

Asperger Syndrome: A Primer For Behavioral Interventionists

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Abstract

Children and adolescents with Asperger Syndrome are intellectually capable, rigid and often obsessive, adhere to stereotypic routines, demonstrate difficulties with pragmatic language and characteristically lack social skills. While the extent of these behaviors may wax and wane and vary by individual, they are in stark contrast with the high level of intellectual function seen in children and adolescents with this disorder. This primer will examine: the features of Asperger Syndrome, the theories which help explain the nature of the disorder, its comorbidity with other disorders, and the strategies that can impact positively on social skill development. The role that significant others in the environment (parents, teachers, clinicians and trained peers) can play in implementing these social skill strategies is also an area of focus.

Keywords: Asperger Syndrome, autism, autism spectrum disorders, social skills, theory of mind, executive function, comorbidity, attention deficit disorder, oppositional defiance disorder, generalization of training.

Introduction

Asperger Syndrome (AS) has received a lot of attention in the literature and in the media recently. Children who are diagnosed as having AS are often referred to as “nerdy” or “quirky.” Labels aside however, the kinds of difficulties children with AS typically have can impact on every facet of life. Though intellectually capable, rigid and often times obsessive, adherence to stereotypic routines and accompanying problems with pragmatic language puts these children at risk educationally, socially and emotionally. These behaviors associated with AS (DSM-IV criteria for AS, 299.80) are in stark contrast with the high level of intellectual function seen in children with the disorder. Parents, teachers, clinicians and trained peers need to understand the features of this disorder, the strategies that can impact most positively on communication and social skill acquisition, and the role they can play as significant others in the intervention process.

Asperger Syndrome versus High Functioning Autism

For a long time there has been a controversy as to whether AS really is a separate and distinct disorder from autism or a variant of High Functioning Autism (HFA). Since both AS and HFA can be categorized as autism spectrum disorders, this would explain why there is a great deal of similarity between them and in fact some overlap of symptoms. From a neurological standpoint there are marked differences however; Kanner’s autism or HFA involves the left hemisphere of the brain, while AS, as well as nonverbal learning disabilities (NLD), involve the brain’s right hemisphere (Volkmar et al., 2001; Ehlers et al., 1997).

What is known to date is that AS is characterized by the absence of clinically significant speech delay, generalized clumsiness, and later onset of symptoms that are characteristic of HFA. Moreover, children with AS are more likely to develop secondary psychiatric conditions than those with HFA. This may be due to the later onset of symptoms, the later diagnosis of the disorder, or both. The secondary psychiatric conditions that are often comorbid in adolescents with AS include depression as well as behaviors that is consistent with Attention Deficit Hyperactivity Disorder (ADHD) and Oppositional Defiance Disorder (ODD). Both ADHD and ODD are identified in the DSM-IV as part of the disruptive

behavior cluster and have been reported in the literature as emerging developmentally, with ADHD occurring first (onset before 7 years of age), Oppositional Defiance Disorder emerging next (onset around puberty), and the most severe conduct disorders emerging in late adolescence. Polirstok (1999) suggested that this escalation of symptoms along the ADHD-ODD-CD continuum might be functionally related to the degree of failure, rejection and hostility encountered in the environment and may in fact be both incremental and developmental in nature (also see Patterson, 2002). Snyder, and colleagues (2003) layout out a process by which this develops for normal children. Hence given the typical delay in the diagnosis of AS, there is a high likelihood that children with features of AS may have indeed been the recipients of increased levels of failure, rejection and/or hostility, and as a result, secondary psychiatric disorders may have had more time to take root and develop fully. Overall the delayed diagnosis of AS and the associated secondary psychiatric conditions clearly differentiate it as a separate and distinct disorder from HFA.

Theory of Mind Deficits in Executive Function and the Drive for Coherence

Several theories have been suggested regarding how children with AS process information. Among those theories are that children with AS have: a) Theory of Mind (ToM) deficits in executive functioning (Baron-Cohen et al., 1997); b) deficits in the drive for coherence (Houston & Frith, 2000); or c) a combination of these deficits (Rinehart et al., 2000). From an emotional/behavioral perspective, children with ToM deficits appear insensitive to the thoughts and feelings of others, an insensitivity that has been labeled “mind-blind” by Baron-Cohen (2001). Perhaps this “mind-blindness” or insensitivity to the thoughts and feelings of others might be what Goleman (1995) termed low emotional intelligence. Consistent with Goleman’s work is the finding that children with AS lack natural empathy, which interferes with the ability to be sensitive to the needs of others. The Swedish autism researcher Gillberg (1996) has proposed the use of an “empathy quotient” to help quantify the degree of impairment in perspective-taking and understanding the thoughts and feelings of others (Safran, 2001). Gillberg proposes that scores under 50 would indicate autism, scores between 50 and 70 would indicate AS, and scores between 70 and 85 would indicate, “lacking in empathy.” Using such a formulaic approach might help parents and professionals determine the urgency for intervention and the types of training that might be appropriate.

In addition, some researchers consider ToM deficits to be the inability to “read faces” (Craig & Baron-Cohen, 1999). This is borne out by a study by Grossman et. al (2000), in which children with AS were more likely to sort pictures of other children by the hats the subjects wore than by their facial expressions, indicative of problems in the interpretation of visual-affective stimuli. ToM deficits may also be responsible for children with AS having to “overlearn” certain unnatural strategies for assessing social situations, leading to a “stilted” quality of behavior which is often reported (Jolliffe & Baron-Cohen, 1999).

Another illustration of “mind-blindness” and deficits in executive function are seen in a study by Jolliffe & Baron-Cohen (1999). Persons with AS who were given the “Strange Stories” test scored significantly higher on problems calling for special knowledge and interpretation based on physical facts than on problems, which required inference and emotion. Channon et al. (2001) noted that the Predicaments tests they gave to persons with AS showed that executive function problems such as failing to identify appropriate goals and predict the consequences of actions, combined with ToM deficits, left persons with AS impaired in a number of ways, which was especially apparent in the “social appropriateness” and frequent inappropriateness of their suggested solutions. It may be that executive skills deficits limit the ability of persons with AS “to derive comparable benefit from similar life experiences” (p. 467).

Beyond ToM deficits, children with AS also seem to have two other significant deficits which contribute to processing problems: deficits in the drive for coherence and absence of global concepts. Houston and Firth (2000) suggest that children with AS, as well as those with autism have a deficit in the

drive for coherence, the way in which their minds take pieces of information and shape them into coherent pictures of the world. And Frith and Happe (1994) even suggest that deficits in the drive for coherence may be a more persistent impairment for children with AS than ToM. Another deficit area that contributes to faulty processing is the absence of global concepts, which despite strong cognitive ability in these individuals, may contribute to difficulty discriminating between useful and non-useful information (Rinehart et al., 2000).

ToM, Depression and Giftedness in AS

While children with AS may be unable to benefit from life experience and may have difficulty discriminating between useful and non-useful information, it is ironic that they often can be classified as gifted (Wagner, 1999). This is interesting because the correlation between autism and depression has been reported to vary with intelligence: the higher the IQ, the more likely a person is to suffer from depression (Ghaziuddin & Green, 1998). As Myles et al. (2001) point out, the more intelligent a person with AS is, “the less he or she attributed social success to chance” (p. 307). To perceive oneself as a social failure can contribute to feelings of inadequacy increased withdrawal from social situations, and depression.

The degree of social impairment and depression in children and adolescents with AS is likely related to the delayed emergence of ToM and executive functioning ability. Safran (2001) reports that ToM develops in children with AS much later on the developmental continuum (9-14 years of age) than when compared with neurotypical peers (age 4). While ToM can be taught to children with AS, those who learn it are often not able to apply it (Bock & Myles, 1999). Hence, from a qualitative perspective, children with AS continue to present as markedly different from their typical peers in assessing social scenarios and organizing subsequent events/responses despite their high cognitive ability. It should also be noted that some children with Kanner’s autism and other disorders on the autism spectrum may in fact never develop ToM (Safran, 2001).

While the DSM-IV and the ICD-10 have been able to pinpoint specific criteria for the diagnosis of AS, they have little practical application for researchers, parents and teachers who struggle to find effective teaching strategies for this population. Given the level of intelligence of children and adolescents with this disorder, helping students to “think about thinking” uses students’ metacognitive abilities to address areas of deficit (O’Neil, 1999). In fact, many of the metacognitive interventions deal specifically with social issues. Bashe and Kirby (2001) and Smith Myles and Simpson (2003) provide strategies for teachers and parents to help children with AS to acquire more typical ways of understanding social situations and responding appropriately. What is common across all of these suggested strategies, however, is the use of a structured, behavioral approach. This type of approach relies on assessing both the environment and individuals in the environment for cues as to the appropriate behavioral and/or emotional response and the intensity of that response. Teaching children and adolescents with AS to attend to important cues must be approached systematically (Polirstok, 1998). Despite the fact that many children and adolescents with AS can be classified as “gifted,” their overall social skill deficits are usually so acute that they appear even more discrepant to others in the environment because of the expectations associated with giftedness.

In the sections, which follow, specific behavioral strategies that can be taught by significant others to assist children and adolescents with AS to function more appropriately in the environment will be highlighted.

Enhancing Communication and Social Skill Competence

Klin and Volkmar (1995) carefully delineate a host of skills related to communication and social skill competence that require explicit instruction for children and adolescents with AS. According to these

researchers, these skills include: “eye contact, gaze, voice tone, voice inflection, facial and hand gestures, non-literal communications (humor, figurative language, irony, sarcasm and metaphor).” Additionally, Klin and Volkmar suggest that children and adolescents with AS be taught to monitor their verbal communication, including selection of topics, initiating conversations, shifting topics, ending conversations, and their physical proximity to the person(s) with whom they are conversing.

There are countless social skill training packages available commercially that address a wide range of skills and behaviors to promote social and emotional understanding (Howlin, Baron-Cohen, & Hadwin, 1999; Goldstein & McGinnis, 1997). What these programs all have in common is that the skills and behaviors identified are organized within domains or categories in hierarchical fashion, usually from least difficult to most difficult and require mastery of previous skills in order to advance along the continuum. These training packages make use of a series of techniques when training each skill: (1) discussion of the skill itself and in what contexts that skill should be demonstrated; (2) modeling of the skill by the trainer (teacher, parent, clinician or trained peer) and focused observation by the child/adolescent; (3) positive practice of the skill by the child/adolescent; (4) evaluation from the trainer on the appropriateness and effectiveness of the student’s use of the target skill; and (5) application of the skill across multiple settings, persons, etc.

Other commercial materials that are less behavioral in their design and employ a strong cognitive component in training social skills for children and adolescents with AS are social stories (Rogers & Myles, 2001) and social scripts (Myles & Simpson, 2003). Both social stories and social scripts are designed to address an individual’s interactions with others and the appropriateness of those interactions in a given social context. Learning to respond appropriately to meet the demands of various settings and social situations is of paramount importance for children and adolescents with AS.

Teaching Appropriateness of Response to Situational Demands

One problem concerning how children and adolescents with AS function in the environment may be attributable to a faulty perception on their part that there is one way of responding socially/emotionally to every given situation. When children and adolescents have limited ability to assess the environment, they continue to engage in the same response or behavior, even though the prompting situation may be different. *An important lesson for children and adolescents with AS to learn is that emotional and behavioral responses are situationally governed.* This raises an interesting question. Who decides what makes something “appropriate for the setting?” The answer must be seen through the lens of the “significant rater” in that setting. In the home, the significant rater is the parent, and the appropriateness of an emotional or behavioral response is determined by whatever rules the parents have established. Instead of using words like “good” or “bad” to describe a child’s emotional or behavioral response, parents need to communicate whether the response was “appropriate to the prompting situation.” Similarly, at school, the significant rater can be the teacher or a trained peer (a student trained to help facilitate appropriate behavioral responses from a student with AS). Figuring out what is appropriate in terms of emotional or behavioral response is determined by the rules that the teacher has established. In less structured, non-classroom settings, learning to “fit in” socially for children and adolescents with AS may require the help of trained peers, who can model the appropriate behavior and verbally mediate what behaviors and/or responses might be better choices for a child or adolescent with AS. Hence, teaching a child or adolescent to take on the perspective of the “significant rater” will help that individual determine whether his or her emotional and behavioral responses across a variety of settings are appropriate. *Taking on the perspective of the “significant rater” constitutes an important component of social skill learning for children and adolescents with AS.*

Learning to Modulate Behavior Across Settings

Having determined the perspective of the “significant rater,” the next task for a child or adolescent with AS is to learn to modulate his or her behavior across settings. This theoretical discussion can be translated into concrete recommendations for parents, teachers, clinicians or trained peers to help children and adolescents with AS to better develop emotional intelligence by teaching them to: (1) distinguish differences among their feelings and to provide the correct vocabulary to communicate various feelings; (2) express feelings in acceptable ways appropriate to given situational contexts by using characters in movies, books, or TV as examples; (3) read body language and other non-verbal cues in order to enhance communication; (4) treat others in the environment sensitively; and (5) try to see a situation from another’s point of view.

Helping children and adolescents with AS to be reflective about their own feelings and behaviors requires that significant others in the environment (teachers, parents, counselors, trained peers, etc.) must find the time after an inappropriate behavior or emotional outburst has been displayed to talk about what happened and why it happened. Ways of responding more appropriately need to be explored. *The best question that a significant other can ask a child after such an event is, “What should you do the next time?”* Helping children to explore what other emotional or behavioral responses that might be more acceptable is a valuable learning process. *A significant other’s goal is to help a child or adolescent identify better options for emotional and behavioral responding.* This is where learning a vocabulary to express the feelings connected with a set of emotions would make a big difference the next time the child or adolescent confronts a similar situation.

Developing Sensitivity to Non-Verbal Cues in the Environment

Non-verbal aspects of communication (including facial gestures and body language) provide another set of valuable clues children and adolescents with AS can use to monitor the appropriateness of their response in a variety of situations. *Children and adolescents with AS need extra help learning to look for the nonverbal clues in a situation.* Facial gestures and body language need to be described and then linked to different emotional states. Identifying various facial gestures in photographs and pictures from magazines and inferring their emotional states is the next step in this process. Finally, having children role-play emotional encounters using only facial expressions and body language helps to reinforce the concept that nonverbal emotional cues about how people are feeling are present in the environment all of the time and are important components of communication.

Accepting Responsibility for One’s Actions

Teaching children and adolescents with AS to be emotionally intelligent requires them to develop empathy for others and to understand other people’s points of view. The development of empathy may be negatively impacted by the inability of children and adolescents with AS who often attribute the problems they encounter to external factors and to the actions of others in the environment to take responsibility for their actions. If a child constantly attributes her/his problems to others (external locus of control), it is difficult for that child to feel empathy for people in the environment who often serve as repositories for the child’s feelings and frustrations. *External locus of control has been identified as a behavioral feature of attention deficit disorder, which is often comorbid with AS.*

Glasser’s (1986) work on control theory discusses the importance of teaching children to take responsibility for their actions; to identify behaviors which were not helpful, friendly, cooperative, etc.; to pinpoint what happened as a result of these inappropriate actions; to identify how others in the environment may have felt about those behaviors; and to plan for alternative ways of responding the next time. The control theory process just described is one that can be readily trained in typical peers who have good intellectual and social function. Peers trained in this process can help to intervene in a way that might prove much more accessible and feel less punitive than if the same feedback had come from adults

in the environment.

Teaching “Self-Talk” To Mediate Anger or Frustration Responses

Another strategy that teachers and parents can employ to help children and adolescents learn to self-regulate their emotions involves the use of “verbal self-instruction” or “self-talk” (Graybill, Jamison & Swerdlik, 1984; Kunzendorf, McGlone & Hulihan, 2004). This technique can be effective in reducing emotional outbursts by training through active rehearsal, a series of pivotal questions that the child or adolescent can ask himself or herself in the face of increased feelings of anger or other problematic emotions or behaviors. The “self-talk” can serve to diffuse the child’s or adolescent’s anger and delay response long enough to avoid a major altercation or deliberate sabotage of oneself. The key here is to train the child or adolescent to recognize first specific feelings and the depth of those feelings in a given situation and to provide a strategy to stop and explore what the behavioral/emotional options related to the active display of those feelings might be. For example, when the child or adolescent recognizes that (s)he is angry and starting to “lose it,” the child or adolescent might learn to ask her/himself a series of questions: “What am I getting so mad about?” “What should I do?” “What’s the best choice of action?” and, “What’s the worst choice I could make?” By the time the child or adolescent recognizes the emotion and “self-talks” the behavioral choices, (s)/he may have already passed the moment when the outburst would have occurred. Through “self-talk” the child or adolescent may become more deliberate in evaluating response options, and ultimately make better choices about which responses might be more appropriate.

Generalization of Training

One of the more significant problems in teaching social skills to children and adolescents with AS is to insure that these skills generalize or are applied beyond the training setting (Romanczyk, White and Gillis, 2005). Several studies involving social skill training and/or metacognitive monitoring of behavior with this population have suggested that the training does not always generalize to real-life situations (Safran, 2001; Bock & Myles, 1999; Myles & Simpson, 1998; Ozonoff & Miller, 1995). Social skills that are not acquired naturally require a very structured regimen to facilitate generalization of training. That structured regimen is carefully described by Stokes and Baer (1977) as a “technology of generalization,” requiring an extended hierarchy of training opportunities with prompts and cues faded over time in multiple settings to foster generalization. The more carefully attention is paid to this hierarchy of training, the greater the likelihood that these skills can appear with greater frequency in a host of settings. However, Klin and Volkmar (1995) caution that practice of various communication and social skills do not typically result in behaviors that would be characterized as spontaneous or natural.

Conclusion

What this article makes clear is that children and adolescents with Asperger Syndrome need ongoing support and intervention from those significant adults and trained peers in their lives. Teachers, parents, clinicians and peers can work collaboratively to address the unique needs of each child/adolescent who presents with this disorder, or features of this disorder. There is no simple intervention for AS; no “magic pill” exists that will correct the social and communication deficits and behavioral excesses evident in individuals who have this disorder. Rather effective intervention consists of direct instruction and structured feedback provided by significant adults and peers in the environment and reinforced by self-reflection and interaction with others over time. Extended practice across a variety of settings will facilitate the generalization and maintenance of skills acquired through training.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, D.C.: Author.
- Baron-Cohen, S. (2001). Think different? An interview with Oliver Morton. *Wired*, 12/02, 185-187.
- Bashe, P.R., & Kirby, B.L. (2001). *The OASIS guide to Asperger Syndrome*. New York, NY: Crown.
- Bock, S.J., & Myles, B.S. (1999). An overview of characteristics of Asperger Syndrome. *Education and Training in Mental Retardation and Developmental Disabilities*, 34, 511-520.
- Channon, S., Charman, T., Heap, J., Crawford, S., & Rios, P. (2001). Real-life-type problem-solving in Asperger's Syndrome. *Journal of Autism and Developmental Disorders*, 31, 461-469.
- Craig, J., & Baron-Cohen, S. (1999). Creativity and imagination in autism and Asperger Syndrome. *Journal of Autism and Developmental Disorders*, 29, 319-326.
- Ehlers, S., Nyden, A., Gillberg, C., Sandberg, A.D., Dahlgren, S., Hjelmqvist, E., & Oden, A. (1997). Asperger syndrome, autism and attention disorders: A comparative study of the cognitive profiles of 120 children. *Journal of Child Psychology and Psychiatry*, 38, 207-217.
- Frith, U., & Happe, F. (1994). Autism: Beyond "theory of mind." *Cognition*, 50, 115-132.
- Ghaziuddin, M., & Greden, J. (1998). Depression in children with autism/pervasive developmental disorders: A case-control family history study. *Journal of Autism and Developmental Disorders*, 28, 111-115.
- Gillberg, C. (1996). The long term outcome of childhood empathy disorders. *European Child and Adolescent Psychiatry*, 5, 52-56.
- Glasser, W. (1986). *Control theory*. New York, NY: Harper & Row.
- Goldstein, A.P., & McGinnis, E. (1997). *Skillstreaming the adolescent: New strategies and perspectives for teaching prosocial skills*. Champaign, IL: Research Press.
- Goleman, D. (1995). *Emotional intelligence*. New York, NY: Bantam Books.
- Graybill, D., Jamison, M., & Swerdlik, M. (1984). Remediation of impulsivity in learning disabled children by special education resource room teachers using verbal self-instruction. *Psychology in the Schools*, 21(2), 252-254.
- Grossman, J.B., Klin, A., Carter, A.S., & Volkmar, F.R. (2000). Verbal bias in recognition of facial emotions in children with Asperger Syndrome. *Journal of Child Psychology and Psychiatry*, 41, 369-379.
- Houston, R., & Frith, U. (2000). Asperger's Syndrome in gifted individuals. *Gifted Child Today*, 24, 28-35.
- Howlin, P., Baron-Cohen, S., & Hadwin, J. (1999). *Teaching children with autism to mind-read: A practical guide*. New York, NY: Wiley.
- Jolliffe, T., & Baron-Cohen, S. (1999). Brief report: Autism and Asperger Syndrome in seven-year-old

- children: a total population study. *Journal of Autism and Developmental Disorders*, 29, 395-406.
- Klin, A., Volkmar, F.R., Sparrow, S.S., Cicchetti, D.V., & Rourke, B.P. (1995). Validity and neuropsychological characterization of Asperger Syndrome: Convergence with nonverbal learning disabilities syndrome. *Journal of Child Psychology and Psychiatry*, 36, 1127-1140.
- Kunzendorf, R., McGlone, M., & Hulihan, D. (2004). Reframing cognitive therapy to integrate recent research in emotion, imagery and self-talk. *Imagination, Cognition and Personality*, 23(4), 309-323.
- Myles, B.S., Barnhill, G.P., Hagiwara, T., Griswold, D.E., & Simpson, R.S. (2001). A synthesis of studies on the intellectual, academic, social/emotional and sensory characteristics of children and youth with Asperger Syndrome. *Education and Training in Mental Retardation and Developmental Disabilities*, 36, 304-311.
- Myles, B.S. & Simpson, R.L. (2003). *Asperger Syndrome: A guide for educators and parents*. Austin, TX: Pro-Ed.
- O'Neill, J. (1999). A syndrome with a mix of skills and deficits. *New York Times*, 4/6/99.
- Ozonoff, S., & Miller, J.N. (1995). Teaching theory of mind: A new approach to social skills training for individuals with autism. *Journal of Autism and Developmental Disorders*, 25, 415-433.
- Patterson, G.R. (2002). Etiology and Treatment of Child and Adolescent Antisocial Behavior. *The Behavior Analyst Today*, 3 (2), 133-145
- Polirstok, S.R. (1998). The importance of developing emotional intelligence in children with severe learning disabilities and disorders of attention. *Ciclo Evolutivo e Disabilita (International Journal of Lifespan and Disability)*, 1(2), 199-207.
- Polirstok, S.R. (1999). The comorbidity of attention deficit hyperactivity disorder: Co-occurrence with disorders of conduct, oppositional defiance, anxiety, somatization and learning disabilities. *Ciclo Evolutivo e Disabilita (International Journal of Lifespan and Disability)*, 2(1), 1-9.
- Romanczyk, R.G, White, S. and Gillis, J.M. (2005): Social Skills Versus Skilled Social Behavior: A Problematic Distinction in Autism Spectrum Disorders - *JEIBI* 2 (3), Pg. 177
- Rogers, M.F., & Myles, B.S. (2001). Using social stories and comic strip conversations to interpret social situations for an adolescent with Asperger Syndrome. *Intervention in School and Clinic*, 36, 310-313.
- Rinehart, N.J., Bradshaw, J.L., Moss, S.A., Brereton, A.V., & Tonge, B.J. (2000). Atypical inference of local detail on global processing in high-functioning autism and Asperger's disorder. *Journal of Child Psychology and Psychiatry*, 41, 769-778.
- Safran, S.P. (2001). Asperger Syndrome: The emerging challenge to special education. *Exceptional Children*, 67, 151-160.
- Snyder, J., Stoolmiller, M., Patterson, G.R., Schrepferman, L., Oeser, J., Johnson, K. and Soetaert, D. (2003). The Application of Response Allocation Matching to Understanding Risk Mechanisms in Development: The Case of Young Children's Deviant Talk and Play, and Risk for Early-Onset

Antisocial Behavior - *The Behavior Analyst Today*, 4 (4), Pg. 435-445.

Stokes, T.F., & Baer, D.M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, 10, 349-367.

Volkmar, F.R., & Klin, A. (2001). International review of research in mental retardation: Autism (23). Glidden, Laraine Masters; San Diego, CA: Academic Press, 83-110.

Wagner, S. (1999). Focus on disability - Asperger's Syndrome. *CEC Today*, September 11.

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