autism do have a commonality in how their disorder affects their communication skills. It is necessary for parents and educators to develop alternative ways of communicating with a child with autism in order to provide support and build a strong foundation for these skills to develop. Academic skills need to be structured to meet the individual's needs based on their intellectual ability and their functioning level (*Treatment and Education*, 2004). Autism is often associated with cognitive deficits, and is frequently accompanied by mental retardation. Autism does not, however, affect all areas of functioning equally. Many times, individuals with autism have specific areas of strength and

weakness. Often, these areas of strength will actually reach into the superior range. Likewise, the weaker areas can be significant deficits.

Children with autism tend to learn in different ways than other children. It is important to understand that children with autism can learn and function productively. They can also show gains with appropriate treatment and education (*Common Characteristics of Autism, 2004*). A child with autism has different learning abilities from those of children with other disabilities. Often they seem unable to understand simple verbal and nonverbal communication. If they do understand some type of communication, they are often unable to react and respond in a typical interactive way.

By helping to improve the communication skills of a child with autism, educators will, in turn, be eliminating some behaviors, which are simply a result of frustration in the child's inability to communicate. With the proper instruction and reinforcements, children with autism often have the ability to learn these basic literacy skills. Some children with autism do not know that speech is used for communication. Language can be learned if the language exercises that are used actually promote communication (*Grandin, 1995*). An individual with autism needs to learn that by using words, concrete things happen as a result. If a child wants a book, and asks for a book, they should be given a book. If a book was not what they wanted to begin with, it will be easier for them to learn the correct word because by using the incorrect word they received the incorrect object. Children who are most at-risk for reading and literacy difficulties are those who enter school with limited exposure to oral and written language. Children with

autism who interact often with parents, other family members, and caregivers are more prepared and have a better chance when starting school. The difficulties that these children encounter in reading cross over to all other subject areas in school. Just as with any child their attitude toward school and learning can be greatly affected in either a negative or positive way, depending upon their early successes and failures. Many children with autism are visual thinkers. For these children, pictures are their first language and words are their second. Attaching a word to a picture or action can help the child learn the word (*Grandin, 1995*). Showing the child a card with the word 'jump' while saying 'jump' and jumping up and down is an example of teaching in multiple way simultaneously.

Children with autism will process and respond to stimuli and information in unique ways. Since a primary weakness in children with autism centers around communication, these children can be very challenging to teach. A child with autism may be learning the information, but unable to express it at a requested time, therefore it may appear as if the child has not learned the task or skill (*Gumatz, 1999*). Literacy and direct learning are often overlooked in the educational setting because the behavioral mannerisms and disabilities of children with autism often become the main focus. It is important to keep in mind that autism is not a behavioral disorder, despite some behavioral characteristics of autism (*University of Minnesota Hospital and Clinic, 1998*).

Educating Children with Autism

Educators are often more concerned with behavior modification and behavior management than they are with literacy learning. This seems to be due

to the numerous social, behavioral, and communicative needs of these children. Also, the training of special education teachers tends to focus more on the behavioral components than on the academic components. When children with autism enter school, their literacy is often given a lower priority than other areas. Many educators are concerned more with the behavior of children with autism, as opposed to their needed attention in learning and literacy. A child with autism may have immature or inappropriate social skills as well. However, by allowing this child to be involved and exposed to situations of interest and talent, social skills often improve after being around other children with shared interests (*Grandin, 1996*).

Other Difficulties Due to Autism

Organization is difficult for children with autism (*Edelson, 2003*). This organization requires an understanding of what needs to be accomplished and how to accomplish it. These requirements become quite complex for a child with autism. This is important because in order to learn and develop their literacy skills, children with autism need structure in their curriculum. A structured environment is very important for children with autism. Having structure will assist in this organization plan.

Many children with autism also have sensory problems. An example is a child with autism being very sensitive to loud noise. The most common sensory difficulties occur with the auditory and the tactile senses (*Grandin, 1988*). Often, when faced with something causing some sensory distress, a child with autism will withdraw, or appear to shut down. Due to these types of sensory problems,

children with autism must be protected from noises that are disturbing to them. Sensory difficulties can be directly related to episodes of inappropriate behavior. Tactile difficulties need to be broken down slowly and gently. Just as with noises, tactile stimulation should not be forced on a child with autism. A child with autism should be exposed to tactile sensitive activities that are calming and gradual.

Another characteristic of children with autism is an overaroused nervous system. Brain scans of individuals with autism have shown indications of cerebellar abnormalities and also of an overaroused brain (*Courchesne et al., 2001*). Exercise or some types of sensory interaction can reduce this arousal, which will make a child less hyperactive. Vestibular stimulation has also been found to be very calming (*Ayres, 1979*). Spinning in an office chair, for example, has shown to reduce some hyperactivity. This type of stimulation should never be forced on a child. Forcing this type of stimulation can actually cause seizures. The child needs to be in control of the type of stimulation, the length of time it is performed and also its intensity. The child must also be able to stop the stimulation instantly is needed.

Purpose of the study

The purpose of this study is to complete a review of literature regarding children with autism and literacy. It is this author's intent to show that children with autism can be taught to read, write, and learn to utilize basic communication and literacy skills. Key to this end result is the manner in which these skills are taught. Structure, variety, organization and repetition are vital to the success of this effort (*Structured Teaching, 2001*). Patience and flexibility are also

necessities. By providing this type of environment on a consistent basis and on the child's level of understanding, many problems can be alleviated or moderated. Research also indicates an injustice is done when the academic skills of a child with autism are neglected in order to strictly address their behavior. As educators, we are to teach to the whole child. It is not enough to just teach to the area that appears to be the 'easiest' or most disturbing.

Assumptions

1. It is impossible to review all of the available literature on autism.
2. There are many varying views and opinions on how children with autism learn.
3. There is such a wide variance of characteristics and needs in children with autism, that it is impossible to make statements that are applicable to all children with this disorder.
4. One cannot possibly review all of the available literature on reading, writing, and literacy.

Definition of terms

Autism: a cognitive disorder that causes significant difficulty in social interaction, in language, in nonverbal communication (i.e. eye contact, gestures), in pretend play, and who have a restricted range of interests. This disorder applies to approximately 2-5 out of every 10,000 children. About 75% of children with autism also have mental retardation (significantly below age level in all areas of understanding), while 25% of children with autism have "normal" intelligence with the exception being

areas related to language, social, and play development (*The University of Minnesota Hospital and Clinic, 1998*).

Literacy: an individual's ability to read, write, speak in English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society (*The Workforce Investment Act of 1998, 1998*).

Methodology

This paper will demonstrate, through a review of literature, that children with autism are capable of learning to read and write. The author will discuss many of the ways an educator can enable a student to achieve success in literacy. In this paper, early detection of autism and early interaction with others will be shown to be significant in the development of skills. This paper will also discuss that although behavior management and modification is important it should not be the sole focus in a school setting for an autistic child. As their behavior is modified, redirected and controlled the academics can then be focused on and addressed as well (*Treatment and Education, 2004*).

Chapter Two

Literature Review

This chapter will discuss causes and characteristics of autism. It will also discuss teaching a child with autism and breaking down literacy. Verbal language and various teaching strategies will be discussed. This chapter will also delve into specific methods for teaching literacy and lay out some suggestions as to the responsibility of the parent and educator.

Autism is a complex neurological disorder, which affects individuals in the areas of social interaction and communication. Verbal language may be absent, or if present, may be very limited in scope and characterized by abnormal speech rhythm or tone, pronoun reversal, and echolalia (*Grandin, 1988*). Autism is often referred to as a spectrum disorder. This name is due to the fact that it can occur in various degrees of severity. Sometimes there are some characteristics of autism that appear in infancy. However, often the signs of this disease become more obvious during early childhood (about 24 months to 6 years). Autism affects people of all races and ethnicities in every country and region around the world.

Causes of Autism

The exact causes of autism are unknown. Once thought to be a psychological disorder, which was triggered by traumatic experiences which eventually lead to emotional and social withdrawal; today researchers and scientists believe that autism is actually caused by several genes in combination with environmental factors. Scientists are investigating patterns and links between heredity, genes and the medical problems involved with autism (*What*

Causes Autism?, 2004). The apparently normal and even intelligent physical appearance of individuals with autism, along with various abilities often displayed by them, have led people to believe that beneath the surface of autism is an individual with great potential, perhaps even on a genius level (*Grandin*, 1995). There have been many studies on individuals with autism and some have shown there to be abnormalities in several regions of the brain. Some of these areas where the abnormalities have been found are the cerebellum, amygdala, and the hippocampus.

Just as there is no definite cause of autism at this point, there is also no cure. The more research that is done however, the better our understanding of autism will be. According to studies by the Autism Society of America, using appropriate strategies and interventions can affect the typical behaviors of autism in a positive way (*Autism Society of America*, 1995). Teaching children how to develop and use systematic habits and study routines is an effective strategy for minimizing learning difficulties (*Mesibov*, 2004). An important aspect in treating the autistic individual is early detection and intervention. This has shown to significantly improve the quality of life for a person with autism. Even with appropriate interventions, most individuals with autism will continue to display some symptoms in varying degrees throughout their lives. It is important for parents and teachers to recognize that there is not a behavior of theirs, which will cause or increase autistic behaviors. However, parents and teachers can modify a child's environment in order to alter or accommodate the direction that the

autistic behaviors are heading (*Behavioral and Communication Approaches, 2004*).

Characteristics of Autism

Just like all individuals, children with autism have their own characteristics and are unique. Children with autism also process and respond to stimuli in unique ways. Individuals with autism may exhibit some of the following traits: resistance to change, difficulty with expressing needs, repeating words or phrases instead of using a normal response, little or no eye contact, difficulty interacting with others, no real fears of danger, and over-sensitivity or under-sensitivity to pain (*Common Characteristics of Autism, 2004*). This is only a small sample of the more common traits that are often displayed by children with autism. There are many myths related to individuals with autism. These myths are directly correlated to the traits. Many children with autism do make eye contact. Many children with autism can develop good functional language skills. One of the saddest myths about children with autism is that they are unable to show affection. Often they are able to exhibit affection, it is just processed and therefore, displayed differently than individuals without autism. Just like any other child, a child with autism responds to their environment in both positive and negative ways (*Common Characteristics of Autism, 2004*). Autism is not something that children can “outgrow”. However, often their symptoms specific to autism may lessen as the child grows and develops and receives treatment.

Teaching a Child with Autism

According to Swartz, it seems that the easy way to reach and therefore teach reading and writing to children with autism would be to just make a 'breakthrough' and maybe use extreme repetition. However, due to the fact that individuals with this disability often lack the basic skills necessary for communication and interaction, 'breakthroughs' can be far and few between. It is crucial for the teacher, or parent, to learn how to adapt and accommodate to the child in order to foster the communication and interaction between the two parties. These alternative systems and ways of communicating are used to support the child and their attempts at communicating (Swartz, 1997). The responsibility of adapting does not lie with the child, but instead with the adult.

Breaking Down Literacy

There are five areas of instruction that have been identified as critical elements in achieving success in reading instruction. These five areas are phonemic awareness, phonics, fluency, vocabulary, and text comprehension. Phonemic awareness is the ability to decipher, think about, and work with the individual sounds that appear in words. Phonics is the relationship between the sounds and the letters of a written word. Fluency is the ability to read a text correctly. Vocabulary is the list of words that we know and use for communication. Text comprehension is the understanding of what is being read. These five elements need to be woven into the curriculum equally in order to see growth in the students' skills (Swartz, 1997).

In order to correctly identify ways that are positive and effective for teaching literacy to individuals with autism, the reading process must be considered. Consideration must also be given to various teaching methods and accommodations for each individual. As mentioned earlier, autism is a spectrum disorder. This makes it difficult to have one set way of teaching literacy to autistic individuals. Each person has their own set of characteristics and therefore, needs their own way of acquiring literacy skills (*Swartz, 1997*). Often it is helpful to use a variety of methods in order to teach a child with autism to read and write. Crucial to the success of learning to be literate, is flexibility and accommodation.

It has been determined that the development of literacy skills is related to an individual's oral language skills (*Edelson, 2003*). If a child has a high deficit in their oral language, they are likely to have a more difficult time learning to read and write than a child with a higher level of oral communication skills.

Another key to the success of teaching literacy is assessment. This assessment needs to be a regular occurrence as well as the need for flexibility in its standards. Assessments that are completed on a child with autism need to be directed toward the progress the individual has made and should also measure a specific skill. Lastly, the assessment should measure and document the reading level of the child at a given time (*Mesibov, 2004*). By consistently and accurately performing these assessments, educators will be able to ensure that they are using appropriate teaching methods and techniques for the students.

Verbal Language and Autism

Literature indicates that it is important and helpful to begin introducing language in a comfortable setting and environment for the child. Often this is at mealtime or during “snack” at school. This is a time that is usually comfortable for children with autism. The children find success during mealtime because they enjoy this time and will usually remain in their seat due to the nature of the setting. Vocabulary is chosen that would relate to mealtime. Words used would allow the child to be in control of the situation and openly express their choices and feelings (*Gumatz, 1999*). Visual and concrete cues using pictures (Picture Exchange Communication Strategies) and symbols works very well in these situations. Sign language is also a method that may work well with some individuals with autism.

In the literature, adaptations that must be made for individuals with autism are clearly outlined. Due to the fact that children with autism often have a variety of strengths and needs, it is extremely important that they are provided with reading, writing and/or keyboarding experiences on a regular basis. Often these children demonstrate strong visual processing skills. Therefore, the more they are exposed to these types of experiences, the better chance they have to succeed (*Grandin, 1996*).

Teaching Strategies

There are many different treatment options for autism. Educational methods for children with autism need to address a wide range of skill development. It is important for parents and teachers to work together. A teacher

should have some understanding and knowledge of a child's behavior and skills at home. Parents also need to make the teacher aware of expectations in the home and what types of methods work well for the child at home (*Treatment and Education, 2004*). The most effective programs emphasize early, appropriate, and intensive interventions. Due to the fact that the symptoms and needs of individuals with autism vary greatly from person to person, the treatment utilized needs to be flexible. As with any program or plan it needs to be re-evaluated regularly to see if there is progress, growth or change. Some of the most common treatments for autism are the following: facilitated communication, speech-language therapy, occupational therapy, physical therapy, biological therapy and sensory therapies (*Treatment and Education, 2004*).

Facilitated communication is a technique that works to accomplish an avenue for individuals with autism and have a severe language deficit to have a way to express themselves. This technique involves supporting the individual's hand at the wrist or forearm, and requires using backward resistance to assist the individual while using a keyboard or some other type of letter board. It is important to understand that although assistance is required to support the individual's hand, the facilitator does not influence the letter choice (*Treatment and Education, 2004*).

In speech-language therapy the main focus is on the social use of language. Individuals with autism are treated for auditory processing disorders and also for associated processing disorders. Educational treatment includes addressing social, relationship, and interaction skills. There are many different

approaches and curriculum designs in these areas. The speech-language pathologist tries to help the individual with autism develop language goals that follow along the typical and normal developmental sequence. They also try to use and teach the ideas and principles of language in both a literal and symbolic sense. All of these techniques are used in an effort to maximize the child with autism's overall language and communication skills (*Treatment and Education, 2004*).

Occupational therapy involves an occupational therapist that works with the child with autism and targets motor skills. This type of therapy is often very tactile. Pictures are often used with children with autism as a means of communication. Sign language has also shown to have a positive impact on an autistic individual's life. Sensory therapy as a treatment includes occupational therapy, sensory integration therapy, and auditory integration therapy (*Treatment and Education, 2004*).

Details related to the environment and atmosphere are very important to a child with autism. Blank walls, for example, can be good to build a work area around because they lack distractions (*Structured Teaching, 2001*). It is also suggested to use furniture that is the appropriate size for children, and to use things such as bookshelves, rugs, and tape on the floor to make clear boundaries.

There are many different strategies, which are helpful in teaching language and literacy skills to individuals with autism. Often a structured environment that allows for flexibility based on individual needs works best. In

addition, reinforcement is extremely beneficial to this program and it is important to assess what is being used. Reinforcements need to be individualized. It is important to watch the child's reaction to this support and to give him a choice. It works best when there is variety in the reinforcement used (*Grandin, 1996*). An educator can rotate between verbal praise, physical interaction, toy time, food and social interaction (which would be a smile or thumbs up type of gesture). It is imperative to stay fresh. Use new toys or come up with a new meaning/use for an old toy. It is also vital and helpful to the child to state the behavior that is being reinforced. This will let the child know that he did something correctly (looking when called, or coming to the art table). Immediate reinforcement is crucial (*WEAP, 2002*). Often, the tone of voice used and facial expressions will give the child the support and reinforcement as well. As the child begins to get stronger in a particular area, the specific reinforcements for a certain behavior can begin to fade away or be faded out. This is a very gradual process and should only occur once the child has found continual success in his demonstrated behavior. Some parents and educators use bribery or incentives quite frequently. This can lead to the child expecting a reward every time they exhibit a particular behavior. It is recommended to use bribery in situations where there is actually a negative behavior. It seems to work best in these situations because it can be used as the solution to the problem or way to try to change the negative behavior (*WEAP, 2002*).

Another strategy is prompting. This can be a verbal, visual, and sometimes even physical prompt. This type of strategy is used to help the child to

perform and achieve success by exhibiting the correct response. Similar to reinforcement, prompting must also be faded out once success has been achieved. The parent or educator needs to be flexible with this style of teaching. Due to the nature of autism and the social deficits it causes for the child, prompting can cause some discomfort and unease. It is important to begin with the least intrusive type. It is also important to vary the types of prompts used, in order to remain unpredictable to the child (*Stokes, 2001*). For example, physical prompts can be a gentle pat on the hand or back. Verbal prompts can be clues or special words to try to nudge the child to perform the behavior wanted. Visual prompts can be a head nod, or pointing of the finger.

It is important to be patient when interacting with individuals with autism. Too many questions can cause annoyance and unnecessary stress on the child. It can be helpful to watch the child's reaction or behavior and comment on it, rather than questioning it. It is also helpful to wait for a response. If there is no response, then a signal or expectant look may cue or prompt a response. Physical gestures and facial expressions are highly useful in interacting with individuals with autism (*Stokes, 2001*).

Specific Methods for Teaching Literacy

Research shows that there are two methods proven to be successful for teaching literacy to individuals with autism. These methods are Reading Recovery (*Clay, 1979; 1985*), which is often used on an individual basis; and Guided Reading (*Swartz, Shook, & Klein, 2003a*), which can be used on an individual basis or in a small group setting.

Reading Recovery is widely known as an early literacy program. Although this program was originally designed for first graders, it has been used with other groups on an experimental basis and has shown documented success. This program was created as a means of intervention designed to assist children who were having difficulty developing reading and writing skills (*Swartz, 1997*).

Reading Recovery is based on the idea of a conversation between teacher and student. The lessons follow a set of activities that are adapted and individually designed. This is based on the child's needs and growth from day to day. It is obvious that assessment is key in this method of instruction.

Guided Reading is a technique that uses collaborative teaching methods. In this program both regular and special education teachers use the same processes and strategies. This teaching method requires that the student reads orally and the teacher provides direct instruction. The teacher covers main areas of the curriculum such as phonics and comprehension. This approach is often used as an intervention method when a child is having a difficulty learning to read (*Swartz, 1997*). Typically children work in small groups with this system.

Stimulation and encouragement are very important factors in reaching a child with autism. Often a strategy or method that works well for one autistic child will not work for another. This is because of the varying degrees of severity and the varying autistic behaviors. It is mentioned often, in the literature that it is very important to stay open-minded and flexible when working with children with autism. In order to be skillful and effective, the educator needs to get to know the individual child and his individual deficits and behaviors. By doing this, they have

a better chance of modifying and controlling some autistic behaviors and teaching the child to read and write.

There is also research on facilitated communication. This is defined as a technique that allows individuals with autism, and who have severe language deficits, to express themselves at a near to normal level (*Biklen, Morton, Gold, Berrigan, & Swaminathan., 1992; Biklen and Schubert, 1991*). This is a technique that is somewhat controversial based on the literature the author has read. This method entails supporting the hand of the individual with autism, usually at either the wrist or forearm, and offering a backward type resistance to help the individual select letters on a keyboard. It is controversial because many researchers believe that this physical pressure or force is actually suggesting which letters to choose. However, advocates of this method insist that even though there is physical assistance, the educator, or person holding the wrist, is not influencing the selection of letters at all (*Biklen, 1990; Biklen et al., 1991*). Advocates of this method also believe that with this facilitated communication technique individuals who are either verbal or nonverbal are able to communicate at a level that was once thought to be impossible based on their abilities. This method can be used with both children and adults who have autism.

Literature also shows that one of the most important things that parents and teachers can do is talk to individuals with autism, even when they are nonverbal. During the toddler and preschool years it is critical that children with autism are exposed to many different language and reading experiences. These experiences should be both playful and fun and include nursery rhymes and

games and stories that have rhyming words. This will expose children to the various sounds of our language. It is also very important that children with autism observe their parents and teachers reading. This observation will allow children to learn and gradually understand why reading is so important (*Taylor, 1993*). Parents need to remember to make reading and language interactions enjoyable for the child and to display a positive attitude toward these experiences.

It is also important for parents and teachers to keep in mind that routine interaction and experiences in daily life are actually quite valuable experiences for teaching and enforcing literacy experiences (*Schwartz, 1999*). The literature also shows that in addition to newspapers and magazines, it is critical that parents and teachers make sure there are books available in the home and classroom at appropriate reading levels. It is also very important that children have books of their own. Adults can pass on to children their own expectations about education and literacy, in both negative and positive ways. Shared enthusiasm about books and reading between a parent or teacher and a child can deepen a child's interest in learning to read (*Hall & Moats, 1998*).

The Parent and Educators Responsibility

What parents do or don't do has a lasting impact on their child's language skills and literacy. In general, children develop much of their capacity for learning in the first three years of life. This becomes even more difficult for children with autism due to their limited communication skills. Parents can help build pre-literacy skills through play and one-on-one interaction. This necessary interaction can be difficult and quite stressful for the parent as there is usually little or no

response on the part of the child. There is considerable evidence documenting the relationship between reading regularly to a child and that child's later reading development (*University of Minnesota Hospital and Clinic, 1998*).

Parents and educators need to realize that children will pick up cues from the actions being modeled for them daily. An autistic child, whose parent or teacher reads to them daily, will most likely develop an interest in reading, even if they cannot initially express this interest. They may eventually be the one requesting, either verbally or nonverbally, the story or activity. Children with autism also learn literacy skills as they interact with others in everyday life. Since this interaction is one of the deficits of autism itself, it cannot be forced, but instead must be gradually introduced at a level that is comfortable for the child. Children with autism will learn from their parents and teachers' modeling. The method of modeling is important and useful to the growth and development of the child's literacy skills (*Stokes, 2001*). Success in literacy will affect all other areas of an autistic child's life because of the freedom and independence it will allow them. Teachers and parents need to provide opportunities for their individuals with autism to be comfortable exploring reading and writing and literacy skills in the classroom or in their home (*Cullinan & Bagert, 1999*).

Literature in the field of autism states that it is highly important that children with autism are read to aloud. It is not necessarily crucial who reads to them, just that they are read to regularly and with a positive attitude (*Lopes, 1993*). The teacher or parent needs to realize that there is quite a bit more to reading to an autistic child than just saying the words. A story that is read aloud

should be a shared activity. This can in itself be difficult due to the nature of autism and its social difficulties that are often present. The reader should try to discuss the story and ask questions to prompt some thought on the part of the child even if the child does not respond. This can begin to build a base or starting point for a child's social and literacy skills.

Overall, the literature makes it quite clear that an autistic child needs to be read to and interacted with in a positive way in order for them to have the best chance of developing pre-literacy, and eventually literacy skills. There is documented data regarding children with autism that shows a correlation between not being read to beginning at an early age and difficulties developing literacy skills. The research suggests that parents and educators need to be aware of ways in which they can help individuals with autism develop the necessary skills. The reading process starts with the understanding that what can be said, can be understood, written down, and then read by the writer or another individual (*Grandin, 1996*). Along with understanding this basic concept, students must also gain an understanding of print. Once a child is able to decode and decipher print, they must develop the skill of turning it back into speech. This can be a long process. Comprehension and communication is key in the learning process. Children with autism already have severe difficulties with the communication side of this equation, which makes the comprehension side quite difficult as well.

A good autism program needs to utilize good teachers and therapists. It is crucial for the educational professionals and the parents of the child with autism

to work together as much as possible. It is also extremely important to the success of the program and to the success of the child with autism for a variety of methods and teaching styles to be used (*Grandin, 1988*). Along with this variety, there also needs to be a large amount of structure in order for the child with autism to feel comfortable and secure in his environment.

Developing Literacy Skills

Research continually states that literacy refers to reading and writing skills and builds on oral language skills. This knowledge is widely known and recognized. This is why developing literacy skills is often of a lesser priority than behavior and social skills with regards to individuals with autism. It is important to keep in mind that children with autism need to be taught literacy skills, but they need to be taught these skills in significant and appropriate ways (*Grandin, 1995*). Creative and meaningful opportunities need to be found and seized in order to best accommodate and adapt to the individual needs of each child.

Early on, before a child enters school, parents need to be informed and taught ways to help boost their child's academic achievement (*Taylor, 1993*). Parents with strong literacy, parenting, and job skills often have the education and resources to help their children start to develop early successes academically. It is also suggested many times, by various authors that early identification and diagnosis is key in teaching children with autism.

Research also shows that the behavioral, communicative, and social deficits in children with autism are often significant stressors on their families. The lack of communication and interaction between parent and child at a very

young age causes these stressors to be apparent in the parent-child relationship very early on (*Grandin, 1988*). Therefore, the added burden of needing to learn autism along with the task of parenting itself can negatively affect the family dynamic. A child with autism sometimes develops negative feelings towards parents and caregivers when their 'safe' and 'controlled' world is interrupted. The routines and rituals that are performed allow for a certain amount of comfort and when that comfort is interfered with the child may get restless, agitated, or even upset.

Chapter Three

Summary and Recommendations

Although a child with autism may be verbal, and may even have some developed verbal language skills, this does not mean that he/she can effectively communicate all of the time and in all situations (*Stokes, 2001*). There are many factors and variables, which can affect a child with autism's ability to communicate. The environment and atmosphere as well as the individual's emotional and mental mood and stress or anxiety level can drastically affect their ability to communicate.

Treatments and Methods

Some effective programs and approaches for treating autism fall into six main categories. These categories are Educational, Speech-Language Therapy, Communication, Intensive Autism Services, and Sensory Therapies. The educational approaches include behavior analysis or interventions. The biological options include a regimented diet, taking vitamins and/or medications. Speech-language therapy includes treatment for associated and auditory processing disorders. Communication options include sign language, Picture Exchange Communication Strategies (PECS), facilitated communication and also visual strategies or using pictures for communication. Intensive autism services consist of treatment that is provided by a team of individuals in the classroom, home and community. Sensory therapies include occupational therapy, sensory integration

therapy, and auditory integration training. These programs are most effective when started at an early age and used on a consistent basis (*Next Steps, 2000*).

After reviewing related literature, it is evident that although quite a bit is known about autism, there is still a lot that needs to be discovered and understood. Research continues on an ongoing basis in an effort to make a breakthrough discovery regarding the cause of autism. It is repeated throughout much of the research that people with autism appear across a very wide spectrum of impairment, with great variability in their symptoms and levels of functioning (*Grandin, 1988*). There have been individuals with autism who have normal intelligence and are also able to develop basic language skills. Conversely, others are far below the normal range of intelligence and are unable to develop even the most basic language skills. Since the primary deficits of autism seem to be in the social and communication skills of an individual, these areas must be assessed in great length and in various environments.

There is overwhelming data on behavior modification, interventions, and strategies for individuals with autism. However, there is not nearly as much regarding teaching autistic individuals to be literate. It has been suggested in many articles that once the behavior related issues and symptoms are taken care of, educators and parents can begin to teach. It has also been suggested that this should all happen simultaneously (*All About Autism, 2004*).

The Importance of Structure

Structure, organization, and definite patterns of routine are important to the ultimate success academically and socially for an individual with autism.

Individuals with autism respond very well to structure. Individual with autism can often be observed trying to 'create' this structure when they feel it is not present. For example, lining up crayons so they are all pointing in the same direction is an effort to find structure or a pattern. Schedules are an important part of structure for an individual with autism. Schedules allow for a comfort level in knowing what will happen next, but also aid in transitioning between activities (*Structured Teaching, 2001*). Often in a classroom there are two types of schedules being used at the same time. These two types are the overall schedule of the classroom, and the schedule of each individual student. It is important and helpful for the schedules to be posted in a clearly visible place in the classroom so the students know where to look for direction when needed.

Structure and rituals are developed to ensure a sense of stability and comfort. Children with autism will often create their own rituals in order to ensure predictability. The need for everything to be in a certain place and for events to occur in a certain order, even if it is repetitive, is all a part of the rituals that a child with autism will find comfort in. Control is a critical key in ensuring this stability and predictability (*Cohen, 1998*). Repetition gives a sense of security. This security offers comfort and does not leave room for uncertainty. Uncertainty is uncomfortable and often disturbing and can cause anxiety for individuals with autism.

Key Ways to Help Children with Autism

One of the main ways to help children with autism would be to find a cause and eventually a cure for this disorder. However, until that is possible, it is

crucial to continue researching and learning about autism in order to make advances with the science and medical aspects regarding treatment of autism. Continued research related to educating and using behavioral interventions is also a vital component to the improvement in the lives of children with autism. It is also essential to continue to develop and improve the education of teachers and caregivers working with children with autism (*Cohen, 1998*). It is also important for public funds and systems to continue to grow so the resources can best be used for the benefit of children with autism.

Educators and parents need to be aware and alert to the special needs that a child with autism has. Each individual child will have its own individual set of needs. These needs must be taken into account when planning and scheduling out the child's day, whether it is at home or school. It is important for the atmosphere and environment to be appropriate and comfortable for the child. Any materials or interventions used must also be relevant and comfortable for the child. Literacy learning strongly ties in with early childhood development. A curriculum should be structured so the parents, educators, and children work together. All activities should be related to literacy, either directly or indirectly. Parents and educators should be taught and encouraged to see that routine interactions are actually opportunities for literacy experiences (*Schwartz, 1999*). Providing this safe and comfortable environment will allow for a positive experience and provide the opportunity for success. There are a variety of teaching styles that together, seem to be the most successful for children with autism. Variety, with structure, as a general guideline in tailoring a curriculum for

a child with autism is key. Finding the learning style that will best meet the needs of each individual child with autism is something that takes time and patience on the part of the teacher, parents and also the child.

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