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Running head: ASPERGER'S SYNDROME

Case Study of Counseling Interventions with a Child with Asperger's Syndrome

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Abstract

Diagnosis of children with Asperger's syndrome (AS) has significantly increased. Therefore, effective counseling interventions are needed to help children develop social skills that will assist them in daily activities. The paper reviews areas of deficits experienced by children with AS; social communication, social interaction, cognition, behavior, motor clumsiness, and sensory issues. Appropriate counseling interventions such as skillstreaming, social stories and comic strip conversations are detailed. Additional school interventions are described. Results of a case study are included.

Case Study of Counseling Interventions with a Child with Asperger's Syndrome

Asperger's syndrome has gained increasing recognition since the American Psychiatric Association added it to its list of pervasive developmental disorders identified in the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV) (American Psychiatric Association, 1994; Myles & Simpson, 2002; Siegel, 2003). It is estimated that as many as 71 per 10,000 children could have the syndrome (Bashe & Kirby, 2001; Kadesjo, Gillberg, & Nagberg, 1999; Myles & Simpson, 1998). Of those diagnosed, the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition Revised (DSM-IV-TR) (2000) reports that the disorder occurs five times more frequently in males than in females. Additionally, AS has been identified throughout the world among all racial, ethnic, economic and social groups (Myles & Smith, 1998).

The recent increase in the diagnosis of AS has significantly impacted schools. Counselors, educators and speech/language pathologists are just beginning to learn associated characteristics and effective interventions to use with these students (Dahle & Gargiulo, 2004; Myles & Simpson, 2001). For this reason, the purpose of this case study is to promote understanding of the characteristics of AS and to describe several counseling and educational intervention techniques. The study investigated whether counseling interventions could positively affect classroom interactions and behavior.

Review of the Literature

The literature review summarizes the history of AS, diagnostic features, areas of deficit, counseling intervention strategies and educational intervention strategies. The areas of deficit are further described by restricted areas of interest, social communication, socialization, cognitive functioning, behavior, motor clumsiness and sensory issues. The counseling interventions

described are skillstreaming, social stories and comic strip conversations. The educational interventions focus on academic, social/behavioral, sensory and motor accommodations.

History

AS was first described separately by Dr. Leo Kanner in 1943 and by Dr. Hans Asperger in 1944 (Attwood, 1998; Hewetson, 2002; Rosaler, 2004; Safran, Safran & Ellis, 2003). Both doctors worked with children that lacked a natural connection to other people. However, the children did have a strong development for special interests (Attwood, 1998; Rosaler, 2004). Hans Asperger observed that his children displayed some typical autistic behaviors, but had normal intellectual and communication development (Myles & Simpson, 1998). In contrast Kanner's children were described as being less responsive to other people and experienced severe language impairments (Attwood, 1998). In 1981, Lorna Wing published a paper that described individuals that closely resembled the children Asperger had worked with 30 years prior. Her work brought AS to the attention of clinical professionals (Myles & Simpson, 2002). Then in 1991, Dr. Uta Frith translated Asperger's paper "Autistic Psychopathy in Childhood" into English and his research became widely recognized in Europe and the United States (Bashe & Kirby, 2001; Myles & Simpson, 2002).

Diagnostic Features

According to the DSM-IV-TR (American Psychiatric Association, 2000), AS is composed of two primary clusters. Social interactions consist of deficits in nonverbal behavior, establishing peer relationships, and social reciprocity. Additionally, individuals with AS show problems with verbosity, inability to read social cues, problems in regulating voice volume, and failure to comply with fundamental social standards. The second cluster, restricted areas of interest and stereotypic behaviors and activities, includes fixation on one narrow special area

(Safran et al., 2003). It is important to note that children with AS do not experience clinically significant delays in early language, cognitive development, age-appropriate self-help skills, adaptive behavior and curiosity about the environment (American Psychiatric Association, 2000).

AS is a neurological disorder (Bashe & Kirby, 2001; Myles & Simpson, 1998). It results from anomalies in the physical brain. Researchers have yet to discover the precise cause of AS. However, evidence suggests it is a result of the interactions among several genes, perhaps twenty or more (Bashe & Kirby, 2001). AS is also believed to carry a significant hereditary link (American Psychiatric Association, 2000; Myles & Simpson, 1998).

Areas of Deficit

Restricted areas of interest.

One common identifiable symptom of individuals with AS is their all-consuming interest in one or more particular topics (Bashe & Kirby, 2001). The distinction between a normal range of interest and that of a person with AS, is that the interest is often solitary, idiosyncratic and dominates the individual's time and conversation (Attwood, 1998). The focus of interest does change, but only by decision of the child. The complexity and number of interests will develop according to the child's developmental level and intellectual capacity (Kutscher, Attwood & Wolff, 2005). Bashe and Kirby (2001) report that parents and adults with AS indicated that the first special interest emerged by the age of two or three.

The interests of children with AS generally follow a pattern (Kutscher et. al., 2005). First the young child may become preoccupied with parts of an object. For example wheels on a toy bus. Next the child will move onto a fascination with a specific category of objects and try to accumulate as many as possible. The following stage involves the child acquiring information

regarding a topic or concept. Common childhood interests are transportation, animals and electronics. As the child develops, interests will become more sophisticated.

Attwood (1998) suggests that individuals with AS develop special interests for several reasons. Often the interest will help the individual facilitate conversation. People with AS do not want to appear stupid, consequently their special interest may help them to appear intelligent due to technical terms and their extensive knowledge. The area of interest can also provide order and consistency. The special interest can be a means a relaxation. For many individuals the intensity of their interest increases with their level of stress. Most importantly, persons with AS find their interest enjoyable. Much of their social world is challenging, but their special interest provides them with genuine excitement.

Social communication.

Social interactions are challenging for individuals with AS. There is a significant incapability to understand social cues (Myles & Southwick, 1999). One reason for this is due to an inability to understand nonverbal language. Some experts estimate that up to 90 percent of communication is nonverbal (Bashe & Kirby, 2001). Since individuals with AS find it difficult to focus on two things at once, often referred to as 'joint focus attention', they frequently ignore or miss nonverbal information that most individuals seem to automatically register (Moyes, 2001; Bashe & Kirby, 2001). For this reason, humor, sarcasm, and related slight modifications of phrases and words are taken as literal (Bondy & Frost, 2002). Persons with AS also have problems expressing accepted nonverbal cues. For instance, they may stare at another person for a long time, maintain abnormal body posture and fail to make eye contact or display an inexpressive face (Myles & Simpson, 1998). This lack of understanding of social cues directly impacts their use of language and social relationships.

Many children with AS are sophisticated in their expressive language (Bashe & Kirby, 2001; Rosaler, 2004), but have poor pragmatic communication abilities (Myles & Southwick, 1999). Therefore, many use inadequate language for social interaction (Myles & Simpson, 1998). According to Moyes (2001), they may use words that are too advanced for their age. They may choose words because of their dictionary meaning and not their conversation meaning. In conversations they may also repeatedly say the same phrase, talk with exaggerated inflections, a monotone voice or increase the volume of their speech to convey emotion (Siegel, 2003). Children with AS often will experience difficulty in sustaining a conversation unless it focuses on a particular interest (Myles & Southwick, 1999). These language deficits may make them appear awkward or socially inept (Bondy & Frost, 2002).

Socialization.

Asperger described the children he studied as socially isolated because of their lack of interest in the world around them, their engagement in stereotypic behaviors, and their tendency to follow their own impulses and interests despite others' responses (Myles & Southwick, 1999). These same behaviors continue to be apparent in children with AS.

As children with AS begin to interact with their peers it becomes evident that the play is one-sided and lacks the give-and-take typical relationship. It is not that they don't want to interact, but more often that they lack the ability to enter a conversation or a social situation (Bashe & Kirby, 2001; Myles & Simpson, 2002). When children with AS do engage in play with peers, they desire to have complete control over the activity (Attwood, 1998). They do not tolerate frequent shifts in focus and therefore can become upset during free play with another (Bashe & Kirby, 2001). Since these situations are challenging, children with AS will prefer to be

left alone or engage more with older children, teenagers, and adults (Attwood, 1998; Bashe & Kirby, 2001).

In social situations, children with AS may use rudimentary social skills. For example, they may greet a person, but not be able to extend it or reciprocate (Myles & Simpson, 2002). Many times social conventions are learned and then applied universally. This causes a problem because social conventions are variable.

According to Attwood (1998) children with AS generally do not understand social codes of conduct. They will inadvertently say or do things that may offend or annoy people. This is often the case when a child says true but potentially embarrassing personal comments. Once they learn codes of conduct, they tend to police between right and wrong; whereas children in a class will bend the rules, the child with AS will report any wrongdoing.

Another barrier is a lack of empathy (Myles & Simpson, 2002; Bashe & Kirby, 2001; Moyes, 2001). People with AS lack theory of mind, which is the ability to conceptualize and appreciate the thoughts and feelings of another person (Attwood, 1998). Due to this mind-blindness, a person with AS may experience difficulty with explaining own behaviors, understanding emotions, predicting the behavior or emotional state of others, understanding the perspectives of others, inferring the intentions of others and differentiating fiction from fact (Myles & Southwick, 1999; Myles & Simpson, 2002; Bashe & Kirby, 2001). Theory of mind problems can have a profound impact on social interactions.

Cognitive functioning.

Many students with AS have average intellectual abilities and are included in general education classrooms (Myles & Simpson, 1998; Safran et al., 2003). However, many aspects of AS make it challenging for students to have academic success without suitable supports. Many

problems are related to social and communication deficits combined with obsessive and narrowly defined interests, concrete and literal thinking styles, inflexibility, poor problem-solving skills, poor organizational skills, and difficulty in discerning relevant from irrelevant stimuli (Myles & Simpson, 2002).

Generally, individuals with AS have strong memory skills (Attwood, 1998). This can give a false impression of comprehension to teachers. According to Myles and Simpson (1998), they can understand basic facts and either repeat them verbatim or paraphrase them, but they experience difficulty understanding how to interpret them. Rote memory causes two problems. First individuals are able to store chunks of information; however they have trouble knowing how to retrieve it. Second, they have a lot of information stored, but the information remains unconnected (Myles & Simpson, 1998).

Cognitive flexibility is another issue for students with AS (Attwood, 1998). Often children with AS will only have one approach to a problem. If the problem-solving strategy does not work, they will continue to persist, which can result in a behavioral outburst (Myles & Simpson, 1998). Their thinking tends to be inflexible and they experience trouble adapting to change or failure (Attwood, 1998).

Behavior.

Behavior problems are not uncommon among children with AS. The first area of behavior focuses on socially inappropriate behavior stemming from lack of social understanding. Behaviors range from failure to monitor voice level, off-task questioning, inattention to personal space, and frequent interrupting (Safran et al., 2003). According to Myles and Southwick (1999), the second area, the rage cycle, is typically a function of social ineptness, lack of understanding, a high stress level, lack of control over the environment, an obsessive and single-minded pursuit

of a certain interest, or a defensive panic attack. As a result, these students manifest aggression related to difficulty in functioning in a world that they perceive to be unpredictable and threatening and thus results in a defensive panic attack (Myles & Simpson, 1998). The panic attack or tantrum comes instantly. A child will progress from calm to complete meltdown in a matter of minutes or seconds (Bashe & Kirby, 2001). Therefore it is crucial that professionals working with students with AS have the understanding and tools necessary to be proactive in their approach.

Motor clumsiness.

Many individuals diagnosed with AS experience some degree of fine and gross motor deficits (Bashe & Kirby, 2001). For example, persons with AS may lack coordination of their upper and lower limbs, resulting in puppet like movements (Attwood, 1998). Tossing, catching and kicking a ball accurately appears to be another impacted motor skill (Bashe & Kirby, 2001; Attwood, 1998). This directly impacts successful involvement in games and consequently effects social acceptance (Myles & Simpson, 1998). Many are also dysgraphic and have difficulty with handwriting. Consequently, the child may be embarrassed or reluctant to engage in writing tasks (Attwood, 1998). In general, technology is very appealing to those with AS and can be used to accommodate the poor motor skills (Safran et al., 2003; Foley, 2003). Other skills that require the use of both hands, like learning to dress, tying shoelaces, using utensils and riding a bike may also be challenging (Attwood, 1998; Bashe & Kirby, 2001).

Sensory issues.

People with AS tend to be hypersensitive to sound, sight, taste, smell and touch (Rosaler, 2004). As a result, an individual may be overwhelmed by the sound of a bell, smell of a doctor's office or the touch of chalk (Bashe & Kirby, 2001). Often painful sounds will cause children to

cover their ears, hide or take on a pained expression (Moyes, 2001). It is also common for these children to have strong and obsessive preferences for certain foods and textures. For example, children may avoid wearing certain types of clothing, such as zippers, buttons or denim. Their avoidance may be severe and extreme (Moyes, 2001). Not surprisingly, parents and teachers have reported behavior problems associated with these children's fear of anticipated unpleasant sensory stimuli (Myles & Southwick, 1999; Foley, 2003).

Counseling Intervention Strategies

Many intervention strategies are available to use with children with AS. In a school setting not all interventions are applicable. Social skills training, social stories and comic strip conversations are three interventions that can be used by school counselors to encourage development of social skills.

Skillstreaming.

Skillstreaming is a psychoeducational intervention that is used to teach students desirable prosocial behaviors (McGinnis & Goldstein, 1997). Teaching prosocial skills provides the student with opportunities to be successful. It breaks down and teaches specific skills like taking turns, sharing, understanding facial expressions and using nice talk in a safe place (Barry et al., 2003; Bashe & Kirby, 2001). Skillstreaming is designed for a group setting; however it can be used for one-to-one instruction (McGinnis & Goldstein, 1997). The process developed by McGinnis and Goldstein (1997) focuses on direct instruction of the skill through modeling, role-playing, feedback and transfer. Baker (2003) adapted skillstreaming to fit students with AS more appropriately. In his model the four components consist of didactic instruction, modeling of skill steps, role-playing skills with feedback, and practice in and outside the group. Myles and Simpson (1998) describe this as direct instruction. Their model first identifies the social skill

goal. Second, the steps the child takes to reach the goal are identified. Third, the steps are taught in sequential order through modeling, providing multiple opportunities to practice desired behaviors, providing instructional prompts, and reinforcing the behavior.

According to Baker (2003,), his approach includes more pragmatic language skills that children with AS need to practice. The steps to this structured learning include didactic instruction. The instructor first needs to teach the steps of a skill using a visual to support instruction. This part can be dry and sometimes boring for the student. It is suggested to put teaching into a game format. Next the instructor needs to model the skill steps. This can be done with other adults or students. While modeling the student should be instructed on what to observe. After the student has an understanding of the steps, a role-play should follow. This is best done with another student or adult. That way the instructor can coach students through steps and provide feedback as the observer. As the student role-plays the skill, the instructor or other student should provide corrective feedback. This process should be repeated until the student is able to demonstrate the skill without prompting. The student is then ready to practice the skill to promote generalization.

There have been few studies on the efficacy of skillstreaming. This is not surprising since it is difficult to objectively measure progress. However, most experts agree that skillstreaming should be one intervention that all children with AS should have in some form (Bashe & Kirby, 2001).

Social stories.

Social stories were first developed by Carol Gray (1994). They are a product and a process that improves social understanding between people with AS and those that work with them. Social stories are written in the first person and are specific to the individual and

circumstances (Baker, 2003; Moyes, 2001; Myles & Simpson, 1998). They are most often written about situations that are troublesome to the child with AS, but can also help introduce changes and new routines, explain reasons for others behaviors and teach new social skills (Adams, Gouvousis, VanLue & Waldron, 2004).

Social stories consist of four types of sentences, descriptive, perspective, directive, and affirmative. These sentences types and the ratio of use are important in the construction of the social story. Descriptive sentences identify the most relevant factors in a situation (Gray, 1994). They explain what occurs and why, who is involved, and provide background for the story (Moyes, 2001). Perspective sentences are most frequently used to refer to the internal status of other people (Gray, 1994). They help to instruct student's how it feels to step into someone else's shoes (Moyes, 2001). Directive sentences gently direct the child how to do something or how to respond. The sentences are not to be written using negative words (Gray, 1994; Moyes, 2001). Affirmative sentences often express a commonly shared value or opinion within a culture and stress an important point (Gray, 1994; Moyes, 2001).

According to Gray (1994), once the social story is written, it is important to introduce it in a relaxed setting. After the story is initially read with the student, it should be shared with individuals who are important in the story. This allows the child with AS to see that others have the same information, it allows for immediate review of the story and it encourages generalization of the story to other situations and settings.

According to Bashe and Kirby (2001), social stories have been in use since the early 1990's. They have gained wide acceptance by the authorities on AS. Social stories are viewed as an effective way of overcoming challenges that result from theory of mind and social

understanding. Since an educator developed them, they are also practical to use in a school setting.

There has been limited research on the effectiveness of social story interventions. Prior research investigated individuals with autism, not AS. Sansosti and Powell-Smith (2006) completed a study of the effects of social story interventions with three children with AS. Their data found an increase in the social behavior of two of the three participants. The maintenance of the target behaviors was not observed. The results show possible limitations and suggest a need for further research.

Comic strip conversations.

Comic strip conversations are social stories that have been adapted for younger students or those with more limited communication skills (Glaser, Pierson, & Fritschmann, 2003). Their main function is to help emphasize skills students need in order to behave in a more socially appropriate ways. The comic strip helps to slow down conversations, which can help those that struggle with quick exchange. Once the drawing is completed the child can revisit the picture and process the situation at his or her own pace without distractions and stress from being in the actual situation (Bashe & Kirby, 2001). They can also offer insight into the perspective of students with AS (Glaser et al., 2003).

One main difference between social stories and comic strip conversations is that the latter relies on the participation of the child who co-constructs them with an adult. This approach is designed to improve social interaction (Hutchins & Prelock, 2006). The competent adult can assist the child with AS in making sense of an unfamiliar or confusing social situation.

The comic strip incorporates simple figures, symbols, writing and color. The symbols are used to illustrate what people say, do and think (Hutchins & Prelock, 2006). The conversations

try to emphasize what people may be thinking. Color is used to identify the feelings and motivations of others (Gray, 1994). These comic strip conversations can be very effective, but can be cumbersome if used too often. They should be used for important conversations and social interactions (Gray, 1994).

A study completed by Rogers and Myles (2001) attempted to study the impact of comic strip conversations on an adolescent student with AS. The results found that the student enjoyed using the comic strips and thought they were effective in helping him interpret social situations.

The research on comic strip conversations is limited. There is no research that has studied whether comic strip conversations promote theory of mind. Gray's proposition is based on clinical opinion and remains theoretical (Hutchins & Prelock, 2006).

Education Intervention Strategies

Academic interventions.

Students with AS will greatly benefit from simple interventions in the classroom. The teacher should carefully consider the seating arrangement. A student with AS can be a target for bullies, for this reason he or she should be placed next to a peer buddy (Safran, 2002). This person may potentially serve as a social translator and role model. The student should also be seated near the teacher or near an open quiet area (Safran, 2002; Dahle & Gargiulo, 2004).

Routine provides students with AS predictability and a means of reducing anxiety (Attwood, 1998). Therefore, the structure of the classroom should be organized and visually accessible. The student should be able to access daily schedules with ease. For younger students visuals should be posted pictorially that organize the day (Attwood, 1998; Dahle & Gargiulo, 2004). Attwood suggests using a separate card and Velcro for each activity. This way the cards

can be rearranged in case there is an unexpected change in the order. If changes are going to occur they should be explained to the student well in advance (Dahle & Garguilo, 2004).

Poor concentration is a component of AS. Bashe and Kirby (2001) make the following recommendations. Teachers should provide frequent feedback and nonverbal redirection. Assignments should be broken down into manageable portions. Students should be allowed to work in shorter sessions with breaks when needed. Homework assignments should be reduced or eliminated.

Students with AS may have a strong fear of failure, criticism or imperfection, therefore the teacher needs to be cognizant of this worry. It will help the student if the teacher adopts an encouraging attitude. Rather than being compassionate, the student will benefit more from quiet assertive guidance. Since the student may be reluctant to ask for help, a secret code should be in place (Dahle & Garguilo, 2004; Safran, 2002). For example, a hand signal or object on the desk can let the teacher know the student needs assistance without drawing unwanted attention.

According to Safran (2002), group work can be especially challenging. The teacher should pay careful attention to the structure and makeup of the children. Students should be taught how to work in a group setting. It may be helpful to give each member a role, so that the student with AS is not left out. Since a student with AS could unintentionally monopolize the group, a timer could be used as an indicator for speaking time.

Most children with AS have a strong area of special interest, the teacher can use it as a teaching tool. The special interest can be incorporated into an activity that is non-motivating or perceived as boring. The student can also earn access to the special interest through a means of effort and compliance (Attwood, 1998; Myles & Simpson, 1998; Safran, 2002).

Organizational skills tend to be an area of deficit for students with AS. Provide students with a “to do” list or an assignment book. It is also helpful for parents to use this as a communication tool (Dahle & Gargiulo, 2004). This gives them a way of knowing about upcoming assignments, tests, and projects (Bashe & Kirby, 2001). To avoid lost items, help the student establish one place for everything at home and at school. If the student has difficulty locating materials, place pictures showing the contents on the outside of bins, bookshelves, cabinet and closet doors.

Social and behavioral interventions.

Social skill deficits are one of the biggest areas of difficulty for students with AS. To help students learn the hidden curriculum it is important for teachers to explicitly teach rules of social behavior. This can be done through social stories, modeling, role-playing and social skills groups (Bashe & Kirby, 2001). It is also important to provide clear expectations and rules for behavior. It may be necessary to implement a behavior plan that will positively reinforce appropriate skills (Dahle & Gargiulo, 2004). According to Simpson and Myles (1998), it has been found that reinforcement programs are most effective when implemented through collaborative social contracts. Adults and students work together to clearly define goals, expectations and consequences. The student then chooses reinforcers from a menu, which are provided when goals are met.

Students with AS tend to be targets for bullying. The teacher can help to diminish this by educating peers about how to respond to the student in social interactions in a way that does not stigmatize the student. In the class, the student can be encouraged to participate in cooperative games and be given the chance to be viewed as a valuable class member. By assigning a high-status, sympathetic peer to assist the student through nonstructured times, he or she may develop

some connections (Bashe & Kirby, 2001). During breaks, recess and lunch the student should be provided with a necessary level of support. This may range from using the peer buddy to using an adult. A separate location may also need to be utilized during unstructured times.

Sensory interventions.

In school settings, a physical therapist (PT) or occupational therapist (OT) is often helpful in designing a program to help support the student and teacher in dealing with sensory deficits (Dahle & Gargiulo, 2004). The teacher can then learn to anticipate the child's needs and respond with a variety of interventions to help alleviate anxiety provoking situations.

Many students with AS become overwhelmed from noise, light, smells and unstructured situations. To help students cope with the over stimulation, the teacher should have a quiet or "safe" place the student can retreat to in times of distress (Bashe & Kirby, 2001; Dahle & Gargiulo, 2004).

Some situations in schools, such as assemblies, fire alarms, the lunch room and recess may be too loud for these students. They may try to wear ear plugs or headphones as a way to screen out some of the noise. It may be beneficial to also teach and model relaxation strategies and diversions to reduce anxiety (Dahle & Gargiulo, 2004; Safran, 2002).

Visual sensitivity can impair a student significantly. The teacher can place the student's desk away from an area that receives strong sunlight and away from artificial light fixtures. To reduce glare they can wear sunglasses or a hat (Attwood, 1998).

Motor interventions.

Teachers can make adjustments for students with AS to help with motor deficits. Since writing can be a challenge, teachers should provide students with additional time for writing tasks. During note taking, another student could do the writing for the child. If handwriting is too

difficult, a computer or other assistive technology device should be utilized. Teachers should allow verbal responses instead of written. The student will also benefit from engaging in gross motor activities prior to doing fine motor activities (Attwood, 1998; Bashe & Kirby, 2001; Dahle & Gargiulo, 2004).

Physical education (PE) can often be very challenging. The combination of difficulty with fine/gross motor skills and understanding of team sports can make students with AS very vulnerable during PE. Teachers should provide students with the opportunity to take part in more individual activities as opposed to team sports (Bashe & Kirby, 2001; Dahle & Gargiulo, 2004). The activities should have no winners or losers. Additionally, the option of incorporating a health and fitness curriculum would benefit a student with AS.

Method

The literature explains the complexities of AS, especially for young children trying to acclimate into a school setting. For this reason, the researcher chose to use a case subject design to determine the effectiveness of using three counseling interventions with a child diagnosed with AS. By utilizing a descriptive qualitative method the researcher was able to develop an in depth view of the experiences a child with AS encounters in a school setting. The following section provides a description of the participant, family history, setting, procedure and evaluation.

Participant Description

In order to protect the participant's identity the researcher chose to refer to the participant as Rob and his mother as Susan. Rob was selected for the study following discussions with the school counselor, classroom teacher and his mother. It was agreed that he could potentially benefit from individual counseling and the intervention techniques. A brief summary of his

developmental history provided by his mother, classroom teacher and school psychologist help to describe the difficulties he has faced.

Rob is a nine-year-old third grader diagnosed with AS and Irlen Syndrome. He began third grade in a new school after being home schooled for two years. Rob completed kindergarten and first grade in a public school setting. According to Susan, he always had difficulty at daycares and at school. Within two years, he had been in and out of four daycare settings. Some of the complaints were of him biting, kicking, hitting, screaming, throwing chairs and banging his head. Susan consulted with a child psychologist and by the third session she mentioned AS. Rob was diagnosed with AS in 2002.

The following background information was provided for an assessment completed by a licensed speech/language pathologist prior to his diagnosis. He was described as having a very strong interest in dinosaurs beginning at about age 2. He could be very literal in his thinking, but does have an excellent memory. Information is best processed when explained to him in a logical sequential fashion. Socially, Rob has the ability to read basic facial expressions, such as happy, sad or angry, but does not understand subtleties and gradations. He has weak friendship making skills and his play is imaginative but narrow in focus.

Rob's transition to a public school setting was accompanied with aggressive and reactive behaviors. Difficulties with rigidity, impulse-control and adapting to change were noted. He reportedly preferred solitary play and would inappropriately mimic phrases and peer comments. By the middle of first grade, he was having frequent meltdowns, displaying aggression and had stopped talking. It was then that Susan decided to home school him. She reported that he seemed happier and his social skills improved. It was only when Rob expressed an interest in returning to school that Susan pursued reentering him.

Based on the school psychologist's report Rob is friendly and cooperative. He enjoys interacting with others, especially adults. He can experience difficulty following multiple people in a conversation and does not always attend to nonverbal cues. He has inconsistent eye contact. Rob has begun to take turns in a conversation, but they tend to focus on his interests. His interests are restricted to Yu-gi-oh, video games, space, ocean life and dinosaurs.

Rob can become frustrated easily. Some triggers are multi-step directions, writing, reading, noise, feel of paper and over-stimulation. In the past, Rob has engaged in head banging to express frustration. His behavior can escalate quickly to tantrums and running out of the room.

Rob's cognitive functioning is average, with visual skills being stronger than verbal/auditory skills. Irlen Syndrome impacts his ability to visually process print, which makes reading and writing a challenging task. His math skills and number sense are areas of relative strength.

Family History

Rob lives with his mother, whom currently attends college and works as a server. He does not have contact with his father. His father completed high school and began college, but developed a problem with alcohol. He served in the Marine Corp for six years and then was discharged. It was reported that he may have some mental disorder.

Susan was diagnosed with AS in 2002. When she began researching AS for information to help her with Rob, she found that she fit the criteria as well. She reported that other members of her family exhibit similar symptoms.

Setting

The school that Rob attends is considered a neighborhood school. It serves students in kindergarten through third grade. The total enrollment is 192, 52% are males and 48% are

females. The racial makeup of the school is 93% white, 2% African American, 2% Asian and 3% Hispanic or Latino. In Rob's classroom there are 25 students, 56% are females and 44% are males. Three other students in the room have been diagnosed. The diagnosis are autism, downs syndrome and AS. In addition to the classroom teacher, there are always two teacher aides in the room that serve as one to one aides.

According to the 2000 Census, there are 52,354 people, 22,247 households, and 14,327 families residing in Rob's town. The racial makeup of the town is 93.03% white, 3.55% African-American, 0.98% Asian, 0.15% Native American, 0.02% Pacific Islander, 1.02% from other races, and 1.25% from two or more races. Hispanics or Latinos of any race make up 3.06% of the population. Of the town's 22,247 households, 26.7% have children under the age of 18 living with them, 50.7% are married couples living together, 10.4% are headed by a female with no husband present, and 35.6% are non-families. The average household size is 2.32, and the average family size is 2.91. A breakdown of the Town's population by age shows that 21.9% of residents are under the age of 18, 5.2% from 18 to 24, 26.6% from 25 to 44, 23.7% from 45 to 64, and 22.5% of residents are 65 years of age or older. The median age is 42.6 years. Among residents 25 years old and above, 84.4% have a high school degree or higher, 27.9% have a Bachelors degree or higher and 10.5% have a graduate or professional degree. Median household income in the Town is \$45,276, and median family income is \$55,493. About 3.8% of families and 5.4% of residents live below the poverty line, including 6.6% of those under age 18 and 6.8% of those ages 65 and over. The median home value is \$88,700.

Procedure

The researcher chose Rob as a participant due to his diagnosis of AS. Since he was transitioning back into the public school system, he was going to need strong support. The pupil

personnel services team identified that Rob would need support in developing friendships and social skills. Additionally he needed work on pragmatic language. It would be important to directly teach social skills and then help to reinforce those skills in a general setting.

The researcher planned to work with Rob for a minimum of 12 counseling sessions. Prior to beginning the work, the researcher planned to gather information through a variety of sources. To begin the researcher would review Rob's files. That would provide the researcher with an overview of Rob's background information, areas of strength and need. Following that the researcher intended to broaden her understanding of Rob from holding informal interviews with Susan and classroom teacher. Susan and classroom teacher were also going to fill out a skillstreaming checklist (McGinnis & Goldstein, 2003). The goal of the interviews and skillstreaming checklists was to identify areas of need for the researcher to focus on in the sessions.

Depending on Rob's areas of need the researcher planned to use one or a combination of skillstreaming, social stories and comic strip conversations. The researcher chose these counseling interventions based on the review of the literature. The three interventions have been used with elementary age students with AS.

Evaluation

The researcher planned to work with Rob one time per week for a minimum of twelve sessions. The effectiveness of the interventions would be measured after six meetings and then again after 12 meetings using a skill rating form filled out by the classroom teacher. This information would provide the researcher insight into Rob's progress in the classroom setting. At the end of the meetings, the researcher intended to interview Susan and classroom teacher. The

interview would provide a way of knowing if the counseling interventions impacted Rob's social development.

Results

Interviews

The researcher began seeing Rob before interviews could be arranged. At the same time, team meetings were implemented on a biweekly basis. These meetings in conjunction with the skillstreaming checklist provided the researcher with enough information. Interviews were not conducted.

Skillstreaming checklist teacher

Rob's classroom teacher filled out the skillstreaming checklist after approximately six weeks of working with him. This gave her the opportunity to develop a sense of Rob and his areas of strengths and needs. The following areas were identified as skills needing development; using nice talk, using too much brave talk, asking for help, ignoring other children and situations, asking a question, trying when it is hard, interrupting, sharing, knowing your feelings, feeling left out, asking to talk, deciding how someone feels, dealing with teasing, dealing with feeling mad, solving a problem, relaxing when upset, saying no in an acceptable manner and deciding what to do when feeling bored.

Skillstreaming checklist mother

Susan completed the skillstreaming checklist and then added additional comments. This gave the researcher a more complete view of Rob. She identified many areas of strength for him. It is important to note that Susan could not fill out all parts of the checklist because many behaviors were specific to a school setting.

She reported that Rob often listens. She stated that he is very good at listening and he usually makes good eye contact with people when they are talking. She went on to say that he is a boy that is always in motion so even when it appears that he is not listening, he usually is. She thinks the most difficult thing for him is understanding the meaning of the words that people use. He also doesn't always understand tone of voice or body language, so he doesn't always know how to respond. She explained that when he doesn't know how to respond, people often think he is not listening. But the truth is that Rob heard everything, he just doesn't know the appropriate way to reply.

Susan stated that he often says thank you. She explained that he is always discussing his appreciation for what other people do for him and his recognition of when someone is nice to him or others. However, she does think that his reaction is delayed. It is only after he has had time to process his day that he will talk about things. This is great progress because a couple of years ago he didn't know or understand the importance of saying thank you. She has worked on this skill and explained that the best moments are when he gives her a big hug on his own, thanking her and telling her how wonderful things are.

Offering help to an adult is something Rob often does. Susan stated that most of the time he will ask her if can do anything specific and other times he will ask in a general way if there is anything she would like him to do. She explained that Rob doesn't have a schedule of chores; instead they work on things together. If she asks him to do something, he generally takes care of it. He may at times ask to do it later, but without reminders he will get it done.

At home Susan reported that Rob has no problem beginning a conversation, whether it is with her, his babysitters or friends. However, she noted that he doesn't always look to see if it is an appropriate time to start a conversation. For example, he may try to begin talking to the

babysitter the minute she walks in the door, or when he sees the neighbor leaving in a hurry. As a result, he may get frustrated when a person can't talk because he is so excited about a topic.

Susan stated that while playing games Rob was so fair that sometimes other kids wouldn't want to play with him. He actually had to learn how to 'bend the rules'. She went on to explain that if someone forgets a rule, Rob is the first to recite it. If anything, he struggles with losing. This is a skill she has spent a lot of time on with him. Susan makes the focus on the fun of playing and not whether he wins or loses.

Rob always shares his belongings with others. Susan explained that at times she has to make it clear to him that there are things he shouldn't share. He can get frustrated when he does share and other kids don't take turns with him. Rob is learning what to do in these situations. This is challenging because he always wants to be make sure he is sharing and being nice.

According to Susan, Rob always apologizes. She stated that he does his very best to make up for the things that he has done wrong, and he is usually the first one to admit it. He is also very uncomfortable with lying and keeping a secret.

Rob has a good memory for what he needs to put in his backpack. Susan stated that she may need to remind him to get his bag ready, but he knows exactly what items go inside. Some mornings he tends to focus on walking out the door and he will forget to grab his bag.

Susan reported that even though reading and writing are difficult for Rob, he still does a great job of his homework and gets it done. Sometimes when he gets off the bus, he is totally wiped from the day. He is still adjusting to the schedule. At the time she reported this, she explained that they were still getting their homework routine down. Many of the difficulties were due to Susan's evening work schedule.

Susan reported areas of need for Rob. The following areas are skills he does sometimes or seldom. Susan stated that he seldom asks for help. She went on to explain that he is still learning how to verbally express the need for help and at times he doesn't recognize the need for assistance. His mind thinks in pictures and many times he will only see where he is stuck in a situation. It may not occur to him to ask for help and very often he doesn't have a picture in his mind for it. Learning this is very mechanical. He has to form a picture for each new place and new person. For settings that change often like school or a friend's house, he can become very overwhelmed and as a result not ask for help when it is needed.

Rob sometimes follows instructions. Susan views the biggest struggle as putting the verbal instruction into visual understanding. She stated that routine makes the biggest difference in his comprehension. At times, she tries to bend the routine slightly so he can learn to generalize to new situations. If he is given too many instructions at a time, he can get overwhelmed.

Susan stated that Rob does not always know how and when to ask a question. However, she does state that he is improving in this area. She went on to say that since he has returned to a public school setting, his confidence in this area seems to be getting stronger.

Susan reported that Rob has no problem knowing how to be around adults. He experiences the most difficulty when trying to join in with other kids. Since he was little he would want to play with other children, but he wouldn't know how to step into their circle or do what they were doing. Usually he would stand there and watch them play and not know what to say. He has developed certain lines to say, for example, "Can I play with you?" Over the years he has been learning to ask "How do I go over there and play with those kids?" That has been a major accomplishment for him.

Rob sometimes knows how to ask a favor in an appropriate way. Susan stated that he can sometimes come across like he is giving a command instead of asking for something. His biggest struggle in this area is patience. He doesn't like to wait for the other person and when he gets impatient, he will begin to repeat himself over and over again.

Susan reported that Rob sometimes accepts compliments given to him in a friendly way. She went on to say that he likes to get compliments and sometimes he will ask about something in order to receive a compliment. Rather than saying thank you, he will agree with Susan and respond with "I know." He also sees a compliment as an open door for a conversation about what he is doing.

Susan explained that she was unsure of how Rob contributed in classroom discussions. She did note that he is working towards not interrupting other people when they are speaking. He does get frustrated when he thinks other people are interrupting him. The more people there are in a group, the more challenging it can be for him to interact appropriately.

Susan reported that Rob sometimes can express his feelings in an acceptable way. He also sometimes tries to figure out how others are feeling.

Team Meetings

Meetings were scheduled on a biweekly basis. People in attendance were Susan, principal, speech/language coordinator, classroom teacher, school counselor and researcher. During each meeting, Susan would give a home report. Then a report from each additional member would follow. This format provided all in attendance the opportunity to hear about how Rob was progressing in all areas. It also gave the members a chance to brainstorm ways to better serve his needs. As a result of team meetings, his counseling goals tied more closely to the classroom.

It was during team meetings that the researcher could assess Rob's progress and then make adjustments. All members provided input on the skills being addressed. The researcher was able to gauge if Rob had transferred the skill into a general setting. If he had not yet applied the skill, the researcher knew to continue working on it in his session.

Additionally, the meetings provided a place for all members to work on a common language and common expectations. Rob thrives on consistency; therefore it has been crucial for all personnel working with him to use the same language.

Due to the strong communication in the team meetings, the researcher thought it was repetitive to have the classroom teacher complete a skill rating form. All of the information needed was gathered during the meetings.

Functional Behavior Assessment

After two months of school, Rob's behavior began to escalate to tantrums and running out of the room. The school psychologist completed a Functional Behavior Assessment (FBA), which indicated that the behaviors were related to deficits in coping skills and academic skills. The behaviors served the functions of primarily avoidance of tasks and secondarily to gain the attention from adults. Recommendations were for academic and environmental modifications, direct instruction in skill deficit areas, and development of a formal behavior support and intervention plan.

The FBA impacted some of Rob's counseling goals. Eliminating his aggressive behaviors became priority for the safety of himself and his peers. Therefore some of his work focused on practicing strategies that would help him function more effectively in the classroom.

Counseling Goals

The researcher identified goals based off the information gathered from Rob's file, the two skillstreaming checklists and team meetings. The researcher determined these to be preliminary and was prepared to adjust as needed. The targeted skills were asking for help, interrupting and staying on topic during a conversation. The researcher chose these three because she thought they would help him acclimate to a classroom setting and assist with peer relationships.

Session Format

Since Rob thrives on routine, the researcher thought it was important to incorporate that into his counseling sessions. The expectation was to make his sessions comfortable and predictable, so that Rob could relax and work on his skills in an environment that he viewed as safe.

For the initial three counseling sessions, the researcher reviewed the schedule with Rob. A visual was posted on the white board in front of him. Each session would begin with Rob putting his feeling on the feeling bear. Then he would learn something new and practice the skill. After that the researcher and Rob would relax using a variety of relaxation techniques. For the last five minutes of each session, Rob would get free choice time. This time gave the researcher a chance to interact with Rob in an unstructured manner or observe while he engaged in play.

The researcher also reviewed the days they would meet. Out of a six day cycle, they would meet on two of the letter days for thirty minutes. This allowed the researcher a chance to work on skills on a more consistent basis with less time between meetings. It also gave the researcher the opportunity to be more flexible in their sessions. For this reason, Rob sometimes had the chance to bring a friend with him. When a classmate accompanied him, they would

practice the targeted skill together. It also provided Rob some time to work on friendship skills in a safe, calm environment.

Skillstreaming

The researcher used McGinnis & Goldstein's (1997) skillstreaming guide to assist with the teaching of asking for help, interrupting and staying on topic. The first skill taught was asking for help. Through consultation with the classroom teacher, it was decided that this skill would have the greatest impact on Rob's functioning in the classroom. In the classroom, Rob has a variety of cards he can access. One card is for when he needs help. However, he was not using that, rather he was shouting out or going directly up to the teacher.

To teach the skill, the researcher hung the poster on the board, so that Rob had a visual. The skill steps were altered to better meet Rob's needs. The first step, try it, stayed the same. The second step was covered up and replaced with blank paper. The researcher thought Rob would develop ownership of the skill if he helped decide the ways he could seek help. Together the researcher and Rob decided to add use card and raise hand to the poster. Then Rob began using some sign language. He requested that the researcher find the signs for "I need help". The researcher used the internet to find the appropriate signs and together they practiced. Rob practiced the signs many times until he had them down correctly. The researcher reviewed the steps for asking for help. Rob then taught the researcher the steps. After the researcher was confident in Rob's ability, they role played several classroom situations. When it was time for Rob to have free choice, he chose to continue with the role plays. On the way back to class he requested that we teach his teacher and class the sign language. Rob's teacher listened to him explain about the session and then arranged a time with him to teach the class. The researcher reviewed the skill in his following two sessions.

According to Rob's teacher, interrupting was a big area of concern. Whenever he had something to say, he would approach her and begin talking without taking into consideration what she was doing at the time. The researcher used the skill from McGinnis & Goldstein (1997). The researcher taught the skill and explained why it would be a skill of importance. After Rob could verbalize the skill, they role played a situation from school and one from home. After the session, Rob could verbalize the steps but was unable to put them into practice in the classroom. The team decided that a visual would help Rob understand when he could approach his teacher. She began wearing a circle with one side green and one side red. The circle helped Rob to identify times when it was appropriate to go up to his teacher and interrupt.

After working with Rob on a regular basis, the researcher saw that it was challenging for Rob to maintain a conversation. The researcher had observed this in conversations with herself and in situations with a peer. As a result, the researcher used the skill staying on topic from Baker (2003). Rob learned the steps of the skill and then played a game to practice. Rather than doing a role play, the researcher used a ball to have a conversation. A topic was chosen and then whoever had the ball could speak. The researcher reviewed length of time to talk. Rob was very engaged in the activity. He needed reminders to wait for the ball to talk. The next session a friend accompanied Rob. In this setting he was able to teach the friend the skill and practice the game with him. The researcher could observe and provide them with feedback.

Social Stories

The researcher used social stories with Rob three different times. The first time was a result of Rob's behavior in the classroom. On one occasion when a substitute was in the room, he had a tantrum. He kicked the lockers, threw a pencil across the room and tipped over a container holding butterflies. The change in classroom teachers was extremely challenging for Rob to

handle. After the incident, we read “Dealing with a Different Teacher”. The social story explained several points; the reason his teacher may not be in school, the substitute may teach differently, he still has the same routine, he has strategies to calm himself down and teacher helpers are always there to help. The researcher read this three times with him and provided a copy for the classroom and home. It was suggested to read in the morning when there was a substitute in the room.

In addition to working on the skill for interrupting, the researcher read with Rob, “How I Know When to Talk to My Teacher”. The social story explained the steps for understanding the green and red circle. It further reviewed the steps to take when the circle was on green. The steps were; raise my hand or walk over to my teacher, wait and say “Excuse me.” The combination of the instruction and social story helped Rob to understand the skill.

As a result of the FBA, one modification included that Rob would have a teacher aide with him at all points of the day. The aides would rotate so that he didn’t become dependent on one. Rob struggled with using the teacher aides. He preferred to rely only on his classroom teacher. We read “My Teacher Helpers” to help him understand the job of the aides. The social story focused on the reason for the aides, their names and it reinforced that change will help Rob.

All the social stories were read to Rob by the researcher. Rob struggles with reading and does not like to engage with text. Each time the researcher introduced a social story, Rob expressed his dislike for them. However, he would listen and after he would tell the researcher if anything needed to be changed to make the story correct. Copies of the social stories were provided for the classroom teacher and home.

Comic Strip Conversations

After a team meeting, the researcher chose to do a comic strip conversation with Rob. Susan had reported that recently he had been choosing to draw. She stated that the act of drawing seemed to relax him. In the next session, the researcher explained to Rob the parts of a comic strip and the steps. The researcher began a comic strip about his teacher wearing the red and green circle. Rob asked for the paper and took over. As he drew, he verbalized how he was feeling when he wanted to talk to his teacher and she had the red circle. He stated that he gets angry and wants to squeeze his teacher's head. Rob went on to say that he knew he could not do that. He continued with the comic strip and drew himself turning over his card that signals he needs a break. Next he drew himself in his safe room doing yoga. He explained that yoga will help him relax.

As Rob worked on the comic strip, he would do the drawing and then ask the researcher to write the words. He had a strong understanding of the situation. When the whole piece was finished, the researcher worked with him on adding thinking bubbles to gain insight into his thoughts as well as the teachers.

After teaching a lesson in Rob's class, the researcher attempted to do another comic strip with him. While the researcher was working in a small group with Rob, she observed that he struggled while finding a seat in a circle. The researcher attempted to assist him, however he had escalated quickly. Rob yelled and threw a pencil. The researcher redirected him and he was able to settle into the group. It appeared to the researcher that Rob thought he was being alienated from a group of boys.

During his session, the researcher suggested doing a comic strip to help Rob gain insight into the thoughts of his peers. He was reluctant to work on it. The researcher began and did some

modeling. Rob withdrew from the activity. The researcher put away the comic strip and in place reviewed his relaxation strategies.

Relaxation Techniques

Each session the researcher planned for time to relax. The purpose of including this was to help Rob explore a variety of techniques. Through the exploration, the goal was for him to find the ways he liked to relax and use them at home and in the classroom.

The researcher first introduced Rob to deep breathing. She showed him that he could use the strategy at any time and no one would need to know. Rob tried deep breathing on many occasions. He exaggerated his breathing and would laugh out loud.

The next technique practiced was squeezing oranges. The researcher showed Rob how to tense his arms and fists while counting to five. Rob practiced this technique in his sessions and during a classroom lesson.

The researcher also introduced Rob to labyrinth tracing. Before hanging the poster of the labyrinth the researcher added glue to the area that needed to be traced with a finger. The purpose was to have a guide for his finger. Rob liked the feel of the glue and traced the labyrinth without frustration. At times, he would use it without prompting. The researcher provided one for the classroom.

Rob's favorite technique was doing yoga. The researcher first introduced yoga during a classroom lesson. During Rob's following counseling session, he informed the researcher that he had been doing the poses at home. From that point on, Rob began doing yoga poses in his sessions on a regular basis. He worked very hard to get the poses right. When he struggled he would appropriately ask for the researcher's assistance.

Researcher Observations

The researcher immediately enjoyed working with Rob. He was friendly and very imaginative in his play. It was also very clear to the researcher that he was experiencing significant difficulty in the classroom and he wanted it to get better.

Throughout the sessions, Rob would have some good days and some bad ones. He was very open with his feelings and would let the researcher know about situations that were bothering him. The researcher took note that he had a hard time letting things go. If something upset him during the weekend, it would still be on his mind in the middle of the week. During these times, the researcher let Rob guide the session. It seemed more important for him to have a place to get all his frustrations out.

In the beginning of their work, Rob had several meltdowns. This happened when he would discuss a trigger for him; such as pizza, his grandmother or friends. When he reached this point it was a challenge to help him work through it. As their sessions progressed, the researcher noticed that triggers were not affecting him like they had weeks earlier. Rob began using his words. For example, he would say, "I don't want to tell you about that" or "That makes me angry."

Rob's free choice time changed dramatically from the beginning sessions. He really liked doing role plays, so he would ask to continue them for free choice. The acting became very silly and at times inappropriate. By the end of their work, Rob's play changed. He preferred to play cooperative games. The researcher observed that he would ask for help appropriately when needed.

During sessions, Rob would interrupt the researcher many times. After working on the skill the interruptions decreased. On one occasion he even politely corrected the researcher by saying, "Excuse me, but you just interrupted me. Can I finish talking?"

By the end of their work, Rob still had several skills to learn. However, during one of their last sessions, he stated that he was happy and couldn't think of anything to work on.

Teacher Post Interview

The researcher met with the teacher after eleven weeks to review Rob's progress. The teacher reported that Rob asks for help appropriately and even says please. He knows now when to approach the teacher without the aide of the red and green circle. The teacher decided to phase it out, so that Rob could prepare for fourth grade. She explained that she removed the circle one subject at a time. The process of slowly reducing the circle helped Rob's adjustment. He now checks to see if it is an appropriate time prior to interrupt the teacher. If he sees that she is busy, he asks a friend or a teacher aide.

The teacher reported that up until a month ago he would say, "I hate my life" or "I want to die" when he became angry. She stated that he has not used these phrases in a month. When he does become frustrated he now uses his words. He will say that he needs a break. She has also observed him in class using his relaxation technique of squeezing oranges. Some triggers that make him angry are when he is interrupted or if he thinks he is wrong.

The teacher explained that Rob has improved in the area of staying on a topic. She went on to say that routine helps him to stay focused. For example during reading group, he knows the routine and can stay with the group. However, he does need to work on knowing when to stop talking.

Throughout the school year he has had lunch in a separate location. The lunch room was too noisy and caused Rob stress. The teacher reported that within the last month she has started working him into the lunch room. She began with two minutes and has been increasing slowly.

The purpose is to prepare him for his new school next year. The teacher stated that he is doing well. He chose a seat on the end, close to the doorway and in view of the whole room.

Overall the teacher reported that she was very pleased with Rob's progress. The teacher explained that the beginning of the year was challenging for both of them. He was trying to acclimate to public school and she was trying to anticipate his needs. Now she has a better understanding of him and the accommodations that help in his development.

In conclusion, through consultation with school personnel and Rob's mother, the researcher gained insight into Rob's strengths and areas of need. This assisted in the development of counseling goals and appropriate interventions. Through the use of skillstreaming, social stories and comic strip conversations, Rob's social skills significantly improved in the areas of asking for help, interrupting and staying on topic.

Discussion

This paper reported on the characteristics of AS and counseling interventions that could be effective with this population. Skillstreaming, social stories and comic strip conversations were used to help reduce inappropriate social behaviors in one student with AS. The efficacy of the interventions was measured using a descriptive qualitative method. Information was gathered from Rob's mother and classroom teacher. Additional data was collected from his school file, skillstreaming checklists and members of the team that met biweekly.

Overall, the effects of the counseling interventions appeared to be promising for Rob. Following the counseling sessions, he demonstrated marked improvement in three areas; asking for help, interrupting and staying on topic. According to reports from his classroom teacher and observations from the researcher, Rob seemed much more confident and happier in school. Rob also reported that he was happy.

Limitations

A primary limitation of the study was the use of a single subject. Caution must be used when generalizing results across the population of individuals with AS. It is important to take into account that the results are specific to one individual with a unique set of experiences.

Another significant limitation was the combination of counseling interventions. It is unknown if it was the combination of the skillstreaming, social stories and comic strip conversations that positively impacted Rob's behavior. Since the interventions were used simultaneously the researcher cannot determine if one had a more significant effect than the others.

A related limitation was the collaboration of school personnel. It cannot be determined if the changes in Rob's behavior were a result of the counseling interventions. The changes could be a result of the accommodations put into place in the classroom. Furthermore, they could be directly related to work Rob did with his speech and language therapist. The researcher cannot identify if Rob's behavior improved due to one intervention or a combination of interventions.

Finally, the researcher used a qualitative study to report outcomes. By imploring this method, the information does not provide quantitative results. The information is limited because it lacks any type of rating scales. The behaviors therefore were not systematically tracked. Since the reports are from individuals whom are closely tied to Rob, they may not be completely objective in their views.

Interpretation of Findings

The findings of this study contribute to the effectiveness of skillstreaming, social stories and comic strip conversations. The research suggests that skillstreaming should be used in some type of format with all students with AS (Bashe & Kirby, 2001). The study indicates that

skillstreaming positively impacted Rob's behavior. According to Myles & Simpson (2002), students with AS use rudimentary social skills, therefore skillstreaming is beneficial because it breaks down a skill and specifically teaches each step. It also allows for modeling, role-playing and feedback (McGinnis & Goldstein, 1997; Myles & Simpson, 1998; Bashe & Kirby, 2001; Baker, 2003).

The results of using social stories relate to the study completed by Sansosti and Powell-Smith (2006). Rob's behavior improved following implementation of the social stories. This indicates that using them with students with AS can positively impact their social behaviors. Bashe and Kirby (2001) also suggest that they are an effective way of overcoming challenges that result from theory of mind and social understanding and they are practical to use in a school setting.

Comic strip conversations are used to help students with AS slow down difficult situations (Glaser et al., 2003). When used with Rob he gained a deeper understanding of the thoughts of others. He was able to verbalize his thinking during a frustrating time and then discuss appropriate ways to handle the situation. Since comic strip conversations are co-constructed (Hutchings & Prelock, 2006), the adult can assist the student in developing a deeper understanding of the difficult situation.

Counseling Implications

The results of this study are relevant for professionals working in a school setting. They are especially beneficial to counselors working with elementary age students. Since the diagnosis of AS has dramatically increased, counselors need to have effective intervention techniques to use with this population. Many of the studies regarding interventions are with related disability groups. Most of the strategies specific to AS are descriptive, anecdotal reports (Safran, 2001).

Counselors need to combine relevant research with case studies to create school-based interventions that reflect the best current knowledge (Safran et al., 2003).

It is important that all school personnel have a strong understanding of the characteristics of AS. Most students with AS receive the majority of their education in a general education classroom setting (Myles & Simpson, 2002; Safran, 2002). For this reason, it is necessary that research based interventions are used to work with these students. They can be very successful with the appropriate supports.

Furthermore, school counselors need to have a variety of strategies to work with children with AS. Comic strip conversations are great to use, but not in every situation. This is also true for skillstreaming and social stories. Therefore, counselors need to discern when to use specific strategies.

One of the most crucial implications for counseling is the need to develop a team approach to working with students with AS in a school setting. The success of the student can greatly increase when all stakeholders play an active role. School counselors need to be willing and ready to educate and collaborate with all school personnel. As evidenced with Rob, it was not just the work of the counselor alone, but all team members that contributed to his success.

Further Research

This study provides no definitive claims as to the effectiveness of skillstreaming, social stories or comic strip conversations for students with AS. The information should be used as a foundation for research. It is recommended that future research employ controlled studies that isolate each intervention. This would provide a deeper understanding of the potential benefits of each technique. Since recent trends in educational practice are requiring more evidence-based approaches (Sansosti & Powell-Smith, 2006), it would be advantageous if the research combined

the use of qualitative and quantitative methods; therefore, providing greater validity to the use of counseling interventions.

Often children with AS can master a skill in a controlled setting, but fall apart in their natural environment. Additional research should focus on the ability to transfer skills into a general setting. This will help to further the understanding of the effectiveness of skillstreaming, social stories and comic strip conversations.

In order to gain a broader perspective of individuals with AS, further research should use a larger number of participants. This would help to inform practice to the general population and increase the reliability of future studies.

In summary, the results of this study support the notion that skillstreaming, social stories and comic strip conversations are useful in decreasing inappropriate social behaviors. Research on interventions to use with this population is still relatively new. This represents an exciting area of study to pursue that may influence future practice.

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Appendix A

Statement of Informed Consent for Parents of Minors

This letter describes a research study being conducted with a child with Asperger's syndrome. The purpose of the research in this area is to broaden effective counseling interventions that would assist children with social skills. The person conducting the research is a graduate student at SUNY College at Brockport. You are being asked to give permission for you and your son to participate in this research. If you agree to participate in this study, you will be asked to fill out a skillstreaming checklist and take part in a brief interview at the beginning and end of the ten week study. In addition, the classroom teacher will be asked to participate in an interview and fill out a skillstreaming checklist. Your son will take part in ten to twelve counseling sessions, which would focus on social skills training. The counseling sessions will take place at Seneca school in the school counselor's office.

The possible benefit from participating in this study could be that information will be learned that would allow counselors to better help children with Asperger's syndrome and social-communication problems. Information from this study might also suggest interventions for classroom teachers.

Any information that you and your child give in this study remains confidential and will be known only to the researcher. Except for this consent form, all checklists/interviews will be coded with a number and your names will not be on them. All forms will be kept in a locked filing cabinet. At the end of the research all forms will be shredded.

Your child's counseling sessions will be audio tape recorded, so that information can be reported accurately. No last name will be used on the tape to preserve confidentiality. These tapes will be kept in a locked filing cabinet for the duration of the research and then destroyed at the end of the research.

Your participation in this study and your child's is completely voluntary. You and your child are free to change your mind or stop being in the study at any time.

You are being asked whether or not you want to participate and have your child participate in this study. If you wish to participate, and you agree with the statement below, please sign in the space provided.

I understand the information provided in this form, agree to participate in this project and to have my child _____ participate.

If you have any questions you may contact:

Primary researcher
Moira Hancock
585-421-8787

Faculty Advisor
Dr. Patricia Goodspeed
585-395-5493

Signature of parent

Date

I agree to have my child's counseling sessions audio taped.

Signature of parent

Date

Appendix B

Statement of Informed Consent for Minors

I, Mrs. Hancock would like to work with you in counseling sessions to help you feel better in school. While we are working together, we would focus on skills that would help you with your classmates. Since I am a graduate student at SUNY College at Brockport, I plan to write a research paper about our work together. We will meet 10 to 12 times in the school counselor's office.

I hope that our work together will help other counselors work better with children with Asperger's syndrome. Our work might also help teachers work better with these students in the classroom.

Any information that you give in this study remains confidential and will be known only to me. Except for this consent form, all checklists/interviews will be coded with a number and your name will not be on them. I will keep all the papers in a locked filing cabinet. At the end of the research all forms will be shredded.

Your counseling sessions will be audio tape recorded, so that I can write about our work together. I will keep the tapes locked in a filing cabinet and destroy them when we finish our work.

You only have to participate in this study if you want to. You can stop at any time and no one will be upset.

If you wish to participate in this study, and you agree with the statement below, please sign on the line.

I understand the information above and agree to participate in this project.

 Signature of participant

 Date

 Birthdate of the participant

 Signature of a witness 18 years of age or older

 Date

If you have any questions you may contact:

Primary researcher
 Moira Hancock
 585-421-8788

Faculty Advisor
 Dr. Patricia Goodspeed
 585-395-5493

Appendix C

TEACHER/STAFF SKILLSTREAMING CHECKLIST

Student _____ Class/age _____

Teacher/staff _____ Date _____

INSTRUCTIONS: Listed below you will find a number of skills that children are more or less proficient in using. This checklist will help you evaluate how well each child uses the various skills. For each child, rate his/her use of each skill, based on your observations of his/her behavior in various situations.

Circle 1 if the child is *almost never* good at using the skill.

Circle 2 if the child is *seldom* good at using the skill.

Circle 3 if the child is *sometimes* good at using the skill.

Circle 4 if the child is *often* good at using the skill.

Circle 5 if the child is *almost always* good at using the skill.

Please rate the child on all skills listed. If you know of a situation in which the child has particular difficulty using the skill well, please note it briefly in the space marked "Problem situation."

- | | <i>almost never</i> | <i>seldom</i> | <i>sometimes</i> | <i>often</i> | <i>almost always</i> |
|---|---------------------|---------------|------------------|--------------|----------------------|
| 1. Listening: Does the child appear to listen when someone is speaking and make an effort to understand what is said?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 2. Using Nice Talk: Does the child speak to others in a friendly manner?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 3. Using Brave Talk: Does the child use a brave or assertive tone of voice in a conflict with another child?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 4. Saying Thank You: Does the child say thank you or in another way let others know he/she appreciates help given, favors, and so forth?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 5. Rewarding Yourself: Does the child say when he/she has done a good job?
Problem situation: | 1 | 2 | 3 | 4 | 5 |

	<i>almost never</i>	<i>seldom</i>	<i>sometimes</i>	<i>often</i>	<i>almost always</i>
6. Asking for Help: Does the child request help when needed in an acceptable manner? Problem situation:	1	2	3	4	5
7. Asking a Favor: Does the child ask favors of others in an acceptable way? Problem situation:	1	2	3	4	5
8. Ignoring: Does the child ignore other children or situations when it is desirable to do so? Problem situation:	1	2	3	4	5
9. Asking a Question: Does the child ask questions about something he/she doesn't understand? Problem situation:	1	2	3	4	5
10. Following Directions: Does the child seem to understand directions and follow them? Problem situation:	1	2	3	4	5
11. Trying When It's Hard: Does the child continue to try when something is difficult instead of giving up? Problem situation:	1	2	3	4	5
12. Interrupting: Does the child interrupt when necessary in an appropriate manner? Problem situation:	1	2	3	4	5
13. Greeting Others: Does the child acknowledge acquaintances when it is appropriate to do so? Problem situation:	1	2	3	4	5
14. Reading Others: Does the child pay attention to a person's nonverbal language and seem to understand what is being communicated? Problem situation:	1	2	3	4	5
15. Joining In: Does the child use acceptable ways of joining in an ongoing activity or group? Problem situation:	1	2	3	4	5

	almost never	seldom	sometimes	often	almost always
16. Waiting Your Turn: Does the child wait his/her turn when playing a game with others? Problem situation:	1	2	3	4	5
17. Sharing: Does the child share most materials and toys with peers? Problem situation:	1	2	3	4	5
18. Offering Help: Does the child recognize when someone needs or wants help and offer assistance? Problem situation:	1	2	3	4	5
19. Asking Someone to Play: Does the child ask other children to play or extend an invitation to others to join in his/her activity? Problem situation:	1	2	3	4	5
20. Playing a Game: Does the child play games with peers in a fair manner? Problem situation:	1	2	3	4	5
21. Knowing Your Feelings: Does the child identify his/her feelings? Problem situation:	1	2	3	4	5
22. Feeling Left Out: Does the child deal with being left out of an activity without losing control or becoming upset? Problem situation:	1	2	3	4	5
23. Asking to Talk: Does the child verbally express when he/she seems upset? Problem situation:	1	2	3	4	5
24. Dealing with Fear: When afraid, does the child know why he/she is afraid and deal with this fear in an acceptable way (e.g., by talking about it)? Problem situation:	1	2	3	4	5
25. Deciding How Someone Feels: Does the child identify how another person appears to be feeling by what the person says? Problem situation:	1	2	3	4	5

	<i>almost never</i>	<i>seldom</i>	<i>sometimes</i>	<i>often</i>	<i>almost always</i>
26. Showing Affection: Does the child show that he/she likes someone in an acceptable way? Problem situation:	1	2	3	4	5
27. Dealing with Teasing: Does the child deal with being teased in acceptable ways? Problem situation:	1	2	3	4	5
28. Dealing with Feeling Mad: Does the child use acceptable ways to express his/her anger? Problem situation:	1	2	3	4	5
29. Deciding If It's Fair: Does the child accurately assess what is fair and unfair? Problem situation:	1	2	3	4	5
30. Solving a Problem: When a problem occurs, does the child state alternative, prosocial ways to solve the problem? Problem situation:	1	2	3	4	5
31. Accepting Consequences: Does the child accept the consequences for his/her behavior without becoming angry or upset? Problem situation:	1	2	3	4	5
32. Relaxing: Is the child able to relax when tense or upset? Problem situation:	1	2	3	4	5
33. Dealing with Mistakes: Does the child accept making mistakes without becoming upset? Problem situation:	1	2	3	4	5
34. Being Honest: Is the child honest when confronted with a negative behavior? Problem situation:	1	2	3	4	5
35. Knowing When to Tell: Does the child refrain from telling on others about small problems? Problem situation:	1	2	3	4	5

- | | <i>almost never</i> | <i>seldom</i> | <i>sometimes</i> | <i>often</i> | <i>almost always</i> |
|---|---------------------|---------------|------------------|--------------|----------------------|
| 36. Dealing with Losing: Does the child accept losing at a game or activity without becoming upset or angry?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 37. Wanting to Be First: Does the child accept not being first at a game or activity?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 38. Saying No: Does the child say no in an acceptable manner to things he/she doesn't want to do or to things that may get him/her into trouble?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 39. Accepting No: Does the child accept being told no without becoming upset?
Problem situation: | 1 | 2 | 3 | 4 | 5 |
| 40. Deciding What to Do: Does the child choose acceptable activities on his/her own when feeling bored?
Problem situation: | 1 | 2 | 3 | 4 | 5 |