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The Social Reputation of Children with Asperger's Disorder in the Classroom:

Teachers' Impressions
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Chapter I
Review of the Literature

Asperger's Disorder (AD) is a growing concern within the psychological, educational, and medical communities. It was not included in the Diagnostic and Statistical Manual of Mental Disorders until 1994 when the American Psychiatric Association (APA) categorized it as a Pervasive Developmental Disorder (DSM-IV; APA, 1994). This inclusion and concern regarding its degree of relatedness to autism have fueled debates regarding diagnostic and treatment issues. Most research indicates considerable overlap in the symptoms of AD and autism, particularly in the core social deficits. Some researchers find no clinical distinctions between the two disorders; however, others find differences between AD and autism persist in early child development, especially those related to language and cognitive abilities, comorbid conditions and symptoms, and adaptive functioning (Freeman, Cronin, & Candela, 2002). There is growing evidence that Asperger's Disorder and autism are distinct disorders with fundamentally different clinical features and deserve separate assessment, research, and intervention investigations (McLaughlin-Cheng, 1998).

The central feature of Asperger's Disorder is the individual's deficits in social competence, which hinder the development of appropriate social relationships. Asperger's Disorder is primarily a social disorder in that the individuals lack the skills to appropriately interact with others. This impairment often affects their ability to succeed academically, occupationaly, and socially.
**Asperger's Disorder**

Asperger's Disorder (AD) was originally identified by Hans Asperger, a Viennese physician, as "Autistischen Psychopathen im Kindesalter" or autistic personality disorder in childhood. In 1944, Asperger published a paper describing a group of children who exhibited social peculiarities and social isolation with seemingly average cognitive abilities and language development. Intense absorption and circumscribed interests, clumsy motor movements, and odd postures characterized the children described by Asperger (Freeman et al., 2002). Other salient features in AD as described by Asperger include social ineptitude, insistence for sameness, deficits in nonverbal language, stereotypies, and a lack of humor (McLaughlin-Cheng, 1998; Wing, 1981). Asperger's disorder and his paper remained largely unnoticed by most professionals until Lorna Wing introduced it to the clinical community in 1981 with a paper detailing her work with similar individuals. This lack of awareness is partially due to the fact that Kanner's work on autism (1943) overshadowed Asperger's initial work. The recognition of the disorder was further delayed by its late inclusion in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994).

The DSM-IV-TR (2000) definition contains two essential clusters of characteristics that need to be present to qualify for a diagnosis of Asperger's Disorder. The first cluster is a qualitative impairment in social interaction including two of the following:

- Marked delays in non-verbal behaviors (i.e., eye-to-eye gaze, gesturing, facial expression, body posture);
- Impairments in establishing appropriate peer relationships;
Asperger's Disorder

- Lack of spontaneous seeking to share enjoyment, interests, or achievements with others; or
- Delays in social and emotional reciprocity.

The second DSM-IV-TR cluster describes restricted areas of interest and stereotyped behaviors and activities. One of the following needs to be present:

- Preoccupation with one or more stereotyped or restricted area of interest that is abnormal either in intensity or focus;
- Inflexible adherence to specific, nonfunctional routines or rituals;
- Stereotyped and repetitive motor movements (e.g., hand or finger flapping or twisting); or
- Preoccupations with parts of objects. (DSM-IV-TR; APA, 2000).

The DSM-IV-TR (2000) also specifies that the disturbances cause significant impairment in social, occupational, or other important areas of functioning.

Information regarding the prevalence of Asperger's Disorder is somewhat limited; however, it appears to be at least five times more common in males than females (DSM-IV-TR; APA, 2000; Ehlers & Gillbert, 1993; Koning & Magill-Evans, 2001). Some research has demonstrated incidence rates in the range of 48 per 10,000 children (Myles & Simpson, 2002). Safran, Safran, & Ellis (2003) imply the prevalence of AD in the United States to be roughly in the range of 700,000 to 2,000,000 based on previous research in European countries.

Information regarding familial patterns is also limited, but there appears to be an increased frequency among family members of the individuals who have the disorder (DSM-IV-TR, 2000; Volkmar, Klin, & Pauls, 1998). The presence of Asperger's Disorder in family members may also increase the risk for autism as well as more general social difficulties (DSM-IV-TR; APA, 2000). Many case reports have noted the apparently increased frequency of social deficits and/or Asperger's Disorder itself in family members (Volkmar et al., 1998). Volkmar et
al. (1998) cite a preliminary study in which Pauls, Volkmar, Klin, Schultz, & Cohen (1997) provided data based on family self-report in support of a strong genetic component to AD. The data collected from 99 families demonstrates a positive history of AD or something similar in first-degree relative for 46% of the families (Pauls et al., 1997 as cited in Volkmar et al., 1998). This preliminary data demonstrates an increased frequency of social difficulties and attentional problems as well as some language difficulties. There are some limitations to this data given the reliance on family history as provided by the parents rather than from direct assessment, a recent research undertaking (Volkmar et al., 1998).

In Asperger’s Disorder, the overall clinical picture is different at various ages. Often the social disability of individuals with the disorder becomes more striking over time (DSM-IV-TR; APA, 2000). Individuals with AD typically do not have clinically significant delays in cognitive development. In early childhood, they often demonstrate age appropriate self-help skills and curiosity in their environments. Because significant impairments in cognitive and language functioning are not noted during the first years of life, parents and caregivers do not usually express concern about the child’s development. Subtle social problems may exist but concern is often not expressed until the child enters preschool or another environment with same-age children; at this point the child’s social deficits may be more apparent.

Researchers have described the essential features of Asperger’s Disorder to include: qualitative impairments in social relationships, impairment in verbal
and nonverbal communication, and a restricted range of interests or a lack of flexibility in thought (Barnhill, 2001a). Koning & Magill-Evans (2001) further describe AD as a disorder of social interaction deficits including socially and emotionally inappropriate behaviors, a lack of appreciation of social cues, limited ability to interact with peers or develop peer relationships, and an impairment in the ability to use non-verbal behaviors to regulate social interactions. Individuals with AD are not only typically socially isolated but also demonstrate an abnormal range or type of social interaction that cannot be explained by other factors such as shyness, short attention span, aggressive behavior, or lack of experience in a given area (Barnhill, 2001a).

Communication

It is believed there are no significant or severe language deficits present in individuals with Asperger’s Disorder, although there is evidence for considerable pragmatic language problems (Church, Alisanki, & Amanullah, 1999; Safran et al., 2003; Volkmar & Klin, 2000). Verbal communication impairments are observed particularly in the pragmatics or practical use of language. Language use could be unusual in terms of the individual’s preoccupation with certain topics of interest, repetitive pattern of speech, and wordiness in that they may talk too much or not enough. Individuals with AD may also possess other speech peculiarities such as odd prosody, abnormalities in inflection, and formal pedantic language. Additionally, difficulties in non-verbal communication skills such as tone, intensity of voice, posture and body gestures, facial expressions, interpersonal distance, and the rhythm and timing of speech are often present.
Voice modulation may be especially difficult for children with AD, and they may whisper or yell. In addition to voice modulation, other verbal and non-verbal behaviors including off-task questioning, inattention to personal space, conversational blunders, and frequent interrupting are all indications of pragmatic difficulties associated with Asperger's Disorder.

Klin (1994) has noted three different ways in which the communication in Asperger's Disorder is distinctive. Prosodic skills are generally poor; however, the degree of abnormal inflection and voice quality is not typically as pronounced as it is in autism (Klin, 1994). Individuals with AD possess a limited range of inflection patterns; however, they have difficulty adjusting the patterns to the communicative content of their speech. As previously noted, they also tend to have difficulty monitoring the rate and volume of their speech. Klin (1994) also noted that speech in AD is often tangential and circumstantial resulting in a one-sided, egocentric conversational style. The individual with AD is likely to engage in unrelenting monologues about his or her particular interest with no regard to the listener's interest in the subject matter. The difficulties with contingency, reciprocity, and other rules of social conversation are further complicated by the individual's tendency to verbalize every thought, failing to organize speech in terms of distinct, communicative messages (Volkmar & Klin, 2000). Klin (1994) noted that individuals with AD tend to be verbose, and given any opportunity they quickly turn a conversation to their area of interest. Their ability to monitor and respond to cues from the conversational partner is lacking, so they are likely to
Asperger's Disorder

Individuals with Asperger's Disorder often have impairments of comprehension in that they misinterpret either literal or implied meanings. For example, a child with AD may take statements such as "Keep your eyes on your own paper", "Today we are going to bend the rules", or "No use of four letter words" as literal meanings and question them with limited understanding of their implied meaning. This literal mindedness may also contribute to difficulties in relating to peers. For example, children with AD may not "get" or may misunderstand humor, sarcasm, and play (Safran et al., 2003).

As previously noted, impairments in non-verbal communication are often present. These include: limited use of gestures; clumsy or awkward body language; limited facial expressions; inappropriate facial expressions; or peculiar, stiff gaze (Barnhill, 2001a; Gillberg & Gillberg, 1989; Ehlers & Gillberg, 1993; Koning & Magill-Evans, 2001). In addition, individuals with AD not only have difficulty utilizing eye communication appropriately and spontaneously but also have difficulty interpreting the body language or facial expressions of others. They may misinterpret or ignore non-verbal signs of communication (Wing, 1981).

Overall, individuals with Asperger's Disorder have difficulty initiating and sustaining social conversation with others. They often struggle with basic conversational skills such as when to listen, when to question, and how to initiate and end interactions (Safran et al., 2003); skills typically expected to develop as
a result of interactions in social environments. Additionally, they have difficulty interpreting and reading other people's body language and facial expressions, as well as using these forms of communication themselves in a spontaneous and appropriate manner (Barnhill, 2001a).

**Rigidity**

Rigidity may also be observed in individuals with Asperger's Disorder. They may insist on a schedule and have difficulty accepting deviations in routines. They may be firm on rules and have difficulty understanding that there are times when rules need to be bent or renegotiated. They are likely to have difficulty adjusting to new school routines such as a change in schedule due to unanticipated event or a holiday break. In terms of rigidity, Ehlers & Gillberg (1993) detail diagnostic criteria including demonstrable abnormalities in at least two of the following areas: an encompassing preoccupation with stereotyped and restricted patterns of interests; attachment to unusual objects; compulsive adherence to specific, on-functional, routines or rituals; stereotyped and repetitive motor mannerisms; pre-occupation with the basic aspects of play material; or distress over small changes in the environment.

Individuals with Asperger's Disorder frequently engage in unusual patterns of narrow interest and distinctive stereotyped behavior. The restricted range of interest in individuals with AD often takes eccentric or unusual forms. While no patterns have been discovered related to the restricted range of interests for individuals with AD, some researchers have speculated on the use of these interests. Some researchers believe it is possible children with AD use these
interests to facilitate conversation, indicate intelligence, offer a pleasurable activity, serve as relaxation, or offer consistency in the individual's life (Barnhill, 2001a; Myles & Simpson, 2002). It should be noted that topics of interest may be age appropriate (e.g., superhero, comic character, sports) or may be outside the bounds of what is expected of the child's typical peers (e.g., steam engine trains, weather).

Associated Features

In addition to the impairments in social functioning and the restricted range of interests in Asperger's Disorder, many researchers have added the following characteristics: insistence on sameness, poor concentration, poor motor coordination, academic difficulties, emotional vulnerability, and a naivété or lack of common sense (Williams, 1995 as cited in Barnhill, 2001a). Motor clumsiness and awkwardness is typically present in children with AD. Asperger originally noted these children were motorically awkward and clumsy, with odd posture and gait and generally poor awareness of their body movement in space (Volkmar & Klin, 2000). Others have observed children with AD to have deficient motor skills in addition to coordination and motor difficulties (Wing, 1981) as well as being clumsy with ill-coordinated movements and odd posture (Ghaziuddin & Butler, 1998). In addressing the question of clumsiness in AD, it has been proposed that delays in reaching motor milestones may lead to clumsiness (Ehlers & Gillberg, 1993) and motor difficulties may lie in the learning of movement rather than in the performance of movement (Tantum, 1991). This would imply that movements requiring little learning would not be clumsy, while those movements
requiring much learning, such as social behavior, would be clumsy. In addition, clumsiness in coordinated eye gaze and movement lead to difficulties following the social behavior of others (Tantum, 1991).

In their investigation of motor clumsiness Ghaziuddin & Butler (1998) defined clumsiness as impairment in skills on standardized tests of motor functioning, below the expected level of intelligence, in the absence of a known neurological disease. Their study included 12 children with Asperger's Disorder (11 males; average age 11.4 years; mean full scale IQ 104.9) as compared to 12 peers with autism (11 males; average age 10.3 years; mean full scale IQ 78.4) and 12 peers with pervasive developmental disorder – not otherwise specified (PDD-NOS) (10 males; average age 10.1 years; mean full scale IQ 78.2). Participants were selected based on age and diagnosis as well as inclusion criteria including full scale IQ above 60 to minimize the effects of severe mental retardation on the assessment of clumsiness and no obvious physical deformities interfering with motor assessment. A trained professional, blind to group membership, administered the BruininksOseretsky test, an assessment of motor functioning, as a measure of clumsiness. While individuals with AD were found to be impaired on the BruininksOseretsky test on gross motor, fine motor, and battery test scores, their impairments were less significant than those with autism and PDD-NOS (Ghaziuddin & Butler, 1998). In the examination of data, a strong relationship between full scale IQ and coordination tests results was discovered; however, there was not a significant difference in the mean coordination scores for participants in the diagnostic groups after adjusting for full scale IQ scores.
(Ghaziuddin & Butler, 1998). These results suggested differences in severity may be reflective of differences in intellectual abilities considering the mean IQ of the individuals with AD in this study were significantly higher than the members of the other groups (e.g., 105 versus 78 in the other two groups) (Ghaziuddin & Butler, 1998). Overall, their findings recognized the presence of motor coordination deficits and clumsiness in Asperger's Disorder, autism, and PDD-NOS. While these motor deficits are not diagnostic features, they are both common and persistent in individuals with Asperger's Disorder and should be considered as an associated feature of the disorder.

The implications of these deficits are significant in that they are likely to affect the child's ability to participate in sports, drawing, and other social activities involving motor coordination. It is likely the individual's difficulties with posture, gait, coordination, and the motor skills involved in imitation or learning from demonstration become increasingly more impairing with age; affecting not only the individual's ability to participate in sports and activities but also body image and self-perception (Volkmar & Klin, 2000).

Associated features not only include motor clumsiness, but also overactivity, hypersensitivity, inattention, and emotional problems. Children with Asperger's Disorder are often viewed as overactive with difficulty maintaining concentration and attention to the tasks at hand. They typically do not have the resources to cope with the demands of their social environments and are especially prone to depression, anxiety, and other psychological difficulties. Additionally, children with AD may experience pervasive hypersensitivity to
Asperger's Disorder

various sensory stimuli including but not limited to sound, light, and touch. They may have difficulty tolerating various levels of sensory stimulation reacting with unusual, overexaggerated, or disruptive responses. The sensory issues in AD appear similar to those of individuals with autism; however, the reactions to sensory issues by the former appear more overt (Myles & Simpson, 2002). Research exploring the sensory characteristics of individuals with AD is limited but indicates impairments in several areas including endurance, oral sensory sensitivity, attention, and registration (Myles & Simpson, 2002). In general, individuals with Asperger's Disorder have sensory profiles distinctive from other individuals and may engage in disruptive behaviors when they encounter sensory problems.

Cognitive and Academic Functioning

In contrast to autism, mental retardation is not usually observed in individuals with Asperger's Disorder, although mild mental retardation may be present in some cases (Safran et al., 2003). Variability in cognitive functioning may be noted in Asperger's Disorder; research has indicated that while most individuals with AD perform within the average range of functioning, scores can range from intellectually deficient to very superior (Barnhill, Hagiwara, Myles, & Simpson, 2000). People with AD, as a group, perform poorly on tests measuring the understanding of social mores and interpersonal situations, social judgment, common sense, and understanding of social conventions (Myles & Simpson, 2002). Although individuals with AD usually have average to above intelligence, they may demonstrate academic difficulties related to deficits in higher-level
thinking and comprehension skills as well as a tendency to be very literal with most comprehension at a very factual level (Barnhill, 2001a). Most children with AD will have difficulty with abstract thinking, poor comprehension of figurative language, difficulty with problem solving, and problems distinguishing the most relevant information (Safran et al., 2003). Individuals with AD often have difficulty generalizing abilities or applying skills and/or information across settings or individuals. However, it should be noted that if proper interventions are in place to facilitate learning, then academics could be a potential link for the child to the social world (Safran et al., 2003).

Several theories including theory of mind deficits, weak central coherence, and executive dysfunction have been proposed with mixed results to explain the uneven cognitive performances among individuals with autism and to serve as guides in discriminating Asperger’s Disorder from autism (Barnhill et al., 2000). Previous research has demonstrated evidence of difficulties in all three of these areas in autism and evidence of executive dysfunction in individuals with Asperger’s Disorder (Ehlers, Nyden, Gillber, Sandberg, Dahlgren, Hjelmquist, & Oden, 1997). Overall, Asperger’s Disorder appears to share some neuropsychological dysfunction commonalities with autism, as well as deficits in attention, motor control, and perception (Ehlers et al., 1997). Barnhill et al. (2000) explored this concept by examining the cognitive profiles of 37 individuals with Asperger’s Disorder to determine if profiles obtained from the Wechsler scales could discriminate among AD, autism, and other conditions such as attention disorders, head injury, schizophrenia, and dyslexia. This review
includes cognitive profiles of children whose ages ranged from 3 years, 2 months to 14 years, 9 months (mean age = 9 years, 8 months) at time of testing. Based on their chronological age at time of testing, 2 participants completed the *Wechsler Preschool and Primary Scale of Intelligence–Revised* (WPPSI-R; Wechsler, 1989); 33 completed the *Wechsler Intelligence Scale for Children-Third Edition* (WISC-III; Wechsler, 1991); and 2 completed the *Wechsler Intelligence Scale for Children-Revised* (WISC-R; Wechsler, 1974). The examination of these cognitive profiles found no statistically significant differences between the Verbal IQ (VIQ) and the Performance IQ (PIQ) among the participants with AD. Furthermore, Barnhill et al. (2000) found the frequency distribution of the VIQ and the PIQ of the participants in this study to be similar to the distribution of IQ scores in the general population. The results of this research suggested the central factors associated with the diagnosis of Asperger's Disorder may not be found in the cognitive profile, but instead in the behavioral and academic characteristics of the individual.

*School Functioning*

Children with Asperger's Disorder typically spend a majority of their time in general education classrooms sharing space and experiences with normally developing and achieving peers. The general education classroom setting may be extremely challenging to children with AD, especially with the increasing emphasis on teaching methods that favor social interaction (e.g., cooperative learning, group work). In this setting, the child with AD with poor interpersonal
skills and an inability to read social cues will continuously test the patience of teachers and peers and likely be admitted to groups last, if at all (Safran, 2002).

As children learn social conventions, they often try to apply them universally. However, social conventions are variable, making it difficult to rigidly and consistently apply them across situations. This lack of social consistency is especially confusing for children with AD, who experience frustration as interactions are praised in one setting and punished in another (Myles & Simpson, 2002). In addition, the need for routine and structure may lead to behavior difficulties in school, especially during group activities or unstructured free time. These times may include moving from one activity to the next, from one classroom to another, going to lunch, or during recess. These times can be more difficult due to the sensory input (e.g., noise level, change in lighting, group size, etc.), reduced supervision, or increased need for social interaction (Safran et al., 2003).

Children with Asperger's Disorder have the ability to sense their differences from peers often experiencing behavioral and emotional difficulties connected to their social deficits. These problems and challenges frequently involve feelings of stress, loss of control, and inability to predict outcomes (Myles & Simpson, 2002). Thus, children with AD often experience behavior difficulties associated with their inability to function in a world seen as unpredictable and threatening.

Children with Asperger's Disorder may indicate that one social environment is so stressful that they are unable to maintain themselves in other
environments, and thus situations may escalate to the point of crisis before others are aware of their excitement or discomfort (Myles & Simpson, 2002). Myles and Southwick (1999) have previously characterized this concern as “the rage cycle”, in which children with AD experience extreme levels of stress and frustration as they attempt to navigate the social world, balance academic tasks, process sensory information, and cope with often confusing environments (Safran et al., 2003). For example, a child may be expending so much energy to maintain the stress and frustration resulting from the social environment of school during the morning routine he or she has little left over to sustain a reasonable level of behavior later in the day. Without proper supports and coping strategies for the child, this lack of self-control may result in varying degrees of behavioral disturbances.

Children with Asperger’s Disorder represent a unique population within the educational community, in that they appear “normal” to the average observer in a society that tends to judge one’s disability on outward appearance (Church et al., 2000). Individuals with AD often have considerable social and language peculiarities while simultaneously demonstrating normal development and functioning in many areas of their lives. With average to above average intellectual functioning, individuals with AD may look typical but impairments in social awareness and appropriate social skills limit their ability to connect with the world around them. The odd use of language and atypical social behaviors associated with AD are rarely understood by others since the individuals look “normal”. Children with AD are often referred to as “behavior problems”,

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“inappropriate”, “weird”, or “cold”, which are inaccurate descriptions of these children as they struggle to fit in (Church et al., 2000). Children with AD are typically thought to be socially stiff awkward, emotionally blunted, self-centered, deficient at understanding social cues, and inflexible (Myles & Simpson, 2002).

**Social Deficits in Asperger’s Disorder**

Social impairment is perhaps the most important feature of Asperger’s Disorder. On a daily basis, children with AD typically encounter a great deal of social difficulty during interpersonal interactions. Even though they often possess relatively unimpaired language and intelligence, they are challenged to attain even minimal social success due to the unbecoming nature of their behavior. Difficulties within the social world are considered especially troublesome for individuals with AD and include a general inability to empathize with others, a lack of typical peer relationships, and inappropriate responses to the behavior of others. They are remarkably egocentric and highly sensitive to any perceived criticism, while being oblivious to other people’s feelings (Wing, 1998). Individuals with Asperger’s Disorder lack appropriate social skills, have a limited ability to take part in reciprocal communication, and do not seem to understand the unwritten rules of communication and conduct (Barnhill, 2001a; Barnhill 2001b). In fact, Wing (1981) describes the most obvious characteristic of individuals with AD to be the impairment of two-way social interaction.

Individuals with Asperger’s Disorder are overall impaired in social interactions. Researchers agree that difficulties communicating and learning the unspoken rules of social interaction contribute to the major challenges for
children with AD (Barnhill, 2001a; Church et al., 2000, Carrington, Templeton, & Papinczak, 2003; Myles & Simpson, 2002). In a descriptive study of Asperger's Disorder at various ages, Church et al. (2000) found children with AD fall into two distinctive patterns of interactions. In a retrospective chart review, they found the children to be either quiet and unassuming with very low demands or exuberant and active violating social boundaries with an “in your face” style of interacting. Additionally, some children were thought to be too physical with difficulties keeping their hands to themselves. Overall, children with AD in this review needed the assistance of an adult (e.g., parent, teacher, instructional assistant) to facilitate social interactions. However, even with additional support the array of deficits in social interactions frequently alienated peers, creating patterns of negative interactions (Church et al., 2000).

Children with Asperger's Disorder do not possess the perceptive knowledge of how to adapt their approaches and responses to fit in with the needs and personalities of others (Wing, 1981). They may approach others only to have their own needs met or respond to peers in a one sided nature (Ehlers & Gillberg, 1993). Individuals with AD are further disadvantaged in their social environment, in that, they have difficulty comprehending the facial expressions of others, sensing the feelings of others, and making adjustments to fit different social contexts or listeners (Koning & Magill-Evans, 2001). In general, individuals with Asperger's Disorder are clumsy in their approach during social interactions contributing to difficulties relating to others including peers and caregivers. Children with AD are often described as socially awkward or self-
centered with a lack of understanding of others. They frequently do not have the skills to engage in accepted reciprocal social interactions. For example, it is not unusual for a child with AD to greet a peer and begin talking about an area of special interest with no regard for the peer's response or the social rules of conversation such as interest or reciprocity.

The social impairments experienced by individuals with Asperger's Disorder manifest in a variety of ways. For example, one child with AD may participate passively in social situations while another may be an overactive participant. The passive participant may show no interest in peers or may interact only when his or her own obsessive interest is involved. The overactive participant may intrude on others by talking too much or too loud, asking inappropriate questions, or infringing on a peer's personal space. For the child with Asperger's Disorder, difficulties in social interactions arise not from a desire to withdraw from social content or situations but instead from a lack of understanding and ability to use the rules governing social behavior (Wing, 1981).

Children with Asperger's Disorder have difficulties communicating with their peers and developing appropriate relationships with others involving mutual sharing of interests, activities, and emotions. They may be viewed as being solitary or as having no close friends. Many individuals with AD express no desire to socialize and make friends; others are very aware of and unhappy with their isolation (Safran et.al. 2003). Even though children with AD experience marked social isolation, they are not usually unaware of or disinterested in
others. Frequently individuals with AD want to make friends but have difficulty understanding the rules of relating to others. In fact, some of the behavioral difficulties observed in children with AD appear to result from frequent yet inappropriate approaches to others (Volkmar & Klin, 2000). Children with AD may be aware of their difficulties and even try to overcome them, but have difficulty changing their behavior to meet environmental demands. Research has demonstrated that children with Asperger's Disorder do not appear to comprehend the nature and reciprocity of friendship (Carrington et al., 2003).

Carrington et al. (2003) utilized semi-structured interviews to examine the understanding of friendships or mutual peer relationships of five adolescents with Asperger's Disorder. They focused on five broad areas including: the understanding of concepts or language regarding friendships; descriptions of what is not a friend; descriptions of what is a friend; descriptions of acquaintance; and skills used to cope with social deficits. Overall, they found a lack of in-depth discussion from all participants regarding the issue of friendship. This meant that the participants frequently needed prompts, such as sentence completion, to provoke discussion regarding friendships. In general, participants struggled to describe their understanding of friendship (Carrington et al., 2003). The participants had an easier time describing individuals who were not friends detailing such as characteristics as being “different”, “liking other things”, or “not being nice to me anymore” (Carrington et al., 2003). Participants detailed various descriptions of friends but once again found it difficult to explain. Many participants made statements such as, “you grow up with them”, revealing their
inability to fully comprehend the nature of friendship (Carrington et al., 2003). At times, the participants were able to make statements describing friends as individuals they had known for a long time or with whom they shared interests. Carrington et al. (2003) expressed that the words used by participants during the study interviews lacked insight into what constitutes a friendship and a general difficulty in understanding and using language to describe friendship issues. Overall, Carrington et al. (2003) found that while friendships may be desired the concept of reciprocity and sharing of interests, ideas traditionally inherent in friendship, are often not understood by children with AD.

Individuals with Asperger’s Disorder have difficulty comprehending the subtleties of how individuals relate or interact with one another (Myles & Simpson, 1998) and understanding the perceptions of others (Myles & Southwick, 1999). This is demonstrated not only by the Carrington et al. (2003) study but also one conducted by Church et al. (2000). Their project involved a retrospective chart review for a descriptive study of AD at a variety of ages. They found that by the ages of 6 to 7 years these children were recognized as having significant social skills disabilities. While highly varied, their social abilities were always disordered in some manner as described by caregivers. The children in the study were described as having no deep, reciprocal relationships with peers. Any developed peer relationship was viewed as being superficial or misunderstood.

One possible reason social interactions are problematic for children with Asperger’s Disorder is they experience difficulty in interpreting subtle social cues,
particularly non-verbal body language. An inability to “mind read” means these children will find it difficult to predict others’ behavior, read the intentions of others, understand the motives behind behavior, understand emotions, and understand how their behavior affects how others think or feel (Barnhill, 2001a; Barnhill, Cook, Tebbenkamp, & Myles, 2002; Carrington et al., 2003; Myles & Simpson, 2002).

Theory of Mind

The ability to infer the thoughts or beliefs of others is a major challenge in individuals with Asperger’s Disorder. This concept is often referred to as theory of the mind and may be defined as “the ability to infer the mental states of others (e.g., their knowledge, intentions, beliefs, and desires)” (Ozonoff & Miller, 1995 as cited in Barnhill, 2001a). Theory of mind or the ability to attribute mental states such as beliefs, feelings, and desires to others often facilitates social interactions (Kleinman, Marciano, & Ault, 2001). According to Myles and Southwick (1999), theory of mind deficits in individuals with Asperger’s Disorder frequently lead to an inability to explain their own behavior, problems understanding emotions, and difficulty differentiating fiction from fact (as cited in Barnhill, 2001a). Additional problems with theory of the mind deficits include difficulty predicting the behavior or emotional states of others, difficulty understanding the perspectives of others, difficulty inferring the intentions of others, and a lack of understanding that behavior impacts how others think or feel (Barnhill, 2001a). Individuals with theory of mind impairments have difficulty
with joint attention and other social conventions such as turn taking and
politeness (Barnhill, 2001a).

Myles & Simpson (2002) also describe challenges with theory of mind. They describe these issues to include the following difficulties: difficulty inferring the intentions of others, a lack of understanding of how their own behavior may affect others, and difficulty with reciprocal skills like turn-taking (Myles & Simpson, 2002). The inability of individuals with AD to recognize the experiences of others is widely accepted by researchers (Barnhill, 2001a; Barnhill et al., 2002; Carrington et al., 2003; Myles & Simpson, 2002).

Without theory of mind, an individual does not understand what motivates others' behavior or that other people have unique beliefs, feelings, desires, and experiences (Kleinman et al., 2001). According to Ehlers & Gillberg (1993), children with Asperger's Disorder lack the shared enjoyment of pleasure in other's happiness or the spontaneous seeking to share their own enjoyment with others. The degree of impairment with regards to theory of mind may vary from individual to individual; therefore, different individuals with AD may possess various levels of theory of mind skills.

Kaland, Moller-Nielsen, Callesen, Mortensen, Gottlieb, & Smith (2002) investigated whether children and adolescents with Asperger's Disorder would be able to infer mental states embedded in naturalistic story contexts. They also looked at the participants' abilities to identify physical aspects versus mental states in the stories as well as their reaction times when performing theory of mind tasks. The study involved 21 children with AD (mean age=15.72; mean
VIQ=111.40) with verbal intelligence within the average range (VIQ>90) and 20
“normal” children (mean age=15.58; mean VIQ=126.4). The comparison group
was noted to obtain significantly higher verbal IQ scores than the AD group;
therefore, the importance of this variable was controlled by covariance analysis.
All participants were males, as males are typically over-represented in the
diagnostic population. The children were presented with short stories then asked
questions about the story content including control questions to make sure the
participants understood the gist of the story, physical questions in which the
children were asked to identify physical states, and mental inference questions
exploring the mental states involved in the story context. Children with AD
needed significantly more time to answer the questions, even after prompt
questions were given. The major finding of this study was the children with
Asperger’s Disorder had significantly less success inferring mental states as
compared with physical states (Kaland et al., 2002). Difficulties with interpreting
social communication is also highlighted by the finding that individuals with AD
needed significantly more time and more prompts to answer questions involving
mental states as compared to their peers (Kaland et al., 2002). One striking
qualitative finding from this study was the tendency for children with Asperger’s
Disorder to interpret events literally, even when a mental state interpretation was
the most likely option (Kaland et al., 2002). The deficits in the ability to attribute
mental states is likely to have significant consequences for children with AD in
their social environment, since social understanding in naturalistic settings
Asperger's Disorder requires mental flexibility and subtle timing to social responses (Kaland et al., 2002).

The ability to employ theory of the mind skills, as well as the child's overall level of social functioning significantly influences their social competence. Social competence is considered an essential feature in determining the child's ability to successfully engage in relationships with others. Social behavior and social interactions are often viewed as central and important characteristics of human beings. Social competence is frequently viewed as fundamental to leading a typical healthy life.

**Social Competence**

A body of well-developed research has supported the belief that success in peer relations represents a critical aspect of social competence in childhood and adolescence. Peer relationships have significant importance because positive peer relationships during childhood are associated with prosocial behavior, academic achievement, and stress resistance (Noll, Bukowski, Rogosch, LeRoy, & Kulkarni, 1990). Social competence refers to the skills and strategies that allow individuals to have meaningful friendships; forge close, emotion-based relationships; productively collaborate with groups, teams, and work partners; manage social settings; and participate in family functioning (Gutstein & Whitney, 2002).

Social competence is often referred to as a critical variable in predicting success in future life pursuits. Inadequate social skills impinge on development by "(1) increasing behavior problems that result from not having the appropriate
skills for social interaction, (2) increasing the likelihood for maladaptive behavior later in life, and (3) decreasing the positive developmental support and learning opportunities found in successful peer relationships” (Frea, 1995, p. 53 as cited in DiSalvo & Oswald, 2002). Social competence is perceived to consist of three separate areas of social development: (a) secure attachment, (b) instrumental learning, and (c) experience sharing relationships (Gutstein & Whitney, 2002). Attachment refers to the specific affiliative bond of the infant to his or her parent(s) that generally begins after 6 months of age (Gutstein & Whitney, 2002). The bonds that form between the child and the caregiver vary in level of attachment. Children who form secure attachment are able to use the attachment figure as a refuge in times of upset and as a supporter of exploration and play in times of low distress. As children move into other environments, such as school, they are able to generalize their attachment to other significant figures in their life (Gutstein & Whitney, 2001). Instrumental social learning involves engagement in a social behavior in order to obtain some goal. Individuals participate in instrumental interactions with the awareness of the result they wish to achieve and why they are expending the effort (Gutstein & Whitney, 2001). Individuals interact with others to obtain specific goals, information, or new skills and learn from experience and understanding the relationship between behaviors and desired outcomes. Experience-sharing relationships involve the desire and skills to be a good reciprocal playmate, value other’s points of view, develop friendships, and perform other emotion based connections (Gutstein & Whitney, 2001). The development of peer relationships,
such as friendships, is considered a classical experience sharing relationships. Significant impairments in any of these areas of social competence may result in eventual social difficulties.

The belief that children’s peer relationships contribute to their psychological adjustment is widely accepted (Erdley, Nangel, Newman, & Carpenter, 2001). Early developing social relationships are believed to have a strong influence on many adult behaviors and relationships. The success of school age children in developing peer relationships (Bagwell, Schmidt, Newcomb, & Bukowski, 2001) and gaining an understanding of social rules and roles within a given peer group context, with a focus on being liked and accepted by peers (Zeller, Vannatta, Schafer, & Noll, 2003), are important to the future acceptance and relationship development of the individual. A number of factors have been identified to predict peer acceptance in early and middle childhood including cognitive and social problem solving ability, prosocial behavior, emotional regulation, and emotional knowledge (Mostow, Izard, Fine, & Trentacosta, 2002).

Children who experience peer rejection are at greater risk for dropping out of school, aggressive behavior problems, engaging in delinquent or criminal behavior, loneliness, and development of mental health difficulties including depression and anxiety in adolescence and adulthood (Bagwell et al., 2001; Elliott & Gresham, 1987; Erdley et al., 2001; Masten, Morrison, & Pellegrini, 1985; Noll et al., 1990). Conversely, children who develop early relationships with peers have better employment records as adults, are more likely to live
Independently, live longer, are less likely to contract adult diseases, have better mental health, and have greater self-esteem (Strayhorn & Strain, 1986 as cited in Strain & Smith, 1996).

Peer interactions are valuable because they form the context in which children learn all kinds of other important developmental skills (Mostow et al., 2002; Guralnick, 1986 as cited in Strain & Smith, 1996). In many instances, peers play a prominent role in defining acceptable behavior. Peer groups provide a culture in which behavioral standards, goals, and expectations are set, thereby influencing what a child does (Bukowski, 2001). Participation in peer groups allows children the opportunity for exploration and acquisition of new skills. For example, as children interact with one another, they learn key social rules, such as negotiating individual needs, cooperation, and turn taking (Strain & Smith, 1996). Research has also demonstrated experiences of peer relationships to be associated with the development of several other basic skills including behavior coordination, imitation, appropriate participation in social exchanges, and development of conflict resolution skills (Bukowski, 2001) as well as empathy and altruism (Mostow et al., 2002).

There exist multiple theoretical perspectives for understanding the process through which peer relationships in childhood and early adolescence might affect not only current adjustment but also long term social and emotional adjustment. One such theory suggests that peer relationships meet the needs that surface during this period of development. Bagwell et al. (2001) suggest that the need for acceptance during elementary school (ages 6 to 9 years) is characterized by
the need for acceptance and this need can be fulfilled by participation in peer groups. This need often shifts to a need for more interpersonal intimacy or mutual friendship during pre-adolescence (Bagwell et al., 2001). Peer acceptance and the development of friendships may provide sources of instrumental learning of appropriate social behaviors, nurturance, companionship, and enhancement of self-esteem (Bagwell et al., 2001; Erdley et al., 2001). The importance of the development of peer acceptance and friendships to the overall adjustment of the child may be better understood by considering the process of peer rejection.

The adjustment problems associated with peer rejection and failure to develop and maintain friendships may be attributed to the overall stressfulness of the experience. Rejected children often experience loneliness, victimization by others, and exclusion from activities. In addition, this stress is likely compounded by the fact that the rejected children lack support from a valuable social network thereby leaving them vulnerable to other stressors (Bagwell et al., 2001). Peer relations provide a source of protection against stresses or potential stresses in addition to a variety of direct and indirect supports leading to long lasting adjustment (Bukowski, 2001). Individuals with limited peer relations and social supports often have difficulty accessing coping resources in times of stress, and as the stressors intensify, the coping strategies decrease, leading to increased negative outcomes (Bagwell et al., 2001).

Social skills are considered essential in the development of social competence. Social skills may be generally described as the interaction between
an individual and their surroundings and the tools used to initiate and maintain necessary interpersonal relations (Elliott & Gresham, 1987). A more comprehensive description as proposed by Elliott & Gresham (1987) describes social skills as those behaviors exhibited in a specific situation that help in predicting the child's attitude on important social outcomes. According to Elliott & Gresham (1987), important social outcomes for school age children include acceptance by peers, significant others' (e.g., parents, teachers) favorable judgment of abilities, academic competence, adequate self-concept or self-esteem, and adequate psychological adjustment. The development of social skills is correlated to the overall social adjustment and societal functioning.

**Measurements of Social Behavior**

Numerous assessment procedures are available to help generate information that assists in identifying, clarifying, and classifying social skills or social behavior problems. The assessment procedures most frequently utilized in gathering this information include ratings by others, sociometric techniques, and self-report measures. Most commonly used measures take into consideration the ease of administration and the relative amount of time needed for completion (Elliott & Gresham, 1987).

Sociometric techniques are considered useful in determining which children are poorly accepted, rejected, or considered unpopular as compared to peers (Elliott & Gresham, 1987). Sociometric procedures ask others, typically peers, to nominate or rate the child on particular behaviors or social roles (e.g., like to play with, work with, like the most, like the least, etc.). These instruments
are presumed to measure the general reputation of the individual, his or her sociometric status (Masten et al., 1985). Through nomination on a variety of attributes or behaviors sociometric techniques explore the individual's peer acceptance or rejection.

Rating measurements, with behavior rated on a scale or checklist, have been a prime source of information in evaluating behavior difficulties. Rating measurements are typically designed to indicate the degree to which a rater observes an attribute (e.g., cooperativeness, aggression) or the perception of the particular attribute to be present in the child (Sattler, 2002). They are typically useful in evaluating the more global aspects of behavior and for quantifying impressions, such as after a psychometric assessment has been completed (Sattler, 1992; Sattler; 2002). Rating measurements have many advantages including providing a common frame of reference for comparing individuals, recording many different behaviors, suitable for statistical analysis, and convenience and time efficient (Sattler, 2002). However, rating measurements usually involve a greater degree of observer subjectivity than do other behavioral recording methods (Sattler, 1992; Sattler, 2002). Additionally, other disadvantages are associated with rating measurements including low interobserver reliability because of ambiguity in terms, scale positions that are interpreted differently by different observers, a tendency to use the center of the rating scale avoiding extreme positions (central tendency error), and potential halo effects (Sattler, 2002). Teachers, parents, and other important caregivers typically supply ratings on such instruments. Self-report measures of the child's...
behavior are also available, but are not as frequently used as the other techniques. Self-report measures provide potentially useful information regarding the child's behavior and their perception of their own behavior; however, they should be viewed with caution considering the possibility of bias, in that, an individual may over or underestimate his or her problems or even be unaware of the existence of problems.
Chapter II
Rationale and Hypothesis

The purpose of this study is to explore the behavioral reputations and social acceptance of children with Asperger's Disorder. In addition, the relationship between the child's observed behavior and his or her behavioral reputation will be examined. This study will explore how children with AD are perceived in the general education classroom, what roles they play in the classroom, if they are socially accepted or liked by classmates, and how their behavior influences this perception.

Research has demonstrated that a lack of social understanding is a fundamental deficit in individuals with Asperger's Disorder. Asperger (1944) initially outlined this limitation in social relationships and described the nature of these individuals as being revealed most clearly in their interactions with other people. Wing (1981) and others continue to emphasize deficits in social interactions and relationships as a central deficit. Barnhill (2001a, 2001b) described individuals with AD as being clearly disadvantaged in coping within their social world. Asperger's Disorder is often related to an odd use of language and atypical social behaviors that are rarely understood by others causing the individual to struggle to fit in (Church et al., 2000). The individual's inability to develop social competence is often viewed as a significant contributor to disappointing achievement in educational, occupational, and interpersonal functioning. The intention of this study is to contribute to the understanding of
the social acceptance of children with Asperger’s Disorder in hopes of assisting in the future development of appropriate interventions.

The primary clinical hypotheses involve the social reputation (What is the child like?) and the social acceptance (Is the child liked?) of the child with Asperger’s Disorder. The first hypothesis states that children with Asperger’s Disorder, when compared to typically developing children, are perceived by teachers to have less positive social reputations in the classroom. Second, it is hypothesized that the social reputation of children with Asperger’s Disorder will reflect the social deficits characteristic of the disorder. Finally, the third hypothesis involves the strength of observed behavior based on behavior ratings on social behavior reputation of the child with Asperger’s Disorder.
Chapter III

Method

Participants

Participants will be the teachers of children ages 6 to 11 years with a clinical diagnosis of Asperger's Disorder. Information about the children in this study will be provided by two groups of teachers in order to get the best overall picture of the child's performance in the social setting of the classroom.

Participating teachers will belong to one of two groups. The first group will consist of the general education classroom teachers of the target children. This group will be defined as teachers with whom the target children spend the majority of the school day, at least 3 to 4 hours of the day. This group will be identified as the Teacher Group throughout this study. The second group of teachers will consist of other school staff members, preferably classroom instructional assistants. An instructional assistant is a school staff member who spends the majority of the day (3 to 4 hours) within the classroom setting assisting children with special needs. The instructional assistant observes the classroom children and their interactions with one another. If an instructional assistant is not available for participation then a secondary teacher who spends consistent time observing and interacting with participating children in a peer involved setting (e.g., lunchtime, recess, extracurricular activity) will be selected for participation. The second group will be identified as Assistant Group throughout this study.
Recruitment

Children ages 6 to 11 years with a clinical diagnosis of Asperger’s Disorder will be identified through community groups and school systems. The researcher will request participation from parent(s) of children with AD at local community groups such as support groups and educational conferences. School systems will also be contacted to assist in the identification of children with Asperger’s Disorder. The researcher will ask school systems to provide study information to families of children with AD (See Appendix C). The diagnosis of Asperger’s Disorder will have been determined independent of this study through an evaluation conducted either by a school psychologist, clinical psychologist, or physician. The parents will provide verification of the diagnosis of Asperger’s Disorder by giving the diagnostic history of their child (See Appendix F). In addition, parents will grant permission for the school to confirm the child receives services based on this diagnosis as specified by an Individualized Education Plan (IEP) or 504 Plan (See Appendices G and H).

The parent(s) of children with Asperger’s Disorder will be contacted by letter and/or in person to gain permission for the child’s participation in the study (See Appendix C). The parent(s) of children with AD will provide informed consent for their child to participate in a study of social behavior (See Appendix E). School principals will be contacted once consent is obtained from the parent(s) of children with AD. The researcher will inform the principals of study procedures and ask for permission to conduct the study in their schools. The
researcher will contact classroom teachers after receiving approval from school principals.

Classroom teachers will be asked to participate in a study involving social behavior in children (See Appendix I). Teachers agreeing to participate will be placed in the Teacher Group. Another school staff member will be asked to participate in the study (See Appendix I). This person will be someone having knowledge of the social behaviors of the children, preferably an instructional assistant. Those agreeing to participate will be considered to be in the Assistant Group.

A teacher from the Teacher Group will select an appropriate peer comparison for the identified child with Asperger's Disorder from the classroom. The best peer comparison is defined as the child matching the child with AD in age based on date of birth, gender, and race. Additionally, the teacher will confirm this child does not have an Individualized Education Plan (IEP) or a 504 Plan indicating the need for special services. Once a peer match is identified the teacher will send a consent letter home with the selected child (See Appendix E). If consent is not granted by the parent(s) of this child, then a consent letter will be sent home with the child deemed to be the next most appropriate for comparison, based on the above mentioned criteria. This process will continue until an appropriate peer match has been selected for the child with AD.

Twenty-eight children (N=28) will participate in each group for a total of fifty-six participating children. At a power level of .80, a large difference between two independent means at alpha=.05 requires a sample size of twenty-six
children in each group (Cohen, 1992). Further consideration of statistical information indicated that with two groups of participants, with an eta square of .30, and alpha of .05, thirty participants per group were needed in order to achieve power of .80 (Jaccard & Becker, 2001). In addition to the statistical information, the lack of prevalence data for AD in the geographical area of focus in this study was considered in the establishment of the number of fifty-six total participants. This number is also set based on prior research using similar methodology (see Noll et al., 1990).

**Measures**

**Revised Class Play**

The Revised Class Play (RCP), originally developed as an assessment of peer interactions (Masten et al., 1985), will be modified for use in this study in order to collect the teacher’s impressions of the child’s social behavior (See Appendix A). The RCP has typically been used with peers; however, this study will ask participants in the Teacher Group to complete the instrument. Previous research has demonstrated a significant overlap between teacher and peer impressions of a child’s social behavior. Noll et al. (1990) demonstrated this use of the RCP to measure teacher impressions of peer behavior in children with cancer.

The Revised Class Play (RCP) is an inventory of social behavior (Masten et al., 1985). It is a descriptive instrument that asks the rater to “cast” classmates or students into 30 different roles (e.g., “someone who is a good leader”, “someone who is shy”, “someone who picks on other children”, etc.). The RCP
Asperger's Disorder

is usually completed separately for males and females in the classroom. In this study, the RCP will be completed once using only those children of the same gender as the child with Asperger's Disorder. The use of the RCP in this study will assist in keeping the specific focus from the child with AD. The teacher will be asked to list three children in the class who fit into the described role. No rank order will be given to the listing on a role; therefore, each child will be given equal credit for appearing on a role.

The scoring procedure for the Revised Class Play (RCP) as described by Masten et al. (1985) will be adapted for this study. The number of nominations that each child receives on the instrument will be tallied and summed separately for the three RCP dimensions. These raw scores for each child will then be standardized using z-score transformations that serve to adjust a child's scores for the differences across classrooms in size and sex distributions.

The RCP assesses vulnerabilities as well as competencies in classroom social behavior. The instrument consists of 30 social roles with equal distribution of 15 positive and 15 negative roles (Masten et al., 1985). The roles load onto three separate dimensions including one positive dimension based on 15 roles, Sociability-Leadership, and two negative dimensions, Aggressive-Disruptive and Sensitive-Isolated, each based on 7 roles. One negative role ("someone who acts like a little kid") was not used in any composite score because of its weak factor loading (Masten et al., 1985). The Sociability-Leadership dimension includes roles associated with academic achievement, cooperation, and other prosocial behavior. This dimension is associated with a
positive peer reputation suggesting a social competence in the school social
environment (Masten et al., 1985). Roles on the Aggressive-Disruptive
dimension are typically associated with academic difficulties, aggression, and
disruptive, maladaptive behavior. This dimension suggests a behavioral style of
the child that in combination with other attributes reflects the child's general
behavior and activity level in the classroom (Masten et al., 1985). The Sensitive-
Isolated dimension is composed of roles usually associated with withdrawal and
social isolation. Children high on this scale are typically perceived to use their
intellectual and social resources less effectively than other children (Masten et
al., 1985). The factor structure has demonstrated internal consistency of .81 to
.93, stable at 6 and 17 months and replicable across settings (Masten et al.,
1985).

Since this study involved utilizing the RCP with a specialized population of
children, nine additional roles developed by the primary researcher will be added
to the end RCP. Eight of these additional roles reflect behaviors and
characteristics frequently associated with Asperger's Disorder including
difficulties in the following areas: motor abilities, conversational competency, and
academic work. Added roles will address difficulties as well as competencies.
Therefore the added roles reflect behaviors perceived as being socially positive
(e.g., “someone who is graceful”, “somebody who works well on group projects”) or as socially negative (e.g., “someone who is clumsy”, “someone who has
difficulty working in a group”). One of added role addresses overall social
difficulties with peers by asking for “someone who is teased a lot”.

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**Behavioral Assessment System for Children – Teacher Rating Scale**

Ratings of observed behavior are based on the Behavioral Assessment System for Children – Teacher Rating Scale (BASC-TRS) (See Appendix B). The BASC-TRS will be used to identify significant child behaviors. A member of the Assistant Group, a novel rater or a participating teacher not completing the RCP, will complete the BASC-TRS for each child. They will complete the BASC-TRS as they view the child to behave or how they interact with the child.

The BASC-TRS, developed by Reynolds and Kamphaus (1992), is a multidimensional inventory that measures various facets of behavior and personality, including positive (adaptive) and negative (clinical) aspects. The Adaptive Skills Composite will be utilized as a measure of social competence. This composite factor includes items from the following areas: leadership, social skills, study skills, and adaptability. This composite summarizes prosocial, organization, study skills, and other adaptive abilities considered incompatible with the behavior problems reflected by the other composites (Reynolds & Kamphaus, 1992). The behaviors measured in the Adaptive Skills Composite are often considered in opposition to those measured by the following composites. The Externalizing Problems Composite and the Internalizing Problems Composite will be utilized to identify broad areas of negative behavior. The Externalizing Problems Composite is composed of items in following areas: aggression, hyperactivity, and conduct problems. This composite characterizes the disruptive nature of the child's behavior. This type of behavior often brings about problematic relationships with both peers and adults (Reynolds &
Kamphaus, 1992). The behaviors in this dimension are also referred to as "undercontrolled" behaviors (Achenbach & Edelbrock, 1978 as cited in Reynolds & Kamphaus, 1992). The Internalizing Problems Composite includes items from the anxiety, depression, and somatization areas of behavior. This composite characterizes internalized or "overcontrolled" behaviors (Achenbach & Edelbrock, 1978 as cited in Reynolds & Kamphaus, 1992) that typically do not disrupt the activity others and may impair relationships with others in only subtle ways. The internal consistency for the BASC-TRS composites (Externalizing Behavior, Internalizing Behavior, and Adaptive Skills) ranges from low to mid .90s with one-month test-retest values ranging from the high .80s to mid .90s (Reynolds & Kamphaus, 1992). BASC-TRS includes both positively and negatively worded items in order to protect against response sets (Reynolds & Kamphaus, 1992). According to Reynolds & Kamphaus (1992), the BASC-TRS applies several methods of detecting invalid results including the F or "faking bad" index assessing the possibility the teacher rated the child in an exceedingly negative manner and the Response Pattern Index which is sensitive to repeated and cyclical patterns. The BASC-TRS has been found to correlate highly with other teacher report forms, especially the Achenbach Teacher Report Form with ranges in .80s to .90s (Reynolds & Kamphaus, 1992).

Procedure

Before the study begins, approval from Xavier University's Institutional Review Board will be obtained. Children ages 6 to 11 years old with a clinical diagnosis of Asperger's Disorder will be identified with the assistance of
community groups and local school systems. The researcher will approach the parent(s) of children with Asperger's Disorder to obtain consent for participation in the study (See Appendix E). School principals will be contacted once permission is given from the parent(s). After principals grant permission for data collection in the school, teachers will be asked to participate in a study of social behavior in children. The researcher will attempt to protect against bias by keeping the specific interest in the child with a diagnosis of Asperger's Disorder from the participating teachers. Data collection will take place in various elementary schools during the middle to end of the school year. A teacher from the Teacher Group will complete the RCP for members of the class of the same gender as the child with Asperger's Disorder. The RCP will be completed using the initials of the classroom children so the identities of the children will be unknown to the researcher. If duplicate initials occur in a classroom then the initials will be numbered (e.g., 1, 2, etc.) based alphabetically on the second letter of the child's last name.

Following completion of the RCP, the teacher will identify an appropriate peer comparison for the child with Asperger's Disorder. The peer comparison will be chosen from the classroom based on similarities in gender, age based on date of birth, and race. Once a peer comparison is identified the teacher will send home a consent letter requesting permission for the selected child to participate in a study of social behavior (See Appendix E). If permission is not granted for this child to participate then a consent letter will be sent home with
the child deemed to be the next appropriate peer comparison based on the above criteria.

Once permission is obtained for the comparison peer, a teacher from the Assistant Group will complete the BASC-TRS for each child. The person from this group will be someone having knowledge of the behaviors of both children; someone spending considerable time interacting with and observing each of the children.

In appreciation of their time and effort, the teachers will be given a gift certificate to a local teacher supply store. The amount of the gift certificate is dependent upon the amount of funding received, but will be equal for all participants. Additionally, the parents, teachers, and principals of all children involved may choose to receive follow-up letters detailing the results of the study (See Appendix J).
Chapter IV

Proposed Analyses

The purpose of this study is to examine the perceived social acceptance of children with Asperger's Disorder in the general education classroom. The social acceptance of the children with AD is measured based on the perceptions of teachers, who spend the majority of the school day with these children, as well as comparing this perception to that of typical peers in similar school environments.

The primary hypotheses involve the social reputation and social acceptance of children with Asperger's Disorder. The first hypothesis states that children with AD, when compared to typically developing children, are perceived by teachers to have less positive social reputations in the classroom. Social reputations are based on the three dimensions of the Revised Class Play (RCP), Sociability-Leadership, Aggressive-Disruptive, and Sensitive-Isolated, as rated by the teachers. The second hypothesis is the social reputation of children with Asperger's Disorder will reflect the social deficits characteristic of the disorder. The study will add roles to the end of the RCP depicting social roles related to Asperger's Disorder. The added roles will include both positive and negative aspects of these social behaviors. Differences between the children with AD and the comparison peers on the nine added roles will be examined to demonstrate the presence of social difficulties characteristic of Asperger's Disorder.

A Multiple Analysis of Variance (MANOVA) will be conducted across the three dimensions of the RCP and the study added roles to examine the
differences between scores obtained by children with Asperger's Disorder and those obtained by comparison children. The group of children with Asperger's Disorder is expected to have lower teacher-rated achievement in the area of social leadership. They are also expected to be viewed by the teachers as more aggressive and disruptive and to experience significantly more social isolation. It is believed the children with AD will appear at a greater frequency on the added roles depicting negative aspects of social behavior.

Finally, a third hypothesis involves the influence of observed behavior on the social reputation of the children with Asperger's Disorder. Observed behavior ratings are based on the Behavioral Assessment System for Children-Teacher Rating Scale (BASC-TRS) as completed by a member of the Assistant Group. A step-wise regression analysis will be conducted to determine the strength of the BASC-TRS factors in predicting RCP dimension scores. The BASC-TRS factors are as follows: Externalizing Problems, Internalizing Problems, and Adaptive Skills. Such an analysis will allow for the examination of the children's observed behavior on their perceived social acceptance in the classroom setting.
References


Appendix A

Revised Class Play

You are to pretend that you are the director of a play starring the students in this classroom. The director of a play has many things to do, but the most important job is to select the right people to act in the play. So, your job is to choose the three (3) students who could play each part or role the best. Try to pick the students who seem to fit each part in real life.

Since some students may fit more than one role, you may choose the same person for more than one part. Just remember to think carefully about your choices.

You are asked to cast the play with only the (boys/girls) in the classroom. You can pick from all of the (boys/girls) in your classroom, so even if someone is absent today (he/she) may still be given a role in the play. To ensure all of the (boys/girls) in the class are considered, it may be helpful to have your class roster available to reference.

Please cast the roles using the initials of the first and last names of the student you wish to play the part. If two students have the same initials than add a number (e.g., 1, 2, etc.) to their initials based alphabetically on the second letter of the child's last name. For example, John Simpson would be J.S.1. and John Smith would be J.S.2 since "i" comes before "m" and their first and last initials are identical.
Remember to cast three (3) students in each role using only their initials.

Don't forget a student can play more than one role. Do you have any questions before we begin?

1. A person who is a good leader.

   __________   __________   __________

2. A person who gets into a lot of fights.

   __________   __________   __________

3. Someone who would rather play alone than with others.

   __________   __________   __________

4. A person with good ideas for things to do.

   __________   __________   __________

5. A person who loses their temper easily.

   __________   __________   __________

6. Someone who shows off a lot.

   __________   __________   __________
7. Someone you can trust.

8. A person who interrupts when other children are speaking.

9. Somebody who has many friends.

10. Someone who will wait their turn.

11. Someone whose feelings get hurt easily.

12. A person who everyone listens to.

13. Someone who plays fair.

14. Someone who has trouble making friends.
15. Someone who acts like a little kid.

16. Someone who has a good sense of humor.

17. A person who can't get others to listen.

18. Somebody who is very shy.

19. Someone who is polite.

20. Somebody who makes new friends easily.

21. A person who is too bossy.

22. Someone who is often left out.
23. Someone who helps other people when they need it.

---

24. Someone who is usually sad.

---

25. A person everyone likes to be with.

---

26. A person who can get things going.

---

27. Somebody who teases other children too much.

---

28. Someone who is usually happy.

---

29. Somebody who picks on other kids.

---

30. Someone who likes to play with other children rather than alone.

---
31. A person who gets teased.

32. Somebody who is clumsy.

33. Someone who is graceful.

34. A person who always talks about the same things.

35. Somebody who talks about a lot of different things.

36. Someone who has trouble talking with others, especially other children.

37. A person who easily participates in conversations.

38. Somebody who works well on group projects.
39. Someone who has difficulty working in a group.
Appendix B

Behavioral Assessment System for Children – Teacher Rating Scale

The Behavioral Assessment System for Children – Teacher Rating Scale is a copyrighted measure.
Appendix C

Study for Children with Asperger’s Disorder

How is the child with Asperger’s Disorder viewed in the classroom? How do they behave? What are they like? A new study through Xavier University seeks to explore the social behavior of children with Asperger’s Disorder in the general education classroom. The study is designed to look at the social reputation of these children. Teachers will be asked to complete a short questionnaire exploring how the children are viewed in the classroom as well as a brief questionnaire focusing on how the child acts at school. The hope of this study is to get a glimpse of what the child with Asperger’s Disorder is like in the classroom and how he/she acts with others.

The study will focus on elementary school-age children (6 to 11 years old) with a clinical diagnosis of Asperger’s Disorder. The actual collection of information will occur with your child’s schoolteachers. Neither you nor your child is expected to do anything in this study. The teachers will be asked to complete short questionnaires. The study was designed with an awareness of the importance of time in the busy school day. The study questionnaires are brief taking 20 to 25 minutes to complete. Additionally, the issue of privacy is considered in this project and no names or identifying information will be used or be made known to anyone outside the study (e.g., schoolteacher, principals, etc.).

Information gathered from this study will add to what is known about social behavior in children with Asperger’s Disorder. It will give us a better
understanding of what the child with Asperger’s Disorder is like in the classroom. Additionally, it will provide further insight into how they interact with others. This information will likely be useful to parents, teachers, and others who are in the position to help these children who have difficulties in social situations.

If you are interested in your child and his/her teachers being involved this study please contact me for more information. I would like to meet with you and/or your child’s school principal and teachers to further discuss the details of this project.

Thank you for your interest.

Kristn Currans, M.S.

Telephone: (859) 391-6454

Email: ckristn@hotmail.com
Appendix D
Letter to School Principals

Date
Address of School
Dear (Name of Principal),

I am writing this letter in hopes of eliciting your cooperation with my doctoral dissertation research project through the Department of Psychology at Xavier University. Under the guidance of Professor Janet R. Schultz, Ph.D., I have designed a study exploring the social behaviors of children with Asperger's Disorder. The study involves the teachers of these children. There is no direct involvement of the children with Asperger's Disorder or their classmates in this study. Schoolteachers are asked to provide information about the children. The teachers are asked to take approximately 20 to 25 minutes to complete questionnaires on the children. The aim of this study is to learn more about the social behaviors of children with Asperger's Disorder in the classroom, in hopes of getting a better picture of what they are like and how they act with others at school.

I am requesting your assistance in recruiting some children to be involved in this study. I understand the importance of privacy for these children and their families, so I am asking you to distribute the enclosed informative flier to the appropriate teachers to be sent home to the parent(s) of the children with Asperger's Disorder. If parents give consent for their child to participate, I am requesting your permission to contact the teachers of the participating children. I
understand the importance of time in the busy school day; therefore, the study will not require a significant amount of time for involved teachers. Additionally, efforts will be made to gather information during the school day or after-school based on teacher's preference. I would greatly appreciate any assistance you can provide in helping me complete my project.

Information gathered from this study will add to what is known about social behavior in children with Asperger's Disorder. It will give us a better understanding of what the child with Asperger's Disorder is like in the classroom. Additionally, it will provide further insight into how they act with others such as teachers and peers. This information will likely be useful to parents, teachers, and others who are in the position to help these children who have difficulties in their social environments such as school.

I look forward to an opportunity to discuss this project in more detail with you and interested teachers and will be in contact with you soon to schedule time at your convenience. Please feel free to contact me with questions or for further discussion.

Sincerely,

Kristn Currans, M.S.

Telephone:  (859) 391-6454

Email:  ckristn@hotmail.com
Appendix E

Informed Consent

You are being asked to volunteer the participation of your child in a doctoral dissertation research study conducted through Xavier University. The University requires that you as the child’s legal guardian give your signed agreement for his/her participation in this project. The research will actually involve the teachers of your child. Neither you nor your child is required to do anything in this study. The teachers will be asked to complete brief questionnaires.

This letter will briefly explain the purpose of this study as well as the procedures used. Additionally, it outlines any potential benefits and risks to you prior to participation. The primary researcher will be available to you for any questions you may have regarding this study. A basic explanation is provided for you below. Please read this explanation carefully. Feel free to discuss any questions or concerns with the researcher.

Study Explanation

The ability to develop positive relationships with others contributes to children’s social growth and their overall social acceptance. The goal of this study is to see how children are viewed in the classroom and how they act with others. The study will ask teachers to complete brief questionnaires exploring what your child is like in the classroom as well as how he or she acts at school.

The importance of privacy is understood in this project. The study uses no names or identifying information. The teachers will use the initials of the children.
to complete the questionnaires. Additionally, no information about the teachers will be used in this study.

Teachers will be provided with gift certificates to a local teacher supply store in appreciation of their time and effort. In addition, the parents, teachers, and principals of all children involved may choose to receive a follow-up letter detailing the results of the study.

At any time during the project, you are free to withdraw or refuse participation. Refusal to participate in this study will have no effect on any future services the participant may be entitled to from the University or from the child’s school system. Anyone agreeing to participate in this study is free to withdraw at any time without penalty.

It is not possible to identify all potential risks in any experimental procedure; however, the aim of this study and its primary researcher is to minimize risks by taking all reasonable safeguards to protect against known and potential but unknown risks. Since the children do not directly participate in the study the risks of participation are minimal.

If you choose for your child to participate in the study, please sign and return this form. A copy of this form is available for you to keep.

If at any time you have questions regarding this project, you may contact Kristn Currans, M.S. at ckristsn@hotmail.com or (859) 391-6454 or Janet R. Schultz, Ph.D., Professor, at (513) 745-3248.
Name of Child

Attending School

Child's Teacher (if known)

Signature of Parent Date

Expiration Date: ____________________

The date approval stamp on this consent form indicates that this project has been reviewed and approved by Xavier University's Institutional Review Board for the protection of human subjects in research.
Appendix F

Diagnostic History

Please provide information about your child's history of receiving a diagnosis of Asperger's Disorder.

Name of Child: ____________________________________________________________

Diagnosis: ________________________________________________________________

Place of Diagnosis: _________________________________________________________

Date of Diagnosis: _________________________________________________________

Professional: _____________________________________________________________
*Person giving diagnosis including title.

Name of Parent: ____________________________________________________________

Signature of Parent: ________________________________________________________ Date

Signature of Witness: ______________________________________________________ Date
Appendix G

Permission for Review of Records

I give permission for a school staff member to release information regarding my child's Individualized Education Plan (IEP) and/or 504 Plan to Kristn Curran, M.S. of Xavier University for the purposes of confirming school services are received based on a diagnosis of Asperger's Disorder.

Name of Child

Name of School

Name of Parent (Please Print)

Signature of Parent Date

Signature of Witness Date

Expiration Date: ________________

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Appendix H

School Verification of Services

I confirm that the below listed child has a current Individualized Education Plan (IEP) and/or 504 Plan in place to provide school services based on a diagnosis of Asperger’s Disorder.

Name of Child

Name and Title of School Staff Member (Please Print)

Signature of School Staff Member Date
Appendix I

Teacher Informed Consent

You are being asked to participate in a doctoral dissertation research project conducted through Xavier University. The principal has reviewed the study and given us permission to proceed. This letter will briefly explain the purpose of the study as well as the procedures used. Additionally, it outlines any potential benefits and risks to you prior to participation. The primary researcher will be available to you for any questions you may have regarding this study. A basic explanation is provided for you below. Please read this explanation carefully. Feel free to discuss any questions or concerns with the primary researcher.

Study Explanation

The ability to develop positive relationships with others contributes to children’s social growth and their overall social acceptance. The goal of this study is to see how children are viewed in the classroom and how they act with others. You will be asked to complete brief questionnaires about children in your classroom. The intention of the researcher is to keep your time commitment to a minimum. Efforts will be made to complete all activities at a time convenient for you. All activities should be completed within 30 minutes.

Two teachers, a classroom teacher and an instructional assistant or someone in a similar role will complete questionnaires. Two teachers will be used in order to get the best overall picture of the children in the social environment of the classroom. The hope is for independent ratings of the
children so teachers are asked to complete the questionnaires separately from each other.

The importance of privacy is understood in this project. The study uses no names or identifying information. You will use the initials of the children to complete the questionnaires. In addition, no information about you will be used in this study. The information will not be made known to anyone outside of the study (e.g., other teachers, parents, principals, etc.).

You will be provided with a gift certificate to a local teacher supply store in appreciation of your time and effort in this study. Additionally, the parents, teachers, and principals of the children may choose to receive follow-up letters detailing the results of the study.

At any time during the project, you are free to withdraw or refuse participation. Refusal to participate in this study will have no effect on any future services you may be entitled to from the University or from the school system. Anyone agreeing to participate in this study is free to withdraw at anytime without penalty.

It is not possible to identify all risks in any experimental procedure; however the aim of this project and its primary researcher is to minimize risks by taking all reasonable safeguards to protect against known and potential but unknown risks.

If you choose to participate in this project, please sign this form in the presence of the person who explained it to you. You will be given a copy of this form to keep for your records.
If at any time you have questions regarding this project, you may contact
Kristn Currans, M.S. at ckristn@hotmail.com or (859) 391-6454 or Janet R.
Schultz, Ph.D., Professor, at (513) 745-3248.

signature of teacher

print name

signature of witness

expiration date: ________________

the date approval stamp on this consent form indicates that this project has
been reviewed and approved by Xavier University’s Institutional Review Board
for the protection of human subjects in research.
Appendix J

Follow-Up Letters

Following the completion of this study the primary researcher will prepare a letter detailing significant findings. If you wish to receive a follow-up letter please indicate below and provide a mailing address.

Please DO NOT send me a follow-up letter.

Please send me a follow-up letter.

Address:

Name

Street Address

City State Zip Code

Signature Date

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Appendix K
Proposal Addendum

A sample size of twenty-eight children \((n = 28)\) in each group for a total of fifty-six children \((N = 56)\) was initially proposed for this study. This number was based on the preliminary consideration of the following statistical information. At a power level of .80, a large difference between two independent means at \(\alpha = .05\) requires a sample size of twenty-six children in each group (Cohen, 1992). Further consideration of statistical information indicated that with two groups of participants, with an \(\eta^2\) square of .30, and \(\alpha = .05\), thirty participants per group were needed in order to achieve power of .80 (Jaccard & Becker, 2001). In addition to the statistical information, the lack of prevalence data in the geographical area and prior research using similar methodology were considered. Since approval from the Institutional Review Board (IRB) at Xavier University (December 6, 2004) the study has achieved a sample size of thirty-two participants \((N = 32)\), sixteen children \((n = 16)\) in each group. At this time, it is proposed that a sample size of thirty-two \((N = 32)\) be established for this study.

Statistical analyses of the data collected from these participants indicate support for the proposed hypotheses. The primary clinical hypotheses involve the social reputation (What is the child like?) and the social acceptance (Is the child liked?) of the child with Asperger’s Disorder. The first hypothesis stated that children with Asperger’s Disorder, when compared to typically developing children, are perceived by teachers to have less positive social reputations in the classroom. The findings in this study show that on the Revised Class Play
Asperger's Disorder 77

(RCP), a measure of social behavior, children with Asperger's Disorder are nominated less often on roles in the Sociability-Leadership dimension and more often on social roles in the Sensitive-Isolated dimension than their peers. These findings support the hypothesis stated above. It was also hypothesized that the social reputation of children with Asperger's Disorder reflected the social deficits characteristic of the disorder. A review of the results of the study supported this hypothesis. Children with Asperger's Disorder were more likely to be nominated for roles added to the RCP that specifically describe characteristics of the disorder. Finally, the third hypothesis involved the strength of observed behavior based on behavior ratings on social behavior reputation of the child with Asperger's Disorder. The findings show that a child's observed behavior impacted his social reputation. Children who were rated as having better adaptive functioning on the Behavioral Assessment Scale for Children – Teacher Report Scale (BASC-TRS) scored higher on the Sociability-Leadership dimension and lower on the Sensitive-Isolated dimension of the RCP. Additionally, children who engaged in more externalizing behavior problems, as measured by the BASC-TRS, were nominated for more roles on the Aggressive-Disruptive dimension of the RCP.

Overall findings based on data from the current sample demonstrated support for the study hypotheses. The present sample is based on systematic recruitment of the population in a wide geographical area including the Greater Cincinnati area, Northern and Central Kentucky, and Southern Indiana.
Recruitment focused on school districts, community resource groups, and professionals working with this specific population.

Research has demonstrated a lack of social understanding and relationships are fundamental deficits in individuals with Asperger’s Disorder. This study proposed to explore the behavioral reputations and social acceptance of these children and the influence their behavior has on this reputation. While the study has not attained the initially proposed number of participants, the findings demonstrate that the current sample size did achieve many of the objectives set forth in the study. At this time, the recruitment efforts appear to have exhausted the population of children with Asperger’s Disorder in the targeted geographical area and continued recruitment is not considered a practical option. Therefore, it is proposed that the current sample size of thirty-two (N = 32) be accepted as the new sample size for this study.
References


Specific Recruitment Efforts

1. School Districts

All of the school districts listed below were contacted a minimum two times at the district level. Initial contact typically focused on the director of special education or the school psychologist. Contact was made in person as well as by telephone, email, and/or packets of informative materials (e.g., study fliers, introductory letters). Several of the districts required the completion of additional documents in order for the recruitment to continue. As necessary, the primary researcher followed all procedures outlined by the district for study approval.

All schools within each district were contacted at least one time by telephone and/or email and were mailed information packets. At the school level, the contact was either directed to the school principal, school psychologist, or special education coordinator.

The following districts were contacted:

**Kentucky**

Boone County
Bourbon County
Boyle County
Campbell County
Fayette County
Gallatin County
Garrad County
Jessamine County
Kenton County
Lincoln County
Madison County
Scott County
Ohio

Butler County
Fairfield City
Lakota Local
Madison Local
Monroe Local

Clermont County
Batavia Local
West Clermont Local

Hamilton County
Deer Park Community
Finnertyon Local
Forest Hills Local
Loveland City
Madeira City
Mariemont City
Mason City
Mt. Healthy City
North College Hill
Oak Hills Local
Reading Community
Sycamore Community

In addition to public schools, approximately 100 private schools in the Greater Cincinnati area were contacted by telephone in an effort to recruit participants.

2. Autism Society

Information about the study was published in the Autism Society of Greater Cincinnati Newsletter following IRB approval. The primary researcher presented the study to a parent support group sponsored by the Autism Society of Greater Cincinnati. Informative study fliers were given to the group leader to facilitate on-going recruitment. The primary researcher also contacted board members of the Autism Society of
Greater Cincinnati requesting permission to mail study information directly to members of the organization. This request was denied based on the established research policy of the organization.

The Autism Society of the Bluegrass was contacted by telephone and an information packet detailing the study was sent to the group.

3. **Community Support Group**

The following community groups were contacted by telephone or email and sent packets of study information.

- Asperger's Disorder (Franklin County, KY)
- Danville/Boyle County Autism Support Group (KY)
- Gallatin County Parent Support Group (KY)
- Mother of Special Children of Northern Kentucky
- Northern Kentucky Autistic Children Support Group
- Autism Society of Kentuckiana (Kentucky and Indiana)
- Autism Spectrum Disorder Network (Northern Kentucky)

Information regarding the study was available on-line and forwarded to subscribers of the “Learning Disabilities News” (Kentucky).

4. **Professionals**

Professionals who work with individuals with Asperger's Disorder were contacted as part of the recruitment effort. The Regional Autism Advisory Counsel and the Kelly O'Leary Center for Autism Spectrum Disorder were consulted in person and by email for guidance in the recruitment process. Study information was made available to the professionals in these organizations. Cincinnati Center for Autism, Kid Power Therapy Services Incorporated, Miami Valley Special Education Regional Resource Center, and Southwestern Ohio Special Education
Regional Resource Center were also contacted. The primary researcher discussed the study with professionals in these organizations. They were also provided with informative fliers for distribution within their organizations. For additional guidance in the search for recruitment sources, a special education professor at the University of Cincinnati and a special education consultant in the community were consulted. In an effort to direct information to professionals within the school setting, a group email detailing the study was forwarded to approximately eighty school psychologists in the Cincinnati area during each school year of the recruitment period.

5. Conferences

Informative fliers were distributed at several conferences in the Greater Cincinnati area. The conferences, sponsored by local, regional, and national organizations, focused on topics in Asperger's Disorder. Both parents and professionals attended these conferences.
Chapter V: Dissertation

Abstract

The social reputations of children (ages 6-11) with Asperger's Disorder (AD) (n = 16) and classroom peers (n = 16) were examined using a modified version of the Revised Class Play (RCP), a measure of social behavior, completed by teachers. Teachers also completed a Behavioral Assessment Scale of Children – Teacher Report Scale (BASC-TRS) for each child, a measure of observed behavior. Relative to their peers, children with AD scored higher on the Sensitive-Isolated dimension and lower on the Sociability-Leadership dimension of the RCP, indicating less positive social reputations. They were observed to engage in more disruptive and fewer adaptive behaviors. The findings suggest that the behavior of children with AD negatively impacts their social reputations and acceptance by peers. The need for social skills interventions is discussed, and suggestions for further research are made.
The Social Reputation of Children with Asperger's Disorder in the Classroom: Teachers' Impressions

Asperger's Disorder (AD) is a growing concern within the psychological, educational, and medical communities. Asperger's Disorder is categorized as a Pervasive Developmental Disorder (DSM-IV-TR; APA, 2000) in that the central feature is the individual's deficits in social competence, which hinder the development of appropriate social relationships. Researchers have described the essential features of AD to include: qualitative impairments in social relationships, impairment in verbal and nonverbal communication, and a restricted range of interests or a lack of flexibility in thought (Barnhill, 2001a).

It is believed there are no significant or severe language deficits present in individuals with AD, although there is evidence for considerable pragmatic language deficits (Church, Alisanki, & Amanullah, 1999; Safran, Safran, & Ellis, 2003; Volkmar & Klin, 2000). Verbal communication impairments are observed, particularly in the practical use of language. Impairments in nonverbal communication often include limited use of gestures; clumsy or awkward body language; limited or inappropriate facial expressions; or peculiar gaze (Barnhill, 2001a; Gillberg & Gillberg, 1989; Ehlers & Gillberg, 1993; Koning & Magill-Evans, 2001). Children with AD often struggle with basic conversational skills such as when to listen, when to question, and how to initiate and end interactions (Safran et al., 2003); as well as interpreting body language and facial expressions.
Overall, individuals with AD have difficulty initiating and sustaining social conversation with others.

Rigidity is also observed in individuals with AD. They are often preoccupied with stereotyped interests, attached to unusual objects, compulsive in their adherence to routines, and distressed by even small changes in their environments (Ehlers & Gillberg, 1993). In addition, many researchers have added the following characteristics when describing AD: insistence on sameness, poor concentration, poor motor coordination, academic difficulties, emotional vulnerability, and a naiveté or lack of common sense (Williams, 1995 as cited in Barnhill, 2001a). Over activity, pervasive hypersensitivity to sensory stimuli, inattention, and emotional problems have also been described in AD.

Variability in cognitive functioning may be noted in AD. Research has indicated that while most individuals with AD perform within the average range of functioning, scores may range from intellectually deficient to very superior (Barnhill, Hagiwara, Myles, & Simpson, 2000). As a group, individuals with AD perform poorly on tests measuring the understanding of social mores and interpersonal situations, social judgment, common sense, and understanding social conventions (Myles & Simpson, 2002) and demonstrate academic difficulties related to poor comprehension skills as well as a tendency to be very literal with comprehension at a factual level (Barnhill, 2001a).

Children with AD represent a unique population within the educational community, in that they appear “normal” to the average observer in a society that tends to judge one’s disability on outward appearance (Church et al., 2000).
Individuals with AD have considerable social and language peculiarities while simultaneously demonstrating normal development and functioning in many areas of their lives. With average to above average intellectual abilities, individuals with AD may look typical but impairments in social awareness and inappropriate social skills limit their ability to connect with the people around them.

**Social Deficits in Asperger's Disorder**

Social impairment is perhaps the most important feature of AD. Koning and Magill-Evans (2001) described several social interaction deficits in AD including socially and emotionally inappropriate behaviors, a lack of appreciation of social cues, limited ability to interact with peers or develop peer relationships, and an impairment in the ability to use nonverbal behaviors to regulate social interactions. Overall, individuals with AD lack appropriate social skills and demonstrate an abnormal style of social interaction. They have limited ability to take part in reciprocal communication and do not seem to understand the unwritten rules of communication and conduct (Barnhill, 2001a; Barnhill, 2001b).

Researchers agree that difficulties communicating and learning the unspoken rules of social interaction contribute to the major challenges for children with AD (Barnhill, 2001a; Carrington, Templeton, & Papinczak, 2003; Church et al., 2000; Myles & Simpson, 2002). Children with AD do not possess the knowledge of how to adapt their approaches and responses to fit in with the needs and personalities of others (Wing, 1981). They may approach others only to have their own needs met or respond to peers in a one-sided manner (Ehlers
Asperger's Disorder (Gillberg, 1993). In fact, Wing (1981) described the most salient characteristic of individuals with AD to be an impairment of two-way social interaction. Individuals with AD are further disadvantaged in their social environment, in that, they have difficulty comprehending the facial expressions of others, sensing the feelings of others, and making adjustments to fit different social contexts or listeners (Koning & Magill-Evans, 2001).

The inability of individuals with AD to recognize the experiences of others is also widely accepted (Barnhill, 2001a; Barnhill, Cook, Tebbenkamp, & Myles, 2002; Carrington et al., 2003; Myles & Simpson, 2002). This concept, often referred to as theory of mind, is a major challenge in individuals with AD. Theory of mind is the ability to understand what motivates others' behavior and attribute mental states such as beliefs, feelings, and desires to others, which often facilitates social interactions (Kleinman, Marciano, & Ault, 2001). Theory of the mind deficits include inability to explain one's own behavior, difficulty predicting the behavior or emotional states of others, problems understanding the perspectives of others, difficulty inferring the intentions of others, and a lack of understanding that behavior impacts how others think or feel (Barnhill, 2001a).

The ability to employ theory of mind skills, as well as, the child's overall level of social functioning significantly influences their social competence. Social competence is considered an essential feature in determining a child's ability to successfully engage in relationships with others. Social behavior and social interactions are often viewed as central characteristics of human beings and fundamental to leading a healthy life.
Social Competence

Social competence refers to the skills and strategies that allow individuals to have meaningful friendships; forge close, emotion-based relationships; productively collaborate with groups, teams, and work partners; manage social settings; and participate in family functioning (Gutstein & Whitney, 2002). Social competence is often viewed as a critical variable in predicting success in future life pursuits.

Early developing social relationships are believed to have a strong influence on many later behaviors and relationships. The success of school age children in developing peer relationships (Bagwell, Schmidt, Newcomb, & Bukowski, 2001) and gaining an understanding of social rules within a given peer group context, with a focus on being liked and accepted by peers (Zeller, Vannatta, Schafer, & Noll, 2003), is important to the future acceptance and relationship development of the individual. A number of factors have been identified to predict peer acceptance in childhood including cognitive and social problem solving ability, prosocial behavior, emotional regulation, and emotional knowledge (Mostow, Izard, Fine, & Trentacosta, 2002).

Peer interactions are valuable because they form the context in which children learn all kinds of other important developmental skills (Mostow et al., 2002; Guralnick, 1986 as cited in Strain & Smith, 1996). In many instances, peers play a prominent role in defining acceptable behavior by providing a culture in which behavioral standards, goals, and expectations are set, thereby influencing what a child does (Bukowski, 2001). Participation in peer groups
allows children the opportunity for exploration and acquisition of new skills such as negotiating individual needs, cooperation, and turn taking (Strain & Smith, 1996). Previous research has also demonstrated that experiences of peer relationships are associated with the development of the other basic skills including behavior coordination, imitation, appropriate participation in social exchanges, and development of conflict resolution skills (Bukowski, 2001) as well as empathy and altruism (Mostow et al., 2002).

The importance of the development of peer acceptance and friendships to the overall adjustment of a child may be better understood by considering the process of peer rejection. The adjustment problems associated with peer rejection and failure to develop and maintain friendships may be attributed to the overall stressfulness of the experience. Rejected children often experience loneliness, victimization by others, and exclusion from activities. This stress is likely compounded by the fact that rejected children lack support from a valuable social network thereby leaving them vulnerable to other stressors including mental health difficulties such as depression and anxiety (Bagwell et al., 2001; Elliot & Gresham, 1987; Erdley, Nangle, Newman, & Carpenter, 2001). Peer relationships provide a source of protection against stresses or potential stresses in addition to a variety of direct and indirect supports leading to long lasting adjustment (Bukowski, 2001).

Most children with AD spend a majority of their time in general education classrooms sharing space and experiences with typically developing peers (Myles & Simpson, 2002). They sense their differences from peers, often
experiencing behavioral and emotional difficulties connected to their social
deficits (Myles & Simpson, 2002). These difficulties leave them vulnerable to
developing a variety of problems including increased discomfort and anxiety in
social situations, depression, and low self-esteem (Myles & Simpson, 2002).
Frequently they experience an array of behavioral difficulties associated with
their inability to function in a world seen as unpredictable and threatening.

Research has demonstrated that a lack of social understanding and
deficits in social interactions and relationships are fundamental impairments in
AD. The purpose of this study was to examine the behavioral reputations and
social acceptance of children with AD. Additionally, the relationship between the
child's observed behavior and his social reputation was examined.

Method

Participants

Thirty-two teachers completed questionnaires about the social reputations
and behavior of 16 children with a DSM-IV-TR (2000) diagnosis of AD and 16
typically developing peers. A medical or psychological professional diagnosed
the children with AD prior to this study. The children with AD had a current
Individualized Education Plan (IEP) or 504 Plan specifying specific
accommodations based on the diagnosis of AD. The comparison peers were of
the same gender, race, and age as the children with AD. The peer was in the
same general education classroom as the child with AD and did not have an IEP
or 504 Plan. All of the children with AD were Caucasian males. Although
definitive data regarding the prevalence of AD is lacking, it likely follows the same
pattern as other pervasive developmental disorders such as autism, which is four to five times more likely to occur in males than females (DSM-IV-TR; APA, 2000; Ehlers & Gilbert, 1993; Koning & Magill-Evans, 2001). Therefore, given the target population it was not unexpected that the participating children were all male. The children with AD in this study ranged in age from 7.1 years to 11.8 years with a mean age of 10.4 years (SD = 1.5). The peer comparisons ranged in age from 7.0 years to 11.9 years with a mean age of 10.3 years (SD = 1.6). Twenty-eight of the participating children attended public elementary schools while four children attended private schools.

Children with AD were recruited through the local Autism Society newsletter, approximately 31 school districts, and numerous private schools. It should be noted that even with exhaustive efforts recruitment directly in the schools was minimally productive as several schools initially agreed to participate but failed to maintain contact with the primary researcher or later declined participation. Attempts to recruit participants through several community support groups and professional services (e.g., community centers offering occupational therapy, physical therapy, and/or speech-language services) were also overall unsuccessful.

Measures

Revised Class Play

The Revised Class Play (RCP), originally developed as an assessment of peer interactions (Masten, Morrison, & Pellegrini, 1985), was modified for use in this study in order to collect the teacher's impressions of the child's social
behavior (See Appendix A). The RCP is a descriptive inventory of social behavior in that it asks the rater to “cast” students into different social roles. The RCP assesses vulnerabilities as well as competencies in classroom social behavior. It consists of 30 social roles with an equal distribution of positive and negative roles (Masten et al., 1985). The roles load onto three separate dimensions including one positive dimension based on 15 roles, Sociability-Leadership, and two negative dimensions, Aggressive-Disruptive and Sensitive-Isolated, each based on seven roles. One negative role, “Someone who acts like a little kid”, was not included in any composite score due to its weak factor loading (Masten et al., 1985). The Sociability-Leadership dimension consists of roles associated with prosocial behavior and is associated with a positive peer reputation suggesting social competence in the school environment.

Maladaptive behaviors such as aggression and disruptive behavior are associated with social roles on the Aggressive-Disruptive dimension. The Sensitive-Isolated dimension is composed of social roles usually associated with withdrawal and social isolation.

Since this study utilized the RCP with a specialized population of children, nine roles were developed by the primary researcher and added to the end of the measure. Eight of these roles reflected difficulties and competencies in areas such as motor abilities, conversational competency, and academic work. Difficulties in these areas are often considered characteristic of AD. One added role addressed overall social difficulties with peers by asking for “someone who is teased a lot”. 

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Behavioral Assessment System for Children – Teacher Rating Scale

Ratings of observed behavior are based on the Behavioral Assessment System for Children – Teacher Rating Scale (BASC-TRS) (See Appendix B). The BASC-TRS, developed by Reynolds and Kamphaus (1992), is a multidimensional inventory that measures various facets of behavior and personality, including positive (adaptive) and negative (clinical) aspects. The Adaptive Skills Composite is a measure of social competence including leadership, social skills, and adaptability. The Externalizing Problems Composite and Internalizing Problems Composite are utilized to identify broad areas of negative behavior. The Externalizing Problems Composite, which characterizes the disruptive nature of the child’s behavior, is composed of items in areas such as aggression, hyperactivity, and conduct problems. The Internalizing Problems Composite includes items from the anxiety, depression, and somatization areas of behavior.

Procedure

Following approval of the study from Xavier University's Institutional Review Board (See Appendix C), children with a clinical diagnosis of AD were identified through the local Autism Society and area schools. After obtaining parental consent, the child's teachers were asked to participate in a study of social behavior. The general education classroom teacher (n = 16) completed the RCP using all of the children in the classroom of the same gender as the identified child with AD. In an effort to keep the specific focus from the child with AD, the teachers selected three children for each role with equal credit given for
appearing on a role. To protect the identities of those children not directly involved in the study, the teachers used the first and last initials of the children to complete the RCP. Following completion the RCP, the general education teacher selected an appropriate peer comparison from the classroom based on gender, age, and race. Teachers sent consent forms home with the selected children and all of their parents gave permission for the ratings of the peer to be identified and included in the analysis. After obtaining parental consent for the peer to participate, a second teacher (i.e., instructional assistant, specials teacher) \( (n = 16) \) completed a BASC-TRS for the child with AD and the peer.

In appreciation of their time and effort, participating teachers were given a $5.00 gift certificate to a local teacher supply store.

Results

Independent Samples t-tests were conducted to evaluate the teacher rated social reputations of children with AD as compared to their peers on the three dimensions of the RCP. Table 1 presents the means, standard deviations, and t-test results for each dimension. There were statistical differences on two of the three dimensions. For the Sociability-Leadership dimension, peers \( (M = 6.38, SD = 4.18) \) were rated by teachers as having more leadership and prosocial skills as compared to the children with AD \( (M = 2.75, SD = 3.30; t(30) = 2.73, p = .011) \). On the Sensitive-Isolated dimension, the peer group \( (M = 1.19, SD = 1.72) \) was found to score lower than the children with AD \( (M = 3.19, SD = 1.80; t(30) = -3.22, p = .003) \) indicating the boys with AD in this study were more likely to have difficulty coping with the academic, behavioral, and social demands of
the classroom. No significant differences were found in the examination of the Aggressive-Disruptive dimension. The Bonferroni correction for experiment-wise error was applied to determine the level of significance given the number of t-tests utilized in this study.

Independent Samples t-tests were also conducted for the roles added to the RCP specifically for this study. These results are also summarized on Table 2. Teachers rated the typical peers as significantly lower \( (M = .44, SD = .89) \) than the children with AD \( (M = 2.44, SD = 1.46; t(30) = -4.68, p = .0001) \) on social roles describing deficits in the targeted areas, characteristics typically associated with AD. In contrast, on social roles describing competencies in these areas, the comparison children were rated higher \( (M = 1.88, SD = 1.26) \) than the children with AD \( (M = .44, SD = 1.03; t(30) = 3.54, p = .001) \).

A series of chi-square analyses were used to examine the eight roles added to the RCP that addressed difficulties and competencies in motor abilities, conversational competency, and academic work. Results are summarized in Table 3.

A linear regression was used to examine how Externalizing Problems, Internalizing Problems, and Adaptive Skills, as rated on the BASC-TRS, were related to the three dimensions of the RCP for all of the children involved in the study. The results are summarized in Table 4. The regression was significant in predicting the Sociability-Leadership dimension of the RCP \( (F(4, 27) = 4.93, p = .004) \). Adaptive Skills significantly \( (\beta = .57, p = .044) \) predicted the Sociability-Leadership dimension in that children observed to have better adaptive
functioning scored higher on the Sociability-Leadership dimension of the RCP. No other variables were significant. This model accounted for 42% of the variance in Sociability-Leadership dimension scores.

A linear regression examining the impact of the BASC-TRS composite scores on the Aggressive-Disruptive dimension of the RCP was also significant \((F(4, 27) = 5.35, p = .003)\). Externalizing Problems significantly \((\beta = .77, p = .001)\) predicted the Aggressive-Disruptive dimension. Children who exhibit more externalizing behavior problems were rated as being higher on the Aggressive-Disruptive dimension. No other variables were significant. This model accounted for 44% of the variance in the Aggressive-Disruptive dimension scores.

Finally, a linear regression was used to examine the relationship of the three BASC-TRS composite scores to the Sensitive-Isolated dimension of the RCP. The model was significant \((F(4, 27) = 5.07, p = .004)\). Adaptive Skills significantly \((\beta = -.64, p = .023)\) predicted the Sensitive-Isolated dimension in that as scores on the Sensitive-Isolated dimension increase scores in the area of Adaptive Skills decrease. Children rated as having higher adaptive functioning were also rated to better manage the social demands of school and were perceived to be less socially isolated. No other variables were significant. This model accounted for 42% of the variance in the Sensitive-Isolated dimension scores.
Discussion

A child’s functioning within the context of classroom activities provides an opportunity to evaluate behavior and form social perceptions. The current study was designed to explore the social reputation and acceptance of children with AD as compared to their typical classroom peers. How the child’s behavior impacted his reputation was also examined.

Teachers rated the boys with AD in this study as having less positive social reputations. On the RCP, teachers rated the children with AD lower in the area of Sociability-Leadership and higher on the Sensitive-Isolated dimension as compared to their peers. Teacher reports described these boys with AD as having fewer leadership and positive social skills. The children with AD in this study appeared detached from others, having difficulty forming meaningful peer relationships. The teachers described them as struggling with the daily academic and interpersonal demands of the classroom. Their overall description of these boys with AD is associated with an unfavorable peer reputation suggesting a lack of social competence in the school environment. These findings are consistent with the previous literature describing children with AD as having significant social impairments and as being more social isolated than their typically developing peers (Barnhill, 2001a; Barnhill, 2001b; Church et al., 2000; Koning & Magill-Evans, 2001; McLaughlin-Cheng, 1998; Myles & Simpson, 2002; Safran et al., 2003; Wing, 1981). No significant differences were found on the Aggressive-Disruptive dimension of the RCP. These results are consistent with previous literature (Barnhill, 2001a; Barnhill, 2001b) describing social interaction.
impairments in AD that cannot be explained by factors such as aggressive behaviors.

The findings demonstrated that the social reputation of boys with AD reflected the social deficits characteristic of the disorder. As shown on Table 2, the children with AD were nominated by teachers significantly more often for the social roles associated with characteristics of individuals with AD such as being clumsy, having difficulty working in groups, and poor social conversation skills. They were less likely to be nominated for the added social roles that described strengths in these areas such as being graceful, working well in groups, and conversational skills. The results support previous literature by demonstrating a perception of motor difficulties (Barnhill, 2001a; Church et al., 2000; Ehlers & Gillberg, 1993; Freeman, Cronin, & Candela, 2002; Ghaziuddin & Butler, 1998; Gillberg & Gillberg, 1989; Safran et al., 2003; Volkmar & Klin, 2000; Wing, 1981), difficulty participating in groups (Barnhill, 2001a; Gillberg & Gillberg, 1989; Safran, 2002), and poor conversational skills such as restricted range of interest and limited ability to take part in reciprocal conversation (Barnhill, 2001a; Barnhill, 2001b; Church et al., 2000; Ehlers & Gillberg, 1993; Freeman et al., 2002; Gillberg & Gillberg, 1989; Klin, 1994; Safran et al., 2003; Volkmar & Klin, 2000; Wing, 1981) in individuals with AD. These findings demonstrated that the methodology utilized in this study was sensitive to the presence of social deficits and behavioral difficulties in children with AD. An additional observation of this study was the teachers described the boys with AD as being teased by others.
more often than their peers. This may imply an increased likelihood of victimization in these children and is a possible area of further exploration.

This study also looked at how observed behavior relates to the social reputations of children. The findings of this study demonstrated that a child's observed behavior, as measured by the BASC-TRS, influences his teacher rated social reputation. Children who were observed to have well developed adaptive abilities such as prosocial, organizational, and study skills were perceived to have more positive social reputations as exhibited by higher scores in the area of Sociability-Leadership on the RCP. These children were also perceived to be less socially isolated as demonstrated by lower scores in the area of Sensitive-Isolated on the RCP. Additionally, children whose social reputation reflected characteristics of the Aggressive-Disruptive dimension were observed to engage in externalizing behaviors characterized by disruptive behaviors such as aggression and hyperactivity. These results implied that the behaviors that are often associated with AD such as hyperactivity, poor adaptive functioning, inflexibility, and poor interpersonal skills might negatively influence the child's perceived social acceptance. Previous literature has suggested that individuals with AD engage in problem behaviors such as over activity and disruption as a result of social deficits and frustration (Myles & Simpson, 2002; Safran et al., 2003; Simpson & Myles, 1998) and describe individuals with AD as being inflexible with poor interpersonal skills (Gillberg & Gillberg, 1989; Myles & Simpson, 2002; Simpson & Myles, 1998). Overall, the results of this study
implied that disruptive or unfavorable behaviors negatively affect the social reputation and acceptance of children.

In addition, the teachers rated the boys with AD in this study higher than their peers on behaviors in the area of internalizing problems. Their teachers observed them as being easily upset and nervous, worrying, and expressing more self-doubt than their peers. These observations support previous literature (Barnhill, 2001a; Barnhill, 2001b; Church et al., 2000; Gutstein & Whitney, 2002; Myles & Simpson, 2002) describing individuals with AD as experiencing low self-esteem and mental health concerns such as anxiety and depression.

In general, previous literature has described AD as a disorder of social ineptitude, social isolation, and abnormal social interactions (Barnhill, 2001a; Barnhill, 2001b; Church et al., 2000; McLaughlin-Cheng, 1998; Myles & Simpson, 2002; Safran et al., 2003, Wing, 1981) and has demonstrated a lack of social competence in children with AD (Gutstein & Whitney, 2002). The findings of this study supported these descriptions by demonstrating that teachers perceive boys with AD as being less socially competent and more socially isolated than their peers. The results also add to what is known about how observed behavior relates to social reputations and acceptance.

Understanding the social and behavioral patterns of children with AD could be essential to the design of treatment interventions. Therefore by adding to what is known about their behavior, social acceptance, and the influence of their behavior on their social reputations, these findings may be especially helpful to clinicians working with this population and developing treatment programs.
The findings suggest a need for on-going interventions for children with AD focusing on social skills and interpersonal relationships with an emphasis on developing the child's behavior strengths, especially in the area of adaptive functioning.

This study has several strengths including adding to what is known about social behavior in boys with AD. It gives us a better understanding of what the child with AD is like in the classroom. Additionally, it provides further insight into how they act with others such as teachers and peers by gathering information directly from those who interact with them on a regular basis in a social atmosphere. This information is useful to parents, teachers, and others who are in the position to help these children, who have difficulties in social environments such as school.

Although this study has a number of strengths, it also has some limitations. First, the findings reported here are for only 16 Caucasian males with AD. Secondly, some degree of sample bias may exist in that often the parents of the boys with AD were involved in some type of community resource group (i.e., local Autism Society, parent support group) through which they learned of the study and initiated participation in the study. Future examinations should aim to report findings on a larger, more diverse sample of children of AD. Finally, the findings are based solely on teacher reports and not actual peer nominations. Although the RCP has demonstrated considerable reliability and validity when used with peers, a similar wealth of data is not available when the RCP is used with teachers only. Noll, Bukowski, Rogosch, LeRoy, & Kulkarni (1990)
demonstrated adequate reliability and validity of the RCP when used with
teachers; however, when used with only teachers the findings should be
considered tentatively.

Overall, the findings of this study showed that teachers rated boys with AD
as having less positive social reputations as compared to theirs peers. It also
demonstrated that adaptive behaviors are related to more favorable social
reputations. Adaptive behaviors, such as social skills and adaptability, are often
especially troublesome for individuals with AD. Interventions focusing on the
development of these behaviors may assist these children in social interactions
as well as help them achieve favorable social reputations and acceptance in their
classrooms. Although this study provides additional information about how
behavior is related to the social reputations of boys with AD, there are still many
areas of future research necessary to adequately understand and effectively treat
this population. The findings of this study in combination with established
research promotes a focus on identifying reasons individuals with AD have
difficulty attaining social competence and what can be done to assist these
individuals achieve success in social relationships.
References


### Table 1

**Means, Standard Deviations, and t-test Results for Teacher Rated Social Reputations**

<table>
<thead>
<tr>
<th>Revised Class Play</th>
<th>AD Mean (SD)</th>
<th>Peer Mean (SD)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>S - L</td>
<td>2.75 (3.30)</td>
<td>6.38 (4.18)</td>
<td>2.73</td>
<td>.011*</td>
</tr>
<tr>
<td>S - I</td>
<td>3.19 (1.80)</td>
<td>1.19 (1.72)</td>
<td>-3.22</td>
<td>.003*</td>
</tr>
<tr>
<td>A - D</td>
<td>1.94 (2.29)</td>
<td>.94 (1.39)</td>
<td>-1.49</td>
<td>.146</td>
</tr>
</tbody>
</table>

Note: S - L = Sociability-Leadership Dimension, S - I = Sensitive-Isolated Dimension, A - D = Aggressive-Disruptive Dimension, * = significance

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### Table 2

**Means, Standard Deviations, and t-test Results for Teacher Rated Social Reputation on Social Roles Added to the Revised Class Play**

<table>
<thead>
<tr>
<th>Added Roles</th>
<th>AD Mean (SD)</th>
<th>Peer Mean (SD)</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.44 (.89)</td>
<td>.44 (1.46)</td>
<td>-4.68</td>
<td>.0001*</td>
</tr>
<tr>
<td>NA</td>
<td>.44 (1.03)</td>
<td>1.88 (1.26)</td>
<td>3.54</td>
<td>.001*</td>
</tr>
</tbody>
</table>

**Note:** AD = Asperger's Disorder, NA = Not Asperger's Disorder, * = significance

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### Table 3

_Nomination of Children with Asperger's Disorder vs. Peers on Social Roles Added to the Revised Class Play_

<table>
<thead>
<tr>
<th>RCP#</th>
<th>Role</th>
<th>$X^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 A</td>
<td>Somebody who is clumsy.</td>
<td>5.24</td>
<td>.022*</td>
</tr>
<tr>
<td>33 NA</td>
<td>Someone who is graceful.</td>
<td>9.31</td>
<td>.002*</td>
</tr>
<tr>
<td>34 A</td>
<td>A person who always talks about the same things.</td>
<td>9.31</td>
<td>.002*</td>
</tr>
<tr>
<td>35 NA</td>
<td>Somebody who talks about a lot of different things.</td>
<td>4.80</td>
<td>.028*</td>
</tr>
<tr>
<td>36 A</td>
<td>Someone who has trouble talking with others, especially other children.</td>
<td>10.49</td>
<td>.001*</td>
</tr>
<tr>
<td>37 NA</td>
<td>A person who easily participates in conversations.</td>
<td>4.57</td>
<td>.033*</td>
</tr>
<tr>
<td>39 A</td>
<td>Someone who has difficulty working in a group.</td>
<td>10.49</td>
<td>.001*</td>
</tr>
<tr>
<td>38 NA</td>
<td>Somebody who works well on group projects.</td>
<td>2.67</td>
<td>.102</td>
</tr>
</tbody>
</table>

_Note: RCP = Revised Class Play, A = Asperger's Disorder, NA = Not Asperger's Disorder, * = significance_
Table 4

Summary of Linear Regression Analysis for the Behavioral Assessment Scale for Children – Teacher Report Scale Composite Scores Predicting Revised Class Play Dimension Scores

<table>
<thead>
<tr>
<th>RCP</th>
<th>BASC-TRS</th>
<th>F</th>
<th>p</th>
<th>β</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>S - L</td>
<td></td>
<td>4.93</td>
<td>.004</td>
<td>-.28</td>
<td>.154</td>
</tr>
<tr>
<td>EXT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td></td>
<td></td>
<td></td>
<td>.09</td>
<td>.680</td>
</tr>
<tr>
<td>ADP</td>
<td></td>
<td></td>
<td></td>
<td>.57</td>
<td>.044*</td>
</tr>
<tr>
<td>A - D</td>
<td></td>
<td>5.35</td>
<td>.003</td>
<td>.77</td>
<td>.001*</td>
</tr>
<tr>
<td>EXT</td>
<td></td>
<td></td>
<td></td>
<td>.77</td>
<td>.001*</td>
</tr>
<tr>
<td>INT</td>
<td></td>
<td></td>
<td></td>
<td>-.31</td>
<td>.149</td>
</tr>
<tr>
<td>ADP</td>
<td></td>
<td></td>
<td></td>
<td>.073</td>
<td>.784</td>
</tr>
<tr>
<td>S - I</td>
<td></td>
<td>5.07</td>
<td>.004</td>
<td>-.22</td>
<td>.266</td>
</tr>
<tr>
<td>EXT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td></td>
<td></td>
<td></td>
<td>.15</td>
<td>.501</td>
</tr>
<tr>
<td>ADP</td>
<td></td>
<td></td>
<td></td>
<td>-.64</td>
<td>.023*</td>
</tr>
</tbody>
</table>


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Appenidix A

Revised Class Play

You are to pretend that you are the director of a play starring the students in this classroom. The director of a play has many things to do, but the most important job is to select the right people to act in the play. So, your job is to choose the three (3) students who could play each part or role the best. Try to pick the students who seem to fit each part in real life.

Since some students may fit more than one role, you may choose the same person for more than one part. Just remember to think carefully about your choices.

You are asked to cast the play with only the (boys/girls) in the classroom. You can pick from all of the (boys/girls) in your classroom, so even if someone is absent today (he/she) may still be given a role in the play. To ensure all of the (boys/girls) in the class are considered, it may be helpful to have your class roster available to reference.

Please cast the roles using the initials of the first and last names of the student you wish to play the part. If two students have the same initials than add a number (e.g., 1, 2, etc.) to their initials based alphabetically on the second letter of the child’s last name. For example, John Simpson would be J.S.1. and John Smith would be J.S.2 since “i” comes before “m” and their first and last initials are identical.
Remember to cast three (3) students in each role using only their initials.

Don’t forget a student can play more than one role. Do you have any questions before we begin?

1. A person who is a good leader.

2. A person who gets into a lot of fights.

3. Someone who would rather play alone than with others.

4. A person with good ideas for things to do.

5. A person who loses their temper easily.

6. Someone who shows off a lot.
7. Someone you can trust.

8. A person who interrupts when other children are speaking.

9. Somebody who has many friends.

10. Someone who will wait their turn.

11. Someone whose feelings get hurt easily.

12. A person who everyone listens to.

13. Someone who plays fair.

14. Someone who has trouble making friends.
15. Someone who acts like a little kid.

16. Someone who has a good sense of humor.

17. A person who can't get others to listen.

18. Somebody who is very shy.

19. Someone who is polite.

20. Somebody who makes new friends easily.

21. A person who is too bossy.

22. Someone who is often left out.
23. Someone who helps other people when they need it.

24. Someone who is usually sad.

25. A person everyone likes to be with.

26. A person who can get things going.

27. Somebody who teases other children too much.

28. Someone who is usually happy.

29. Somebody who picks on other kids.

30. Someone who likes to play with other children rather than alone.
31. A person who gets teased.

32. Somebody who is clumsy.

33. Someone who is graceful.

34. A person who always talks about the same things.

35. Somebody who talks about a lot of different things.

36. Someone who has trouble talking with others, especially other children.

37. A person who easily participates in conversations.

38. Somebody who works well on group projects.
39. Someone who has difficulty working in a group.
Appendix B

Behavioral Assessment System for Children – Teacher Rating Scale

The Behavioral Assessment System for Children – Teacher Rating Scale is a copyrighted measure.
December 7, 2004

Kristn Currans, M.S.
1074 Shadowridge Drive
Elsmere, KY 41018

Dear Ms. Currans:

The IRB reviewed the revisions for your Protocol #0309-4, *Social Reputation of Children with Asperger's Disorder in the Classroom: Teachers' Impressions* at its December 6th meeting. Your revised protocol is approved in the Full Review Category. This approval expires 12/6/05. A progress report must be filed with XU's IRB by the expiration date. A form is enclosed for your convenience. The form is also available at www.xu.edu/IRB/IRBforms.htm.

If there are any adverse events or modifications to the research, please notify the IRB immediately.

We wish you every success in your research.

Sincerely,

Robert C. Baumiller, S.J.
Chair and Administrator

RCB: nm

Enclosures

cc: Dr. Janet Schultz, ML 6511

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