Aydın Bal[1]
Timothy E. Radke[2]

Diverse Perspectives on Social-Interactional Strengths in Children with Disabilities: A Socioecological Study

Abstract

Children identified with High Functioning Autism Spectrum Disorders (HFASD) or Asperger Syndrome are often characterized as lacking social-interactional abilities. However, these individuals demonstrate a variety of social-interactional strengths in their daily life that may not be acknowledged in education research and utilized in school settings. The present study examined parents' perspectives and experiences regarding social strengths of children diagnosed with HFASD or Asperger Syndrome. Our findings revealed three social interactional strengths that the children developed and practiced in multiple socioecological activity contexts via various mediums: Empathy, sensing fairness, and story telling. This study provides insights to develop socioecological conceptualizations of social skills in this population. Findings of the study contribute to the limited but growing literature on social strengths of children with Autism Spectrum Disorders and have implications in designing academic and social programs.

Keywords: Autism Spectrum Disorders, Asperger Syndrome, Social-interactional Strengths, Socioecological Theory.

Introduction

Autism Spectrum Disorders (ASD) includes a family of neurological disorders marked with qualitative impairments in social interactions and imaginative play and atypical developments in social communication and restricted repetitive and stereotyped patterns of behaviors (Diagnostic and Statistical Manual of Mental Disorders [DSM], 2000). ASD first appeared in the DSM in 1980 and since then, its prevalence has significantly increased. The median of global prevalence of ASD is 0.62% in general population (Elsabbagh et al., 2012). The prevalence of ASD in the United States (U.S.) is higher:

[1] PhD., Asst. Prof., Rehabilitation Psychology and Special Education, School of Education, University of Wisconsin-Madison, WI, USA, e-mail: abal@wisc.edu
[2] MS., Special Education Teacher, University of Wisconsin-Madison, WI, USA

1.1% of U.S. children aged 3 to 17 years were diagnosed with ASD and boys are disproportionately represented in ASD identification with a risk ratio ranging from 1.33 to 16.0 (Kogan et al., 2009). ASD are strictly diagnosed as pervasive neurodevelopmental disorders that begin in early childhood before the age of three years. Sociodemographic factors (e.g., age, income, and geographic location) influence ASD identification. Kogan and colleagues (2009) found the higher prevalence among children in the Midwest and Northeast of the U.S., and a lower prevalence in children who have parents with less formal education. Currently, children identified with ASD make up 5.8% of the students served in special education programs in U.S. schools (National Center for Education Statistics, 2013).

In this study, we focused on children identified as high functioning ASD, High Functioning Autism Spectrum Disorder (HFASD) or Asperger Syndrome (or Asperger's). By diagnostic criteria, symptomology of HFASD or Asperger's includes significant difficulties in social interaction and restricted and repetitive patterns of behavior and activities but excludes CI and atypicality in social linguistic competencies (APA, 2000). The ASD research literature has a scarcity of research on high functioning children (Solomon, 2004). Much energy in this field of study has been spent on linguistic, behavioral, and cognitive deficits that children with ASD exhibit. Moreover, the ASD studies are often conducted in experimental condition, which excludes participants with high functioning autism (Capps, Kehres, & Sigman, 1998). Our knowledge base on the competence of children with high functioning autism to participate in everyday social interactions with family members, friends, teachers, and schoolmates is inadequate at best (Solomon, 2004). This limits the generalizability and ecological validity of research findings for those children outside of the highly controlled experimental contexts. Children with HFASD or Asperger's demonstrate social-interactional strengths in and out of school settings (Smith, 2006; 2009). Unfortunately, practitioners and researchers often do not utilize those strengths for improving learning and development opportunities for students (Ochs & Solomon, 2004). As the field of special education moves towards context-sensitive and strengths based approaches, it is increasingly salient to have a comprehensive understanding of effective and meaningful adaptive social-interactional functioning for children identified with ASD.

Much of the previous work pertaining to the topic of social interactional strengths of children with ASD has emanated from the field of cognitive psychology, psycholinguistics, and linguistic anthropology (Ochs & Solomon, 2004). A pretext to understanding the social interactions of a child with ASD is the presence of interaction *differences* (atypicality) rather than defects. This strategy proves valuable to a strength-based intervention program development. Gernsbacher, Stevenson, Suraiya and Goldsmith (2008) built an argument on the atypicality of social interactions rather than on the pathology of interaction skills in autism and suggested that atypicality implies a valid albeit, different way of engaging in social interactions. Gernsbacher et al. (2008) found that individuals with HFASD were much more likely to engage in interactions if the activity was task oriented rather than spontaneous non-purposeful.

Task related social interactions in and out of school are the main focus in the present study. We examined particular goal-oriented tasks, which children with high functioning ASD engage in as a way of understanding children's social competence in more personal settings, such as family activities. Understanding social strengths of young children with ASD provides the opportunities for practitioners and researchers to develop more comprehensive, ecologically valid, and meaningful academic and social programs. As a result, we aimed at addressing the following research questions: 1. What are the social strengths demonstrated by children with high functioning ASD diagnosed with HFASD or Asperger syndrome? 2. In which contexts and settings do children with HFASD or Asperger syndrome show their social strengths?

Conceptual Framework

We used a socio-ecological model of learning and development to conceptualize social strengths of individuals with HFASD or Asperger, mediated by their socio-ecological contexts **(**Bronfenbrenner, 1992; Sontag, 1996). Children with HFASD or Asperger learn, develop, and function in a constantly changing world in which they influence the environment around them as well as the environment influencing them. Because ASD are developmental in nature; the developmentally structuring attributes present in an individual with HFASD or Asperger's are an intriguing way of representing their social interaction preferences, practices, and learning histories. According to Sontag (1996, p. 325), "[t]he concept of developmentally structuring attributes is a theoretically useful concept for studying children with disabilities because it supports the search for protective factors which are capable of modifying developmental risk." The personal attributes of someone with HFASD-as with any individuals-vary widely. To understand the development and manifestation of these attributes that individuals develop as active social agents over time and the affects that any given attribute has is salient to understanding social skills as situated within contains and possibilities of their socio-ecological contexts (Bronfenbrenner, 1992; Cole, 1996; Ochs & Solomon, 2004).

Method

In this study, we employed a *collective case methodology* in which a number of cases are examined together to provide insight into a social, ecological, and historical phenomenon (Stake, 2005). We conducted in-depth semi-structured interviews with primary care providers of children identified either with HFASD or Asperger's.

Recruitment and Participants
The children (Cullen, Mark and Milo) that had their family interviewed were in elementary school (see Table 1 for more information about the students). In sampling, we did not aim at selecting cases based on *representativeness* criteria. We followed Stake's (2005) methodological suggestion that "[m]y choice would be to choose that case from which we feel we can learn the most…Potential for learning is a different and sometimes superior criterion to representativeness" (p. 451). We worked with three participants, Mrs. Weiner, Mrs. Pierce, and Mrs. Domen, who offered *the best opportunities to learn* for the purpose of the study. The caregivers were recruited if their

children were diagnosed with pervasive developmental disorder, Asperger and matched the following criteria: The child is "high functioning," which is defined for this study as a child diagnosed either with Asperger syndrome or HFASD who has functional communication skills and age appropriate self help and/or adaptive skills. Parental report was used to ascertain these qualifications. All three participants lived in single-family households in a city of the Midwestern U.S. They came from middle to upper middle-income level, monolingual English speaking families, and had a European-American background.

Both of Cullen's[1] parents were attending graduate school; Mark's mother was completing a graduate degree while his father had a master's degree. Milo's father had a doctorate and his mother had a bachelor's degree. The study took place in a large state university community renowned for serving families who have children with disabilities.

Table 1
Participant Characteristics

Child	Age	Diagnosis	School Setting	Primary Service Providers
Milo	7	HFASD	Inclusive public school	Mother - Mrs. Domen
Mark	8	HFASD	Inclusive charter school	Mother – Mrs. Weiner
Cullen	11	Asperger	Inclusive charter school	Mother – Mrs. Pierce

Data Resources
We primarily generated data through semi-structured life history interview methodology (Gomez, 2010). The semi-structured life history interview were chosen for this study because of its inherent value as a method for gathering data to understand people's lived experiences. By using life history methodology, we collected the detailed account of children and their contexts and social-interactional skills and practices such as the media of interaction. Once we obtained the Institutional Review Board (IRB) approval and consent forms, participants were interviewed in a setting of their choice. For Milo's and Cullen's parent this was in the home. For Mark's mother, she felt most comfortable being interviewed at a private area of a coffee shop. An electronic voice recorder was used to record the interviews. The interview process started with an explanation of the research project, signing of consent forms for audio recording and participation in the research project, and providing them time to ask any questions about the project.

Researcher Positionality
Experiences and positionality that researchers bring into research settings are important components of a qualitative research study (Lincoln & Guba, 1985). We, both of the authors, have had first hand experiential knowledge about the education of children and

adolescents with ASD. As practitioners and educational researchers, we have worked with families and youth with ASD in and out of educational settings. Moreover, one author was diagnosed as an individual with ASD. Having an author with ASD has been instrumental in our data collection and analysis. Collectively, professional and personal experiences that we each brought into this study helped us immensely as we make meaning of our findings and develop a more comprehensive and situated understanding of actions of children with HFASD or Asperger's.

Data Analysis

The data analysis process began as soon as we started collecting data and continued as we wrote the analysis of the data. We used Erickson's interpretative research methodology (1986). In the data analysis, our goal was to generate empirical assertions on parents' perceptions and experiences related to social interactional strengths and strategies of children with HFASD or Asperger's in multiple socio-ecological contexts in and outside of school (Erickson, 1986). In Erickson's research approach, we completed two general tasks to address research questions: a) finding conceptual assertions from data sources; and b) establishing the evidentiary warrant for the assertions. We came up with the final empirical themes by reading, listening, and watching the data mass continuously and repeatedly. In what follows, we present the results of the study and discuss them in the light of current research literature.

Results and Discussion

In the present study, we investigated social-interactional strengths of children identified with HFASD or Asperger's. In-depth parent interviews revealed a wealth of social interactional strengths that the children developed and practiced in multiple socio-ecological activity contexts (e.g., pretend play, family games, and helping others) via various mediums such as story telling, video diary, movies, and family games. We identified three themes running across all individual cases: Emotional empathy, sensing fairness, and story telling.

Empathy

All participants stated their child's principal social strength is in reading other people's emotions, referred to as *empathy* in psychological research literature. The term empathy is defined as understanding of others' mental states and emotions. Mainstream autism literature suggests that autistic children have a significant dysfunction in general empathy. Children with autism were characterized as "mind blind" (Baron-Cohen, 1995) explaining that children with ASD have been found to struggle with identifying irony, lies, or deception (APA, 2000). On the other hand, there is another line of research that is supported by personal and family narratives of individuals with autism contradict the general empathy deficit hypothesis. This line of research has suggested that children

with ASD may experience an empathy imbalance with heightened ability of empathy in sensing others' emotions (Smith, 2009).

Research on empathy in individuals with ASD considers the difference between emotional and cognitive empathy. Smith (2006; 2009) argues for a distinction between cognitive (predictive) and emotional (reciprocating) empathy. Children with ASD, Smith hypothesized, have a neurological hypersensitivity toward relating to other people's emotional states. Thus, as a coping strategy to restrict emotional arousal, these children actively avoid social-personal interactions (e.g., avoiding eye contact, turning away and engage in a repetitive behavior) with people experiencing intensified emotions (Smith, 2009). More specifically, emotional empathy, the ability to understand and reciprocate another person's emotions, has been found as a strength for children with ASD and specifically those who are on the higher functioning end of the autism spectrum (Roeyers, Buysse, Ponnet, & Pichal, 2001). Smith (2009) suggested children with ASD tend to demonstrate emotional empathy and effectively share an emotional response with others. Alternatively; the same children may struggle with cognitive empathy, the ability to predict the reactions of others (Smith, 2009). This disparity between emotional versus cognitive empathy provides profound insight into the understanding of ASD and social interactions.

Emotional empathy has significant implications in building social relationships. Emotional empathy allows individuals to select people that would be more accepting of them as well as people they should avoid. The ability to read someone's emotions "in the moment" also allows adjusting behaviors as demonstrated in the following excerpt:

> *Cullen is just so aware of anyone in trouble or hurt around the neighborhood, he knows if someone is crying or hurt and will make sure they're okay* (Mrs. Pierce, Participant Interview)

Cullen is a very involved child around his neighborhood. He is well known and liked by the neighbor adults and children. Cullen's concern for his fellow neighbors and playmates demonstrated his ability to empathize and act on his empathetic emotion in a pro-social manner. Furthermore, he could independently identify situations where someone was in distress and take measures to make sure that the person was being helped. When situations got out of control, Cullen would step back and let his mother handle things. In one incident, Cullen developed a friendship with a young boy who was adopted later in childhood and experienced significant behavioral issues. The boy chased off a few of his other friends with a garden hoe. Cullen, often avoid confrontations, had his mother come and helped and then continued to play after it had been resolved.

> *It's almost as if he knew that he [the other boy] couldn't help it* (Mrs. Pierce, Participant Interview).

The amount of empathy and tolerance that Cullen demonstrated in this situation is a testament to his social abilities. Not only did he have to understand the other boys'

emotions, but also he had to predict his peers' behaviors and determine an appropriate reaction. Perhaps, it may be claimed that Cullen showed both emotional and cognitive empathy (Smith, 2009).

Marks' mother provided further insight into this theme.

> *Mark doesn't understand his emotions at all, but he has this innate ability to read others'. It's almost as if he understands other people better than himself* (Mrs. Weiner, Participant Interview)

Mrs. Weiner described Mark's strength in emotional empathy (Smith, 2009). Mark's emotional empathy enabled him to understand people in the moment with minimal non-verbal or verbal cues. Mark demonstrated the ability to interpret subtle cues about people's emotions:

> *Even if you're upset about something and you're not showing it he'll ask 'are you happy?' so yes, he can read people very well* (Mrs. Weiner, Participant Interview).

Reading subtle cues in context is an important strength for a child's social interactions. It is beneficial for Mark to be able to understand subtle cues to facilitate his interactions. It may be that Mark understands himself through others as people understand themselves by their interactions with others (Gosling, 2011). If this were the only feedback that an individual gets on their current emotional state one would expect that they would be acutely aware of the emotional state of other's around them. The issue with this strategy is the illusion of transparency (Gosling, 2011). This was also demonstrated by Milo who was "tuned in" to other people's emotional states:

> *If Milo is worked up or anxious, I usually have to calm myself down to calm him down* (Mrs. Domen, Participant Interview).

The ability to regulate yourself by observing those around you was both an asset and a challenge for Milo. He gleaned information about his environment from a selected group of people in it; something that could be considered a highly social strategy. Empathy studies in autism and the narratives of individuals with ASD suggested that children with ASD can notice and mimic distress of people around them (Smith, 2009). In the excerpt above, Mrs. Domen realized the close connection between her emotional state and that of Milo. Researchers exclusively focusing on isolated actions and behaviors of children with ASD might miss the role of social-interactional context (Ochs & Solomon, 2004).

Parent participants reported that it was difficult to hide frustration and sadness from their children. Children with ASD sometimes are able to read and mimic the emotional state of their parents before they realized them. Mark's mother gave an intriguing caveat to this ability. Mrs. Pierce reported Cullen's ability to read her emotions before she fully realized she was experiencing them. Mrs. Pierce hypothesized:

> *Cullen did this from reading her facial expressions because he would state that he doesn't like that face when she is sad, angry, or frustrated* (Mr. Pierce, Participant Interview).

His mother reported that he was acutely aware if any child was hurt or crying in the neighborhood and would try to help them. When Milo's mother queried about his ability to read her emotions, she simply stated that if she needed to change his mood when he was angry, anxious, or overly excited she adjusted her mood first and Milo's behavior would follow. This contradicts with the empathy deficit (mindblindness) hypothesis (Baron-Cohen, 1995).

Through emotional empathy, children with HFASD or Asperger's were reading non-verbal social cues. The conflict is that children with ASD are not expected to be adept at reading non-verbal social cues; yet, each parent reported that their child is adept at reading non-verbal social cues. Hyperfunctionality of reading people in larger social contexts may be overwhelming and the child with HFASD or Asperger's may avoid the task by "tuning out" (Smith, 2009). These social-interactional strategies and behavioral adaptations might not be not easily observed by outside observers.

Another aspect of emotional empathy that the parents experienced was related to identifying with and helping others who have a disability similar to their own. Mark's mother observed him playing with and helping other children on the autism spectrum or experiencing behavioral difficulties:

> *It's almost like he knows his own kind* (Mrs. Weiner, Participant Interview).

Mark had demonstrated an ability to identify a child with a disability and actively befriend them. At a birthday party Mark was observed by his mother helping a child who has ASD into a "bounce house" and then inviting other children who are typically developing in to play with the two of them. Not only was he assisting a child with ASD, but engaging in social interaction for himself and the child in the "bounce house." His effort to engage in shared enthusiasm through a mutually enjoyable activity is an example of demonstrating both social-emotional altruism and emotional empathy. Mark facilitating his interaction with other children is another mode of social-interactional strengths.

In a group of peers, belonging begins with an "entry strategy" (Ramsey, 1991, p. 27). For this entry strategy to be successful it must appeal to a wider group of children existing within a cultural context. These strategies range from passive to assertive (Ramsey, 1991). Individuals with HFASD or Asperger's tend towards the extremes (Heinrichs, 2003). This entry strategy is the first step in building and maintaining friendships. There is a great deal of cultural-contextual awareness that is involved in initiation. For example, if a nine-year-old boy asks a group of male peers whom he meets first time if they want to play with Legos or in the bounce house; that would be a

culturally and contextually relevant initiation. If the same boy asks his peers if they want to play with troll dolls his entry strategy would most likely be unsuccessful. Once entry is accomplished the social interaction must be maintained, in the case of children this may be done by mutual interest in a play activity. Included in this mutual interest is a component of reciprocation (Ramsey, 1991). This reciprocal relationship keeps both parties engaged in the mutual activity while sharing enjoyment over a mutual interest. Sustaining this mutual interest requires cultural-contextual awareness on the part of both parties. Culture mediates social interaction at any level (Graue & Walsh, 1998; McDermott & Varenne, 1995). Considering play such as functional play, associative, or cooperative play requires a great deal of language, reciprocation, and social awareness of the other child's needs; all of which are culturally and contextually mediated exchanges. Mark inviting people to play in the "bounce house" at a birthday party, Cullen inviting a group of children to try his newly built boat, or Milo desperately wanting to stay in his class with his peers are all examples of culturally and contextually appropriated entry strategies into social relationships. To understand the social skills of an individual with ASD requires cultural awareness of that individual's ontology, his prior experiences as well as specific local context where social interaction take place.

Sensing Fairness

Smith (2009) suggested that heightened ability of emotional empathy result in high morality and a strong sense of fairness. Fairness was an important aspect of the social interactions for the students under investigation. At home, Cullen was very concerned about him and his sister being treated fairly and kindly. If he thought that his mother was too harsh on him or his sister he would discuss this with his mother:

> *Cullen is very concerned about Carol [his sister] being treated fairly, he'll confront me and say: 'You know, mom, I think you were a little hard on Carol,' it really bothers him if he thinks I am being too hard on anyone* (Mrs. Pierce, Participant Interview).

Cullen's interest in other people being treated well that he cared about and acting upon that conviction is an example of emotional empathy in action. Cullen's concern for his sister is an intriguing view into his emotional empathy. Our observation confirmed that Cullen did not want his sister to be in a negative emotional state (sad or angry) because it caused Cullen distress as well. Being able to take another person's perspective and understand and genuinely want to alleviate their sadness or frustration is an important determinant of Cullen's social relationship with his family.

At school, the classrooms provided a substrate for social interactions through shared activities for the children with HFASD or Asperger's. Throughout the day, the students were learning and playing through common activities that gave a basis for their social interactions. While in class this provided them with frequent means and several modes of interacting with their peers. School, in particular elementary schools, provided a great

many opportunities for purpose oriented social interactions with small and large group instruction and work as well as cooperative learning. When a purpose oriented social interaction took place, the students were more likely to find the interaction gratifying, and participate. Milo was very conscious of any modifications or interventions that were specifically used for him. He did not want to stand out from his peers. This social awareness had facilitated a redesign of his classroom where any person could have access to sensory items, visual aids, and other environmental modifications. Before these modifications were widely available Milo refused to use them.

> *If he is the only one in the room with a fidget on his desk or [a] seat cushion he will refuse to use them* (Mrs. Domen, Participant Interview).

However, since the implementation class wide, the teacher has reported that classroom management and behavior has improved considerably. Milo enjoyed being with his peers and did not like to be separated from them during the school day for therapies, which shows that he put considerable effort to be around his peer group. He has stated to his teachers and mother that he did not want to be taken away from his peers during the school day. Further evidence for his willingness to participate in the social world was his willingness to struggle through a speech impediment to make himself understood to his peers.

> *That [the speech impediment] is Milo's biggest frustration with his peers, he gets really frustrated when he thinks he isn't understood* (Mrs. Domen, Participant Interview).

Milo put considerable effort into this issue and became frustrated. However, he often needed to repeat himself several times. He did this willingly even though frustrating at times, he worked hard to communicate and made himself understood and resist against the exclusionary institutional actions such as "pull out."

Story Telling

The third category of social-interactional competence was found in children' story telling discourses involving imaginative plays. It is proposed that individuals with high functioning autism socialize less in unstructured social environments as a result of the limitations in cognitive functioning and empathy (Bauminger, Shulman, & Agam, 2003). The DSM IV states that one of the characteristics of children with ASD is limitation in imaginative play (APA, 2000). On the other hand, our findings revealed that when the children with HFASD or Asperger's did interact with other people in spontaneous or semi-structured social activities such as family or peer games or imaginative plays.

The parents mentioned Milo, Cullen, and Mark engaged in imaginative story telling and plays with their family members and friends. Milo, for instance, interacted with his family and close friends by story telling through video recording of his stories. This process of engagement is a shared purpose oriented activity. Milo's mother stated:

> *He seems to enjoy telling rather complex stories using his toys and having a friend to be part of his story telling process* (Mrs. Domen, Participant Interview).

Milos' stories detailed the interactions between familiar characters and sometimes included the people helping him tape his narration. Mrs. Domen indicated that the stories often involved Milo's stuffed animals and figures fighting or combating some evil:

> *If we observe Milo in the video making process he is engaging in a shared purpose oriented activity and so are the characters in his story* (Mrs. Domen, Participant Interview).

Cullen was also a renowned storyteller among his friends. Cullen's story telling had been ongoing for considerable time at the time his mother was interviewed. He is known for telling "strange" yet very engaging stories that develop over time into complex plots. His friends, twin neighbor boys of the same age, even wrote Cullen's stories down and drew illustrations for those stories:

> *The three boys [Cullen and his friends] really get into Cullen's stories; they spend a lot of time writing them down and illustrating them as Cullen tells them* [Mrs. Pierce, Participant Interview).

This social interaction or artistic collaboration albeit extensively facilitated by two other boys is not only complex in nature but is an activity that all parties willingly participate in. Such reciprocal relationships the students with HFASD or Asperger's built through narratives also took place in family settings.

All of the children highly valued family relationships and the time they spent with family. Various forms of story telling were a central activity in social interactions with their families. For example, Cullen's family has regularly scheduled movie nights and game nights, which could not be skipped, according to Cullen. These game and movie nights were to be attended by all individuals in the family. If everyone were not there, Cullen would go find them:

> *He [Cullen] knows when we miss a movie or game night* (Mrs. Pierce, Participant Interview).

Cullen did enjoy being with his family and initiated the activities to facilitate the time he spent with his family members collectively. Family games and movie nights provided a means and mode for Cullen to interact with his family though social narratives. The purpose oriented social interactions had an underlying result of the family spending time together. Cullen's seeking of social interaction with his family is task related and shows social reciprocity. Cullen is seeking social interaction, albeit not spontaneous in nature and over semi-structured shared activities. As seen, the social interactional strengths that

the children with HFASD or Asperger's have implications for them as well as their family and friends.

Conclusion

In the present study, we examined the first hand experiences of mothers of three children with high functioning autism to develop a socioecological understanding of social-interactional strengths of children HFASD or Asperger's. This study contributes to the growing body of literature that describes social-interactional strengths in children with ASD. We do not claim that these children have the same characteristics with children without those identifications. We sought to further define some areas of social-interactional strengths from perspectives of the caregivers who are most knowledgeable about their children so that those strengths can be recognized and further utilized in the social promotion of such children particularly by educators in schools. Primary caregivers of the children with HFASD or Asperger's in our study provided rich anecdotal examples that emotional empathy and a strong sense of fairness were demonstrated by their children in shared purposeful activities, more specifically in story telling activities. From the semi-structured life-history interview process we were able to determine that children with ASD do have a variety of social strengths such as interests and abilities that draw people to them. Furthermore, the children have a strong ability to "read" people in the specific socioecological contexts.

The present study took a constructive and qualitative approach. This is an initial foray into the social strengths of young children with HFASD or Asperger's. It was not the aim of the study to draw comparisons between populations or self-select conclusions. Understanding the social strengths of these children as developmental in nature, dynamic, and valid can assist educators and treatment providers to utilize those strengths and to ameliorate the areas that need to be developed. It is hoped that the present study provides a cautionary note of acceptance and validation of social skills present in children with HFASD or Asperger's.

Limitations
This is a preliminary study with weakness inherent in many foundational studies. The numbers of cases in the study is homogenous with only the participants coming from similar socioeconomic background. In addition, our study relied only on individual interviews. However, the information is first hand coming from parents who have the most comprehensive and developmental understandings of strengths, needs, and interests of the children. As with any study on disability, the conclusions drawn from this study should be applied and generalized with ethical judgment and the principal of beneficence. The authors hope that application and generalization of the content of this study will only be accomplished in as much as it proves to be directly beneficial to any child with ASD and families.

Implications and Future Research

We hope that this study will spark interest in special education to study social strengths in children with ASD from a socioecologically situated perspective. Special education researchers, educators, and therapeutic service providers may further study the differences in social cognition relating to empathy, between a typically developing child and one with autism. They may also explore the ways to use social strengths to teach social skills and social risk-taking; as well as developing a better understanding of the strengths of a child with HFASD or Asperger syndrome; to have a foundation to scaffold from when teaching social skills. Also, it may be beneficial for special educators to understand what task-specific purposeful activities motivate the greatest amount of social interaction. Understanding and facilitating the processes and contexts that an individual with HFASD or Asperger's does well in is a promising area of research (Ochs & Solomon, 2004). Socio-ecological processes and contexts as well as individual potentials and competencies are dynamic and ever evolving in nature. Rather than the prevalent focus of describing person specific social, cognitive, and linguistic deficits, it would be beneficial to examine the contextual changes around the individuals as they actively participate in various communities of practice.

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