A case study to determine best practice treatment for a child diagnosed with Asperger's syndrome and attention deficit/hyperactivity disorder

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A CASE STUDY TO DETERMINE BEST PRACTICE TREATMENT FOR A CHILD DIAGNOSED WITH ASPERGER'S SYNDROME AND ATTENTION DEFICIT/HYPERACTIVITY DISORDER

by
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ABSTRACT

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A CASE STUDY TO DETERMINE BEST PRACTICE TREATMENT FOR A CHILD DIAGNOSED WITH ASPERGER’S SYNDROME AND ATTENTION DEFICIT/HYPERACTIVITY DISORDER
2003/04
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Master of Arts in Mental Health Counseling

The purpose of this case study was to determine the best practice model of therapy to treat a child diagnosed with Asperger’s syndrome and Attention deficit/hyperactivity disorder. The participant was an eight-year-old Caucasian male who had significant developmental delays. The Behavior Assessment System for Children was used in order to assess the progress John made in the therapeutic setting of which he had been attending. Intervention components included a psychosocial assessment, differential diagnosis, a behavior treatment plan, psychotropic medication and social skills training. A client satisfaction survey was also administered. The normative practice of the agency was compared with empirically supported treatment approaches to these diagnostic categories. Results from the outcome measures and recommendations for future treatment were discussed.
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Presenting Problem:

John was an eight year-old Caucasian male who had significant developmental delays. His understanding of the reason for his referral was that he fights a lot and became angry easily. He became angry when people “snatched” things from him or when people told him to do things that he did not want to do.

His grandmother felt that John could not control his aggressiveness. He got into trouble at school for punching and kicking other children. The other children are usually female and a few have had disabilities. For instance, he pushed a girl with Downs Syndrome to the ground and punched a girl who was deaf in the face. During the second incident, John became angry because he spilled some juice and was asked to clean it up. Besides punching the little girl, he also pulled his aide’s hair and used derogatory words. After this incident, he was suspended from school for two days.

Besides aggressiveness, John presented with hyperactivity, impulsivity, difficulty following rules and directions, problems with personal space and inappropriate social interactions. His grandmother stated that John’s mood changed quickly. He was apologetic and sad after he got in trouble for fighting and then quickly became happy when the situation was over. The problems became worse when John was tired and asked to do something that required
energy, such as cleaning up or switching a seat on the bus. The problems got better when he played Nintendo or when he received his way.

John demonstrated restricted and stereotyped behavior patterns such as continuously talking about Pokemon and Yu-gi-oh and requesting to play with the same games and toys daily. He played Nintendo games for at least 4 hours a day after school. When a transitional period occurred, John had difficulty. He would act out by hitting or yelling.

History of Presenting Problem:
John's grandmother has had custody of John since he was eight months old. His biological parents did not raise John. She stated the problems that she was having with John have been lifelong. As a baby, John displayed tantrum behaviors such as kicking and crying but they started to get better when he turned two and one half years of age. While these behaviors were improving, John's grandmother began to notice other behaviors. She stated that John did not speak until he was around four years old. When he did begin to speak, his vocabulary came rapidly and he spoke quite often. He flapped his hands "like a bird" when he became excited. He did not like to be held or touched by his grandmother, though, she stated, she did so anyway. He did not make eye contact and refused to play with other children. He insisted on watching Sesame Street all day. As he had gotten older, John had developed an obsession for fantasy shows such as Pokemon and Yu-gi-oh. He was content continuously playing video games all day long.
As for the recent hostile behaviors, John’s grandmother attributed that to an incident having to do with his biological mother. Two years ago, John’s mother moved into the home with John and his grandmother. She physically assaulted his grandmother in front of John. This was around the same time that John’s behavior began to regress and he became aggressive towards his grandmother and peers. He has received some treatment, which has helped his behaviors to improve, such as medication and partial care, but the behaviors are still evident by report of the school, grandmother and partial care staff.

Prior Efforts to Address the Problem:

When John was two and one half years old, his grandmother took him to a state university where she had him assessed. He was diagnosed with Autistic Disorder and started early intervention services. His grandmother reported that these services were helpful and helped him come as far as he has. When asked what was helpful about them, she stated that they not only taught John skills, but they taught her skills to help her deal with John’s behaviors.

She then moved to this state and did not enroll him in services. The child study team evaluated him and the decision was made to send him to an alternative school. The school referred John and his grandmother to a partial care program for families. He was evaluated by the program and was found to be inappropriate for those services. They felt that he needed to develop some skills before they could help him and his grandmother together. They referred John to his current program, a partial care program for children. He attended this program for a
period of a year and a half. The psychiatrist diagnosed him with Pervasive Developmental Disorder, Not Otherwise Specified and Attention Deficit Hyperactivity Disorder. He started taking medications such as Ritalin, Adderall, Concerta, Clonadine, and Strattera. When the medication started to work, John made positive progress on his goals. He was re-evaluated by the child study team, who allowed him to return to his public school. Because of his progress, his grandmother felt that he should be discharged while the staff did not. The staff felt that John had not had enough time on the new medication to be monitored. John was the first child in the center to be placed on Strattera and it was unclear how his body would react to the medication. Because services are voluntary, she was able to have him discharged.

At the same time as his enrollment in his current program, John was enrolled in services through the Department of Developmental Disabilities (DDD). A one-on-one was hired to implement behavioral techniques such as discrete trial and positive reinforcement. John’s behaviors improved while he was involved with DDD, but as his caseworker changed and services were not continued. It is unclear why. Subsequently, he returned to this program because of aggressive behaviors and angry outbursts at school and home.

Family Relationships:

Current Family Relationships: John lived in a household with his maternal grandmother (age 49). They also shared this residence with eleven cats and a dog.
John’s grandmother had taken care of him since he was eight months old. John stated that he loved his grandmother, whom he called Mom, very much. He also stated that he wished he could stay home everyday so that he could take care of her. John’s grandmother seemed dependent upon him. She would keep him home at times from partial care because she missed him, or needed someone home so she did not become lonely. She stated that she knew that it was not right, but she could not help but feel this way. She would often tell John that he was the “man of the house.” John seemed to take this very literally and told his grandmother at least once a week that he would take care of her when she was old.

When John was disciplined for acting out behaviors, either he was not allowed to play with a neighborhood friend or he was sent to his room. His grandmother did not take away his television or Nintendo because she did not want to be “mean.” She stated that John has “been through enough.” John’s grandmother made many references to God as a consequence such as, “God does not like little boys who hit others.” John’s grandmother stated that she has spanked John very few times, but was unsure how to discipline him. She felt that she was unable to be consistent because she had health problems. She was aware, however, that her methods for disciplining John were not effective, but she stated that she was afraid of being “mean” towards John.

John’s grandmother had lived a difficult life. She had been married and divorced twice, and has had two long-term relationships since. She was severely physically abused during a past relationship. She had metal bars placed in her
back because of this and has developed arthritis. Until recently, John’s grandmother took OxyContin for the pain. She was on this medication for eight years, which made it difficult for her to properly care for John. She was constantly tired, which caused John to miss the bus multiple times. She decided to quit the medication in order to take better care of him.

John’s grandmother stated that she lost her daughter (John’s mother) because of her inability to care for her, so she is determined to raise John the “right way.”

Family of Origin:

John was removed from the custody of his mother (age 28) due to her drug abuse and inability to properly care for him at the age of eight months. She felt that she could not take care of a baby, so she willingly gave him to her mother. His mother had two other sons, who are John’s half brothers, ages twelve and ten. John has not seen had brothers since he was five years old. His brothers were in the custody of their paternal grandmother. The state child welfare agency removed them from their mother’s care four years ago. When asked why the mother was able to keep the two older boys while John was given to his grandmother, she stated that she was only able to take care of John. John’s grandmother also stated that John’s half brothers are involved with their biological father. John’s mother had seen John about once a year. There was a current a restraining order against John’s mother protecting John and his grandmother, although John’s grandmother had allowed two visits since. The
restraining order was due to an assault on John’s grandmother by his mother. His mother was never abusive towards John.

John’s father has never met John. He left when John’s mother became pregnant. There was not much known about him, except that he had had drug, alcohol and legal problems.

Drugs, Alcohol and Addictive Behavior:

John had never used drugs or alcohol. John’s mother and grandmother both had a history of drug use and abuse. The fact that his mother used drugs may have had an effect on John’s prenatal development, but this was unclear. John’s grandmother stated that she used marijuana about three times per week for a period of about ten years. She stated that she had to deal with chronic physical and emotional pain and the marijuana helped her to escape this pain. She had been sober from drugs for about ten years. She stated that she knew that she would need to stop if she wanted to live a “normal” life. John’s grandmother alleged that his mother continued to use drugs such as marijuana although she had not spoken to her in six months. She stated that she could not remember a time where her daughter (John’s mother) was not using drugs.

Early Development/Neurological History:

As far as John’s grandmother knew, there were no problems during her daughter’s pregnancy and birth of John. It is unknown whether John’s mother used drugs and alcohol during her pregnancy. John began walking at one year of
age. He began talking at the age of four. He was also unable to eat solid food until four years of age because, his grandmother stated, he could not swallow. At the present time, John did not display any characteristics of a feeding disorder. John was toilet trained at the age of three.

Medical and Psychiatric History:

A neurologist in another state diagnosed John with Autism at the age of two and a half. He received early intervention services until he moved to this state at the age of three. John’s grandmother did not continue seeking services because she stated that she did not know where to look.

John became involved with the treatment center and was diagnosed with Pervasive Developmental Disorder, NOS and Attention Deficit Hyperactivity Disorder. He began taking Ritalin, which worked for a period of about four months. The doctor then added Clonadine to help John sleep at night. After the Ritalin stopped working, the doctor replaced it with Adderall. John continued to lose weight on the Adderall, so the doctor prescribed Concerta. Two weeks before he was discharged from the treatment program the first time, the doctor placed him on Strattera. This seemed to work for a period of about six months. John’s grandmother then had him re-enrolled in the treatment program. The doctor then placed John on a low dose of Adderall in the morning, Strattera and Clonadine at night. He appeared to build a tolerance to this medication combination after four months. During the time of this case study, John was taking Adderall XR 5 mg in the a.m., Strattera 40mg in the a.m., Clonadine .1 mg
in the a.m. and p.m., and Risperdal .25 mg in the morning. This combination seemed to be working well, but he had only been taking it for a month. John's aggression and hyperactivity had been reduced by half since beginning this combination of medication. There were fewer reports of aggression and hyperactivity from home, school and his program.

Psychiatric and psychological history were unknown for John's mother and father. It was known that they both had substance abuse problems. John's grandmother had dealt with substance abuse problems in the past. She had been treated for anxiety and depression. She took medication for these issues regularly. During the time of this case study, John's grandmother was taking Zoloft and Amitriptyline, which are prescribed for depression and took an unknown pain medication for her back. She felt that the medication helped her because she was not "crying all the time anymore." She stated that her biggest accomplishment was taking herself off OxyContin in order to take better care of John. She had since begun taking another type of pain medication.

John appeared to be in good health. He had regular medical checkups. He had had dental problems due to past poor hygiene and he had oral surgery to correct that. He did begin to see a dentist regularly.

It was unknown whether there were any medical diseases/disorders that ran in John's family.

Education History:
John was evaluated by the Child Study Team at the age of five and placed in an alternative school. He was classified as multiply handicapped and placed in a classroom for this. Although emotionally and socially John was below average, he had average to above average intelligence. His grandmother and caseworker felt that because of this he did not belong in an alternative school. His behavior had improved so his grandmother and caseworker requested that he be moved back to his sending district for second grade. He was granted a trial period at the end of the first grade school year where John did well. A token economy was used where the children received stars during the day for good behavior and following directions. John received bonus stars all but one day of the four-day trial period. He was allowed to return to his school district for second grade. He had done well academically, but there have been some behavior problems. He has been suspended one time. His acting out behaviors were not constant. They usually occurred after he had been on the same medication for a significant period of time. It appeared that during the current time, John was unable to tolerate transitional periods well.

Social Supports and Patterns of Relationships:

Socially, John was withdrawn from many activities. He showed a pervasive deficit in social interactions. He seemed to play in a parallel manner with other children. As he had become involved in partial care, John had developed two friendships with boys in his neighborhood. One of the friendships had ended because John stated, "he stole my Blue eyed, white dragon Yu-gi-oh
card.” At the time of this interview he played occasionally with another boy. They played Yu-gi-oh, Pokemon and video games.

When observed in his partial care program, John displayed parallel play with another boy who has been diagnosed with Autism. They did not seem to interact with each other and tended to fight physically often. They would, however, play next to each other without interacting.

John was able to develop relationships with familiar adults. He seemed to enjoy being around his caseworkers on the weekend. When he was asked to interact with staff of which he was not familiar John became agitated easily. He had acted out in an aggressive manner as evidenced by him kicking and punching a staff member that he was not familiar with.

When John first came to his current program he seemed to have a dependence on his grandmother. He would cry for at least forty-five minutes when he would have to leave her. This anxiety had since subsided and seemed to be due to his anxiety with situations that are not routine.

One support for John’s grandmother is the church. She believed in God and that “everything happens for a reason.” She believed that no matter what, “God will help [her] raise John in the right way.” She felt that she was given John by God in order to “make up” for losing her daughter. She has brought John up to believe in God and his importance. Her reliance on John for high levels of social support is inappropriate and reflects more of a peer than parent child relationship. John did not attend church with his grandmother because he was attending program at that time.
Situational Stressors:

Transitional periods tended to be a time of turmoil for John. For instance, he would get upset in the morning when it was time to get on the van for partial care. He would cry or fight with the other children. Once at the program he appeared happy and would take part in his regular activities. At the end of the day, when it was time to go home, John tended to fight again and stated that he did not want to go home. John attended the partial care program for five and one half hours. During transition periods between groups John had greater incidents of acting out. At school and at home, John would “get an attitude” when asked to do something that he was not used to doing. An example of this was when he acted out aggressively towards the aide in school when she asked him to clean up the juice that he spilled. He yelled at his grandmother when she asked him to clean up his room while he was playing video games. This pattern of behavior is consistent with a “need for sameness”.

A stressor in the past has been when John’s mother came to visit. Since he witnessed the violence that took place between his mother and grandmother, John had become anxious when his mother would appear. John’s mother kicked in the door to John’s trailer and, in front of John, began to physically assault his grandmother. John stated that this was a scary situation. He reacted to this by screaming loudly and running into his bedroom. He stated that he was unaware to call the police at the time. He said if it ever happened again he knows to call “9-1-1.” After this incident, John did not act out in front of his grandmother but
displayed constant worry about whether she would be okay. He repeatedly told her that he would protect her.

Coping Mechanisms and Strengths:
John tended to cope with his frustrations through aggressive means. He kicked, punched, cried, and yelled at anyone that was in front of him at the time. He had been observed hitting people even though that person was not the cause of his frustration. After he was done with his tantrum, John would repetitively apologize for his actions and stated that he would not do them again. John’s tantrums could last anywhere from five to forty five minutes. When the tantrum was over, and he had apologized, he was able to move on to another activity.

John was able to have conversations and was learning to talk to the adult in charge when he had difficulties with other children. There have been times where he had spoken to an adult instead of fighting, but this was inconsistent.

John had many strengths. He appeared most of the time to be a cheerful child who liked to interact with typically developing peers and adults. He seemed to have average to above average intelligence and spoke well. He was very affectionate towards others.

Other Agencies Involved:
John continued to have an open DDD case, although he was not receiving services from the organization. The state child welfare agency was no longer involved with this family.
Summary:

In summary, John was an eight-year-old Caucasian male who lived with his maternal grandmother. She had had custody of John since he was eight months old. John presented with an inability to stay focused, difficulty following rules and directions, aggressiveness and impulsivity. These behaviors had been ongoing since his grandmother gained custody of him. In addition to the behaviors that John presented with, he had been diagnosed with Autism Spectrum Disorders such as Autistic Disorder and Pervasive Developmental Disorder, Not Otherwise Specified. Furthermore, John had been diagnosed with Attention Deficit Hyperactivity Disorder. He was taking medication and receiving partial care services in order to deal with his behaviors.
Chapter 2 – Differential Diagnosis

Differential Diagnosis:

Axis I: 299.80 Asperger’s Disorder
314.01 Attention Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type

Axis II: None

Axis III: None

Axis IV: witness to domestic violence, school problems (behavior)

Axis V: 60

The diagnosis of Asperger’s Syndrome had been applied to John because he displayed many of the symptoms presented in the DSM-IV. As stated in the DSM-IV, there must be marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures and gestures to regulate social interaction. John presented with a difficulty to make eye contact especially during periods in which he must comprehend what was being told to him. He had difficulty making and keeping age appropriate interpersonal relationships with peers, which is the next criteria that must be met. He did not appear to understand jokes and had been in physical altercations because he
perceived all of what others said as literal. This illustrated an impairment in social
skills and interactions.

The next criteria that must be met is a restricted repetitive and stereotyped pattern of behavior, interest and activity manifested by at least one of the following: (1) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus, (2) apparently inflexible adherence to specific, nonfunctional routines or rituals, (3) stereotyped and repetitive motor mannerisms, and/or (4) persistent preoccupation with parts of objects. John had an intense pattern of interest having to do with Pokemon and Yu-gi-oh. Most of John’s conversations had to do with Pokemon/Yu-gi-oh cards, television shows and video games. During groups, John would talk about scenarios from his life that were grossly exaggerated and seemingly made up from these television shows. One such situation was when John believed that he could have a “blue eyed dragon” as a pet instead of the dogs and cats that he already had. The blue-eyed dragon was a Yu-gi-oh character. John also demonstrated an inability to deviate from routine. Much of his acting out behaviors occurred during transition periods. Especially during times of extreme excitement or anger, John had been observed hand and finger flapping.

This disturbance must cause clinically significant impairment in social, occupational, or other important areas of functioning. The disturbances experienced by John had caused significant impairment in home, school, partial care and social situations. John displayed no evidence of a delay in cognitive development, which must be met if Asperger’s Syndrome is to be diagnosed.
Although John displayed most of the symptoms for Asperger’s Syndrome, he also experienced a language delay, as he did not begin speaking until four years of age. The *DSM-IV* stated that criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia. While a language delay is a common characteristic of Autistic Disorder, John’s language delay can be better attributed to the fact that there was a severe lack of demand for him to speak. At eight months old, custody of John was given to his grandmother because his mother was unable to care for him appropriately. His grandmother lost custody of her daughter (John’s mother) and viewed John as her “second chance.” She did not develop the skills necessary to stimulate John as a baby. She spoke for him and allowed John to point to what he wanted while she would retrieve it. When John began involvement in school and demands for him to speak increased, so did his speech. When he began talking, speech developed rapidly, which is atypical of Autism.

A diagnosis of Attention-Deficit/Hyperactivity Disorder, Predominately Hyperactive/Impulsive Type may be diagnosed according to the *DSM-IV* by the following criteria: six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level: (a) often fidgets with hands or feet or squirms in seat, (b) often leaves seat in classroom or in other situations which remaining seated is expected, (c) often runs about or climbs excessively in situations in which it is inappropriate, (d) often has difficulty playing or engaging in leisure activities quietly, (e) is often “on the go” or often acts as if “driven by a
motor”, (f) often talks excessively, (g) often blurts out answers before questions have been completed, (h) often has difficulty awaiting turn, and (i) often interrupts or intrudes on others. Some hyperactive-impulsive symptoms that caused impairment were present before age 7 years. Some impairment from the symptoms is present in two or more settings. There must be clear evidence of clinically significant impairment in social, academic, or occupational functions. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder.

A diagnosis of Attention–Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type was also determined for John because he meets the DSM-IV criteria. John would often fidget with hands and had difficulty sitting in situations where this was expected. He has been described by teachers and his grandmother as having an overabundance of energy. He talked excessively even after being told that it was time to be quiet. John demonstrated difficulty waiting his turn during games or waiting in line. He interrupted others while they were talking and became visibly agitated when not addressed. Most of the symptoms have been present since the age of three, although he did not speak until four years of age. These symptoms were present and caused significant impairment in school, home, partial care and social situations. Before John began taking stimulant psychotropic medication, his grades were low due to his inability to stay in his seat and do his work; moreover, John had difficulty at home doing homework. While attending recreational trips with his partial care program, John
had been observed running away from staff on multiple occasions and had difficulty remaining in his seat while at the program. Because John fits the criteria for both diagnoses, it seemed appropriate that he be diagnosed with Asperger's syndrome and attention deficit/hyperactivity disorder.
Chapter 3-Literature Review

Asperger's Syndrome is a pervasive developmental disorder that is characterized by impairments in social interactions and restrictive or repetitive interests in the presence of typical intelligence. There is no history of a language delay (American Psychiatric Association, 1994; Ghaziuddin, M., Weidmer-Mikhail, & Ghaziuddin, N., 1998). Hans Asperger, a Viennese physician, introduced Asperger's Syndrome in 1944. This diagnosis was based on his work with a group of children that presented with a set of considerable and persistent neurodevelopmental social behaviors. His work pinpointed the social oddities and lack of interest to interact with others. Asperger observed that these children displayed many of the same characteristics as those diagnosed with Autism, however, they were of average cognitive ability and language development. In 1994 the American Psychiatric Association added Asperger's Syndrome to the Diagnostic and Statistical Manual of Mental Disorders-4th Edition (American Psychiatric Association, 1994). Non-school professionals based on the criteria stated in the DSM-IV typically diagnose Asperger's Syndrome. Symptoms of hyperactivity and impulsivity are particularly common in Asperger's Syndrome (Ghaziuddin, 2002)

Attention Deficit/Hyperactivity Disorder is characterized by inattention, hyperactivity and impulsiveness. Although this commonality exists, very few
studies of looked carefully at the link between Asperger’s Syndrome and
Attention Deficit/Hyperactivity Disorder (ADHD) (Gillberg & Billstedt, 2000). A
study by Ehlers and Gillberg (1993) found that out of five specific children ages
7-16 years old diagnosed with Asperger’s syndrome, four met the DSM-IV criteria
for ADHD. Another study illustrated that out of 35 patients (29 male, 6 female)
diagnosed with Asperger’s Syndrome having a mean age of 15.1, 65% (23)
presented with symptoms of a co-existing psychiatric disorder. Children were
most likely to meet the criteria for ADHD (Ghaziuddin et al., 1998). Current
neuropsychological studies have established that Asperger’s Syndrome is
characterized by comparable types and degrees of attention deficits that are
frequently observed in children diagnosed with Attention Deficit/Hyperactivity
Disorder (Gillberg & Billstedt, 2000). Multiple studies have shown that ADHD is
the most common psychiatric disorder to co-occur with Asperger’s Syndrome,
particularly in young children. Many clients possessing the diagnosis of
Asperger’s Syndrome will also be diagnosed with ADHD at sometime during
their lifespan (Myles & Southwick, 1999). For a client diagnosed with Asperger’s
Syndrome and Attention Deficit/Hyperactivity Disorder, treating additional
symptoms of aggressiveness or irritability will lead to an overall better quality of
life and may impact the long-term prognosis of the disorder (Ghaziuddin, 2002).
Because there is so little research on the co-morbidity of Asperger’s Syndrome
and ADHD, superimposed symptoms such as poor attention, hyperactivity,
obsessiveness, sleep problems, etc. were viewed as “associate features” of
Asperger’s Syndrome rather than a co-occurring psychiatric disorder (Tsai, 2000).
Currently more research is being done to consider these features as symptoms of coexisting neuropsychological disorders including ADHD (Tsai, 2000; Perry, 1998).

Due to the paucity of research presenting the treatments for a comorbid diagnosis of Asperger’s Syndrome and Attention Deficit/Hyperactivity Disorder, this review will explain the separate treatments for each disorder while incorporating the small amount of current research on the treatment of Asperger’s Syndrome and ADHD as they coexist. As with all treatment suggestions, the pros and cons must be assessed in order to ensure that it contributes to the ability of the client to become a fully functioning member of society. Therefore it is important to monitor and adjust the treatment approach when progress is lacking (Freeman, 1997).

Psychotropic Treatment

There are few empirical studies of drug treatments for “non-autistic” Pervasive Developmental Disorders (PDD) such as Asperger’s Syndrome (Volkmar, 2001). A study by Martin, Scahill, Klin, and Volkmar (1999) studied the rates of psychotropic drug use with higher functioning children diagnosed with PDD. The study found that 55% of the subjects were taking medication, with stimulants being the second most commonly prescribed. It is important to carefully consider stimulant mediation in this population because behavioral activation and dose sensitivity can increase in the higher functioning PDD’s (Klin, Volkmar, & Sparrow, 2000). Tanguay (2000) has found that few studies have been performed on the selective serotonin reuptake inhibitors (SSRI) however
they have shown some promise in decreasing the symptoms of aggression and hyperactivity. He has also concluded that stimulants may be effective on impulsivity, hypersensitivity, and decreased attention span. While there are medications to treat some of the secondary characteristics of Asperger’s syndrome, there continue to be no pharmacological treatment to treat the extreme social deficits present in this syndrome (Tanguay, 2000).

Stimulant medication has been and continues to be the most reported successful treatment option for children diagnosed with Attention Deficit/Hyperactivity Disorder (Perry, 1998; Purdee et al., 2002). Because of this, a child should be referred for a medication evaluation and the family should be informed of the fact that the referral allows them to obtain the information in which they require to make an informed decision about their child’s healthcare. A referral does not mean, however, that the child will definitely be placed on medication. Stimulants are reasonably safe and easy to use (Perry, 1998). Treatment begins with trial doses and close monitoring of progress until most favorable outcomes are reached (Frazier & Merrell, 1997).

Stimulant use has been shown in the literature to be one of the most effective treatments for ADHD. In a study by Dulcan et al. (1997) it was shown that stimulant use is effective in producing short-term improvement in attention span, in reduction of hyperactivity and impulsivity, and a positive reaction with a single dose.

The MTA Cooperative Group (1999) conducted a large study in order to discover whether children with ADHD showed a marked improvement after being
a part of a medication only group, behavioral treatment group, combined medication and behavioral treatment group and a community treatment group. The MTA study could not show with statistical significance that combined effect of the behavior and medication group could be greater than the effect of medication alone. While the study found that stimulant medication is the most successful treatment, after a one year follow up only 38% of the medically managed children in the MTA study received scores that placed them in the “normal” range. Much of the time, stimulant medication improves the child’s ability to follow rules and decreases emotional over-reactivity, which contributes to improved peer and familial relationships (Subcommittee on ADHD and Committee on Quality Improvement, 2001).

DuPaul, Barkley, and McMurray (1991) found that stimulant medication can be very useful in the management of ADHD behaviors due to their ability to improve attentiveness, impulse control, educational performance and peer interaction with minimal side effects. While DuPaul et al. (1991) found that stimulant medication have a positive effect on educational performance, Swanson et al. (1993) conducted a review of reviews on the effects of stimulants in children diagnosed with ADHD and found that while these medications do have an effect on attention, concentration and motivation, they do not demonstrate a clear effect on academic performance or learning. Moreover Pelham, Wheeler, and Chronis (1998) established similar findings when studying the efficacy of pharmacological treatments for ADHD. It was found that some behaviors such as on task classroom behavior, disruptive social behavior and negative peer interaction
improved. However an increase in long-term academic gains for students taking stimulant medication was not supported (Pelham et al., 1998).

While there were many optimistic viewpoints in the literature about stimulant medications, there are limitations to this pharmacological treatment. Although the MTA study established the effectiveness of stimulants as a treatment for ADHD, they only managed the children’s medication for 14 months therefore long-term effects of stimulants are still unknown (Subcommittee on ADHD and Committee on Quality Improvement, 2001). Pelham et al. (1998) stated that:

70% to 80% who show improvement in some aspects of their behavior, such improvements generally do not bring them even close to being normalized-often remaining one standard deviation above the norm on impulsivity and related behavior outcome (p.191).

This study demonstrates how medication does not “cure” a person with ADHD. It has also been noted that behaviors that while a teacher may report a decrease in negative behaviors at school, the parents continue to report the same negative behaviors at home. Schachar, Tannock, Cunningham, and Corkum (1997) attempted to determine behavioral, situational and temporal side effects of stimulant treatment in ADHD. Parents and teachers where asked to rate the behavior of the children. Teachers reported that the behavior of the children in the treatment group improved over those in the placebo group, whereas parents reported no differences in the behavior of either group (Schachar et al., 1997).
Aside from stimulant medications working differently on different symptoms, there are side effects to these medications. Weight loss, shakiness, dry mouth, appetite loss and somatic effects can occur in children receiving stimulant treatment for ADHD.

Although there are many conflicting studies about just how effective stimulant medications are for ADHD, it seems that there are more studies than not that support the fact that stimulants are an effective treatment for ADHD. While there is a small amount of research for the use of stimulants in Asperger's Syndrome, it would seem that a child with a co-occurring diagnosis of ADHD would benefit from the effects of the stimulant. Therefore it would seem that stimulant medication would be one effective alternative for the treatment of Asperger's Syndrome and ADHD.

Parent Training

Parent training is another empirically validated form of treatment with children diagnosed with Asperger's Syndrome and ADHD. Parents of children with an autistic spectrum disorder often want to know information concerning the prognosis of the disorder. Because parenthood has been described as a stressful life event, it seems that children that display difficult behaviors, as some with Asperger's Syndrome do, it is suggested that these behaviors have a key impact on parental behavior (Herbert 1995). When parents are not given information regarding their child's disorder they may be accused of improper parenting because of the "normal" appearance and severe disability in certain areas such as social skills and understanding (Perkins & Wolkind, 1991).
The role of families in promoting the development and well-being of their children has become an increasing focus of attention as professionals contend with how to best serve young children with disabilities (Judge, 1997).

As the above passage states, parenting is playing a more important role in the positive development of children with developmental disabilities such as Asperger’s Syndrome. Parental self-efficacy refers to a parent’s confidence level in dealing with their child’s difficulties (Johnston & Mash, 1989). The research shows a negative correlation between parental self-efficacy and a child’s behavior problems (Mouton & Tuma, 1988). This means that as parental confidence increases a child’s behavior problems decrease. Parent management training first focuses on developing parents’ skills as well as addressing the parents’ needs for pertinent information that enable them to make informed decisions about their child (Judge, 1997). A study including 45 mothers and 44 fathers of children ages 6-12 diagnosed with Asperger’s Syndrome found that a parent management training program delivered as individual sessions or as a one day workshop led to a significant reduction in the number of difficult behaviors reported. Parents in the control group reported no changes in their children’s behaviors over time (Judge, 1997). Moreover, Eyberg, Edwards, Boggs, and Foote (1998) have noted that the gains made from parent management training have been found to be effective on average 1-3 years after the course of treatment.

Parent training programs have been developed to support parents in the development of appropriate skills to manage behaviors that accompany ADHD
The focus of parent training is not only on the child’s behavior problems but his/her difficulties in family relationships. The goal of a typical program is to increase the caregivers’ understanding of the child’s behavior and teach them new skills to deal with these behaviors (Subcommittee on ADHD and Committee on Quality Improvement, 2001). These programs offer techniques such as positively reinforcing functional and positive social behavior and extinguishing inappropriate behavior (Subcommittee on ADHD and Committee on Quality Improvement, 2001). A study involving pre-school children diagnosed with ADHD and their families have shown that parent training can lead to an increase in child compliance and better parenting skills (Anastopoulos, DuPaul, & Barkley, 1991). There are, however, conflicting studies that do not agree on the efficacy of parent training programs for children diagnosed with ADHD. The Subcommittee on ADHD and Committee on Quality Improvement (2001) have found that parent training does improve the functioning of the child and can decrease disruptive behavior, however, it does not bring the behavior of the child into a “normal” range on parenting rating scales. Pelham and Lang (1993) indicate that families of children with ADHD are at times dysfunctional in areas such as stress, alcoholism and inappropriate discipline. They have found that there is little generalization from the gains displayed in a structured parent training program to this dysfunctional home life.

Although there are conflicting studies on the use of parent training programs because they either do not bring a child into “normal” range of functioning or because they do not generalize in all situations, it seems that this
continues to be an effective treatment for Asperger's Syndrome and ADHD.

Even if the child is not brought into a normal range of functioning, the studies still show that the negative behaviors decrease because of parent training. Due to the extreme dysfunctional settings that Pelham and Lang discuss, it would be difficult to use their studies to make a generalization that all children may not be able to demonstrate behaviors in a normal range of functioning after their parents have received training.

Social Skills Training

In order for a person to have good social skills, that is to determine the listener's perspective, and reactions, they must have some level of reciprocity regarding appropriate social cues (Klin et al., 2000). According to the DSM-IV, two of the common traits of Asperger's Syndrome include a qualitative impairment in social interaction and a restricted area of interest. The latter can result in little awareness of the listener's interest (Safran, 2001). Children diagnosed with Asperger's Syndrome are thought to be odd socially. They are described as self-centered, emotionally dull, and rigid. These difficulties often come from a lack of knowledge in the area of social skills such as initiating situations with others (Myles & Simpson, 2001; Myles & Southwick, 1999). These behaviors appear to be the result of their inability to understand and interpret social cues. They have difficulties understanding different social situations and therefore in applying social rules (Myles & Simpson, 2001). Children with Asperger's Syndrome typically present with emotional weakness and stress due to social relationships (Barnhill, 2001; Myles & Adreon, 2001;
Myles & Southwick, 1999). Many children diagnosed with Asperger’s Syndrome do not have the skills that it takes to make and maintain friendships and in addition many of them display odd behaviors that may irritate and compel others to end the relationship. Klin et al. (2000) stated that:

The most important component of the intervention program for individuals with Asperger’s Syndrome involves the need to enhance communication and social competence. Therefore, there is a need to teach social and communication skills... as an integral part of the program and as its major priority (p.350).

Although most sources on the topic of the treatment of Asperger’s Syndrome state the need for social skills training, there are very few studies that look closely this method for this population. Most studies are found dealing with the treatment of Autism. Atwood (2000) discussed strategies for Asperger’s Syndrome such as social skills group where the individuals with Asperger’s Syndrome were able to interact with typically developing peers. Another study investigated the effectiveness of social skills groups for boys with Asperger’s Syndrome. The social skills group had three therapists and eight boys between the ages of eight and twelve. The study found that there was no significant difference from the pre-treatment to the post-treatment, however, parents noted that eye contact, the ability to discuss feelings, seeking out contact with family members and the ability to be more aware of others’ interests improved (Marriage, Gordon, & Brand, 1995). A single subject study conducted by Nakamura, Iwahashi,
Fukunishi, and Suwaki, (2000) concluded that individual social skills training program did produce positive effects in the areas of communication and social skills in a fourteen-year-old male diagnosed with Asperger's Syndrome.

Research has shown certain techniques are needed in order to address the social skills deficits of this population of children. There must be verbal instruction with explicit guidelines and the ability to rehearse situations in a concrete situation with the goal of generalization into the community (Klin et al., 2000). Techniques such as working in front of a mirror and the use of video are key elements to a social skills program. Eye contact, gaze, voice inflections, tone of voice and facial and hand gestures need to be taught in a clear manner and drilled frequently (Klin et al., 2000).

Although supporters of social skills have demonstrated its efficacy to an extent, they are not under the impression that it will not solve all of the social problems that a child with Asperger's Syndrome will encounter. This is due, in part, to the fact that not all situations can be taught and if a child diagnosed with Asperger's Syndrome happens upon a situation that they are not familiar with it may still become a source of stress for that individual (Myles & Simpson, 2001). While training in communication and social skills has been shown to decrease stressful social situations for this population, it is not definite that a child will develop spontaneous conversation and flexibility (Klin et al., 2000). In addition to social problems in children with Asperger's Syndrome, more problems occur in a child that has been diagnosed with having a second diagnosis such as ADHD (Crager & Horvath, 2003). While there was a lack of empirically based studies in
the literature on social skills programs for children with the two diagnoses existing simultaneously, there is a small amount of research on social skills programs for children with ADHD.

Antshell (1999) conducted a study similar to that of Marriage et al., (1995) using a population of children diagnosed with Attention Deficit/Hyperactivity Disorder. It was found that children that participated in a social skills group with their peers had increased positive behaviors reported by parents and children on rating scales from pre-treatment to post-treatment. The waitlist control group did not show the same increase. Social skills that can be problematic for children with ADHD include compliance to rules and directions and waiting (Stormont, 2001). To support children who have trouble delaying gratification, wait time needs to be limited and rehearsal of the skills need to be done before asking the child to demonstrate it (Stormont, 2001). Reinforcement is important in producing appropriate behaviors (Barkley, 1997; Landau & Moore, 1991).

It seems that social skills are an important piece to the treatment of children with Asperger’s Syndrome and ADHD. Although there are no studies showing the efficacy of this program for these comorbid diagnoses, similar results have been found in the studies conducted on both populations. Social skills training appears to be an effective way to deal with some of the social deficits observed by children diagnosed with Asperger’s Syndrome and ADHD.

Behavior Management

Behavior therapy consists of giving rewards for demonstrating appropriate behaviors and delivering consequences for the inability to meet that goal
The main goal of behavior management techniques is to allow the child to gain information about themselves such as coping skills and self-awareness (Levine, 2001). Behavioral interventions are different than other techniques because these interventions center on changing observable and measurable behaviors by manipulating the environment in which they present (Frazier & Merrell, 1997). Techniques appear to be very similar for working with children with Asperger’s syndrome and attention deficit/hyperactivity disorder. First the antecedent to the behavior must be identified. The antecedent is what happens before the behavior occurs. Then, it must be determined what the consequence is of that behavior, or what the child is getting from displaying the behavior. After that the intervention is put in place to deter the child from performing the behavior. Finally, a behavior is put in place to replace the extinguished behavior. Positive reinforcement is used as the behavior improves in order to let the child know that he/she is behaving appropriately. Other techniques such as token economies (Frazier & Merrell, 1997) can be used where a child can earn tokens for appropriate behaviors that can be spent on desirable items or activities. Response Cost is an additional technique that takes away the tokens for inappropriate behaviors.

There are advantages for implementing a behavior program for children. Behavioral intervention can be put into place with children who are not responding positively to medication (Pelham Jr., 1991). While medications tend to have side effects, there are no physical side effects of behavior intervention.
The intervention can be implemented in the home and at night when some medications cannot be given (Frazier & Merrell, 1997). If the behavior intervention is used with medication than lower doses of the medication can be administered. While there are many advantages to behavior intervention, there are disadvantages too.

One disadvantage is that the behavior treatment must be long lasting, intensive and generalized among all environments because ADHD and Asperger's syndrome are chronic conditions (Frazier & Merrell, 1997). It is difficult to get teachers and parents to work together on the same behaviors. There is minimal evidence supporting the long-term effectiveness and generalizability of the intervention (Pelham Jr., 1991).

Behavioral management studies for children diagnosed with Asperger's syndrome are still in their beginning stages (Myles & Simpson, 2001). Clients with Asperger's have been shown to have social skills deficits. Many, but not all, also have behavior difficulties. Periodically, these behavior difficulties present in the form of aggression. Behavior difficulties seem to be a function of a) social deficits, b) inability to understand the world around them, c) stress, d) need to control their world, e) an obsessive quest over a stereotypical interest, or f) "defensive panic reaction" (Myles & Southwick, 1999). These behaviors should not be seen as malevolent and purposeful. They are a part of the disability and should be treated in a therapeutic way rather than with punishment (Klin, et al., 2000). Behaviors may be representative of the thoughts and feelings that the child cannot verbally express (Levine, 2001). This seems to be a good explanation of
why children with Asperger’s syndrome tend to act out. They are unable to communicate what they are feeling inside about the world around them therefore they “meltdown.”

A study conducted by DuPaul, Guevremont, and Barkley (1992) used a within subjects reversal design with multiple baseline components across periods during the school day to discover the effectiveness of response-cost contingencies alone and together with directed rehearsal trials. Response cost contingencies were found to result in noticeable improvements in attention span and reduced negative ADHD symptoms.

A separate study conducted by Gordon, Thomason, Cooper, & Ivers (1991 as cited by Frazier & Merrell, 1997) investigating the effectiveness of cost response on six children diagnosed with ADHD found that 5 out of the 6 children demonstrated evident improvements in on task behaviors. This study also found that this effect was not true when the intervention was taken away.

A conflicting study by Oosterlaan and Sergeant (1998) found that there is no support showing that response cost is more effective than other techniques in treating ADHD. They found that reward and response cost contingencies had the same effect on children with this disorder. The authors do make note in the study, however that they did not have a large enough sample size to truly make the statement that response cost is definitely not better than any other techniques. The study also stated that rewards and response cost does not appear to have much effect if any on children with attention deficit/hyperactivity disorder.
The third study, by Oosterlan and Sergeant (1998) found that ultimately, behavior techniques do not have much influence as an intervention for children with ADHD. This contradicts findings from the two prior studies. One limitation of this study was that it had a very small sample size and this limits the results. The evidence overall then, appears to support the use of behavior techniques in ADHD intervention programs.

Although the research is limited on using behavior methods for Asperger’s syndrome, it seems that it would be an appropriate technique. It is known that people with Asperger’s syndrome benefit from clear and concise instruction, repetition and positive reinforcement. It would seem likely that the rigidity of behavior training would help a child with Asperger’s syndrome to have more control over the world around him/her. However, additional research is needed to support this hypothesis.

After reviewing the literature on treatment for Asperger’s syndrome and attention deficit/hyperactivity disorder it appears that best practice would incorporate all of the previously mentioned treatment options. Social skills deficits appear in both disorders and seem to cause many of the behavior problems. Piecing together a social skills program while using behavior techniques such as token economy or response cost would seem to be a successful way to teach social skills to children diagnosed with both disorders. Parent training is important because these disorders not only affect the individual, but the family as a whole. Research shows that when parent training is part of the intervention, there is a difference in the presenting behaviors. In addition to these
interventions, pharmacological treatment is supported in the literature as one of the most successful treatments for ADHD. There is also some evidence to support its efficacy in Asperger's syndrome. These interventions combined make up a best practice model for children diagnosed with Asperger's syndrome and attention deficit/hyperactivity disorder.
Chapter 4-Normative Practice

The program in which John was treated was a partial care program. Initially John was referred to this program from another program in the agency because that program was unable to provide adequate services for him. John first came to this program and attended an intake with his grandmother and the intake coordinator. During this time a thorough biopsychosocial was completed. This is a structured assessment that asks multiple questions about the consumer in order to gain enough knowledge to treat him/her appropriately. The biopsychosocial is the only assessment that this program is required to complete. After the biopsychosocial was completed, John began attending this program two weeks later.

This program runs seven days during the week. John attended on Saturday and Sunday. He began his day at 11:30 a.m. and finished at 5:00 p.m. Transportation was provided to and from program.

The partial care program used therapeutic group work to facilitate children to develop positive coping skills and to become more resilient than they were when they began. As John began his day, he participated in a five-minute period for relaxation. He then moved into a creative expression group where mediums such as arts and music are used. The next group in the day was a time to build social skills through a psychoeducational approach. Therapeutic recreation followed up in order for the children to demonstrate the social skills that were
presented to them in the previous group. After this, lunch was provided and then the children moved into a social and emotional skills building group followed by some kind of cognitive group work pertaining to the topic. Daily living skills were also taught. Each child received one chore after lunch in order to teach responsibility and taking pride in one’s environment.

There was not a set type of therapy that was mandated by the agency for case managers in this program to follow. Group work was flexible and left up to the discretion of the team of staff working with the consumers.

John had difficulty initially participating in groups it seemed because it was a new situation. He was resistant especially from switching groups throughout the day and to practicing daily living skills. Instead of participating in the groups, John would sit far away and look in the opposite direction. He would hit the other children in what seemed to be an attempt to take the focus off the group. John also did not know how to express or label his angry and frustrated feelings.

Within the first two weeks of participating, John attended a psychiatric consultation where the psychiatrist performs a comprehensive psychiatric assessment. Here he was given a diagnosis of Pervasive Developmental Disorder, NOS and attention deficit/hyperactivity disorder. Upon further research and getting to know John better, it became clear that he should be diagnosed with Asperger’s syndrome instead of PDD NOS. He was not assessed for medication at that time; however, he attended a medication consultation with his grandmother three months later at his grandmother’s request.
After John began taking his medication and the groups were becoming more routine, his anxiety about attending the program subsided. John continued to have much difficulty socializing with his peers even though fighting and yelling behaviors decreased.

A preliminary treatment plan was completed for John during intake with the same goals that all new clients receive. The first was to have the initial psychiatric appointment within fourteen days of being admitted. The second goal was to become familiar with rules and expectations of program within the first thirty days. The therapeutic treatment plan was developed for John after he attended the program for thirty days. The next was completed sixty days after that and each additional re-evaluation was done every ninety days. The treatment plan included information from the treatment team in the partial care program, the grandmother and his teacher’s input.

Because John had attended partial care for a period of longer than one year, the goals in his treatment plan had changed as he has improved. John had achieved goals dealing with hyperactivity and taking turns. At this time John continued to work on goals pertaining to aggression, appropriate socialization, and medication compliance, however he was nearing achievement and then would prepare to be discharged.

The first goal John was working on was developing and demonstrating impulse control without physically acting out feelings of aggression. There were two objectives pertaining to this goal. The first was to decrease frequency of hostile and aggressive interactions 90% of the time 2 out of 2 days in program.
Because John was very verbal, the next objective was to express feelings without using threats or use of assaultive behavior 90% of the time 2 out of 2 days in program.

The next goal that John continued to work on was demonstrating appropriate socialization skills. The objective was for John to seek two children to interact with in a socially appropriate manner each day that he attended program.

John’s final goal was to comply with the medication regimen prescribed by the psychiatrist. John took his medication 100% of the time each day and he would report any side effects noticed.

John was close to achieving his goals in partial care. Soon, John would be prepared for discharge. This meant finding the appropriate post-treatment services for John and his grandmother and made contacts with these organizations. Because John had been involved in a mental health setting for quite a while, it would be discussed with John’s grandmother that he be involved in an after school activity and also begin receiving the more intense one on one therapy through DDD again. This would allow for supervised practice of socialization skills and the chance for John to demonstrate the other skills that he has learned in the community.

Outcome Measures

The Behavior Assessment System for Children (BASC) is a valid and reliable measure that was used to assess John’s behaviors and to measure improvement. This inventory was chosen because of its well developed norms,
but also because its norms contain a sample of children with autistic spectrum disorders. This is not a standard measure for the program, so the assessment was not included in the treatment plan. However, it was used as a tool for the purpose of this study. The BASC has three scales, which are the parent rating scale, teacher rating scale and self-report. The self-report was not given to John because it would be difficult for him to complete honestly. John’s grandmother was given the parent rating scale two times within a six month period. The teacher rating scale was given to John’s teacher.

On the original parent rating scale, John scored in the at-risk category for depression, atypicality, and social skills. His scores for hyperactivity, conduct problems, and leadership were considered clinically significant. In the Behavioral Symptom Index, John’s score was considered in the at-risk range. According to the norms for the BASC, these scales are all typically significant in a person diagnosed with Asperger’s syndrome and attention deficit/hyperactivity disorder.

The teacher rating scale was filled out four months after the first parent rating scale. It was interesting to note that John scored in the average range for each scale. This was interesting because the teacher continued to express concern about John’s behaviors. This discrepancy may have been due to the teacher’s lack of participation in this study. She finally agreed to fill out the BASC after multiple attempts to contact her. She appeared to rush through the measurement, therefore, it may not represent an accurate assessment of John’s symptoms. During this period the behaviors did begin to decrease, however, it he still exhibited a number of atypical and problematic behaviors.
On the final BASC, John scored in the average range for most symptoms. He continued to score in the at-risk range for withdraw, adaptability, and social skills. John scored in the average range in the behavioral symptom index. Given that Asperger’s is a chronic disorder, it makes sense that John continued to display some characteristics typical of Asperger’s syndrome. Previously, John scored in the clinically significant range in hyperactivity and conduct problems. However, he did not on the final BASC. This may be due to John’s medication, which he responded well to. The psychiatrist prescribed the specific medication to him in order to target the symptoms of hyperactivity and conduct problems.

A consumer satisfaction questionnaire was given to John and his grandmother six months ago and will be given again at his time of discharge. This survey is an agency policy that gives the consumer a voice in improving services for them and others to follow. The questionnaire is used to find out about the rapport between the case manager and the consumer, quality of services provided, and to also discover whether the child and family were made aware of their rights. The consumer satisfaction questionnaire is an important component of the program because it allows for better treatment of the consumer.
Chapter 5 - Comparison of Best and Normative Practice

There are some discrepancies between the normative practices of the partial care program in which John attended and the best practice literature on treating children diagnosed with Asperger’s syndrome and attention deficit/hyperactivity disorder. Many of these differences are not easily fixed because of the financial limitations placed on the program. Some of the differences may be changed, however.

The program gives the option of using psychotropic medication to the guardian, which, the literature stated is best practice. John’s grandmother took advantage of this option in order to help maintain her grandson in a public school and around the house. John has been prescribed stimulants, which coincide with the literature for ADHD, however, he has been prescribed antipsychotic medication for his aggression. While there had been much improvement in John’s behavior, the literature stated that SSRI’s might have a beneficial affect on decreasing aggression and hyperactivity. In this agency it would be easy to change John’s medication. A new psychiatrist has begun working there and would more than likely be open to the idea. The program had not begun working with a new psychiatrist before because the entire agency used the same practice. As the psychiatrist that owned this practice retired, the agency chose to use another practice. The program would be unable to replace their individual psychiatrist because the entire agency would have to agree on a new practice first.
Parent training is one of the differences between best practice and the program's normative practice. The literature stated the importance of parent training being an integral part of the child's program. This partial care program does not have a parent training program in place. While the case managers make contacts with the parents there is no intervention. Such a program would require specialized counselors that only provided parent education. Because of the financial limitations of the program, this would not be feasible at this time. However, the program will soon be growing into a new building where new programs will be implemented. At this time the partial care for children and the partial care for families will be joining together. This would be a time where an idea such as parent training would be implemented. While the program was not using the best practice of parent training, it was something that may be discussed in the future.

Social skills training is also best practice when dealing with a child diagnosed with Asperger's syndrome and ADHD. Although the program does offer groups on social skills training, this is not best practice. Because of the limited number of staff groups often consisted of 13-15 children. It was difficult for a child that had social and attention difficulties to maintain in a group this large. The literature stated that groups should be small or that social skills should be taught on an individual level. Some of the techniques stated in the best practice literature are not practical in this partial care setting because of cost and the time it would take to do them.
The partial care setting was also a difficult one to teach social skills because all of the children were at a different level socially. There were some children that tended to act out aggressively on a daily basis. Because children diagnosed with Asperger’s syndrome have difficulty reading social cues, there is a potential for the child to get hurt if they do not understand that the other child is angry.

Behavior management is the final piece of best practice. The program does its best to provide a behavioral piece to its partial care. The children had a “three strikes” response cost contingency. If the child significantly acted up for example they constantly made fun of their peers, they received a warning. If they needed to be redirected again then they would go down a level in the prize box. If they needed redirection a third time, they received no prize box for the day. The prize boxes consist of a “good day” box and an “okay day” box. This process is not individually based on goals because it is difficult for all staff to know each of the children’s goals due to the low staff-child ratio. Staff incorporated praise whenever they could in order to make the reinforcement more individualized. While the children definitely do enjoy the box each day, they seemed to enjoy being praised in front of their peers more. The individual aspect of this behavior management system was a possibility when there was a full staff. At this point, salaries continued to be low and the hours were mostly weekend, so it was difficult to fulfill this.

Although the program was not a best practice model for a child diagnosed with Asperger’s syndrome and ADHD, it had a positive affect on John’s behavior.
He had been able to maintain in a public school for two years and was not fighting as he did before. This was one of the only types of programs in the county that dealt with these types of behaviors in children. A best practice model may have helped the positive behaviors take shape more rapidly, however this program had been a major source of support for John and his grandmother, and therefore a helpful intervention.
Chapter 6 - Summary and Conclusions

The purpose of this case study was to review the diagnosis and treatment of an 8-year-old Caucasian male diagnosed with Asperger's syndrome and attention deficit/hyperactivity disorder. These are both chronic disorders that develop in childhood. He was treated with group therapy in a partial care setting. The BASC was implemented in order to observe John's behaviors after being involved in program for a substantial period of time.

The current literature supports stimulant medication, parent training, social skills training and behavior management as best practice when treating children with these diagnoses. Studies on the selective serotonin reuptake inhibitors are being researched, but have shown promise in treating aggression in Asperger’s syndrome (Tanguay, 2000). There is limited information to show whether best practice consists of each of the previously mentioned treatments individually or when they all make up one program. It would seem obvious that the latter is true, however, more research is needed.

Because Asperger’s syndrome is a relatively new diagnosis, more research needs to be conducted to continue to develop a best practice model. There also needs to be more research for children diagnosed with both Asperger’s and ADHD. Many studies are beginning to observe that these two disorders share many common characteristics and although the DSM-IV stated that they should not be diagnosed together, they very well may co-exist. Therapists and teachers
also need to stay current on this research so that best practice can be the only practice.
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