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A SOCIAL COMPETENCE INTERVENTION PROGRAM FOR CHILDREN WITH HIGH FUNCTIONING AUTISM AND ASPERGER'S SYNDROME: A QUALITATIVE STUDY

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A Social Competence Intervention Program for Children with High Functioning Autism and Asperger's Syndrome: A Qualitative Study

by

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Dedication

This is dedicated to Ryan

and the Lew family.

Long ago, you gave me vision and inspiration

to take this journey.

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A SOCIAL COMPETENCE INTERVENTION FOR CHILDREN WITH HIGH FUNCTIONING AUTISM AND ASPERGER'S SYNDROME: A QUALITATIVE STUDY

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The key features of Asperger's Disorder (AS), and high functioning autism (HFA) include marked and sustained impairment in social interactions. Specifically, such impairment includes deficits in reciprocal social interchanges as well as in the ability to use nonverbal behaviors to regulate social communication. For young children with these types of interpersonal deficits, engaging in play and other social experiences becomes difficult or impossible. The treatment of these social skills deficits is a challenging area in meeting the needs of people with AS and HFA.

In order to address the social development needs of young children with AS and HFA, a multi-session, small group program was developed. Intervention sessions took place on a twice-weekly basis over the course of eight weeks. The program was based on the assumption that underlying these social difficulties are perceptual or interpretive problems that are neurologically based. Because young children socialize primarily through play, a hands-on interactive play

component was incorporated into the program. Additionally, parent participation was an important aspect of the intervention.

The intervention was implemented with five children and their primary caretakers, and its effectiveness in changing child social interactions was evaluated through a case study design. Data were collected through parent and child interviews, child observations, weekly group leader session notes, and weekly parent feedback forms. Qualitative analyses of the data resulted in a unifying explanation of the key changes in social interactions that took place through the course of the intervention. Children in this program demonstrated development both emotionally and behaviorally. This development was the result of a dynamic process of communication and teaching on many levels that persisted throughout the course of the intervention program. Findings suggest that, despite their rigid interests and behavior patterns, the social limitations these children improved when provided with the necessary environmental resources.

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Chapter 1: Introduction

High functioning autism and Asperger's syndrome are neurodevelopmental disorders that are categorized under the broad classification of Autistic Spectrum Disorders (ASD). The core deficits of the disorders include social perception, interpretation of social cues, and behavioral response in social situations. Children with these disorders have difficulty engaging in social interactions, and they may describe themselves as being different from their peers and feeling stressed due to a lack of friendships (Carrington & Graham, 2001). Given the social struggles of this population, it is not surprising that these diagnoses are frequently associated with internalizing disorders such as depression and anxiety (Petti, Voelker, Shore & Hayman-Abello, 2003), feelings of loneliness (Bauminger, Shulman & Agam, 2003), and peer victimization (Little, 2002).

Autism was once thought to be a rare disorder. Recently, the number of children identified with Autism Spectrum Disorders is on the increase, and there is a much greater awareness of this condition on the part of educators, health care professionals and the general public (Ozonoff, Dawson & MacParland, 2002). About 425,000 children younger than the age of 18 are approximated to have an Autistic Spectrum Disorder in the United States, including 114,000 children under the age of 5 years old (Frombonne, 2003b).

Neuropsychological research on Autistic Spectrum Disorders has focused on three concepts that are thought to embody the characterizing social perceptual symptoms of the disorder: The 'Theory of Mind' (Baron-Cohen, 1995) hypothesis, the 'executive dysfunction' hypothesis (ie: Rinehart, Bradshaw, Brereton & Tonge, 2002), and the 'weak central coherence' framework (Frith, 1989) all provide valid explanations that

possibly play transactional roles in these disabilities. The neuropsychological explanations of these disorders provide an understanding and guidance for the direction that social skills intervention programs should pursue.

There is great need for intervention targeting the deficits of children with high-functioning autism and Asperger's syndrome. Social skills interventions are most effective if they occur early in the ASD child's life (Hancock & Kaiser, 2002), underscoring the need for early assessment and identification of children with the disorder. Social (group) settings are more effective for intervention rather than one-on-one, as they allow children to benefit from practicing skills among peers (Mastergeorge, Rogers, Corbett & Solomon, 2003). Several studies have outlined important components for social intervention groups, some of which are the need for developmentally appropriate and appealing materials that are taught through different modalities in a naturalistic and therapeutic environment (Ozonoff, Dawson & MacPartland, 2002). Only a few studies have evaluated the effectiveness of group-based social interventions for individuals with autistic spectrum disorders (Howlin & Yates, 1993) and positive changes have rarely been found to generalize into the child's natural environment (Mastergeorge, Rogers, Corbett & Solomon, 2003). Researchers have pointed out the need for research - based social competence interventions to ensure that the skills that are taught do in fact increase the chance of successful social outcomes for these children (Spence, 2003).

This dissertation study aimed to implement and qualitatively analyze a social competence program for early school-age children (ages 6-7) with high-functioning autism and Asperger's syndrome. The program was based on a combination of neuropsychological research in social perception, Dodge's (1991) social information

processing of social competence, and research on group play therapy. The multimodal curriculum was therapeutic in nature, and it took place in an environment in which participants were provided opportunities to practice their skills with others during naturalistic, age-appropriate cooperative activities such as play experiences. Finally, this program incorporated Brofenbrenner's (1979) ecological concept of development, as parents were required to practice the newly learned social skills with their children at home.

Chapter 2: Review of the Literature

This literature review is organized into four sections. First, current models and research on social perception and social competence will be discussed. The second section will provide information regarding neurodevelopmental and neuropsychological features of social competence deficits in autism spectrum disorders. The third section will review the current state of intervention research for this population, and it will summarize effective methods that can be used to enhance the social perceptual deficits of this population. The fourth section will review key concepts in play therapy with young children.

Social Competence and Social Perception

Theoretical Overview

Each day children are required to deal with a variety of social situations, and it is through the complex interactions between the brain and the social environment that children become socially competent (Luria, 1980, Vygotsky, 1978). Social competence was once conceptualized as a set of unspecified skills that were best defined in terms of peer acceptance (Asher, Oden & Gottman, 1977; Foster & Ritchey, 1979). Through the progression of time and research, new definitions have emerged describing social competence as socially desirable behaviors that are in large part the product of well developed processes in social perception. Spence (2003) specifically stated that, to experience successful social interactions, individuals must be able to perceive social cues such as facial expressions, voice tone and volume, gestures, and eye contact in order to monitor their own behavior. Crick and Dodge's (1994) Social Information Processing Model of social competence centralizes the individual's ability to receive/encode and

interpret the cues of others in order to enact behaviors. Mayer and Salovey's (1993) model of Emotional Intelligence suggests that social interactions are laden with affect, and that socially competent individuals possess an emotional perceptiveness of themselves and of others that allow them to accurately decode and appropriately communicate affective messages. Halberstadt, Denham and Dunsmore's (2001) Affective Social Competence Framework asserts that social competence is based on the ability to receive, experience and send affective messages that are appropriate to a dynamically changing contextual environment. In sum, social competence is a context-specific construct in which the individual must be skilled in perceiving and interpreting the social and emotional cues given by others so as to produce appropriate social behaviors.

Social perception is defined here as a set of skills that enables an awareness and an ability to interpret the social cues and body language of others (Spence, 2003). Semrud-Clikeman and Hynd (1991) described social perception in terms of its primary components of emotional recognition, prosody, and facial expression and gestures. Studies have examined these individual factors closely, confirming a relationship between them and social outcomes. For example, first grade children's emotion recognition abilities related significantly to temperament and cognition, which together with emotion memory mediated adaptive social behaviors (Izard, Schultz, Fine, Youngstrom & Ackerman, 2000). Mayer, DiPaolo and Salovey (1991) found that the ability to perceive emotional content in visual stimuli was positively associated with the ability to respond empathically to others. Petti, Voleker, Shore and Hayman-Abello (2003) demonstrated that the inability to interpret child facial expressions among children

with nonverbal learning disabilities was linked to socio-emotional decline, and these children were twice as likely to be diagnosed with an internalizing disorder than children who did not demonstrate such perceptual difficulties. Shriberg, Paul, McSweeny, Klin and Cohen (2001) found that a group of individuals with Asperger's Syndrome and high functioning autism had difficulties with speech prosody (such as non-fluent phrasing and repetitions), especially with utterance of increasing grammatical complexity. These types of communicative issues can lead to conversational problems among peers and eventual unsuccessful social interchanges suggesting an association with the social weaknesses that define this diagnosis. In sum, the ability to accurately interpret social cues appears to be a key process in being socially competent.

Development of Social Perception

From birth, infants show evidence of social perception capabilities through their responsiveness to human voices and faces. Differences in these early social communication patterns can be used to distinguish autistic infants from mentally retarded and normal infants (Osterling & Dawson, 1994; Osterling, Dawson & Munson, 2002). Toward the end of the first year of life, joint attention and social referencing capabilities begin to emerge as facilitators in social communication, while the second and third years are marked by the development of awareness of one's own behavior in relation to social standards (Travis and Sigman, 2000). By about age six, children realize that others may evaluate their own behavior differently than they do themselves, indicating advancement to more complex social perception skills (Hillier, 2002).

Emotion recognition and prosody contribute to the development of social competence, and the ability to decode emotional cues increases with age (Semrud-

Clikeman & Hynd, 1991). Understandings of simple emotions such as sad, happy and mad develop earlier than complex, abstract emotions such as embarrassment and empathy which require advanced perspective taking cognitive abilities (Lewis, 1995). Dmitrieva, Zaitseva and Gel'man (1999) found that childrens' perceptions of positive verbal cues in the presence of white noise developed by ages 7-10 years old, while the perception of negative and neutral voice tones developed later at ages 11-16. Mature emotional processing requires the integration of neural systems across both brain hemispheres, and children's limited visual and auditory emotion processing skills are likely related to constrains on their not yet fully integrated computational resources (Pollak & Fries, 2001).

During the earlier years of life, social experiences revolve around play activities, making knowledge of social cues for navigating play experiences important (Vygotsky, 1978). By age three, the child's ability to identify relevant verbal and nonverbal social cues serve to aid in negotiating play. By age six, awareness of theory of mind and understanding of reciprocity are gain importance for successfully in engaging in developmentally appropriate functional play activities (Attwood, 2003). Additionally, play is mediated by language, the primary mode of social interchange over the age of three (Paul, 2003). This fact underscores the important need for children to possess and continually develop verbal communication skills as they will allow children to achieve mutuality and engagement with others in the context of play.

Two final things that are important to consider in the development of social perception skills are the roles of gender and environment. Gender differences exist in the developmental pathways of social perception, and these differences may be due to

biological or genetic factors. Dmitrieva, Zaitseva and Gel'man (1999) discovered that while girls demonstrated ability to perceive negative and neutral voice tones at a younger age than boys (11-13 years old versus 14-16 years old, respectively), boys were able to more quickly verbally recognize emotions than girls. Experiences in the child's developmental environment also influence the way in which the child perceives emotional cues. Young children with abusive pasts were found to require less sensory input than controls to interpret expressions of anger (Pollak & Sinha, 2002), while children's exposure to parental emotional responsiveness was positively related to children's ability to visually decode emotions (Kalliopuska, 1985). In summary, social perception does not develop independent of gender and environmental factors, and these two things are important considerations in understanding the social needs of children.

Neuropsychology of Social Perception

Research has examined the links between brain activity and social skills deficits. For instance, deficits in social perception have been linked to right hemisphere dysfunction. One common finding was that problems with social perception are related to right hemisphere dysfunction. For example, Heberlein, Adolphs, Pennebaker and Tranel (2003) found that subjects with damage in the right hemisphere somatosensory cortices showed impaired ability to spontaneously recognize and describe emotions depicted on a computer program. Voeller (1986) found that a group of children demonstrating right hemisphere abnormalities had difficulties displaying appropriate emotions, and they were unable to interpret others' emotional cues. Visual-spatial and social perception weaknesses have been linked with dysfunction in the right hemisphere of the brain (Semrud-Clikeman & Hynd, 1991), and these weaknesses have been found

among individuals with Asperger's syndrome (Klin, Volkmar, Sparrow, Cicchetti & Rourke, 1999). Heberlin, Adolphs, Pennebaker and Tranel (2003) found that subjects with damage in right-hemisphere somatosensory cortices were unable to make spontaneous emotional judgments of animated objects, suggesting deficits in social and emotional perceptual processes.

The limbic system, a set of interconnected structures surrounding the core of the forebrain, has been referred to as the 'emotional brain' because this is the area that is primarily responsible for motivation and emotion in humans (see Figure 1 for major limbic system components). Research has implicated the amygdala, a limbic system structure, in social perceptual processes. Martin and Weisberg (2003) found that social interpretation of animated vignettes elicited neural activity in the right amygdala and the ventromedial prefrontal cortex, both structures that are involved in processing and storing information. Phelps, O'Connor, and Cunningham (2000) suggested that the amygdala is involved in cultural evaluations of social groups suggesting that this brain structure plays an important role in a range of social perceptual processes.

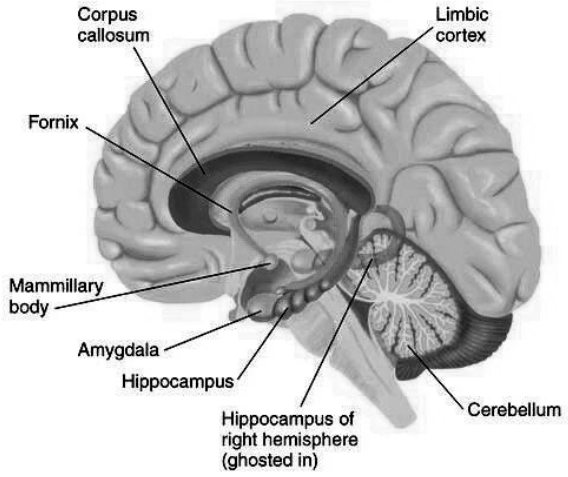

Figure 1: Major Limbic System Structures. All of the Left Hemisphere Except for the Limbic System Have Been Removed. From the Interactive Textbook on Clinical Symptom Research at National Institutes of Health (NIH).

Involvement of the temporal lobe has also been implicated in social-perceptual tasks such as face recognition. Deruelle, Rondan, Gepner and Tardif (2004) proposed that face processing weaknesses among a sample of children with autism and Asperger's syndrome may be linked to deficits of the medial temporal lobe. Pierce, Muller, Ambrose, Allen and Courchesne (2001) showed that individuals with autism and Asperger's exhibited abnormal activity in the medial temporal lobe during face recognition tasks.

In summary, the perception of social cues is a neurologically based activity that is an essential component of successful social interactions. Several brain areas such as the right hemisphere, the amygdala and the temporal lobe have been implicated in process of social perception. A neuropsychological understanding of social perception processes can help to inform social intervention programs for children with neuro-developmental disabilities such as Autistic Spectrum Disorders.

Dodge's (1991) Information Processing Model of Social Competence

According to Dodge (1991), humans are information processors who receive, experience and receptively process social information, resulting in social behaviors. Dodge's social information processing theory of social competence depicts humans as individuals who interact with and make sense of the world through a biologically based system that incorporates sensory information, past experiences, and individual differences. The social-information processing model is summarized in five steps, all of which involve neurologically based functions.

The first step of social information processing is the encoding phase. During this step, the individual receives and encodes social cues. This process involves attending to and selecting the important verbal and nonverbal cues of others, including voice tone, expressions of emotion, facial features, and body language (Spence, 2003). Furthermore, in order to select those cues which are appropriate, the individual must be able to integrate verbal and nonverbal expressions into a meaningful whole (Frith, 1989).

The second step of this model is termed the interpretation phase. At this cognitive stage, the individual is required to attach meaning to the selected cues. Again, integration of these meanings into a sensible whole (Frith, 1989) is a crucial part of completing this stage. During this phase of processing social information, past experiences, memory, and social schemas play a salient role in interpreting meanings.

Once the social cues are interpreted, the brain begins a response search process in which it sifts through long-term memory for possible social responses. Individual differences are an important consideration during this phase, as the possible array of responses is contingent upon the individual's past experiences and personal interpretation

of cues. Furthermore, the types of responses generated during this phase are closely related to nature of the individual's behavioral response (Asarnow & Callan, 1985).

The fourth phase, response evaluation, is a processing step that does not occur for all children because of the impulse control that is required. During this phase, the individual considers the possible consequences of his chosen response. The child decides whether the goal will be attained by enacting the behavior in consideration. Theory-of-mind skills are useful during this stage, as they enable the child to use perspective- taking strategies to facilitate the evaluation process.

Stages one through four are perceptual and cognitive processes that take place within the individual and result in the final enactment stage requires external behavioral response. Once the behavioral response has been evaluated and selected, the individual engages in motor or verbal actions, which comprises the fifth phase in the social competence sequence. The behavior impacts other individuals in the social environment, responses to the behavior are generated, and the social information processing sequence begins again.

This model of social competence is a transactional process between the individual and the social environment in which cues are encoded, evaluated, interpreted, and acted upon. Spence (2003) stated that social competence requires both an ability to monitor one's own behavior accordingly, and also to perceive social cues given by others. An important factor influencing these requirements is emotion. Emotion plays a significant mediating role in this process, and it is an important piece in each of Dodge's (1991) stages of social information processing. The degree to which the individual can monitor

and regulate personal emotions as well as those of others will affect the manner in which one goes about acting upon the social environment.

Social competence is influenced by environmental factors. Social development is viewed as an ecological concept in which the person cannot be set apart from the environment. Such development can be viewed as a perpetual series of interactions between the person and the environment, where the person is constantly evolving in the ways in which he perceives and acts on the environment (Bronfenbrenner, 1979). The individual development of socially competent behaviors depends on environmental opportunities to engage in activity settings in which the child has opportunities to gain crucial social experiences through observation and apprenticeship. Furthermore, children must develop the ability to efficiently integrate social perceptual processes and adapt them to the dynamically changing social environment in order to experience social success (Spence, 2003).

In summary, the model of social competence used for this study is based on Dodge's (1991) social information processing framework, which capitalizes on social perceptual processes as crucial elements in social behavior. Social behaviors (or enactments) are the result of a series of steps involving perceptual, cognitive and emotional processes. Additionally, social competence depends upon the environmental context in which social behaviors are learned, practiced and performed.

Autistic Spectrum Disorders

Overview

High Functioning Autism (HFA) and Asperger's Syndrome (AS) are two disorders that are classified under the more general term of Autism Spectrum Disorders

[ASD] (Ozonoff & Rogers, 2003) or Pervasive Developmental Disorders [PDD] (American Psychiatric Association [APA], 2003). Children with these disorders, as first described by Leo Kanner (1943) and Hans Asperger (1944), share core deficits in social interaction and restricted patterns of behaviors and interests. Autistic Spectrum Disorders are marked by deficits in both social perception processes, as well as the expression of social behavior (Mundy, 2003). According to the DSM-IV-TR (APA, 2000), the social limitations of children with HFA and AS are manifested through difficulty using nonverbal behaviors to regulate social interaction, failure to develop and maintain appropriate peer relationships, lack of social or emotional reciprocity, and inability to share pleasure, interests or achievements with others. Effective social intervention programs for this population are imperative when one considers that the social difficulties that characterize autistic spectrum disorders are frequently associated with internalizing disorders such as depression and anxiety (Petti, Voelker, Shore & Hayman-Abello, 2003), feelings of loneliness (Bauminger, Shulman & Agam, 2003), and peer victimization (Little, 2002).

Prevalence and Etiology of Autistic Spectrum Disorders

Although autism was once thought to be a rare disorder, the number of children identified with Autism Spectrum Disorders is on the increase, and there is a much greater awareness of this condition on the part of educators, health care professionals and the general public. Early research suggested that children meeting the full criteria for autism occurred at a rate of 4 to 6 per 10,000 (Wing and Gould, 1979). A recent study funded by the Centers for Disease Control and Prevention found a rate of 34 per 10,000 cases of Autistic Spectrum Disorders between the ages of 3 and 10 in the Atlanta, Georgia

metropolitan area (Yeargin-Allsopp, et al., 2003). From recent studies, Fombonne (2003b) calculated that approximately 425,000 children younger than the age of 18 have an Autistic Spectrum Disorder [ASD] in the United States, including 114,000 children under the age of 5 years old. The increased rates of autism reflect improved identification practices heightened public awareness, and changes in diagnostic practices such as the inclusion of Asperger's Syndrome as a new diagnostic category of ASD in the 1990's (Fombonne, 2003a, 2003b). Additionally, researchers argue that the increased rate of ASD cases is not solely the result of changes in referral and clinical practices, and that environmental risk factors such as vaccinations and early infections are also likely to play a role (Ozonoff & Rogers, 2003).

Although the etiology of ASD is not yet well understood, there is strong evidence for its neurobiological basis (Akshoomoff, Pierce & Courchesne, 2002; Lainhart, 2003; Lotspeich, et al., 2004; Ozonoff & Rogers, 2003). Genetics plays a major etiological role in ASD, as suggested by its 4:1 preponderance in boys over girls (Frombone, 2002). There exists a high concordance rate for an autistic spectrum disorder among monozygotic twins with autism, while it is significantly lower for dizygotic twins (Bailey, LeCouteur, Gottesman & Bolton, 1995). Additionally, parents of autistic kids are at greater risk for having another child with the disorder compared to the general population (Bailey, Palferman, Heavey & LeCouteur, 1998). Finally, autism occurs in association with a variety of genetic abnormalities such as fragile X syndrome, tuberous sclerosis and chromosomal abnormalities (for review, see Rapin, 2001).

Autism was once thought to be a disorder that afflicted individuals of high socio-economic status that was the result of psychological or social stressors such as

emotionally rejecting parents (Kanner, 1943). Updated sophisticated studies have disproved these early speculations by repeatedly demonstrating that the behavioral manifestations of this disorder are tied to brain abnormalities (Sameroff, Lewis & Miller, 2000). Additionally, it is now accepted that Autism Spectrum Disorders occur across all socioeconomic levels, in all cultures , and in all ethnic groups (Dyches, Wilder & Obiakor, 2001).

Clinical Features of High-Functioning Autism (HFA)

Deficits in social development are the hallmark feature of autism. According to the DSM-IV-TR (APA, 2000), children must demonstrate qualitative impairment in each of the following areas in order to meet diagnostic criteria for autism: a) deficits in reciprocal social interaction, b) deficits in communication, c) restricted, repeptetive behaviors. High functioning autism is unique from Asperger's syndrome (AS) in that HFA children must demonstrate early delays in language acquisition, the first signs of which are failure to communicate through imitation or gesture and inability to use language appropriately (Paluszny, 1979). Verbal deficits may continue into the later years of life for HFA children. For instance, Klin, Volkmar, Sparrow, Cicchetti and Rourke (1995) found that adolescents with HFA had lower verbal IQ scores than a sample of participants with AS.

Children with autism demonstrate basic deficits in play and communication, and more than 75% of children with autism who have language delays and differences in social interaction are identified by their parents as being "different" by the age of two (Hyman, Rodier & Davidson, 2001). On the other hand, motor milestones are typically met on schedule (Paluszny, 1979). The autistic child's failure to show patterns of social

communication may begin to show by the first year of life (Travis & Sigman, 2000). For example, while directing attention to faces is a first milestone in the social development of infants in the first year of life, a study of home videotapes of first birthday parties showed that the failure to attend to faces was the single best discriminator between typically developing infants and those who were later diagnosed with autism (Osterling & Dawson, 1994). Other examples of early signs of autism are that the child will fail to respond socially when being held or engage in social gestures such as smiling or making eye contact with others.

Autism often occurs comorbidly with mental retardation; however individuals who meet criteria for autistic disorder and are intellectually normal are considered "high functioning" (Ozonoff & Rogers, 2003). The distinction between HFA and Asperger's syndrome has been frequently questioned since they are functionally very similar. Although the types of social deficits that define HFA are identical to those that characterize Asperger's Syndrome, studies such as that by Klin, Volkmar, Sparrow, Cicchetti and Rourke (1995) suggest neuropsychological differences in verbal and visual-motor skills between the two disorders. Klin et al's (1995) study found that while individuals with Asperger's syndrome showed a verbal IQ and performance IQ discrepancy (with verbal IQ being universally higher), the group with high-functioning autism did not demonstrate such a discrepancy between verbal and performance abilities.

Clinical features of Asperger's Syndrome (AS)

Like in autism, deficits in social behaviors are at the core of the Asperger's syndrome (AS) diagnosis. The child with Asperger's must demonstrate a) qualitative impairment in social interaction and b) restricted repetitive patterns of behavior (APA,

2000). However, these children are unique from autistic children in that they demonstrate normal language and communication skills. A diagnosis of AS cannot be made until autism has been ruled out (Ozonoff & Rogers, 2003). Ghaziuddin and Mountain-Kimchi (2004) defined Asperger Syndrome as a disorder that is characterized by "autistic social dysfunction and isolated idiosyncratic interests, in the presence of normal intelligence". Asperger's syndrome is unique from HFA in that children with AS typically demonstrate motor clumsiness. However, speech and prosody difficulties as well as challenges in integrating linguistic information so as to derive meaning are problems that children with both AS and HFA experience (DuCHarme & McGrady, 2003).

During the first three years of life, children with AS express normal curiosity in their environments, and they develop normal self-help and language skills (APA, 2000). Frith and Happé (1994) observed that children with AS are limited in their ability to demonstrate pretend play, imagination and creativity. Children with Asperger's syndrome show strengths in their verbal skills, especially relative to their visual-spatial skills (Klin, Vlokmar, Sparrow, Cichetti & Rourke, 1995). In fact, it is not unusual for these children to develop language skills at an accelerated rate (DuCharme & McGrady, 2003). However, language skills are usually literal in nature and problems with abstract understanding of language appear around age nine (APA, 2000). Despite their normal or even accelerated development of verbal skills, these children commonly have difficulty engaging in age appropriate theory of mind tasks (a concept that commonly develops by the age 7 years), implying an inability to relate socially with others. The social deficits of these children become more striking over time, contributing to the increased likelihood of anxiety and depression during adolescence and adulthood (APA, 2000).

Socially, children with Asperger's may find themselves isolated, as they typically approach people in an inappropriate manner that some may view to be eccentric. Problems with social reciprocity become evident during their typical long-winded one-sided conversations regarding unusual, favorite topics (Klin & Volkmar, 2003). Because of an inability to adapt to dynamically changing social contexts and perceive the social and emotional nuances that direct interactions, these children often experience difficulties in establishing and maintaining social relationships. Socially inappropriate behavior such as off-task questioning, inattention to personal space boundaries and frequent interrupting is common with these children, and it stems from a lack of social understanding (Safran, Safran & Ellis, 2003). It is not surprising then that a diagnosis of Asperger's Syndrome often occurs comorbidly with internalizing disorders, behavior problems, and attentional difficulties (APA, 2000; DuCharme & McGrady, 2003).

Neuropsychology of Autistic Spectrum Disorders

The bulk of research that has explored the neuropsychological development of social perceptual abnormalities in ASD can be categorized according to three dominant models that have been used as frameworks for the disorder. The 'Theory of Mind' hypothesis focuses on an inability to attribute mental states, independent of one's own, to others in order to understand and predict their behavior (Baron-Cohen, 1995). The 'executive dysfunction' hypothesis roots the social deficits of autism in reduced ability in skills required to plan and execute complex behaviors (Rinehart, Bradshaw, Brereton & Tonge, 2002). The 'weak central coherence' framework (Frith, 1989) posits that autistic symptoms are the result of a tendency to process all stimuli in a fragmented fashion, focusing excessively on details, rather than integrating them into meaningful wholes.

The remainder of this section will discuss the neuropsychological research according to these three conceptual frameworks.

Theory of mind (ToM).

The inability to attribute mental states to others is believed to be an important aspect of Autistic Spectrum Disorders because it is believed to result in an inability to make sense of and interact with the surrounding social world. Research on the ASD population has repeatedly proven that these individuals demonstrate social perceptual abnormalities that are essential in completing ToM tasks. For example, Castelli, Frith, Happé and Frith (2002) found that adults with autism or Asperger's made significantly more faulty mental state attributions to animated shapes compared to a normal control group. Children with high functioning autism demonstrated ToM deficits on a false-belief task in an experiment conducted by Begeer, Rieffe, Terwogt and Stockman (2003). A longitudinal study by Steele, Joseph and Tager-Flusberg (2003) suggested that ToM skills are dependent on language. The researchers found that these social perceptual skills improved significantly among a group of autistic children, and that these improvements are likely due to the progression of language development. The connection between language and Theory of Mind skills may suggest that areas of the brain responsible for language comprehension (left hemisphere) and language prosody (right hemisphere) are related to these types of problems. Research has found that patients with damage to the amygdala demonstrate poor performance on theory of mind tasks (Shaw, et al., 2004). Lesions in the amygdala have been found to cause decreased social interactive behaviors related to play (Sweeten, Posey, Shekhar & McDougle, 2001). PET and MRI scan results

showed that the autism/Asperger's group showed less activation in the amygdala, prefrontal cortex, and temporal lobe than did control subjects.

Executive dysfunction.

The term executive functioning reflects the role of the frontostriatal region in coordinating cognitive-motor output so that behaviors are well-planned and appropriate (Rinehart, Bradshaw, Brereton & Tonge, 2002). Studies have explored this neuropsychological concept as a way to explain the social skills deficits in the ASD population. McAlonan, et al. (2002) observed structural brain abnormalities in the fronto-striatal pathways in a sample of individuals with Asperger's that are believed to lead to the characteristic difficulties in inhibiting repetitive thoughts, actions, and speech. The issue of cognitive rigidity and its relation to the communicative weaknesses of the ASD population has also been explored. For example, individuals with right hemisphere fronto-striatal damage and individuals with autism exhibit similar communication deficits (Ozonoff & Miller, 1996), as both groups have difficulties with the pragmatics of language. Ozonoff and Miller (1996) compared 17 autistic adults and 17 members of a control group on their performance on a battery of pragmatic language measures including measures of humor, inference and indirect request comprehension. Compared to the control group, autistic individuals showed significant impairment on all three measures of pragmatic language competence, suggesting cognitive rigidity. In other words, ASD individuals are often literal and concrete in their use and comprehension of language as they have difficulty interpreting figurative utterances or utterances with double meanings despite corrective feedback. These results target the right hemisphere

of the frontal-striatal region of the brain to be primarily responsible for executive dysfunction in ASD children.

Inhibition and planning competencies have been examined in autistic populations as a way to further examine the executive functioning system. Williams, Moss, Bradshaw, and Rinehart (2002) tested the capacity of the executive system of a sample of adults with autism by asking them to generate a series of random numbers in which no numbers are repeated. The authors found that individuals with autism were more likely to repeat previous digits than both an intellectually disabled group and a group of normal age-matched individuals. In other words, the authors found that the group with autism had difficulty with inhibiting a previous response, showing that their output inhibition is compromised. These authors attributed deficits in executive function to the frontal lobe. Rinehart, Bradshaw, Brereton, and Tonge (2001) tested the movement planning and movement execution abilities, all frontal lobe functions, of a group of high-functioning children with autism by using a simple motor-reprogramming task. While their ability to execute movement remained intact, the children with autism exhibited problems in movement preparation, characterized by the authors as a "lack of anticipation". The authors suggested that these findings reflect involvement of the anterior cingulate in the reduced anticipatory attention of the autistic individuals.

In summary, children with autism demonstrate the key features of executive dysfunction, all of which are thought to have a role in their difficulties of social perception and behavior. They have cognitively rigid thinking styles as evidenced in their pragmatic speech styles and inability to adapt to changing social situations.

Additionally, these children show weak ability to inhibit behaviors so as to plan and execute them in a meaningful way.

Weak central coherence.

The "weak central coherence" theory (Frith, 1989) of autism posits that this disorder is characterized by a cognitive bias that is geared toward local rather than global information processing. In other words, these children focus excessively on details at the expense of integrating them to create global understandings. While these children are easily able to pick out a shape embedded in a field of symbols, they have more difficulty integrating parts to perceive a meaningful whole (Blake, Turner, Smoski, Pozdol & Stone, 2003).

Studies have found that this perceptual difficulty is particularly salient when children are asked to identify human faces or motions. Dawson, et al. (2002) recorded event-related potential (ERP) amplitudes to compare the brain activity of young (3-4 years old) autistic-spectrum disordered, developmentally delayed, and typically developing children when shown pictures of familiar and unfamiliar faces. While the developmentally delayed and typical children demonstrated brain amplitude differences when shown familiar versus unfamiliar faces, the group with autism demonstrated no such differences in their brain activity for these activities. However, amplitude differences in the group with autism (as well as the other two groups) were observed when the children were shown a favorite object versus an unfamiliar one.

Another study found that 11 year old children with autism and Asperger syndrome were unable to recognize faces on the basis of emotion, gaze direction, gender and lip reading, while a matched group of normal children carried out the task

successfully (Deruelle, Rondan, Gepner & Tardif, 2004). Additionally, these children performed better when asked to match faces on high-spatial frequency (ie: local facial features) while the control group demonstrated better ability in matching faces on low-spatial frequency (ie: global configuration of faces). The authors hypothesized that this configural face processing impairment in the sample with ASD is related to impairment in the magnocellular visual system (which codes for movement and contrast) or the medial temporal lobe (which has been thought to underlie the social problems of autism). Blake, Turner, Smoski, Pozdol & Stone (2003) found that while children with autism and a normal control sample were able to group small line elements into a global figures, the group with autism performed significantly worse on a task of integrating point-light animations to perceive biological (human) motion. The authors suggested that the results contribute to converging evidence of the involvement of the cerebral cortex structures in and near the superior temporal cortex in the perception of visual information signaling the activities of humans.

These data indeed confirm that individuals with ASD are weak in the ability to perceive faces and human motion, implying that this weakness stems from their deficits in communication and social interaction. While even newborn infants demonstrate preference to global processing (such as whole faces), individuals with autism perhaps as young as one year old preferentially process human faces and motions as individual components (Deruelle, Rondan, Gepner & Tardif, 2004). These global processing deficits, which are thought to be connected to weaknesses in the visual pathway and the temporal lobe, lead to social deficits because of faulty perception and interpretation of important nonverbal social cues such as facial expressions and gestures.

Clinical Assessment of Autistic Spectrum Disorders

During recent years there has been a push toward standardized assessment of ASD and early identification of the disorder. There is little argument that early diagnosis of Autism Spectrum disorders is important, as early intervention increases the likelihood of improved social behavior for these children (Rapin, 2001). Early standardized screening instruments for infants and toddlers have been developed in the form of interactive measures, checklists, and parent interviews (Goodlin-Jones & Solomon, 2003).

Once a child has been identified as at-risk for Autism Spectrum disorders such as HFA or AS, a comprehensive, multidisciplinary assessment is important in ensuring that an accurate diagnosis is made (Goodlin-Jones & Solomon, 2003; Klin & Volkmar, 2003). All areas relevant to the diagnosis should be evaluated such as developmental functioning, neuropsychological features and behavioral status. In most cases, a comprehensive assessment of children with these disorders includes developmental history, psychological and communication assessments, and a diagnostic exam. Additionally, assessment of neuropsychological strengths and weaknesses can help to delineate target intervention areas such as visual special deficits for interpreting nonverbal social cues (Rapin, 2001, DuCharme & McGrady, 2003). The communication assessment looks at the child's verbal and nonverbal forms of communication, pragmatics, nonliteral language, while it also should pay special attention to the child's perseveration of topics, metalinguistic skills and reciprocity (Klin & Volkmar, 2003). The diagnostic assessment (which is behaviorally based) includes behavioral observations of the child in his/her primary natural settings such as school, home, and in

times during which the child engages in special interest activities. The clinician will more accurately understand the child's social strengths and weaknesses if the child is observed in naturalistic social settings rather than in a testing room. Assessment of comorbid disorders such as anxiety and depression are also a very important aspect of determining effective treatment for these children (Safran, Safran & Ellis, 2003).

In order to foster uniformity in diagnosis of HFA and AS, the use of diagnostic interviews are encouraged in addition to observation schedules such as the Autism Diagnostic Schedule-Generic (DiLavore, Lord & Rutter, 1995) and questionnaires such as the Gilliam Asperger's disorder scale (Gilliam, 2001). A handful of standardized interviews have been considered the "gold standards" for accurate, uniform diagnosis. Gillberg, Gillberg, Rastam, and Wentz (2001) recently developed the Asperger syndrome (and high functioning autism) diagnostic interview (ASDI) which consists of 20 questions geared toward the specific symptoms of the nearly disorders. The Autism Diagnostic Interview-Revised (Lord, Rutter & LeCouteur, 1994) is a comprehensive parent interview given by a trained clinician. The interview content is closely linked with the diagnostic criteria listed in the DSM-IV-TR.

Assessment and diagnosis of AS and HFA relies upon a comprehensive, multidisciplinary approach. Observation of the child in naturalistic settings and collaboration with parents are key components in this process. Furthermore, knowledge of the child's developmental history is essential in facilitating an accurate diagnosis. Finally, comorbid conditions such as internalizing disorders should also be addressed as they will affect treatment for the child.

Review of Targeted Social Skills Intervention Literature

Researchers agree that social skills interventions are most effective if they occur early in the child's life (Hancock & Kaiser, 2002) and in social (group) settings rather than one-on-one (Mastergeorge, Rogers, Corbett & Solomon, 2003). The following section provides a review of the essential components of empirically supported group-based interventions for school age children with autistic spectrum disorders.

Converging evidence suggests that the teaching modalities chosen for program implementation are important factors in determining whether children with ASD will acquire certain skills that are important in becoming socially competent. Focused adult instruction of new well-defined and concrete skills is initially important for children to acquire new target behaviors. For example, a cognitive behavioral intervention in which high functioning autistic children were taught specific strategies in emotion recognition and problem solving skills resulted in increases of social emotional understanding and improved social interactions (Bauminger, 2002). The use of social stories (Gray & White, 2002) is a direct instruction method that has been proven to decrease maladaptive behaviors (Scattone, Wilczynski, Edwards & Rabian, 2002).

Observational learning strategies implemented by adults and peers are also powerful intervention strategies. Video modeling techniques in which children view social behaviors on tapes and are then prompted to reenact them through role-play with an adult has been found to help teach conversation and language skills (Charlop & Milstein, 1989). Solomon, Goodlin-Jones & Anders (2004) used modeling techniques and role playing activities to effectively help in improving facial expression recognition and problem solving skills for a sample of boys with ASD ages 8-12. The accurate

perception of emotions depicted in pictures among kindergarten girls was positively related to the frequency in which parents self-reportedly modeled emotional expressions (Kalliopuska, 1985). Generalizations and maintenance of social behaviors have been demonstrated in settings where children were given the opportunity to observe and imitate the prosocial behaviors of their peers (Garfinkle & Schwartz, 2002).

Since school-age children with HFA and AS are likely to experience feelings of loneliness and sadness due to social isolation, a therapeutic approach to intervention may be necessary (Solomon, Goodlin-Jones & Anders, 2004). One important aspect of the therapeutic approach is in helping children to learn new problem solving strategies that will promote successful navigation through social interactions and prevent frustration and social failure. Two examples of these problem-solving strategies are the SOCCSS (Situation, Options, Consequences, Choices, Strategies, Simulation) and the SODA (Stop, Observe, Deliberate, Act) methods (Roosa, 1995), which allow children to use self-monitoring techniques to help in interpreting potentially frustrating social situations. The SOCCSS method is an adult-directed strategy that helps children to work through situations by identifying a) the problem situation, b) options for response, and c) possible consequences. The child is then guided to develop and practice a response strategy based on the options that were generated in the processing phase. The SODA method is a visual rubric that children with AS can use to navigate themselves through social situations. At each of four phases, the child must process salient environmental factors that may influence the social situation. First, the child must stop and note the defining activities in the setting. Second, is an observation of the people who are involved in the activity. In the third, deliberation phase, the child develops a plan for entering in to the

social situation. The act phase requires the child to take active participation in the social setting. The stages of SODA help the child to develop a schema for how to approach novel social situations. Cognitive behavior techniques have been proven to effectively change the way a person thinks about and responds to negative feelings such as sadness, anxiety and anger (Kendall, 2000), and these strategies could be effective in children with high functioning ASD if they are taught in concrete, developmentally appropriate ways. Fostering self-awareness and self-esteem should be implemented through a creative and positive group environment where children's strengths are frequently noted by group leaders (Kransy, Williams, Provencal & Ozonoff, 2003).

Successful social competence intervention with children with ASD requires the active participation of parents (Rogers, 1998). This concept is in line with Bronfenbrenner's (1978) ecological framework that emphasizes the important and active role that adults play in the enhancement of the child's social competence. Bauminger's (2002) facilitation of social-emotional understanding and social interaction in a sample of children involved both parent and teacher participation during the intervention. Parent involvement has been found to contribute to the reduction in challenging behaviors achieved with functional assessment (Moes & Frea, 2002), and increases in maternal responsiveness through intervention involvement has been positively associated with enhanced social-emotional functioning of children with autism spectrum disorders (Mahoney & Perales, 2003). Ozonoff, Dawson and MacPartland (2002) described a number of ways in which social skills can be worked on at home.

The presentation of social skills lessons to high-functioning children with ASD should be multimodal, developmentally appropriate, and presented in an appealing way

to the child (Mastergeorge, Rogers, Corbett & Solomon, 2003). Multiple learning opportunities to include the various learning modalities such as role plays, motor activities, drawing/art tasks, games and discussions presented in a naturalistic environment maximizes the likelihood that the varying learning styles of the children will be tapped (Kransy, Williams, Provencal & Ozonoff, 2003). Encouraging naturally occurring group interactions through the use of cooperative games, group activities with themes of interest, and group conversations (Paul, 2003) will enable children to practice social communication, and perspective taking strategies.

While only a few studies have evaluated the effectiveness of group-based social interventions (Howlin & Yates, 1993) for individuals with autistic spectrum disorders, even fewer have examined group outcomes specifically for early school-age children of the ASD population. In fact, researchers have pointed out the need for research -based social competence interventions to ensure that the skills that are taught do in fact increase the chance of successful social outcomes for these children (Spence, 2003). In addition, while empirical studies on social skills intervention groups have noted in-session improvements, the positive changes have rarely been found to generalize to the child's natural environment (Mastergeorge, Rogers, Corbett & Solomon, 2003).

Creative Drama, Sociodramatic Play, and Social Skills Training

Creative drama can be defined as improvised dramatic activities that are designed to enhance development and learning (Freeman, Sullivan & Fulton, 2003). Unlike scripted role-plays that are traditionally used in therapeutic settings, the creative drama play is carried out with spontaneous action and dialogue once the group has together picked a story and decided on roles. Freeman, Sullivan and Fulton identified other terms

that have been used to define the activities of creative drama for educational purposes such as child drama, play making, child play and educational drama.

Creative drama has been considered an effective method of teaching social skills to children (Courtney, 1995). Freeman, Sullivan and Fulton (2003) explained the ways in which the incorporation of modeling, role playing, corrective feedback and reinforcement techniques into sociodramatic play activities enables group leaders to facilitate change in the way the child thinks and acts. Modeling may be used as the children observe each other portray social behaviors in role. Role -play occurs when children project themselves into a character and improvise their interactions with other characters. Corrective feedback and reinforcement are demonstrated when the leader congratulates the children on their best efforts and focuses evaluation on how to improve rather than on what went wrong.

Children's sociodramatic play serves as the foundation for creative drama, and this form of social behavior develops around the age of three or four. This is an advanced form of symbolic play consisting of five components: a) role playing, b) make believe transformations such as using a rock as a telephone, c) social interaction, d) verbal communication, and e) ability to carry out the theme from beginning to end (Thorp, Stahmer and Schreibman, 1995). In sociodramatic play, children cooperatively enact dramatizations that revolve around a common theme of interest.

The developmental significance of sociodramatic play was explored in depth by theorists such as Vygotsky (1978, 1986) and Luria (1976). Their socio-cultural approach to development asserted that children's mental development is shaped by their experiences with the world. Furthermore, play experience is the primary medium

through which they develop important social behaviors such as language and impulse control. Vygotsky (1978) described children's imaginary play to be a crucial mechanism for the development of important social perception skills, of which the most advanced was the perception of meaning.

Another important theoretical concept founded by Vygotsky (1978) is that of the Zone of Proximal Development. This theory states that children can perform slightly above what is developmentally expected when they are provided with the support of a mature individual, and this developmental area just beyond where the child is developmentally at any time is referred to as the Zone of Proximal Development (ZPD). Creative drama through sociodramatic play provides the child a fictional environment in which he is free to engage in activities that guide him towards the Zone of Proximal Development and onto new skills. An example of this can be illustrated through a study by Kontos and Keyes (1999) who found that children's use of complex interaction styles such as higher level social skills and language patterns were most commonly elicited through dramatic play activities.

There exists some empirical support for usefulness of creative drama through sociodramatic play activities in strengthening social competence. Thorp, Stahmer and Schreibman (1995) demonstrated that teaching sociodramatic play to three children with autism resulted in positive changes in their play, language and social skills. These changes generalized across toys and settings, although the generalization to other play partners did not occur. Involvement in dramatic play activities resulted in use of more complex language utterances compared to other forms of play in a group of 6-year old children (Vedeler, 1997). Elias and Berk (2002) observed that preschoolers' involvement

in complex sociodramatic play activities predicted the development of self-regulation ability, and this relationship was especially strong for highly-impulsive children. This finding is in line with Vygotsky's (1978) theory that involvement in this type of play is essential for helping the child to plan and control his/her behavior. Finally, Glass, Guli and Semrud-Clikeman (2000) gathered anecdotal evidence from a pilot study of a Social Competence Intervention Program suggesting that participating subjects began to develop some self-awareness of their feelings and behaviors and the subsequent impact of these things on social interactions.

In summary, this information on creative drama and sociodramatic play confirms its potential usefulness as a therapeutic tool to help meet the social needs of children with HFA and AS. The dramatic play activities incorporate techniques such as modeling, role playing and reinforcement that are known to be effective in helping this population to become socially competent. Furthermore these activities foster the development of new social relationships with their peers, and they push the children to reach their zone of proximal development in the areas of social communication and social competence.

Review on Play Therapy

Play therapy can be an effective mode of working with children in an individual therapy setting (Carroll, 2002; Wilson & Ryan, 2001), and in a group format (Sweeney, 1997; Sweeney & Homeyer, 1999). Frost, Wortham and Reifel (2005) outline an array of research studies that generally support the effectiveness of play therapy in treating a variety of problems, such as social and emotional issues, academic problems, aggressive behaviors, and coping with trauma and grief. The play therapy approach to treating emotional or behavioral problems allows children to communicate in their own language.

Caplan and Caplan (1974) outlined several unique qualities of children's play, including that it is a voluntary activity that provides respite from a rule-governed society, it encourages children to use fantasy where they are able to experience a sense of control, it is an activity that is interesting and engaging, and it is an activity where children are free of adult ridicule. Sweeney (1997) discussed that, while adults are able to communicate in an abstract manner, children are concrete and simple beings who communicate personal meanings by relying on preoperational processes such as play that are relatively free of verbal content. Piaget (1962) expressed that play is the manner in which children use a sensory-motor process to utilize concrete objects as symbols to express abstract experiences. Frost (1998) asserts that play is a crucial process promoting neurological development in children.

Group play therapy is an environment where children can learn about themselves and others through their interactions with other group members. Sweeney (1997) summarized some important basic advantages of therapeutic play groups. These include opportunities for children to experience self-growth through the responses and reactions of group members, opportunities to practice new skills with other children, increased likelihood of child participation in the therapeutic process due to influencing group dynamics, and the possibility of therapeutic relationships forming between children. Through the process of interacting with one another, child group participants require each other to assume social responsibility for their interpersonal relationships (Landreth, 2001).

A fundamental theoretical cornerstone for play therapy is that it is child-centered. This philosophy is based on the belief that children are capable of directing their personal

growth if they are provided with a therapeutic environment that grants them the freedom to be self-exploring. In child-centered play therapy, the relationship between child and therapist is a crucial determinant for the success of the child's outcome (Ginott, 1999). This type of play therapy also places the child, not the child's problem, as the central focus. In a supportive child-therapist relationship where the child feels valued and is able to progress at his/her own developmental pace, he/she can experience improvements with interpersonal and intrapersonal difficulties (Landreth, 2002).

A useful approach for treating social competence difficulties in a group play format is one that utilizes an ecosystemic model. This therapy format is structured and directive, which may be more effective in settings such as schools where time is limited and therapy is short term (Fall, Gorham, Navelski & Welch, 2002). In group ecosystemic play therapy, the child is viewed as being embedded within a series of nested systems that interact and impact the child's development (O'Connor, 1999). O'Connor described the multimodal components of this type of play therapy, which should promote change in behavior and generalization of newly learned skills. The components of ecosystemic play therapy address cognitive, physical, behavioral, emotional, and social aspects of the child's development. The cognitive component refers to interpersonal problem solving strategies and helping children understand the emotional meanings of their behaviors. The physical component focuses on helping children to utilize self-calming techniques during times of emotional arousal. The behavioral aspect incorporates the use of consistent rewards to reinforce wanted behaviors, and consequences to extinguish unwanted behaviors. The emotional component serves to raise children's awareness of the central role of emotion during interpersonal exchanges, and to integrate this

awareness into their own experiences in interacting with other group members. The social component involves the use of structured activities where children must interact with each other. The therapist reinforces children when they demonstrate developmentally appropriate social behaviors, while the peer reinforcement is also a powerful tool for promoting the use of appropriate interpersonal skills in group members. In structured ecosystemic play therapy, O'Connor recommended that a group be no larger than six children, and group participants should be developmentally and cognitively similar. In this therapeutic approach, the therapist's role is to provide and maintain structure in the group while also monitoring the group's process and providing an understanding of this process to the child members.

The effectiveness of play therapy for various child populations is well documented. For example, play therapy can be beneficial for children who have been exposed to trauma or major life stressors. Studies found that play therapy promoted the emotional adjustment of children who were victims of sexual abuse (Tyndall-Lind, Landreth & Giordano, 2001), reduced maladaptive behaviors of sexually abused children who participated in a structured group setting (Hall-Marley & Damon, 1993), and led to improved psycho-social functioning for young children who were exposed to high levels of life stress (Jackson, Rump, Ferguson & Brown, 1999). Jackson, Rump, Ferguson and Brown (1999) conducted a 16 week play group therapy intervention for 6 preschool children who were experiencing very high levels of stress. Qualitative results based on parent reports of their children's behavior at the end of treatment suggested improvements in the psycho-social functioning of these young individuals. For example,

parents reported that their children were better able to express their feelings verbally, were better listeners, and acted out less.

Play therapy is a favorable treatment approach for promoting social skills development in children. For example, this treatment mode can lead to increased empathy, compliance, and decreased irritability in autistic children (Kenny & Winick, 2000; Josefi & Ryan, 2004). Improvement in social interactions is a common goal for children who are referred due to aggressive tendencies, acting out behaviors, or inability to establish and maintain appropriate peer relationships (O'Connor, 1999). Schaefer, Fairleigh, Jacobsen and Ghahramaniou (2000) described short-term play therapy for children to be an effective approach for fostering children's social competence development, maintenance, and generalization. The authors asserted that the intervention format should utilize a direct teaching format using appealing games and activities. Furthermore, skill generalization is promoted through parent involvement. Minnis (2001) suggested the use of clay to express feelings can be a fun and creative way to foster social skills development in children such as those with AD/HD by helping to calm and focus children's attention. In a study targeting children ages 5-17 experiencing AD/HD symptoms such as impulsivity, disruptive behaviors, and social skills deficits, Hansen, Meissler and Ovens (2000) assessed the impact of a 15-week play therapy intervention on its child participants. This program, based on tenets of social learning and attribution theories, aims to provide children with opportunities to learn from others in a nurturing group environment. Results of this study revealed that participants experienced improvement in internalizing symptoms, such as increase in self-esteem, which may lead the children to engage in socially acceptable behavior.

In summary, play therapy can be an effective intervention strategy for children with emotional or behavioral difficulties, and it is effective in both individual and group settings. By using the 'language of the child' play therapists communicate with and teach children through appealing and creative activities such as the use of games and clay. The therapist can utilize either unstructured or more directive strategies to elicit therapeutic change in children, and children may be more likely to maintain these changes when their caretakers are actively involved in the therapeutic process. Play therapy has been found to be an effective method for promoting emotional and behavioral improvement in children who have experienced trauma or life stress. It is also productive in enhancing social skills development for children who have difficulties with interpersonal relationships, such as children with autism and AD/HD.

Chapter 3: Method

Statement of Purpose

The purpose of this study was to investigate the effects of an empirically derived intervention developed to address the social competence needs of young children with high functioning autism and Asperger's syndrome. As the identification and diagnosis of children with these disorders has become more frequent, there exists an even greater need for social intervention programs that help them to overcome their social deficits. Furthermore, as demonstrated in the reviewed literature, intervention at an early age yields more promising results. This intervention program was unique in that it focused on the social perceptual and integrative deficits of children with these disorders. This is a unique curriculum in that it is flexible and dynamic (rather than a rigid "cookbook" approach), with an emphasis on responding and adapting to the individual needs of the children and parents involved. The program was designed to be implemented in a naturalistic context, and incorporated elements of play therapy techniques along with direct instruction and coaching. Additionally, it was therapeutic in nature, involving cognitive-behavioral techniques such as self-monitoring and relaxation exercises that were taught to help children improve social emotional understandings and behaviors.

This qualitative study utilized a case-study approach and incorporated Grounded Theory (Strauss & Corbin, 1998) data analysis techniques to gain a better understanding of the social changes that children with HFA and AS experience through the course of this intervention. The goal of the study was to use thick descriptions to depict participant experiences and group process, and to use these descriptions to arrive at a unifying explanation of the phenomena that took place through the course of the

intervention. Data were collected through parent and child interviews, observations, parent satisfaction surveys, group leader feedback forms, and project coordinator fieldnotes. In using a case study/grounded theory methodology of evaluation of the intervention, hypotheses were grounded in the data and derived through the course of the study rather than developed a priori (Lincoln & Guba, 1981). Therefore, this research study was guided by the following research questions:

Question 1: Do the parents and children participating in the program perceive change in child social interactions, and how do they describe these changes?

Question 2: How do these changes in social interactions relate to aspects of the intervention program?

Current Study

This dissertation aimed to implement an empirically based social competence intervention program for school-aged children with High Functioning Autism and Asperger's Syndrome. The program incorporated past intervention research for this population, literature on play therapy techniques, and research from the field of neuropsychology and social psychology in order to address the social perception and social cognition deficits that characterize this population. Based on ideas by Luria (1980) and Vygotsky (1978) that the children's brains can be reorganized and developed through environmental social interactions, this study hoped to provide children with opportunities to learn, practice and generalize new social skills that will help them to become socially competent. The overall goals of this program were for child participants to demonstrate improvements in the following areas of social functioning: 1) increased awareness and ability to recognize verbal and nonverbal social cues of peers and adults; 2) ability to take the perspective of others during social interactions and to interpret the

social intentions of others and 3) ability to demonstrate appropriate social behaviors during social interactions (ie: complimenting others, taking turns in conversations, responding appropriately to teasing). The qualitative approach to this study yielded rich descriptions of the experiences of those involved with the study, and an explanation of phenomena that took place as a result of this intervention.

The intervention program designed for this study was adapted from a group social competence intervention developed by a previous School Psychology doctoral student (Guli, 2004) at the University of Texas. The previous intervention program, based on drama and acting techniques, targeted children ages 8-14 with Attention Deficit/ Hyperactivity Disorder, Nonverbal Learning Disabilities and Autistic Spectrum Disorders. The doctoral student conducted a dissertation study utilizing both quantitative and qualitative techniques to determine the effects of the intervention on children's social competence. While the quantitative results did not yield significant results for broad changes in various aspects of social competence, the qualitative piece of this individual's study utilized participant's reported experiences to support a conclusion that the intervention program did indeed contribute to noteworthy social growth in the child participants. Furthermore, the qualitative portion of the study provided rich descriptions revealing some mechanisms through which social change occurred, and these subtle mechanisms could not have been captured through the use of quantitative data alone. My study, based on similar ideas related to social perception and social competence, aimed to focus in on giving detailed descriptions of the program's role in promoting social change among its participants. The previously done research study

(Guli, 2004) confirmed for me that a qualitative approach is the best manner in which to achieve my goal.

Participants

Children

A group of 5 children, ages 6 to 7 years old, and their primary caretakers were included in the study. Each child had a formal diagnosis of either High Functioning Autism (HFA) or Aspergers Syndrome (AS). All children have an overall intelligence at least in the average range (85-115), as measured by a pro-rated overall intelligence score from the Vocabulary and Block Design subtests of the Weschler Intelligence Test for Children-Third Edition (WISC-III; Weschler, 1991). Children meeting selection criteria were selected from the database of an ongoing study conducted by the School Psychology Program entitled "Assessment of social competence in children with developmental disorders" under the supervision of Principal investigator Margaret Semrud-Clikeman, Ph.D. Participants were referred to this study by parents in the Austin community and surrounding areas, and personnel from the Austin Independent School District. Children attended 16, ninety-minute intervention sessions led by two trained doctoral student group leaders at the University of Texas at Austin. They also engaged in home-based exercises with their parents designed to help the children in continuing to strengthen their social skills. Children agreed to participate in three interviews, conducted at the beginning, middle and ending phases of the intervention. Participant demographic and information is found in table 1, which shows that child participants included 4 boys and 1 girl. The mean age of the participants was 6.9 years, and all children spoke English as a first language. Two of the children had a primary

diagnosis of Asperger's syndrome, and three had a diagnosis of high functioning autism. None of the children took prescription medications during the time of this intervention program. To protect the identities of the participants, each child has been given a pseudonym.

Parents

Each child's primary caregiver took part in several aspects of the study. Although fathers were occasionally seen delivering their children to sessions, mothers were the most active parent participants in each child's case. At each session, parents anonymously completed feedback forms when they dropped off their children. Mothers participated in three interviews during the beginning, middle and end phases of the intervention program. Furthermore, parents were given home-based activities to carry out with their children in order to promote maintenance of social skills.

Group Leaders

Group leaders consisted of two women in their second year of doctoral training at the University of Texas at Austin School Psychology program. These women were members of a research team led by Dr. Semrud-Clikeman, and they agreed to volunteer their time to lead this intervention program. One of the group leaders helped me co-lead the sessions during the pilot year, and this was her second time participating. Both women had extensive experience with children, however they explained to me that working this extensively with children with ASD's was a new experience for them. The leaders were quite open to receiving guidance on dealing with the children participating in this project, and they quickly developed confidence and capacity to use good judgment in responding to the changing needs of the children.

Table 1

Participant Demographic Data

Participant Name	Gender	Chron. Age	Primary Diagnosis	Ethnicity
Kyle	M	7	AS	Caucasian
Lee	F	6	AS	Caucasian
Jake	M	7	HFA	Caucasian
Lenny	M	7	HFA	Hispanic-American
David	M	6	HFA	Caucasian

Note. AS=Asperger's Syndrome, HFA= High Functioning Autism

Instruments

Parent/Child Interviews

Interviews were conducted in order to gain a deep understanding of participant experiences, perceptions and feelings that are often not directly observable. Merriam (1998) stated that interviewing is the best technique to use when conducting intensive case studies of a few selected individuals, as it is an ideal method to gain detailed information of the respondent's situation and experience. Each child participant and his/her primary caregiver (always the mother) completed formal interviews conducted by myself on three occasions: during the first, second, and third phases of the intervention program. These interviews took place at the University of Texas, at times that were convenient for the parents and children. Parents often participated in interviews during the time that their children participated in intervention sessions. Each interview lasted 30-50 minutes for parents, and 20-30 minutes for children. Interviews followed a semi-structured format, containing both open-ended and structured questions. This format allowed me to navigate through a specified list of topics to be addressed, while also allowing the interviewee to give rich and uniquely personalized responses. The interview questions were designed based on suggestions by Guba and Lincoln (1981), who described the range of questions that should be asked to elicit in descriptive responses from interviewees. Furthermore, all questions were designed so that I could use follow-up probes if needed. Each mother and child participated in interviews one and two. One child did not participate in interview three because he had recently

endured a serious physical injury (not while at an intervention session) during the ending phase of the intervention.

Interview questions (see Appendix A) addressed topics such as parent and child experiences of the intervention, feedback on intervention content, and perceived changes in child behavior. All formal interviews were audio-recorded for transcription purposes, transcribed, and verified.

Throughout the course of the intervention, I maintained frequent contact with parents through informal conversations or emails regarding their children's progress. These conversations can be thought of as unstructured, exploratory interviews in which insights about a phenomenon can be obtained (Merriam, 1998). I included these 'unstructured interviews' as data for the study's analysis.

Parent Satisfaction Feedback Forms

In order to receive frequent, consistent feedback from parents regarding the intervention, they were asked to complete a structured feedback form (see Appendix B for Parent Feedback Form) at every intervention session. This form consisted of ten, 5-point Likert-type questions addressing the thoughts and experiences of parents as they progressed with their children through the intervention program. The survey, which was completed anonymously by parents, addressed issues such as parent satisfaction, parent perceived impact of the program on herself and the child, and parent expectations. At the end of each form, parents were given space to write any comments about services or noteworthy experiences.

Child Observations

While interviews allow the respondent to move back and forth through time by providing second-hand accounts of experiences, observations provided first hand encounters on the phenomena of interest to the researcher (Lincoln & Guba, 1985). For this reason, observational data provided unique and useful insights for case study research. I observed 3 previously video recorded sessions; one session per each phase of the intervention was observed (sessions 2,6, and 10). The observation record included information on 5 key elements that are likely to be present in an intervention setting. These areas of observational focus, as outlined by Merriam (1998) were: physical setting, participants, activities and interactions, conversation, and subtle factors (such as nonverbal communication, symbolic meanings of words). See Appendix C for the observation checklist. Each recorded observation period covered the full course of the intervention session.

Fieldnote/Observational Logs

Directly following each session, each group leader was asked to complete a log of their impressions of the day's session, and observations of each child's behavior during that session. Glesne (1998) suggests that keeping a field log of observations and experiences is important in qualitative research. Log entries included information on overall impressions of the day's session, personal sentiments related to the day's session, and child strengths and weaknesses. In order to facilitate the group leader feedback process, I provided a structured "group leader feedback form" on which entries were completed (see Appendix D for leader feedback form).

Researcher as an Instrument

Personal background leading to interest in current study.

My interest in children with Autistic Spectrum Disorders began when I was 15, during my first year working as a camp counselor for children with autism and related disorders. I was fascinated by the ways in which these disabilities affected the thoughts, behaviors and emotions of the children. I was also moved by the impact that these disorders had on the lives of parents and family members of the affected children. These experiences at summer camp motivated me to pursue a career where I may be able to somehow make a positive difference in the lives of these children and their families.

My motivation and enthusiasm to pursue this path increased when I had the opportunity to work as a behavioral therapist for two children with autism during my college years. During that time, specially trained psychologists taught me the defining characteristics of autism, and I was trained to utilize behavior therapy techniques to help children to overcome some of the social difficulties brought on by their disorders. For me, one of the most inspiring aspects of this work was the bond that I formed with not only the children, but also their families. It was during this period of my work when I realized that, when given the proper tools and guidance, the children's family members can be the strongest catalysts for symptomatic improvement of their children.

During my years of doctoral training, I became involved with a research team in the School Psychology Department led by faculty member Margaret Semrud-Clikeman, Ph.D., that is working to better understand the social competence deficits of children with developmental disabilities. Since this study maintains a neuropsychological focus, it was during this time that my interests shifted to the neuropsychological underpinnings of

autistic spectrum disorders. I eventually became involved as a group leader with a social competence intervention study, led by another doctoral student, that targeted pre-adolescent and adolescent children with a variety of developmental disorders. The previous intervention study (Guli, 2004) yielded results suggesting that a qualitative approach to analyzing such a program would be most fruitful in uncovering detailed explanations of its effectiveness in promoting positive social change in children. Given these results, I proceeded to develop this study, which employs a qualitative evaluation method for determining the effectiveness of my intervention program.

Characteristics of the investigator as instrument.

Merriam (1998) stated that, as a good "human instrument" for data collection, the qualitative researcher is able to create an "atmosphere of trust" with informants through establishing good rapport, demonstrating warmth, and maintaining an empathic stance toward informants. An empathic qualitative research investigator is able to use his or her communication skills to find out what is on a person's mind, and is willing to listen and understand that person empathically. The good communicator is sensitive to the data being gathered and engages in a process of clarifying and summarizing with respondents in order to ensure that meanings are accurately interpreted (Guba & Lincoln, 1981).

My efforts to build an "atmosphere of trust" with the participants in my study were a constant process that began prior to the data collection process. With parents, I found it important not only to help them in feeling comfortable with talking to me honestly, but also to trust that I would help to keep their children safe during the course of this intervention program. These two goals of comfort and trust were achieved through my ability to communicate effectively with these parents both verbally and

nonverbally. Prior to the intervention, I had spoken to each parent several times by phone, in person, and/or by email. I answered questions, provided them information about the intervention program, and I provided my contact information encouraging them to get in touch with me at any time if they had further questions or needed help. Parents began to share their stories with me through our conversations together, and I took a genuine interest.

As intervention sessions took place, I made efforts to remain physically visible to parents, as a way to communicate that I was accessible and willing to receive information from them. I greeted each child and parent at the beginning of each session, and I was present to say good-bye as they left each time. While parents waited for their children during the sessions, I often spoke with them informally, as they shared stories with me about their children's school progress, noteworthy things that their children had recently done, or tips for how group leaders could work more effectively with their children. I also received emails from parents on similar topics. I responded to any parent feedback with appreciation and encouragement to continue this communication with me.

As an interviewer, I maintained rapport with parents and children by maintaining good eye contact, listening actively, and verbally expressing appreciation for their willingness to share with me. During interviews, I encouraged participants to ask me questions or add information they thought may be important. Some parents used this invitation as an opportunity to find out more from me about the nature of my study. During child interviews, I found it most effective to "get on the children's level". For example, at times we engaged in a quick play activity, or we would begin the interview by speaking about something of interest to the child. I was most successful in getting

information from children when I used an enthusiastic tone of voice, the language of the child, and humor during the interview process.

After the intervention was complete, I continued to maintain my connection with the parents who participated in this study. I emailed parents at 3 months and 6 months following the program, asking how they and their children were doing, and inviting them to share anything memorable that may have happened with their children recently. Each time, I heard back from 3 parents, each of whom reported on how her child was doing. Furthermore, each parent expressed appreciation for my efforts in working with them and their young ones.

Theoretical lens.

I am an advocate for an ecosystemic approach to understanding human behavior. I believe that humans develop through their interactions with the various systems within their socio-cultural environment. Furthermore, I understand human learning to be a process by which people learn behaviors, rationales and motivations through observations from their social interchanges with other individuals (concepts from social learning theory). Whereas a strict behaviorist would focus on shaping specific overt behaviors of ASD children by providing highly structured and repetitive feedback during sessions, I extended my focus beyond behavior modification in recognizing the children's relational experiences with key individuals in their daily environments (rather than just during sessions) as important in promoting social competence during my program. I felt a responsibility to foster an environment where these children could be exposed to good models for appropriate social behavior (ie: parents and group leaders), could be given opportunities to engage in prosocial interactions with others, and would be provided with

reinforcing feedback for demonstrating social growth. This environment would have to capitalize on a natural and flexible relational style, rather than one that was rigid and excessively structured. It would have to extend beyond the 90- minute intervention sessions and into the home lives of the children. This atmosphere of social growth would require that parents, group leaders and I work to take on a uniform attitude of hopefulness, devotion, and diligence.

Striving to provide this ideal learning environment for the children in this study led me to realize that I carried the responsibility of setting the tone and modeling this theoretically rooted framework of action to those individuals (group leaders and parents) who would directly influence the children. I had the duty to set this relational process in motion. In carrying out this leadership responsibility, I made it my goal to set up a system where my expectations and hopes were communicated not only through my explicit directions, but more importantly through my natural interactions and behaviors with the participants in my study. I hoped to influence the way in which group leaders and parents related to the children by providing them with a unique and rich experience of relating to me.

Supervising group leaders was a generally enjoyable process for me during which I viewed my role as supervisor as one that was multifaceted. Not only was I a provider of constructive feedback, but also a supporter and motivator. I wanted to model my enthusiasm and devotion to this project as a way to motivate group leaders to show a similar energy during their time with the children. I provided session feedback in a variety of ways, such as modeling specific language, use of role plays, discussion of potential obstacles, and written feedback on video tape reviews that I completed

periodically. I felt that providing this multimodal feedback modeled my value of flexibly adopting various strategies for communicating and teaching new concepts. During our times together, I also capitalized on the strengths that each group leader showed through the program, as I frequently commented on specific demonstrations of effective teaching and interacting with the children. I also sought to foster relationships in which group leaders felt valued and appreciated. I communicated my gratitude for their commitment to fulfilling the expectations of my program, and I acknowledged the time and energy that they devoted to helping these children and families.

Another positive aspect of my work with the group leaders was the friendly relationship that they shared with each other. The two women leading my group interacted comfortably with each other, and at no point did we need to spend time resolving conflict between them. Their bond as friends impacted my relationship with them because it seemed to help them work well together as a team, which made the supervising experience more enjoyable. Their friendship also served as a good natural teaching model for the children by exemplifying the utility of working together in a relaxed and friendly way.

In summary, through my interactions with group leaders and parents, I used myself as a tool for promoting the development of a desirable learning environment for the children. I interacted with group leaders and parents in the same way that I hoped they would interact with children: with positive energy, understanding, flexibility, and genuine care. I devoted a great deal of time to both group leaders and parents so as to maintain open communication about the program; and this communication helped us all to maintain clarity on the goals of this program, and to work uniformly toward them. My

interactions with group leaders and parents in some respects served as a microcosm for the system of interactions that they would carry out with the children. The relationships that were formed among group leaders, parents and myself helped give rise to a positive learning environment for the children.

Procedures

Approval by Human Subjects Committee

This study complies with the standards of research outlined by the American Psychological Association and the University of Texas at Austin. Informed assent was obtained from all parents and children through consent forms outlining assessment and intervention procedures (see Appendix E for IRB Forms).

Referral Procedures

Children meeting selection criteria for the intervention were selected from the database of an ongoing study conducted by the School Psychology Program, "Assessment of social competence in children with developmental disorders", supervised by Margaret Semrud-Clikeman, Ph.D. Participants were referred to this study by parents in the Austin community and surrounding areas, personnel from the Austin Independent School District. Those children meeting intervention criteria were offered participation in the intervention program. The first 5 children whose parents respond with interest were placed in the intervention.

Pilot Study

The Social Competence Intervention Program for Young Children was developed to address the perceptual and behavioral difficulties of children with HFA and AS, ages 6-7, in a developmentally appropriate manner. Adapted from a similar program designed

to address the social needs of older children and adolescents, this intervention was piloted with a group of 5 children ages 6-9 in Spring, 2004. The pilot program lasted 10 weeks, with children participating in ten, ninety-minute intervention sessions at the University of Texas at Austin. Meetings were held during after school hours, and sessions were led by two group leaders (myself and another doctoral student). Parents and children each participated in one interview at the end of the intervention program. Interviews with parents and children revealed both strengths and weaknesses of the intervention (see Appendix F for Pilot Interview Questions). Strengths included high general parent and child satisfaction, positive impact of group setting on children, usefulness of parent involvement component of intervention, and increased awareness of social cues on the part of the children. Weaknesses included parent perceived need for more frequent meetings and longer lasting intervention so that children have more opportunities to apply new skills, and need for more direct child instruction on behavioral responses in social situations. To allow her son opportunities to master newly learned social skills, one parent involved in the pilot study enrolled her son to participate again in the Social Competence Intervention Program in the Spring, 2005 study.

Intervention Content

The Social Competence Intervention Program for Young Children addresses deficits in nonverbal communication through the use of sociodramatic play activities, cooperative games, and interactive discussions among group members and leaders. This program was piloted in Spring, 2004, with overall positive responses from parents and children. In response to parent feedback regarding the program, the intervention has been increased in session length as well as number of sessions.

The intervention program was divided into three general phases, as adapted from a similar program (Guli, 2004) designed for older children with similar needs. Sessions 1-4 focused on skills related to taking in social information; and activities included establishing group rapport, emotional knowledge, focusing attention, and identification of emotional cues. Sessions 5-8 focused on processing social information. Session activities incorporated elements of sociodramatic play such acting out hypothetical scenarios, where children practice taking another's point of view and expressing feelings nonverbally. Furthermore, child involvement in cooperative games allowed group leaders to use naturally occurring situations to help children in processing social information. Sessions 9-16 were designed to aid in appropriate social behavior (output). Cooperative games, group activities, and role-plays were geared toward getting children to practice prosocial behaviors such as being polite, introducing oneself for the first time, and complimenting others. Group leaders also addressed how to be a good sport, since this was a skill was one that many parents felt their children lacked. See Appendix G for an outline of intervention sessions.

Each intervention session began with a group snack, when children and group leaders sat together at a table. This aspect of treatment was designed to address difficulties in social reciprocity and in the pragmatics of communication (ie, frequent interruptions, long-winded one-sided conversations) among children with these disorders (Klin & Volkmar, 2003; Safran, Safran & Ellis, 2003). Snack-time provided a naturalistic scenario during which children could practice reciprocal conversation skills that were likely to be used in their everyday environments. During this time, group leaders utilized modeling and coaching as scaffolding techniques to help facilitate the use

of appropriate conversation skills among the participants. Following snack, children were led in structured social skills building activities. For example, children watched videos of social situations and then had to identify and discuss the emotions being portrayed in the video. Some activities required that children rely on their verbal communication skills, such as one where each child had to place a mask over his or her face and convey his emotion only by using his voice tone. Other activities placed more emphasis on the use of nonverbal techniques. For example, each child had to communicate an expressive sentence simply by using the body and face so that other children could guess the meaning of the sentence. Sessions often ended with a play-time in which children were allowed to choose from a variety of cooperative games and toys. For instance, children played turn taking games and they also enjoyed role-playing games. During free-play sessions, leaders were able to use natural play experience to guide and reinforce the use of prosocial behaviors among children.

Since parent involvement is a key component of successful intervention for children with HFA and AS (Rogers, 1998), parents were given home activities to be carried out with their children between sessions. Anecdotal parent feedback from the pilot study revealed that the involvement of the parents was the most noteworthy aspect of the intervention. At the end of each session, when children were released from the day's activities, parents were given a brief verbal explanation of the assignment, as well as a printed document describing the assignment and its rationale.

Intervention sessions followed a structured format beginning with snack time, followed by group activities, unstructured play time, and the distribution of parent assignments. Throughout the sessions, group leaders utilize empirically supported,

multimodal strategies such as direct instruction of skills (Bauminger, 2002; Gray, 2002; Scattone, Wilczynski, Edwards & Rabian, 2002), and observational learning strategies including modeling and role playing (Charlop & Milstein, 1989; Kalliopuska, 1985; Solomon, Goodlin-Jones & Anders, 2004). Finally, therapeutic techniques such as positive reinforcement and cognitive behavioral strategies help increase self-esteem and social confidence.

Treatment Conditions

The intervention was conducted two afternoons each week. Over the course of eight successive weeks, there were 16 sessions of 1.5 hours each in at the University of Texas at Austin. The intervention took place during the late spring, between the spring break and summer vacations. Five children participated in the intervention, and one of the children had participated in the pilot study one year prior to this program. See Table 2 for information on each child's attendance rate during each phase of the intervention, as well as overall. The most sessions missed by one child were three. Additionally, one child missed two sessions, a child missed one session, and two children had no absences throughout the course of the intervention. Some of the reasons that children missed sessions were illness, schedule conflicts, or parent's inability to bring their kids to the group. All sessions were videotaped to ensure treatment fidelity.

Table 2

Participant Group Attendance Rates

Participant Name	Phase 1 (1-4)	Phase 2 (5-8)	Phase 3 (9-16)	Total Attendance
Kyle	75%	75%	100%	83%
Lee	100%	100%	88%	96%
Jake	100%	100%	100%	100%
Lenny	100%	100%	100%	100%
David	100%	100%	63%	88%

Parents were given an overview of intervention objectives and target goals at the outset of intervention along with a schedule of intervention topics and activities. Parents were informed of the integral role that their participation will play in the success of their children in this intervention, and they were also encouraged to maintain an open communication with myself and group leaders so as to stay informed of the child's progress.

Group leaders.

Group leaders consisted of 2 doctoral students in School Psychology who were familiar with the research project and the nature of social competence deficits in the target populations. One of the leaders had participated as a co-leader with me during the

pilot study of this program. Leaders were supervised by me, the principal researcher. Prior to the first intervention session, group leaders were trained in three one-hour sessions Training covered theoretical orientation of the program, leader responsibilities, behavior management techniques, therapeutic techniques for promoting behavior change, and manual review (see Appendix H for Leader Training Outline).

All group leaders were familiar with and trained in manual content. During the eight weeks of intervention, weekly meetings between group leaders and myself took place, during which group leaders discussed whether the objective goals were being met during sessions, and factors that influenced leaders abilities to meet the goals. During the meetings, group leaders processed behavioral issues with children, as well as their personal experiences of running the groups. This meeting time was often spent brainstorming on how to meet the individual needs of the children, based on their behaviors during sessions and feedback from parents. Finally, these meetings served as opportunities to review upcoming session contents. Leaders completed structured field journal notes immediately following intervention sessions to help them process the session and note behavior of group participants.

Collection of Data

Data were gathered through the use of parent and child interviews, direct observations of video-recorded sessions, group leader feedback logs, and parent satisfaction feedback forms. Please see Appendix I for an outline of data collection procedures. Informal conversations between the principal investigator and parents, as well as noteworthy events were noted by the principal investigator through the use of an ongoing audio field log. Parents often communicated feedback of their children's

behavior through email messages to the principal investigator, which were archived for data analysis purposes.

Formal semi-structured interviews were tape recorded to ensure the preservation of all interview data. Upon beginning interviews, I explained the purpose of the study and of the interview, participant confidentiality and anonymity, and participant rights. Once interviews were conducted, they were transcribed in preparation for analysis of data.

Information from informal, conversational interviews was audio recorded as fieldnotes. The context of the conversation, a general description of the conversation, specific references to what was said in the conversation, and any other noteworthy aspects of the interchange that took place were all noted on the audio log. A description of the individuals who took part in the conversation, as well as the time that it took place were recorded with each entry.

After parents delivered their children to the meeting room at the beginning of each session, they were expected to complete the Parent Satisfaction Forms that were placed in a stack on a table outside the meeting room with pens, and then place it in a large yellow envelope that I provided. Parents were asked to complete this feedback form at each session. To further motivate them to do so, I occasionally sent parents emails reminding them to please take the time to complete the forms, as the information they provided was important. Parent return rates were calculated for each phase of the intervention, and they are as follows: Return rate for phase one (sessions one to four), 75%; phase two (sessions five to eight), 70%; phase three (sessions nine to sixteen), 68%.

I viewed three video taped sessions, in order to gather observational data. Sessions 2,6 and 10 were observed, and copious notes were typed in narrative form describing details of children's and group leaders behaviors during the sessions. I spent extensive time watching each of the three observation videos while typing notes on what I saw and heard. Observational data included descriptive information regarding physical setting, participants, activities and interactions, conversation, subtle factors (such as nonverbal communication, symbolic meanings of words), and group leader behavior. In observation records, children were referred to by their initials, in order to ensure anonymity and confidentiality.

After each session, I required group leaders to spend 5-10 minutes writing about their experiences from the completed session on the Group Leader Feedback Form. This gave leaders opportunities to express their own ideas, reflections and to note emerging patterns in child behavior. They were asked to write notes that are nonjudgmental yet analytical and descriptive (Glesne, 1998). The analytic aspect of the notes reflected the leader's own experiences such as feelings, impressions and speculations. For this portion of the feedback, leaders answered a variety of structured, Likert-type questions addressing their feelings and attitudes related to the session. A descriptive, narrative portion of the Leader Feedback Form allowed leaders to write about observed strengths and weaknesses that each child demonstrated during the day's session. For this portion of the feedback, leaders were asked to describe in writing one strength and one weakness observed in each child during the day's session. Leaders were required to complete the field log entry immediately after the session, before leaving. This ensured that data was more accurately and fully recalled. Furthermore, leaders were asked to record their

observations without discussion, so that their original perceptions are not modified or influenced by those of other leaders.

Data Analysis

Interviews, observations and field journal entries were analyzed through techniques outlined in the grounded theory approach to qualitative research (Strauss & Corbin, 1998). Lincoln and Guba (1985) described this analytical process as one in which researchers compare incidents to form the properties of categories, while categories are in turn integrated to become multidimensional grounded theories that explain phenomena. This process of interpreting and organizing occurred through coding procedures. Strauss and Corbin (1998) explained that coding allows the researcher to conceptualize, reduce and relate data that has been gathered. The basic coding strategies used in this dissertation were open coding, axial coding and selective coding. Codes were recorded in the form of memos, notes, and diagrams as discussed by Strauss and Corbin (1998).

Open coding.

This step in the analytic process was geared toward developing and categorizing concepts through the data. In this process of conceptualizing, I began by breaking data down into "discrete incidents, ideas, events, and acts that are given a name that represents or stands for these" (Strauss & Corbin, 1998). Each unit, or concept was given a code, and all subsequent concepts that share the same key characteristics were classified under the same code. The specific elements of each concept were developed in order to specify a category that reflected their common link. In the process of open coding, I analyzed the data paragraph by paragraph (in the case of interviews) or by entry (in the case of

observations and journal entries). I determined main ideas, then went through entries and performed detailed analyses of these identified main themes.

Axial coding.

In this phase of analysis, coding occurred around the core categories (developed in the open coding phase), leading to discovery of the ways in which the categories related to each other. At this level of analysis, I looked to answer the who, when, where, why and how that helped to contextualize the category or phenomenon. I coded for structure (who, what, when, where) and process (why, how), as well as conditions leading up to actions/interactions, in order to fully capture the dynamic process that explained phenomena (Strauss & Corbin, 1998).

Selective coding.

At this phase of analysis, major categories were integrated to form a unifying explanation of the phenomena. This process began with integrating categories in discovering a central category. First, I gained a sense for the general theme that crossed all categories, rather than examining them for detail. Second, major categories were related to the central idea through explanations of relationships. Third, the central explanation (or theory) was then refined. Refining consisted of providing additional data to support poorly developed categories and cutting out unnecessary excess data. Fourth, I validated the theoretical idea by comparing it to the raw data to see if it explained most of the cases that were coded. The final, resulting theoretical scheme was one that accounted for variation within and between the categories that it explained.

Chapter 4: Results

The outcome of this research project is a theoretical model of how children experienced social change through their participation in the Social Competence Intervention for Young Children. This model can be summarized as development through communication and teaching. This chapter describes the model, beginning with a brief description of how it evolved from the data. A diagram is presented at the end of this chapter, depicting the core components of the model, and the relationships among them. Chapters six, seven and eight are devoted to describing in rich detail each of the three core components of the model, by using the data to uncover common themes as well as the unique experiences of the program participants. Please be reminded that the names of all participants in the program have been changed.

Evolution of the Model

As I began the process of interviewing, surveying and note taking for this project, I found that each individual came to this intervention program with a story and history of experiences that was absorbing and seemingly unique. I embarked on the process of reading and decoding, and I felt that, while the concepts that were conveyed to me were interesting, they were also diverse and difficult to unify under explanatory themes. I continued to review the data and began to approach the vast amounts of information by focusing on each of my guiding research questions one at a time. This strategy helped me to organize my ideas, and to see common themes in the ways in which children demonstrated social development through time in the program. Since the first research question emphasizes parent perceptions, I focused on parent interviews for information

on this aspect of the analysis process. As a result, I was able to place the parent's descriptions of their children's development into two categories: emotional change and behavioral change. After developing the theme of social change through analyzing parent interviews, I thoroughly reviewed other data sources and found information that contributed specifically to this topic. This additional data helped me to further clarify and fine-tune the concepts of social change that were developed through the parent interviews.

As I moved forward in reviewing and coding the data, with a stronger focus now on the guidance of my second research question, I realized that the relationships I had developed with the individuals in my study were instrumental in forming my understanding of the dynamic process that took place to enable change in the children. While parents identified specific teaching strategies as explanations for their children's learning progress, I came to realize that the open and fluid communication between the parents and myself had become a key catalyst for development as well, because it influenced the teaching that took place. I went back through the data with my attention focused specifically on the general concept of communication about the children, and I learned that needs and expectations for the children's social development were communicated on many levels: across parents, children, group leaders, and myself. I came to see that, because of this multi-level form of communication, children's specific needs could be attended to during group sessions, contributing to their noticeable social change.

Throughout this process of developing an explanatory model, I frequently drew diagrams of emerging concepts and created lists of all data details that related to them in

any way. While consistently trying to narrow down concepts to be as specific as possible, I also endured a process of expanding the explanations in order to include information related to all 5 of the individuals who participated in the intervention program. While this simultaneous process of expanding and narrowing was challenging, the explanation that I present here best captures the key phenomena that took place during the Social Competence Intervention Program for Young Children.

Overview of the Model

A Learning Environment Promoting Development through Communication of Needs/Expectations and Teaching—A Dynamic Process

This program fostered a learning environment that allowed each child in this program to experience change on an emotional, and/or on a behavioral level. Positive changes were the result of a dynamic process of communication and teaching on many levels, that persisted throughout the duration of the intervention program. In other words, the three components making up the learning environment (communication of needs and expectations, teaching, development) consistently worked together and changed over time, depending on the experiences of the individuals involved in this study. Although I approached the analysis process by examining each of my research questions one by one, I came to realize that the concepts that initially developed separately under each guiding question were actually dynamically related to each other. There are three key concepts in my model of social change for this program: Communication, Teaching, and Development. These three components together provide a learning environment that promotes social competence. The communication that took place during this intervention program involved parents, myself, group leaders, and children exchanging information

about children's needs for development of social competence. Teaching took place not only by group leaders to the children, but also by parents to their children. The components of teaching, communication, and development in this model are closely interrelated and difficult to discuss in isolation from each other.

An example of the interconnection of the three core parts of the learning environment can be portrayed in the following example: Parents were a key source for communicating information about their children, such as strengths, weaknesses, and personal backgrounds. This information would in turn be conveyed by me to group leaders, and integrated into the planning of sessions as necessary to meet the needs of the children. Leaders would then use teaching skills to address the established needs that were influenced by information parents communicated about their children. Teaching of the program's concepts was also done by parents at home with their children in order to further contribute to their children's social development. This parent teaching was conducted on a twice- weekly basis throughout the program.

Leaders consistently provided me with feedback about the responses of the children to teaching strategies. Leader feedback was taken into account in the structuring of future sessions, and the open dialogue between them and myself helped us to modify teaching techniques to ensure development. Children began to show change in different ways and at different rates. As this occurred, parents shared with me the ways in which they observed that their children were learning new skills through the program. This type of information helped myself and group leaders get a better understanding of what things worked most effectively as teaching tools during sessions. This communication

also enabled us to carry out a program that was relevant to the individual needs of the participating children, and meaningful to the parents.

A Picture of the Process

This diagram serves as a visual aid in conveying the process of development and change experienced by children in the intervention program. Following this diagram is a description of its individual components.

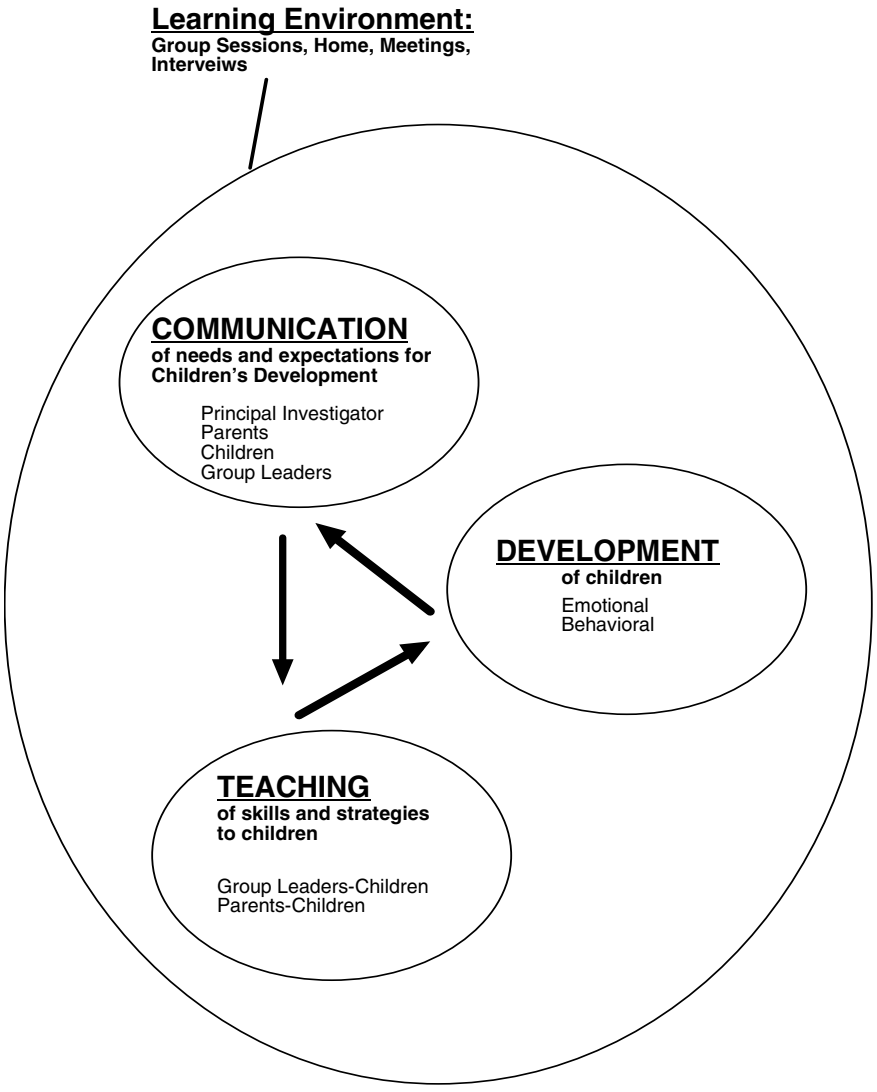

Diagram 1: A Learning Environment promoting Development through Communication (of child needs and program expectations) and Teaching

Communication began prior to the first session of the intervention program. Expectations were conveyed to parents by me through written materials as well as informal conversations. During conversations with me, parents began describing their children's current developmental level and areas of social functioning that were in need of attention. This process of communicating was essential in helping group leaders to implement effective teaching strategies that fit the needs of the five children in the study. As the study progressed, communication regarding changes seen in the children occurred among parents, group leaders and myself.

Information regarding perceived development influenced subsequent teaching because it helped to clarify what was and was not useful in helping the children to develop social competence. Communication also took place between myself and group leaders. Discussions helped leaders to clearly understand the objectives of the manual that needed to be achieved, as well as the individual needs of the children. Group leaders and parents utilized teaching strategies to help their children become more socially competent. They included use of modeling methods, directly teaching concepts through a concrete step-by-step process and utilizing naturally occurring events to reinforce/shape prosocial behaviors.

While the teaching targeted the general objectives outlined by the manual, it also targeted the individual needs of the children that were communicated by individuals in the study. Use of tangible items such as toys were very effective helping the learning process. Additionally, children were most likely to retain information that was taught in the context of novel and enjoyable activities. Group leaders and I also developed

individualized teaching plans to address needed areas of specific children. During sessions, a token economy system was utilized to encourage children to remain compliant and attentive.

Leaders regularly reviewed the three group rules to the children, which were: 1) Be truthful about your feelings, 2) Always try your best, 3) Never leave the room before asking a group leader. A fifth rule was also reviewed regularly with the children, and it was called the Golden Rule because it reflected the main purpose of the group: If you think about the feelings of others, then you will be a good friend. Reinforcement strategies were frequently used by group leaders to increase prosocial behaviors. For example, if a child initiated conversation with another child, was attentive and active during activities, or was observed attempting to utilize any of the social skills taught, he or she would receive verbal praise or a sticker for the token economy system.

Parents were also active teachers for their children during the program. After each session, parents would receive a handout describing activities in which they should engage their children so as to assist their children with internalizing and generalizing the concepts taught during sessions. They were encouraged to use teaching strategies that were similar to those of the group leaders.

Through their involvement in the program, children showed development in social functioning. The change in development was related to the program in that the instruction kids received promoted growth in emotional and/or behavioral functioning. As parents and leaders witnessed the children's development, they were able to communicate feedback on which aspects of the program they felt most contributed to the improvement. This information received in response to the children's development

helped us (myself and group leaders) to further understand how teaching strategies could best be used to meet the children's needs for social development.

Chapter 5: Children's Development

Data revealed that participants perceived changes in social interactions during this intervention program. Every parent reported that their child's behavior had changed positively in some way since the beginning of his or her participation in the program. They noted improved interactions with family members, as well as with individuals at the children's schools. For example, one parent reported that her and her child's involvement in this program had allowed her to have conversations with her son, which was a "big deal", and that it helped her and her husband feel hopeful that they can "increase him [the child] socially more than we thought" [PI3]. A parent also noted that her child's teacher reported that her son's "social skills have improved greatly in the last two months" [PF3]. Changes in social interactions that took place through the course of this intervention were described in terms of the ways in which group participants developed emotionally, and behaviorally. This chapter provides descriptive information on the development that was witnessed during the course of this program, while chapters seven and eight describe the roles that communication and teaching strategies took in shaping this development.

Emotional Development

Regulating Negative Emotions

Two parents noted that an important intervention-related change was their children's improved ability to regulate negative emotions. This improvement helped the children to adapt more readily to the demands of their social environments. One parent emphasized her daughter's ability to more easily overcome anxiety in social situations.

Another was impressed by her son's increased capacity to soothe his feelings of anger when with other individuals.

In addition to the positive emotional processes that took place during this program, parents and leaders also recognized the competitiveness of several of the children to be an obstacle in maintaining emotional stability at times. During the beginning phase of the intervention, several parents reported to me that their children's social weaknesses included difficulties with competition and with losing. In the face of competition during group sessions, these children had greater difficulty in regulating emotions such as frustration, irritability or sadness.

Overcoming anxiety.

Upon beginning participation in the intervention group, Lee's mother had a goal for her daughter to be able to "slow that anxiety so that she can communicate," [PI1, 296] as anxiety was Lee's "number one thing to deal with" [PI2, 56]. Her mother explained that "in public she's very shy" [PI1, 8] because of anxiety in social situations. As a result, Lee's social skills depended on her level of comfort in social situations. At the beginning of the intervention, Lee was attentive and compliant, but anxiety kept her reticent and hesitant to interact in group activities. Her affect was constricted, and her activity level was less than that of other group members. Lee's shyness kept her from initiating play with other children in the group, a trait that her mother said was a common difficulty for her daughter. Lee's mother felt that, if her daughter could find ways to overcome her own anxiety, she would more easily be able to adapt to changing social situations, and learn and apply new social skills.

As the intervention program progressed, Lee's mother reported that her daughter's anticipatory anxiety seemed to have improved, as she was able to more easily overcome worry about impending social situations. She explained that her daughter's improving ability to more easily deal with anxiety helped her to adapt to new social situations and to carry out prosocial scenarios such as appropriately greeting someone else. Through time, Lee's group leaders also reported that she seemed "more active" and "very responsive to the [social] cues of others" [GLF1]. By the program's mid-point, group leaders reported: "She pays attention and always participates," and "Her facial expressions are becoming even more expressive"[GLF2]. Lee's mother speculated that her daughter's increasing comfort in the group may have been related to a sense of belonging on the part of her daughter, as she explained, "I think she knows that people are speaking her language…" [PI2, 194]. As the program reached closure, although still hesitant to speak verbally, she appeared to be comfortably demonstrating a full range of affect, and interacting nonverbally with other children. Lee had communicated to me that she had made friends in the group, and had enjoyed the activities. Lee's mother felt that her own involvement in the program allowed her to work with her daughter in overcoming social anxiety. Because of her mother's involvement, Lee's training extended beyond the intervention sessions, as her mother continued it with her daughter in the context of their everyday lives. Her mother explained:

> Um, well I know at dinner we do something called Sunshine and Clouds and we talk about different things that happened in our day. And a lot of times I'll talk about something, that, that when she came out of group…that she was smiling and she was happy. And I try and connect the fact that she's like anxious

> sometimes when she first walks in and then it goes okay and she's okay. My hope…is just that she'll remember that. You know, maybe a little less anxiety each time. She can just self talk 'Okay, I've been through this, I'll be okay.'" [PI3, 105]

The above excerpt and data demonstrate that Lee's participation in the intervention group was an exercise of overcoming social anxiety. With the help of her mother, Lee allowed herself to feel comfortable enough to experience positive social interactions. Although it did not eliminate her feelings of social uneasiness, the intervention program seemed to provide Lee opportunities to practice in regulating negative emotions so as to become more adaptable and social.

Managing anger.

At the beginning of the intervention program, Jake's mother explained that her son's low frustration tolerance resulted in frequent breakdowns that were most problematic at school. She stated that his anger difficulties led to "social problems at school that aren't really being addressed well". When asked to describe these situations further, his mother explained that at school:

> He usually shuts down, like he'll go under his desk. Or he'll leave the room which is you know when it's a big problem he'll just leave. Um, but mainly it's, he'll go away somewhere in a corner or under a desk and he'll suck his thumb, um, and not look for any body. He'll cover his ears. [PI1, 29]

His mother then added that, aside from school, Jake also "has problems with like large groups like parties…or big unexpected things. He has problems with them" [PI1, 56]. During my first interview with him, Jake's responses provided me with insight into his

tendency to use anger to navigate social situations. He explained that, when he played with other children and things did not go his way, he wanted to "chase" the children and "just quit" the activity in which he was engaged. He added that his anger may lead him to "try and punch them" and to "run at them". When asked how he shows happiness when he is with his friends, Jake described it to be the absence of angry gestures. For example, he explained that showing happiness towards his peers was when "I don't punch them, I don't go and charge at them" [CI1, 55]. When asked to describe a time that it was difficult to make friends, Jake explained, "Well, I tried to punch somebody in my class because he wouldn't let me play his game" [CI1, 135].

During intervention sessions, Jake at times found it difficult to manage his frustration. For example, on one occasion, he requested to join in on a game that two other children were playing. When the children told Jake that he would have to wait until the next game round, Jake stomped away, growled, and walked to a corner of the room. Group leaders noted that Jake's sensitivity and low frustration tolerance at times kept him from being able to participate in group activities.

As the intervention program progressed, Jake's mother noted that her son was showing improvements in his behavior at school, because he was using the calming strategies taught to him in the group. She once reported that his teachers noticed increased ability to be patient in group situations and to less easily become angry. His mother reported to me that his teacher had communicated that he was using the calming strategies such as counting to ten in the classroom. His mother also explained "His teacher commented to me that he has been much better…about expressing his own feelings with words to her" [PF1].

For group leaders, helping Jake to use coping strategies for frustration was a constant and often difficult process. However, he demonstrated behaviors that suggested an increased capacity to soothe his own anger. For example, he frequently used a 'cool down chair' that was introduced to him by group leaders, which was a chair on the side of the room where he could sit to calm himself when angry. He practiced calming exercises in the group activities, when lead by the leaders. He also enjoyed participating in group "politeness" activities where he role played the use of good manners. He was enthusiastic about these types of activities, and often took a leadership role when acting them out. Jake actively engaged in discussions regarding the "politeness skills" that were taught, and he demonstrated ability to apply these skills (such as congratulating others when they win a competition, properly greeting others, and not interrupting) during group sessions.

Jake's ability to self-soothe when angry or frustrated strengthened over the course of his participation in the intervention program. Although evidence of this was at times not apparent during intervention sessions, these developing coping skills seemed to have had a more noteworthy positive impact on his social behaviors outside of the group sessions, such as at school. Seven months after the end of the intervention program, Jake's mother and I corresponded. She reported:

> I am happy to report that [Jake] is having the best year ever at school…. Here we are half way through the school year and he has not had a problem one single day. He has had…no incidents with other kids, no refusing to do what they are doing, no getting upset and not recovering. He is like a new kid this year and we are loving it! He talks to us more now about his day and tells us he is happy. But better than

> that, he tells us when he is upset too, with words, appropriately. He does still use a few of the things that you taught him… when he does get upset he will count to ten and take breaths. I think that counting and breathing is the most valuable tool he learned (for us too!) from the class because it works for all different situations. Just last week he was reading a book with his dad and he got stuck on some words and became frustrated...he counted and took some breaths and then he was fine and could read the words. [PII]

Jake's mother continued to see improvement in her son's coping abilities several months after the intervention's conclusion, which she attributed to important educational decisions she made for her son, as well as his participation in the social skills program. She noted that he retained and continued to use the calming skills he was taught, which for him was the most valuable tool he gained from participating in the group. Additionally, he was reported to be better able to communicate his negative feelings. Jake's ability to manage his anger allowed him to more fully enjoy social relationships, experience happiness, and have academic success.

Handling competition.

When I asked parents at the beginning of the intervention what their children do not do well with peers, four of five mothers responded that their children are not good with competitive situations. Lenny's mother explained that, when her son finishes a game, he will pronounce "I won!", even if he did not. David's mother explained that her son is "bad at losing," and that he becomes the "rule police" who demands that other play by his rules during games. Kyle's mother said that, for her son, "winning and losing is something that is very hard" [PI3, 179]. Jake's mother said that her son can "get so

frustrated if he starts to lose…he does not play group games well, at all" [PI1, 154]. Throughout the intervention this was a major obstacle for Jake, and during the ending phase of the program his mother asked me for advice on how to best handle her son when he "breaks down" for not achieving a reward that he could have worked for.

Some of the activities in the intervention program involved mild competition among the group members. For example, in order to promote natural social interaction, sessions usually ended with an unstructured "game time" during which the children would at times engage in turn-taking games where there were clear winners. Also, as part of a behavior management plan, children were able to accumulate stickers for good behavior; and after every few sessions, the person with the most stickers would win a special prize for trying his/her hardest to be a good friend (however, all children always received a small treat at the end of every session). While these competitions did serve to motivate the children to plan and control their behaviors, some group members on occasions had a particularly difficult time in managing their negative emotions during these types of competitive situations. Jake frequently stormed off in anger when he would discover that he was losing a game. At times he would recover quickly, and then attempt to rejoin the game; however, at other times he would get so upset that he would become distracting to the other children and require one-on-one attention from a group leader. Another child, Kyle, once got upset because he could not exchange his end-of-the-session prize, he had an emotional break down where he cried, screamed, and fell to the floor. Kyle's mother explained that, for her, this breakdown was the low point of the intervention.

In response to the children's difficulties with handling competitive activities, I asked the group leaders to incorporate a lesson on "being a good sport" into the ninth session of the intervention program; and this lesson became a primary focus of the session. We implemented this lesson in order to give the children a strategy for handling situations when they win, and when they lose. Leaders and children discussed what it means to be a good sport, how sportsmanship behaviors affect others, and specific strategies for winning and losing gracefully. During sessions following this lesson throughout the remainder of intervention sessions, leaders specifically encouraged children to show good sportsmanship behavior, and they reinforced children's use of the strategies. Following this lesson, children were observed making specific efforts at showing more appropriate competitive behaviors. For example, when Jake won a prize for good behavior at the end of a session, the other children congratulated him. During this event, Jake also stated, "And the winner congratulates you, even if you're not the winner...," [obs3,198] demonstrating that he was making an effort to grasp the concept of "being a good sport".

Positive Emotional Experiences

Sense of Connectedness/Relatedness

The participants in this program experienced connections with each other. Children seemed to form a connection with the group environment, as well as with each other. Parents also reflected to me the ways in which this group facilitated a strengthening of the bond between them and their children. Through this bonding process, parents became more aware of their children's needs, and they found new ways of relating to their young ones. Parents also formed friendships with each other.

Through the parent-to-parent friendships, they were able to share resources and ideas that would help them in promoting the well-being of their children. Through their apparent increased sense of comfort, confidence and leadership, children also found ways to connect with their inner-selves throughout the course of this intervention program. The children's increased self-connectedness, as well as their strengthening bonds with other individuals in the project seemed to positively influence their development.

Children connecting with group.

Some of the changes in social interactions described by the parents and children related to the increased sense of social connectedness felt among them. Several parents reported that their children related well to the group and enjoyed it. All children reported enjoying at least some group activities. Lee's mother explained that her daughter enjoyed coming to the group to see the other children. The enthusiasm of the other children, and the welcoming friendliness of one child toward her daughter at the start of the program had a special impact on Lee's mother. Lee also communicated to me that she had made new friends in the group, and that she enjoyed the activities in the program. In an interview, Kyle explained that one of his favorite things about the group was that he made new friends. At the start of this program, Jake's mother hoped that her son would have the experience of forming relationships—friendships—with other children. By the mid-point, she remarked that she had noticed her son's connection with the group environment, as she explained that "He's really comfortable here which is kind of a new thing because he's not usually really comfortable in other…environments, so that's new" [PI2, 48]. She also felt that Jake's connection with the other children was noteworthy: "He's really positive about the class, and it makes him happy.…And he talks about the

kids like by name, and he doesn't even know the kids names in his [school] class that he's been with all year….So that's a really neat thing" [PI3, 93]. Lenny's mother also explained that her child related well to the program, and that he would eagerly anticipate upcoming sessions. Seven months after the intervention, his mother informed me that she was inviting one of the children in the group to Lenny's upcoming birthday party. Group leaders noted that children enjoyed many of the activities, especially those that were active and multisensory. It was in these types of activities during which children were most engaged, interactive with each other, and cooperative.

Parents connecting with children.

Mothers also noticed a change in their own connections with their children, which impacted their interactions. All parents reported that, to some degree, the parent home programs allowed them to be more involved in their children's social development. David's mother explained that "I think it [the parent- focused program] *helped me help him*" [PI2, 375], as she added that her increased involvement with her son's positive social development would continue even after the intervention ended. Lee's mother and Kyle's mother reported that their involvement with this program raised their awareness of the weak areas of their children's social development that were in need of focused attention from their parents. One parent expressed gratitude that the program gave her the tools to take "the first step in teaching empathy" [PF2].

Two parents a strengthened bond with their children and improved communication to be attributed to their participation in this program. Jake's mother felt that her involvement helped her to ask her son the right questions, which helped him to relate better to his mother, and to communicate with her. The new, "opened up" line of

conversation between her and her son was a big deal for Jake's mother because Jake now shared new enjoyable experiences that he had gained through the intervention. For instance, his mother reported that he was finally having the experience of friendships with other children in the group, which impacted both her and her son positively because now: "We can talk about his friends; something we've never been able to do. So that's been nice" [PI3, 108]. Jake's mother reported that this strengthened connection between herself and her son made her feel more hopeful for her son's ability to develop well socially. Additionally, she felt that their ability to talk about the class together contributed positively to how she and her son got along.

Lee's mother explained that this group provided her the opportunity to bond with her daughter. She reported that their participation in the intervention allowed them to have more one-on-one time together, and opportunities to talk together about ideas. She explained:

> Um, it's sort of become a bonding experience for [Lee] and I because we'll go have ice cream…right before we come here. And sometimes we'll either have time to talk about what's, you know, what's coming up in the session, what she might be doing. And so just having the time with her is really good, and then being able to bring it home and talk at the dinner table about what the subject matter was…[PI3, 206]

The strengthened bond with her daughter, and the ability to communicate with her daughter was a high point of participation for Lee's mother. Her mother additionally reported that, while Lee rarely spoke to her mom about other aspects of her day such as

events that took place at school, she was able to share her experiences of the group (such as new lessons or skills taught) with her mother.

Parents connecting with parents.

Other noteworthy relationships that developed through this group were those that participating parents fostered with each other. Kyle's mother expressed that this program most impacted her through the relationships that she built with other parents. For her, it was nice to hear their "stories" of their children, and to compare ideas. David's mother reported that, for her, a high point of the program was being able to get to know the other parents. She found the parents to be a good resource, as they provided her with new information regarding her son's school: "If it wasn't for one of the moms here, I would have never known about the…summer reading program that [the school district] offers…" [PI3, 160]. Lee's mother also valued the other parents as resources for school related information. She explained: "I found a really valuable resource is to talk to some of the moms here and there. And um, they were getting information that I wasn't and, I was getting information that they had never heard of. So that's kind of a neat thing…" [PI3, 263]. The parents connecting with each other was most valuable in the sense that it provided new ideas for them in continuing to promote the social and academic development of their children.

Developing Self-Confidence and Leadership

Several parents noticed that the intervention program helped their children to demonstrate more confidence through their social interactions. Toward the beginning of the intervention, Lee's mother hoped that this program would help her daughter to become more assertive. By the mid-point of the program, her mother pointed out to me

that she was noticing her daughter was showing more leadership in her social interactions, as she described that "She's…initiating play a little bit more than just following kids around" [PI2, 67]. Jake's mother also spoke at the beginning of the program of her wish for her son to feel confident enough to initiate play. In a 7-month follow-up correspondence with me, his mother reported: "Even at home he has taken on a new role of being a leader with the rest of the gang and initiating games" [PII]. During the tenth session observation, I was struck by Jake's role as a leader in the group role-play activities. He was first to respond to leader inquiries, and he enthusiastically volunteered to be the first person to act out the various scenarios.

Kyle's mom reported that the most noteworthy change that she saw in her son throughout his participation in the program was the strengthening of his self-confidence and of his leadership skills. He had the benefit of participating in our program for two years in a row. Group leaders felt that Kyle was usually the most proficient in demonstrating a true understanding of the skills taught. His mom felt that, because he had had an opportunity to participate in the program the year before, he was experiencing a feeling of "mastery" this year which contributed to a feeling of confidence. When asked at the program's mid-point how Kyle's behavior had changed since the beginning of the program, his mother responded:

> I think he has definitely developed more confidence. And his teachers at school have also commented about that. Like something's a little bit different with [Kyle]. He seems a little more settled. He seems happier. And I shared with them, you know, that the only thing that we're doing really differently right now is coming to this group. [PI2, 53]

His mother and his teachers noticed a developed sense of self-confidence in Kyle, which led to a happier and calmer demeanor. His mother felt that the high point of their participation in this program was being able to see Kyle develop more confidence in himself. She felt that, because of his previous social skills instruction, he had an increased knowledge of the skills taught, and his ability to "know the right answers" was a powerful confidence booster. Additionally, she reported that Kyle was using some of these skills in his natural environment with friends, and the positive results reinforced his sense of confidence and leadership.

Group leaders consistently commented on Kyle's knowledge of the social concepts that were taught, and on his ability to appropriately answer questions posed by the leaders. Observational data showed that Kyle most frequently initiated conversations and easily followed through with the group leaders' directives. He often volunteered to demonstrate an activity first. He frequently served as a model for prosocial behaviors to other children by naturally initiating conversations, responding appropriately to the behaviors of others, and complying with leader requests.

Behavioral Development

Parent's descriptions of changes in social behaviors suggested that the children developed an increased awareness of themselves and of others during their participation in this program. In other words, children developed improved attention toward the social cues of others during social interactions, as well as ability to use body, face and/or voice to plan and carry out socially appropriate behaviors. While all parents noticed some degree of change in the behavior of their children, some noticed more extensive change than others.

Awareness of Others

Four parents described to me the manner in which their children were developing an increased interest in others during their participation in the intervention program. For example, during the mid-point of the program, when I asked Jake's mother what was the most valuable thing she felt that her son had learned through the program thus far, she responded that "I think so far that just being more aware of other people's feelings is probably the most valuable thing. He's noticing more" [PI2,90]. When I asked her to elaborate with an example, she explained:

> Um, well, he's showing more concern for others, like…if he's noticing someone not being kind, he's…trying to put a stop to it and telling them that you need to talk nice ant things like that. Um, when they're playing games at home now he keeps telling people that it's not about winning, and things like that that you can clearly tell you were talking about in class. [PI2, 96]

This explanation suggests that Jake had begun a process of becoming more connected and responsive to the behaviors of others, and that he made efforts to apply the skills he learned during sessions to his everyday social situations. By the ending phase of the intervention, his mother explained that Jake's teacher reported that he was demonstrating considerable improvement in being able to take turns at school. She reported that "He recognizes now that he has to wait [his turn], and that he can't just go when he wants to, and he's been doing that [waiting his turn] a lot at school" [PI3,55]. She attributed his improved patience and willingness to follow conventional rules to his participation in the social skills program, as she stated "I think that it's from here because you guys have been working on that a lot" [PI3, 47]. During group sessions, leaders noted that Jake

was attentive and cooperative with others, when he was motivated to do so. Group leaders most frequently noted his good compliance and patience during the activities that focused on being polite to others.

Lenny's mother explained that, while she had not noticed any specific behaviors from her son that she could say had been directly taught during sessions, she did notice a more general increased awareness of the facial features of others from her son. Although he at times had difficulty remaining attentive to others when they spoke to him, group leaders did note that Lenny had developed good skills in identifying the emotions of other individuals. His mother felt that, more than anything else, her son was in a phase of "absorbing" the information that others communicated to him.

According to her mother, among some of the most valuable things Lee had learned by the mid-point of the intervention was that she had improved on "thinking about other's feelings". Lee was developing an interest in the preferences of others, and an understanding that they are not always identical to her own. Her mother explained that Lee made recent statements such as "So and so might want to play that, so I'm going to ask him first what he wants to play", which was a shift from her usual self-centered perspective such as "Come on, let's go talk about [a certain topic], and I want to do [a certain activity]" [PI2, 208], suggesting a developing curiosity in others and willingness to understand the desires of others. According to her mother, this was a major development in Lee's social functioning.

David seemed to become more interested in the input and reactions of others, as his mother explained. She felt that he demonstrated more curiosity in the opinions of his family members, and in their reactions to his behaviors. She explained, "I just see him

almost wanting us to ask him…how he's feeling or what he's doing, or you know, 'How do you like my…idea?'. You know, just the kind of…wanting more input on how he's doing" [PI3, 82]. Group leaders also recognized David's attention to the input of others. A leader once commented that he engaged in a reciprocal conversation about a movie with another child, and "He seemed to really pay attention to what [the other child] was saying" [GLF2]. They also reported that he carried out activities using good eye contact with others. The group leaders taught David and the other children a strategy to be used for giving others "personal space". Leaders reminded children to use this strategy (giving one arm's length between you and the other person) when needed. When David was prompted to use his "one arm rule" to avoid crowding other children, he was attentive and responsive to the directive. At one time, he was observed utilizing the strategy on his own, with no prompting from a group leader.

Although David developed an improved awareness of others during later program sessions, his mother also stated that, for a short period of time at the beginning of the intervention program, her son had become withdrawn and overly sensitive to where he would become easily upset. She shared that these behaviors were noticed by his teachers at school, as they reported to her that he had become "drifty" and was not connecting as well with other individuals. David's mother explained to me that adding the extra three hours of the intervention program into his schedule was "absolute overload" on this kindergartner, and so she resolved to cancel his Monday-Wednesday-Friday commitment so that he could continue to participate in my program. Once she prepared her son for the routine change, she lightened his schedule, and his teachers noticed an immediate improvement in his "drifty" behaviors. Group leaders had also noticed David's

sensitivity to the remarks or behaviors of others, as he sometimes responded with withdrawn and upset behaviors. For example, when another child accidentally bumped him, David began to cry. When other children became upset or frustrated around him, David would ask to go to the restroom and remain gone from the group for several minutes. In David's need for occasional alone time during the sessions, his mother and I developed a strategy where he could use a code word (a word decided by him and his mother) to communicate to his group leaders that he needed some "alone time" away from the other children. During this break, he would take a walk with a group leader and then return to the session. Group leaders noted that David was responsive to this new idea, and he was able to use the strategy during group sessions, to cope with his sensitivity to others.

Awareness of Self

All parents reported that their children demonstrated some level of heightened self-awareness that allowed them to find new ways to interact socially. Jake's mother noted that her son's eye contact improved when he spoke with others. During a seven-month post-intervention correspondence with her, she reported to me that her son's eye contact is "excellent", and that her son continues to introduce himself using the techniques taught to him during the social skills program. Observational data indicate that Jake internalized the steps in appropriately greeting another individual, as this was an activity about which he was consistently enthusiastic during the sessions.

Lenny learned new ways to use words to communicate with others. His mother told me a story about a time during the intervention when her son approached her with a picture of a deceased pet and voluntarily tried to express his feelings about missing the

pet. He than later approached her explaining that he missed an old classmate that had moved out of his school class. His mother was surprised by these incidents, as it seemed out of character for her son to talk with her about his feelings. His mother shared that she felt this program was giving her son "new things to say". She explained that the instruction he received through the intervention was "giving him the verbiage, the language that he needs to do some of these things, to share" [PI3, 163]. During my observations and interviews with Lenny, I noticed that, when he was given specific topics, or when language was modeled for him, he more readily used verbal communication to interact. Group leaders noticed that he demonstrated some improvements in his level of participation in activities as sessions progressed, and in his verbal communication skills. During the last few sessions, he engaged well with activities, and he was able to converse on the required topics of the activities. Group leaders were impressed when he voluntarily approached the other children and asked them to play tag with him.

Lee's mother was impressed by her daughter's developing ability to properly greet others, a skill specifically taught during intervention sessions. Her mother felt that this was one of the three most important things that her daughter learned during the social skills program. Lee demonstrated to her mother the steps that she had learned in introducing herself, such as "how you should say hello, and look in their eyes and shake their hands"[PI2, 93]. Furthermore, Lee's mother observed her doing the greeting with her grandfather, as she reached out for his hand when saying goodbye. In essence, her mother felt that at home, Lee was duplicating some of the specific behaviors that she was taught in sessions. During group sessions, Lee always cooperated activities. She

communicated nonverbally with other children, and she actively engaged in all tasks. She was observed exchanging smiles and laughing with other children, especially during later sessions.

David's mother noticed that her son used his body and face more to communicate with others. She explained:

> The other day my husband was saying that…[David's] making a lot of different faces that he's never seen before….[David] came into the kitchen and shrugged his shoulders and blew out this big breath like (heavy sigh sound), 'just waiting for me to', [my husband] was saying, 'waiting for me to notice him'. And [my husband] didn't know what to do. He just didn't do anything, and [David] did it again (heavy sigh sound). 'Dad?' And so [my husband] turned around and said 'What [David]?', and he goes 'Don't you see that something's wrong?'. And he would have never done that before. [PI2, 128]

David's mother concluded that these behaviors by her son were his way of using his body, face and voice in such ways to get his parents to figure out what he was thinking. He was developing an awareness of the ways in which he could plan and integrate various types of social cues in order to communicate meanings. During group sessions, David demonstrated well- developed verbal skills. For example, in an observation of an activity where children were to pretend that they are engaged in a phone conversation, David reciprocated questions with the other talker, and his voice tone was appropriate for the conversation. Group leaders noticed that, during snack time at the beginning of the sessions, David initiated conversations, and maintained conversations with others without becoming tangential or off topic. When speaking one on one with a group leader, David

was able to articulate his feelings and thoughts using words. Leaders also noted that he was able to carry out the steps of a greeting very well, while maintaining appropriate eye contact all the while. Finally, David was observed playing well with other children during sessions.

Since this was Kyle's second time participating in the Social Competence Intervention Program for Young Children, his mother felt that her son benefited from feeling a sense of "mastery" his second time through. His mother and the group leaders noticed that, at this point, Kyle knew how to answer questions about various concepts related to social functioning, such as being polite, taking the point of view of others, and the uses of social cues. His mother believed that his involvement a second time allowed him to integrate the various social skills that he had learned, and practice them in real life situations with the other group members. Group leaders commented that he was always willing to answer questions, participate in role-plays, and engage in social activities with the other children. I noticed that Kyle had a knack for using his humor to make others laugh during sessions. His mother agreed that his good sense of humor made him a very likable child.

The section above describes the various ways in which children in this program developed emotionally, and behaviorally. In general, the noticed changes served to increase the social competence of the children. Emotionally, some children developed the ability to regulate negative emotions such as anxiety and anger. Even though the competitiveness of the children was an obstacle to progress, we found a way to turn it into a learning experience from which the children could grow. The program also fostered a sense of connectedness and belonging between children with the group,

children and parents, and parents with other parents. A final emotional contribution made by the program was that it fostered a sense of leadership and self-confidence among some of the children. Behavioral development included behaviors associated with an awareness of others, such as increased attention to the feelings of others, to facial features, to the interests of others, and to the input of others. Also included in this type of development was an increased awareness of self. For example, parents noticed children more frequently communicating needs with appropriate use of words and body language, and carrying out social conventions such as greetings. One parent whose son participated in this program for 2 years noticed that her son had demonstrating a sense of mastering social knowledge, and was now beginning to integrate the learned skills in a competent manner.

Chapter 6: Communication

Patterns of communication that took place among the individuals involved in this program (parents, children, group leaders, myself) contributed extensively to the direction that this program took. In other words, feedback related to expectations and needs for the social development of the children was integrated into the intervention content as much as possible, helping to fine tune the program to be maximally effective for the five children involved. Parent/child interviews, leader and parent feedback forms, and unstructured conversations were among the most useful strategies for fostering an open communication during the time of this intervention program. This section discusses in detail the patterns of communication that took place and contributed to helping the children to develop social competence skills.

Communication Between Parents and Principal Investigator

Parents and I communicated frequently through interviews, written feedback, and informal conversations. We interacted with ease, and the manner in which we did so felt authentic and honest. The good relationships that I shared with the parents seemed to foster both a willingness to generate useful feedback between us, as well as a willingness to be responsive and proactive with the information that was communicated. The information exchanged between the parents and myself was probably among the most influential to the course of this program. Parents and I took opportunities to communicate expectations for the course of the intervention, as well as addressing needs for helping the children to benefit from participation.

Program Expectations

Prior to the first session of the intervention, I sent a letter to all parents explaining their responsibilities for participation in this program, and expressing appreciation for their involvement. This letter gave clear descriptions of the group meeting and ending time, procedures for dropping off and picking up children, and expectations for participation in interviews. Prior to the beginning of the intervention program, parents were also informed that they would be expected to participate actively in the program by carrying out activities at home with their children, based on what the children were being taught during the sessions at that time. At the start of the program, parents received an outline of the sessions, another effort made on my part to communicate my expectation for their engagement in the intervention program. One mother stated that she appreciated having the outline because it helped her to be more in tune with the changes that her child demonstrated through participating in the sessions. This mother also explained that it was important for her child to see that this intervention was a priority for the mother. Another parent reported that the outline was helpful because it helped her to know "what questions to ask" her child, thereby fostering increased communication between the two. Thus, the clear expectations that I conveyed to parents helped them to engage in the program in a meaningful way.

During the beginning phase of this program, mothers and I spent time discussing their expectations for their children during their participation. Understanding these parent expectations and incorporating them into the program's content was for me an important aspect of the first phase of the intervention program. The expectations that the parents conveyed to me reflected their keen knowledge of their children, and their

children's needs. I felt that if the parents' expectations could be met, in addition to the program's objectives, then this would ensure the most successful possible outcome for the children.

David's mother explained that the ideal social skills program should take place in a group setting where leaders would "be setting up situations where they would be forced to have to function in…" [PI1, 185]. She hoped that her son would "learn anything that can help me help him, or help him himself…function on a more age appropriate level with his peers" [PI1, 195]. For David's mother, she expected that a group setting where children were "set up" to interact with each other would help him learn a variety of skills that he could use to interact appropriately with his peers. She also expected that, to support her child's social competence advancement, it would be necessary for her to learn new teaching skills that she could use with her son.

Lenny's mother wanted for her son to learn "How not to show frustration….Because just because you're angry doesn't mean you have to scream 'no'"[PI1, 195]. When he didn't want to comply with a request, Lenny would instinctively yell out "no". This behavior was something that his mother hoped would decrease by his learning to "internalize" his frustration instead of acting out on it by yelling "no". His mother felt that the ideal program for her son would include teaching the children 'scripts' that they could use later to deal with various real life situations. She explained that a social skills program should "Include something so that he can *learn* phrases and actions because he memorizes phrases and actions, and he does use them appropriately. I think once you teach him a phrase or a response, and he figures out when to use it, then he can use it and it seems normal to other people" [PI1, 143]. According to

his mother, Lenny needed a program that would help him to deal with frustration, and help him to learn scripts for what to do in various social situations.

Lee's mother enrolled her daughter in the program with the expectation that her daughter would learn several new skills related to managing emotions as well as social behaviors. Her mother envisioned a program that would include instruction on "Greetings, and how to do it appropriately. How to be aware if someone else is becoming bored with what you're talking about….Reciprocation in conversation. Personal space. And just for how to be assertive…" [PI1, 289]. For Lee, the acquisition of these skills hinged on her ability to "slow that anxiety" enough to feel comfortable enough in learning to "focus on personal space, and respect other people, and how to have that verbal interchange with other kids on an appropriate level" as well as how to have "empathy for other people's emotions" [PI1, 302]. Her mother explained that Lee tended to want to automatically certain individuals without consideration for how that made her friend feel, and that learning a phrase, or a script for how to appropriately say hello to others without invading their space would be useful for her daughter.

Jake's mother explained that essential aspects of a program for her son would help him to "interact in age appropriate groups, in a small group…" and "To be able to approach other people—adults and children, because he just doesn't do that. I'd like for him to be able to initiate more communication" [PI1, 251]. Also mentioned were her son's "Personal space issues...with personal space he doesn't know his limits". Finally, she felt that "Learning how to play games, the back and forth is really good". She expressed that she hoped to get new ideas on helping her son to control frustration and anger, as his negative emotions often served as an obstacle to him experiencing positive

social interactions. These problems occurred especially in school, yet mom felt that school personnel had not provided many strategies for helping Jake: "within the school system there's so few things they're willing to try with him…and so any ideas of ways that he can help calm himself are *great*" [PI1, 300]. Mom's goals for her son's participation revolved primarily around her desire to see her child experience positive social relationships. She explained: "I don't know if I can say the specific things I want him to learn, but I'd like him to be able to, within his group, make friends…that he can actually have a relationship and that he can be comfortable in that environment, taking turns and things like that" [PI1,312]. She also added that the objectives that the program was already working to meet were all goals she had for her son, as she expressed "I mean all of the things you're working on, I want him to work on all of those" [PI1, 324].

Kyle needed a program that would help him to learn to engage appropriately in unstructured activities, according to his mother. For her, the ideal social skills program would include "Unstructured activities…because that's where he has the most trouble….especially with boys" [PI1, 157]. She also felt that her son would benefit most from participation in a program that involved "neuro-typical kids". Kyle was the most socially developed child in this group, and since he had participated in this program as well as other interventions prior to this, he had already acquired many of the basic skills. His mother felt that, being in a program with "neuro-typical kids" would allow him the opportunities he needed to fine-tune his skills. Although this program did not involve the type of children that his mother would have ideally preferred, she hoped that through his participation her son would learn "how to listen to what other kids are saying and at least fain an interest in what they're talking about or doing" [PI1, 171]. His mother felt that,

although her son was already working on this skill, he needed more guidance in making it an automatic one. She believed that this social skill was integral in allowing him to have meaningful relationships throughout the rest of his life. She felt confident that if he worked on it enough, there would be "a big enough pay off for him in terms of if there's someone that he really likes and wants to be friends with and he'll meet that person, or even later in life meet that girl…" [PI1, 190].

Getting to know these parent expectations helped me to understand what it was that motivated parents to enroll their children in the Social Competence Intervention Program for Young Children. Some of these expectations, such as teaching children reciprocation, turn taking, and anger management were already areas targeted by the program's manual. Nonetheless, these areas were given even more attention by group leaders as the parent's expectations became known. Some of the skills discussed by parents in this section became integrated components of the program as a result of their communication with me. For example, more than one parent mentioned that their children had difficulties with giving others appropriate space. Hence, I developed a structured lesson on this issue and group leaders were trained to implement it during sessions. All parents mentioned goals related to initiating and engaging appropriately with others. One parent specifically voiced a goal of being able to properly greet people. In response, I developed a step-by-step lesson, implemented by group leaders, so that children could internalize a "script" for what to do when they greet another individual. Finally, the only expectation that I was not able to address in my intervention program was to provide the children with opportunities to interact with "neuro-typical" children. As I thought more about the utility of these children having opportunities to practice their

learned social skills with typically developing children, I encouraged parents to engage in communication individuals, such as teachers, who could help in providing such opportunities. Parents were encouraged to support their children's use of prosocial behavior with siblings as well.

Parents also conveyed expectations for the safety of their children during sessions. During the first phase of the intervention, parents requested more clear-cut guidelines on what I expected them to do during sessions in case of an emergency. One parent asked: "What do you do if there's a problem during the group? Do you call us on the cell? Should we stay?" [PF1]. Another parent requested that I compile a "contact list in case of emergencies" [PF1]. Another parent wrote down her cell phone number on a parent feedback sheet, just to make sure I had it in case of emergency. Through this feedback, I became aware that it was important that these parents know that I had a well organized plan for handling emergencies with their children. In response, I sent each mother an email describing a safety plan that was in place should an emergency arise. Additionally, I requested that all parents send me a best phone number to be reached, so that I could compile an 'official' emergency contact list.

Children's Needs

During each interview mothers were asked to spend time describing how their children functioned socially, including areas in need of improvement as well as strengths. Parents related their children's social needs to each phase of the intervention (input of information, processing cues, behavioral output), which provided me with useful information about the utility of each intervention phase in providing the children with useful learning opportunities. The remainder of this section describes our communication

regarding the children's needs for development as they pertain to each phase of the intervention program.

Phase one: Taking in cues.

Upon beginning the first phase of this intervention program, which focused on helping children to become more aware of social cues, children had varying levels of ability in this aspect of social functioning. Some children were said to possess as greater amount skills in this area than others. Nonetheless, all parents identified some aspect in which they would like their children to improve regarding phase one. Lee's mother described her daughter to be a "very good listener", and an observant child. However, she tended to be overly sensitive to voice tones of others, and needed to work on not "overreacting" to the negative voice tone changes of others. David's mother felt that her son's ability to pick up on social cues was "very poor", as she gave me an example to illustrate what she meant. She explained:

> [David] and I were sitting at the bench at the front of the school. A boy was walking into the office, he *obviously* sprained his wrist, with an ice pack. He's crying, the teacher is holding his arm, the nurse came out, they're having a discussion about have they called the mom. Very obviously the boy is hurt. And [David] got off the bench, which makes me nervous. I'm pulling him back by his shirt and I said "What are you doing?". And he goes, "I'm going to tell that little boy that I tried a new flavor of sherbet". And you know, I had to sit him back down: "Let's look and see what's going on here. Do you think this is a good time to tell the boy about your new ice cream?". And he got very upset: "That boy's never going to know that I tried a new rainbow flavored sherbet!". You know, and

he's walking off to the nurse's office. My gosh! [PI1, 161].

David's mother believed that her son would probably struggle with perceiving social cues for the rest of his life, and that it was a skill that he was going to have to be taught. As illustrated in the excerpt above, David's awareness of the ways in which others conveyed emotions lacked. He demonstrated an absence of 'theory of mind', meaning that he was unable to understand that other individuals do not always see things from his perspective. Because he was enjoying the realization of discovering a new flavor of sherbet, David assumed that the other boy would automatically share in this enjoyment. His mother felt that accurate input of cues was an essential need for her son, and a skill that could best be taught by "catching him in the act" of naturally occurring experiences where it could be applied.

Kyle's mother told me that Kyle demonstrated a strength in being able to pick up on the emotional cues of others, perhaps because this is something that he had been working on through activities with his parents. His mother explained that, in picking up on social cues, "I think he's doing really well. Not only his own intonation, but recognizing others; recognizing other people's facial expression and emotion. I do think that's a strength for him". She continued by describing a "mind reading" computer game that he plays at home that requires him to guess what people are thinking based on their facial expressions. Kyle's tendency to fixate and perseverate on certain topics at times interfered with his awareness of social cues; however his mother stated that she has observed him getting better at dealing with this as he has grown older and more capable of controlling impulses.

Lenny's mother also felt that her son was "pretty good" at picking up on social

cues, especially facial expressions. She explained that they had worked extensively on awareness of facial expressions, and that now he is "very aware" of them. She explained while they "haven't really worked on body language", Lenny seemed to "intuitively know when someone is aggressive towards him, or when they don't want him in their space. He respects that….He does seem to get that" [PI1, 113]. While Lenny's mother felt that he had a good start on becoming more aware of social cues, that he would benefit from more guidance on awareness of body language in social interactions. Jake's mother, on the other hand, felt that her son was "not aware of [picking up social cues] at all". She stated that, "Occasionally, if you're crying, he knows you're upset, you know. If somebody is yelling, he knows you're mad. But he doesn't use that as part of his interactions" [PI1, 224]. In other words, "Like when he's talking to you he can't tell or even if he does tell it doesn't affect the way he responds or the way he approaches something" [PI1, 229]. She concluded that "he's not very good" at picking up on social cues. She reported that, although his school did not deem it 'academically appropriate' to help him with this weakness, he was in great need of receiving guidance in this area of social functioning.

Phase 2: Processing information.

All parents felt that their children needed instruction on skills for processing social information, such as being able to take the point of view of others, and being able to interpret cues. Jake's mother stated that her son's capacity to interpret cues did not extend beyond being able to interpret obvious emotions, such as 'mad' or 'sad', from people with whom he was familiar. She explained that this aspect of the intervention was "great" because "It's definitely what he needs, and it's things that we don't think about to

tell our kids. Even though we all know it, we don't realize that we need to say it to them" [PI1, 28]. She also added that her son was talking about some of the related concepts at home. David's mother explained that her son's difficulties in this area were concentrated around his difficulty with interpreting tone of voice and modulating it to fit the social situation. She explained:

> I hear [David] reciprocating conversation a lot more now. But the way it comes out, and I'm trying to explain to him about the tone of voice and giving him examples or saying one sentence one way and saying it another way and meaning two completely different things. [PI1, 77].

David's mother went on to give me an example of a situation where her son could not properly use his tone of voice to ask his classmates to share, and an example of when he interpreted his sibling's helpful tone of voice as being bossy. She explained that the interpretation of social cues was, for her son, "Very hard, because it's a little more abstract, and yes it's hard to teach…that the words can stay the same but when your vice changes or your body language changes it can mean something totally different"[PI1, 99]. Lee's ability to process social information was "below average", according to her mother. Her mother explained that she required several demonstrations from her parents to understand this, and that one major struggle was Lee's difficulty in transferring the skills from one situation to another. Her mother felt that Lee very much needed help in learning to understand the skills associated with social information processing, and that instruction in this area of functioning was actually helping Lee to reciprocate more during social conversations.

Kyle's mother felt that her son's ability to process and interpret social cues was

"probably more difficult for him", although he did a really good job of being able to "intellectualize it" and to "produce the right answers" [PI1, 11] when talking about this subject. Although Kyle had developed a good understanding of these skills, the difficulty came in being able to use them "in the moment", and his mother felt that now he just needed practice. Lenny's ability to process social information went as far as him being able to tell how someone else was feeling, when prompted, according to his mother. Therefore, his mother felt that instruction in this area was something "that [Lenny] needs". She gave an example of her son's weakness in this area:

> He doesn't always understand how his actions affect others…. Last year he used to point and hold his finger like an inch away from someone's face or he'd hold his fist out and say "I'm very angry!" And he'd hold it so close to their face…and he just didn't seem to understand how that was affecting them. [PI1, 21]

In this excerpt, Lenny's mother described a situation in which her son could not take the perspective of the other children to understand how his actions would be interpreted. Doing this would require a better understanding of how voice, body and facial cues are integrated to convey a meaning.

Phase 3: Behavioral output.

As the last phase of the intervention was upon us, mothers and I discussed their children's needs in developing skills related to being able to behave appropriately in social contexts. All mothers expressed to me that they felt it was an important aspect of their children's functioning, and an area in which the kids had needed guidance throughout their lives. Mothers explained such skills as those that their children had to learn through the use of concrete "scripts", and that they needed extensive guidance in

being able to modify these "scripts" to fit varying social contexts. Lenny's mother described her son to have limited ability in demonstrating proper social behaviors, and that this third phase instruction was "the most important one for [Lenny]" [PI1, 11]. She told me that her son needed to learn these skills through being able to memorize what to do in certain situations, and then act it out. David's mother also explained that, for her son, in order to know what to do in a social situation, he needed to be taught, and to be given a "plan" of action. She explained that, when in an interaction, if "He has a plan, then he can follow through with it. But as he gets older and into new situations, we have to have a plan. So we're on a constant 'Ok, this happened, what do we do next?'" [PI1, 48]. As David's mother pointed out, her child as well as the others in the program needed consistent instruction on acquiring new 'plans' or 'scripts' to accommodate new experiences that come with growing older.

Jake's mother conveyed to me that her son needed consistent modeling of proper social behaviors and constant reinforcement of those skills by individuals in all aspects of his environment such as school and home. Hence, the consistent "follow through" in modeling social behaviors by individuals at both school and home would allow for the internalization of social 'scripts' that would facilitate the demonstration of socially appropriate behavior. Lee's mother agreed that her daughter learned behaviors best when they became routine. Kyle's mother explained that her son "has the script memorized at this point"; however, she added the following:

> He can almost be a little bit overly formal sometimes…and when meeting people or when meeting other kids you know, how many seven year olds walk up to other seven year olds and extend their hand and say 'Hello, my name is [Kyle]. I would

like to introduce you to my sister…She's four years old and I'm seven. How old are you?' I mean that's off-putting to kids. And you know, that another one of those nuance things for him…And it goes back to it's just not so natural for him to know when to use it and how to modify it, or what contexts its appropriate for". [PI1, 24]

Kyle's mother communicated to me that the ability to internalize 'scripts' or 'plans' was not sufficient in being able to successfully carry out proper social behaviors. Rather, it also required an ability to adapt the plan to fit the social situation, which was a skill that was perhaps a bit more difficult for these children to develop.

In this communication with me about their children's specific needs for social competence development, parents were also able to convey to me the teaching strategies that would be most effective in fostering their children's development. For example, the use of specific scripts would help these children to more easily comprehend new concepts, and allowing these children opportunities to act out these scripts during social scenarios in the group would promote internalization of the skills. Furthermore, children benefited when group leaders were able to consistently reinforce these concepts throughout the intervention by using modeling techniques. Finally, children needed guidance that extended beyond the intervention sessions, and included parents and even teachers modeling and reinforcing the use of skills on a consistent basis.

Children Communicating with Principal Investigator

Although not as extensively, children also communicated to me valuable information regarding their own needs. This communication took place during interviews; and I picked up valuable information not only through what the kids said, but

in how they behaved as well. For example, Lenny would become frustrated when he had difficulty in finding words to communicate with me, confirming his mom's previous statements that her son needed to learn new "language" to help him to interact with others. Jake explained to me that it was difficult for him to make friends, and he also described several situations in which his anger took a hold of him when he was with peers. When asked to tell me what he had learned in the groups, he recited the strategies for self-calming that had been taught by group leaders. This information confirmed for me his need to find new ways to manage his anger and to communicate his feelings. It also helped me to see his need to simply have the experience of being in a friendly relationship, which was not a familiar experience for this child.

When David was asked what he had learned in the group, he was able to recite key phrases, or "scripts" that had been used repeatedly by group leaders to teach new concepts. This report reinforced for me the utility in using concrete language and using multiple opportunities to teach skills to help these children to internalize the concepts. Kyle always provided well-articulated answers during our interviews, and he demonstrated a firm knowledge of the concepts that were taught. He communicated to me his sense of "mastery" in knowing about the areas of social competence targeted by this program. Now, he just needed opportunities to apply his knowledge to real life situations. Lee only responded to me nonverbally during the interviews. Although she was compliant and attentive, her silence communicated to me her need to experience a sense of control over her anxiety so that she could interact in a more engaged manner. When children were given opportunities to discuss less desirable aspects of the intervention program, several of them communicated the need to have novel games and

activities. In order for them to remain motivated and attentive, these children needed games that were also engaging.

Communication Between Group Leaders and Principal Investigator

Group leaders and I frequently provided feedback to each other regarding positive and negative aspects of each session, and needs that had to be addressed. Their communication was especially valuable in helping me to evaluate the manner in which instruction was influencing change. Also, as children developed during the program, this communication with group leaders enabled us respond to change by modifying instruction in order promote continued development. Finally, this communication helped me to stay in tune with how the group leaders were experiencing their roles in the intervention. These leaders had the major responsibility of teaching difficult concepts to a group of young children, and this task could at times be daunting. I felt that, in order for them to carry out their responsibilities to the best of their abilities, they needed opportunities to share their perspectives and to communicate their feelings related to this experience.

On a weekly basis, the group leaders and I met to discuss the week's upcoming sessions, and issues related to individual children. During this time, leaders listened to my advice and feedback that addressed meeting the manual's objectives as well as the needs and expectations that were communicated to me. During supervision, I would frequently model teaching strategies for the leaders, or provide them scripts for teaching certain concepts. I provided input for various intervention strategies for more difficult children, and communicated any important parent input that I thought may help them to better understand the children and to better utilize teaching strategies. During this time,

group leaders also provided me with suggestions for what did or did not work for certain children, and for ideas on how to handle certain behaviors.

After each session, leaders were asked to give me feedback on their impressions of the session, of each child's behavior, and of their own feelings about their experience. We also exchanged information during weekly supervision sessions. On average, the group leaders felt that the sessions went somewhat well. Throughout their involvement in the program, they did not experience extremely negative feelings such as doubt, feeling like they were at their wits end, or frustration. They agreed that they generally felt hopeful, optimistic, and energized during sessions, especially during the final phase of the intervention program. Group leaders reported to have difficulty in keeping all the children engaged in some activities, especially in those that required extensive talking. For example, a child would leave the group and wander around the room, or the children would become noisy by making sounds or talking out of turn. In response, I worked with group leaders to further diversify the types of activities the children engaged in, and to make the activities more active.

Group leaders noted that the children seemed to enjoy and be more engaged in activities that were novel, active, and included toys or tangible objects. These types of activities helped even the most difficult of children to become more involved in the lessons taught, and to learn new concepts. Group leaders informed me when they felt that children needed individualized behavior intervention plans to help them to participate better in the group process. In response, I was able to work with parents and the leaders in developing and implementing plans such as a token economy system to help Lenny to maintain attention, a "cool down chair" to help Jake to cope with anger, or

a “code word” that David could use to notify leaders that he needed help in calming his anxiety. Leaders conveyed that children were able to best retain information that was taught to them in a systematic, step-by-step manner, such as steps for doing a greeting or steps for self-calming. The obstacles created by the children’s competitiveness also became known to my through communication with group leaders. As they explained the children’s tendencies to become overly-emotional during even mildly competitive activities, I developed a concrete lesson involving scripts for dealing with competitiveness. During supervision, leaders and I reviewed and practiced the lesson so that it could be implemented effectively.

In summary, the processes of communication that are described in this chapter served an instrumental role in influencing the teaching and essentially the development that took place during this intervention program. It seemed to be greatly beneficial that I was able to serve as a ‘point person’ who could gather information from all individuals who were involved with this program and then use that information to ensure that children’s individual needs were being met in addition to the specific objectives of the manual. My collaboration with the parents helped them to feel involved and efficacious in helping to set the direction of this intervention program.

In terms of the social competence needs of the children in general, the second and the third phases of the intervention program (processing social information, carrying out appropriate behavior) seemed to target the areas in which the children most needed guidance, probably because these concepts were more abstract, and “difficult to teach”, as the parents mentioned. The first phase of the intervention targeted simpler concepts involving identification of social cues, and parents felt that they had already helped their

children to develop skills in this area prior to beginning the intervention. While the first phase of the program did help in raising children's awareness of social cues, it was also productive in establishing expectations set forth by parents and myself, as well as in developing an understanding of each child's social strengths and weaknesses. The children got the most out of activities that utilized concrete step-by-step teaching methods that were coupled with active, fun and novel experiences. Furthermore, each child had his or her own unique needs that were made known through the communication processes and addressed through collaboration from myself, parents and group leaders. The communication that unfolded during this program allowed the Social Competence Intervention Program for Young Children to transform from a strictly manualized program to one that was in many ways personalized to target the five children in this study.

Chapter 7: Teaching

The teaching strategies utilized in this intervention comprise the final component involved in the development of children in the program. Group leaders and parents served as teachers for the young participants. This section provides descriptions of the contributions that these individuals made in promoting the social growth of the children.

Group Leaders as Teachers

The two group leaders carried the primary teaching responsibility during this program. In providing a safe environment that was conducive to learning, leaders did a variety of things. First, the leaders themselves possessed qualities of calmness, confidence, and genuine interest in the children. These qualities helped leaders to be responsive to upcoming issues and situations, to deal with them effectively, and to maintain a therapeutic environment for the children. During the first session, the two graduate student leaders provided children with a clear description of the group's purpose ("the purpose of this group is to make new friends, and to learn ways of being a good friend"), and the types of activities that they would do to achieve that purpose (playing group games, talking about things that help us make friends, doing activities that will help us to learn how to be a good friend). During this first session, leaders clearly defined their role as the persons "in charge" who would help the children to learn new things about being good friends and to help the children to feel good about themselves. The group room was described as a safe place for children to express emotions, and expectations were conveyed in the form of four concise group rules that were written and posted up at every session. Each session followed a predictable routine that began with

snack/conversation time and was followed by session activities, game time, and ending distribution of small prizes to the children.

Based on results from the pilot intervention group, as well as from previous groups run by another doctoral student (Guli, 2004), it was expected that a behavior management system would need to be in place beginning from the first session, to deal with difficult behaviors by the children. At the first session, group leaders introduced the "sticker board" to children, which would be posted up next to the rules during every session. The system was implemented as follows: Children were able to earn stickers for doing things such as following directions, or trying their best at participating in activities. Earned stickers were placed on a poster board next to the child's name and accumulated over a period of two to four sessions. At the end of period of a few sessions, group leaders would count up the number of stickers and provide the student with the most stickers a "special prize" such as a slinky toy, kid's slime, or a decorated tablet of paper. This special prize day was called "big sticker day". Often, group leaders would have "big sticker day" coincide with sessions in which children needed extra motivation to remain engaged and cooperative. When leaders had difficulties redirecting certain children, they would often provide on-task children with sticker points, which elicited compliance from the misbehaving children who also wanted to be awarded points. As a way to even further engage children in the "sticker point" system, leaders would have children place their own stickers on the point board. Although only one to two children were awarded a prize on a given "big sticker day", leaders made sure that, throughout the course of the intervention program, each child had been given the same number of prizes in an effort to treat all the children fairly.

Group leaders taught social concepts in a variety of ways: through discussion-based activities, use of role-plays and socio-dramatic activities, and through the use of tangible items such as toys, masks, and a computer game. The children learned and generalized concepts best when they were taught through at least two of the three mentioned modalities, and on a repeated basis. These well-learned concepts that were taught in multiple modalities included self-calming strategies, greetings, and learning how to take another's point of view.

An example of a discussion-based lesson was when group leaders introduced calming techniques to the children. Children were asked to give examples of situations that make them angry, and then to provide examples of how their bodies show anger. The children tended to have difficulty maintaining their attention during this and most other discussions, as they would become restless and distracted. Therefore, group leaders resorted to frequently reinforcing attentive behaviors during the discussions with verbal praise and giving children sticker points. Children also engaged in discussions during snack time. Snack time was an event that started off each session to encourage the children to engage in everyday-type discussions through reciprocal questioning. Socio-dramatic play activities were utilized mostly during the second and third phases of the intervention as children applied concepts of processing social information and producing appropriate social behaviors. For example, participants had to act out expressions without saying words, and other individuals had to guess what the participant was trying to say with his face and body. Also, children practiced greeting each other by acting out scenarios where greeting another individual would be appropriate. Finally, children practiced acting out some everyday scenarios that they may encounter (such as being in

the room with mom while she is talking on the phone), where utilizing courteous behaviors is important. Props and toys were used both during structured lessons and also during "game time", where children participated in interactive games or play experiences with each other. Such structured activities included one where children had to put on masks and use only their voice tones to communicate emotional meanings, and a computer game where children watched skits performed by children and then guess the emotion that was portrayed during the skit. During unstructured times, children were provided a variety of games from which they could choose to play with each other. These games were most often either cooperative games that required turn-taking behaviors, or games that provided props (such as a doctor's kit, a tool kit, or a pizza delivery set) so that children could assume roles in a pretend-play type of scenario.

Other noteworthy aspects of group leader contributions to children's learning were the use of the following teaching strategies used in multimodal presentations: Focused direct instruction, modeling techniques, and use of naturally occurring situations to teach and reinforce prosocial behaviors. Direct teaching took place in a structured and concrete manner, and each lesson began with a clearly stated objective for the children that was outlined by the manual.

Jake's mother noted the importance of the direct teaching approach in helping her child to develop social competence skills. She explained in a seven month post intervention correspondence: "Things like shaking hands, looking in the eye, counting to calm down- I think that we forget to actually teach that to our kids and they are all so easy, especially with repetition" [PII]. In other words, social processes that may develop naturally for many children needed to be taught to these young individuals, and group

leaders did so by breaking down some of these everyday basic processes into step-by-step lessons that often included scripts that could be internalized. For example, leaders introduced the lesson on carrying out greetings by explaining to children that greetings are something we do to show that we want to be friends with other individuals. Followed by the clearly stated objective of the lesson, leaders taught the greeting as a three step process: Step 1) Put out your right hand to shake, Step 2) Look the person in the eyes, and Step 3) Say "Hello, my name is ____. What's yours?" This lesson was reviewed at multiple times throughout the intervention program, and all the children memorized the steps during the sessions. Furthermore, several parents reported that their children were utilizing these step-by-step processes in their everyday environments.

Group leaders used modeling techniques with frequency during the sessions, and often in conjunction with direct teaching methods. In the greeting lesson described above, group leaders followed their explanation of the three steps in a greeting by acting out the steps together so that the children had a vivid picture of how the interaction should look. During the third phase of the intervention, children participated in many role-play activities in order to learn social concepts.

Group leaders always began each role-play by modeling it, so that children had a clear understanding of how the behaviors were expected to look. After modeling social scenarios for the children, group leaders would ask questions to ensure that children clearly knew the purpose of the role play. For example, during one session, group leaders modeled a scenario in which one person is on the phone, and the second person is being polite by keeping her voice low so as not to interrupt the phone conversation. Following the group leaders' acting out of the scenario, they asked the children: "What about me

was not polite?" Jake responded: "You were yelling in the phone". Kyle added: "You were interrupting". The group leader explained: "Right! Yelling, interrupting, those are really good points. So my voice was really loud. Could [the fellow group leader] hear who she was talking to?" Several children replied in unison: "No" [obs3].

After this discussion, children were given opportunities to act out the 'politeness' scenario themselves with the leaders, and with each other. During the role-plays, the graduate students coached the children on aspects for improvement, such as reminding them to look others in the eye, and to maintain a reasonable tone of voice. Modeling also took place during unstructured activities. For example, when children were set up to play together during a recreational activity such as playing a game or playing with play-doh, group leaders would prompt children to interact with each other by modeling certain phrases that they could use. For example in a game where children used a pizza delivery play set to pretend that they were ordering and delivering pizzas, Lenny had pretended to order a pizza, and the 'delivery people' were taking a long time to deliver it. A leader suggested to Lenny that he call to ask where his food was: "[Lenny], why don't you call them and ask 'Where's my pizza?!'" [obs2]. Lenny did just that. Then the leader told Kyle to respond by saying: "It'll be right there", and Kyle complied. As children took turns assuming different roles during this pizza delivery game, they incorporated this suggested 'script' into their dialogue with no further prompting. The fact that they so quickly internalized these phrases that were modeled by group leaders indicates that the children could quickly learn new prosocial ways to communicate with each other if it was modeled by a socially competent individual.

Group leaders also did a good job of using naturally occurring experiences to teach and reinforce prosocial behaviors. During snack time, they frequently searched for opportunities to encourage the children to communicate with each other. For example, when Lenny was looking for a cup, she prompted him to ask David to pass him one of the extra cups, even though the leader could have easily retrieved the cup for Lenny herself. At times when a child would get frustrated or angry in the group setting, leaders would use these incidences as opportunities to raise children's awareness of how the emotions are demonstrated, and how others should respond to such emotions. For example, during a board game, Jake became frustrated and walked away from the game. A leader asked the other children to identify how Jake was feeling at that moment, and they then discussed exactly how that anger was being demonstrated through body language, facial expressions, and voice. She then suggested that the children ask Jake to rejoin the game, as a way to encourage him to re-engage with the group. In response, Jake approached the group of children at the game, and explained in a sentence why he was angry. Following his explanation, he resumed his position in the board game. On another occasion, a child became angry and the group leaders used it as an opportunities to help the children be aware of the point of view of the angry person. Also, group leaders used angry incidences as opportunities to encourage the upset child(ren) to utilize prosocial strategies for communicating and coping with the anger. Specifically, when they noticed anger building in a child, leaders would remind them of the learned calming strategies that they could use to self-calm. Other strategies that were frequently reinforced through naturally occurring situations were the "one arm's length rule" for giving others space, and the steps for greeting another individual. One child approached a group leader from behind

and hugged her tight while she was trying to teach a lesson. At this point, the group leader asked the children "What is her not respecting?" [obs2], and a child responded that it was "personal space". She then asked the children to remind her of the decided rule for giving others space (one arm's length), and then to show her with their own arms. All the children responded to this brief lesson by each measuring the "personal space" between themselves and their peers as they were seated on the floor. Additionally, each child introduced him/herself to a friend of a group leader when they unexpectedly met in the hallway outside of the group room. Group leaders told me later that day that they were impressed with each child's ability to carry out the steps of the greeting when they met her friend for the first time.

Finally, group leaders worked hard to find frequent opportunities to compliment the children on demonstration of prosocial skills, whether they be subtle or obvious. When a child demonstrated good eye contact, group leaders verbally praised him or her. When children followed directions, or participated in activities, leaders generously gave out "sticker points". Compliments for ability to play together, to initiate interaction with others, to show use of self-calming skills, and for attempting to use good communication skills were frequently doled out by group leaders. These types of naturally occurring opportunities for learning seemed to help the children generalize the concepts that were acquired during the intervention program.

Parents as Teachers

While the children were not in sessions, parents carried the important responsibility of teaching their children to understand and use the social concepts in their everyday lives. After each session, I gave each parent a handout with a suggested

activity to complete with the child. These activities required use of strategies that group leaders used, such as direct teaching, modeling, teaching through naturally occurring situations, and interactive activities. The home-based assignments also provided the parents with teaching "tools" that could be referred to in the future once the intervention had been completed. One mother explained: "I mean, I've got, you know…thirteen home programs that I can refer back to not now but this summer and in the fall and whenever" [PI3, 131]. Parents were also given outlines of the group sessions during the beginning of the program, raising their awareness of group content, and allowing them to reinforce use of the taught social skills at home. One parent explained how the outline enabled her to help her child speak about the concepts that he learned during sessions: "Well, he knows that I know what they're doing and so we can talk about it and that's really helpful….So, because I know, because you've given us the outlines…I can ask him the right questions…" [PI2, 77].

Parents were asked to give feedback regarding their participation as teachers, which helped me to understand how they could best contribute in this capacity for their children. All parents believed that providing additional guidance for their children was a very important aspect of their children's process of learning social skills. For example, one parent expressed that coming to the sessions twice a week "isn't going to cut it", as she explained that:

> I need *stuff* to do. I mean, what am I going to do the other 23 hours while we're at home? So I'm happy to get these home activities. I wasn't sure…what I was going to do to keep this going, you know, for the week, or to, to emphasize what's

been taught. So I'm *real pleased* with the programs and I do them everyday. [PI2, 325]

This high level of parent motivation and interest in participating that all parents shared allowed me to be able to rely on them as instrumental "teachers" for their children. In taking the time to carry out these social skills activities with their young ones, parents modeled for them the importance of social competence. One parent explained that it was important that her child see that these issues were a priority to the parent. When I asked how her involvement had helped her child, she replied: "Well, I think it just…sort of puts a focus on something that people need to work on in general, their social skills….Uh, she knows that I'm involved…and that it's important for me that she knows how to do those things" [PI3, 94]. In general, parents felt positive about their involvement as teachers for their children. The home-based assignments, session outlines and routine feedback that I incorporated into the intervention facilitated their ability to help in promoting their children's social development.

The home-based activity sheets provided explanations of the activities in a clear and structured manner. Parents were even provided the exact language that was suggested for use when carrying out the lessons with their children. In using the clearly specified exercises and "scripts" that I provided in the activity sheets, parents provided their children with learning opportunities that were continuous with what was taught in the group sessions. Parents emphasized the utility in continuity of teaching methods for promoting their children's learning and generalization of skills during their conversations with me. For example, when I asked Jake's mom for her thoughts on the instruction that her son was receiving during phase two of the intervention, she focused on the need for

her son to have opportunities for follow-through on these lessons outside of sessions. She stated: "I guess, you know, suggestions on how to keep them following through with that, it's a big thing. But it's important, and, and, I guess just more reinforcing of it, it's great" [PI3, 15]. She continued to explain that it was important that other older individuals in her child's life needed to be in tune with her child's social development needs, and that it needed to be "modeled a lot" in all his environments. Furthermore, the concepts needed to be modeled in similar ways; because when there were differences in teaching of the same social concepts, it just came across as "all confused" for Jake. In a discussion about her involvement in home-based activities with her daughter, Lee's mother expressed that:

> I think that it's good that we're practicing things and trying to relay it over so that it flows from home, from one environment to another….I like the specific activities and I appreciate that, um, we know exactly what it is that we're supposed to be practicing….I like that they're very specific, and then that you sort of give use the words sometimes. Because I think that's very key, is knowing exactly what to say, and then it'll click. [PI2, 112]

In summary, parents viewed their teaching at home as necessary in providing continuation of teaching concepts to promote generalization of social competence skills. In addition, parents found it easiest to provide this continuity when lessons to be taught were clearly stated, and provided ideas for use of teaching language and strategies that were similar to those carried out by group leaders. Through their active involvement in teaching their children, parents came to better understand their children's teaching needs in two ways. First, it helped to raise their awareness of their children's social weakness

that required more focused guidance. For example, Kyle's mother explained that the home activities made her "more mindful" of her child's difficulties with the concept of Theory of Mind. She elaborated by providing the following description of an activity where this was evident:

> We were doing the homework where he was working on verbal expression and he was supposed to instruct me on how to do something and I was supposed to just listen and do exactly what he told… me to do. And, uh, he had me build the marble run….It's all these different plastic pieces you put together, so he did have to give me some really good instructions on how to do that. And um, it made me aware of the theory of mind that's lacking with him. Because at one point he was looking at the manual and he was like "Ok mom, put this piece there", and I was like "Ok [Kyle], but I can't see what you're pointing to, and I don't know what 'this piece there' means"….He really, in his mind he's seeing the picture. He knows what he's talking about so therefore I do. [PI3, 70]

Although Kyle had developed in many areas of social competence during the two years of his participation in the program, he continued to demonstrate difficulties with more abstract concepts such as Theory of Mind. Lee's mother also explained that the program had impacted her in that "It's actually made me think of what skills we need to target with her" [PI3, 125]. She went on to discuss that her daughter lacked skills in the area of communication, and that even just bringing her daughter to the group sessions made her aware that, compared to the other children, she was not "sharing" as much. The second way in which parents came to better understand their children's teaching needs was that they became more aware of specific teaching methods that worked best for their

individual children. For example, Lenny's mother expressed that her son preferred the home assignments that involved more concrete tasks with tangible items. She stated: "He prefers concrete tasks, and so cutting with [magazine] papers and then talking about it was a little more concrete, easier for him to do" [PI2, 65]. In addition, she felt that running through scripted scenarios on a repeated basis complimented his learning style well because "running through the scenarios" helped him to "memorize situations" and "memorize things to say" in common social situations. Jake's mother realized that her son needed to be specifically taught things that most parents "Don't think about to tell our kids. Even though we all know it we don't realize we need to say it to them" [PI2, 28]. For example, she explained "Well even the, you know, the counting to ten thing [strategy for self-calming]? We all know this but we don't sit down and say 'Okay, when you're upset you need to do this'" [PI2, 37]. Her son benefited from her deliberate teaching of seemingly ordinary social concepts in a broken down, step-by-step process.

David's mother's involvement in home activities also reminded her of the importance of teaching social concepts that were often overlooked or "forgotten about", and that she best served her child by consistently modeling prosocial behaviors for him in their daily routines. Her involvement also reminded her of the utility in reinforcing even the most subtle of social behaviors to promote David's social competence. Kyle's mother felt that, since her son had participated in the program during the prior year, he had already grasped many of the concepts that were being conveyed through the home assignments. He needed something that was "a step beyond" some of the more basic skills addressed in the assignments, and he most benefited when she served to provide opportunities where he could practice his social skills in real life situations. This new

teaching role was a more passive one, as opposed to that of last year, when she felt more compelled to "hover over" her son. This more hands-off approach that his mother took allowed her son to have social experiences that were more independent of her, which may have contributed to his developing leadership qualities.

Lee's mother explained that she was most helpful to her daughter by finding more natural ways that "fit into their environment" to teach and reinforce social concepts. For example, when they visited relatives, her mother would encourage her show them how she could do a proper greeting. These types of developments in parents' awareness of their children's social teaching needs helped them to gain clarification on their roles as teachers who could most effectively guide and catalyze their children's social development.

Parent's motivation in helping their children in the best way possible came through in their suggestions provided to me for how the parent involvement piece could be further enhanced in future social competence intervention programs. For example, all mothers expressed a wish to observe sessions so that they could "get a grasp" on how teaching methods should be carried out with their children, and on "what it looked like" in the sessions, as Kyle's mom expressed [PI2, 185]. Jake's mother explained to me that observing the teaching that took place in session would "Be really helpful because the stuff you send home is really wonderful, and we can repeat that at home; but to be able to see another adult do it with your own child and see *how* they do it. It would be *really* helpful" [PI168]. Lee's mother also thought that parents may benefit from taking advantage of the resources that they could provide for each other. Like many of the parents, she felt that the parent-to-parent communication that took place was a large asset

to the intervention, and that this may be a program aspect that I could "build". She explained: "I even thought of having a sharing day and bring books you know…just see what everyone else is doing" [PI3, 268]. These expressed parent interests in session observations and more structured sharing sessions demonstrated their willingness to learn new strategies to help their children and to go over and beyond the expectations of the intervention program to achieve this goal. These suggested opportunities for parents to learn may have complimented their use of the home activities by enhancing the effectiveness of their teaching.

In summary, group leaders and parents served to transmit social knowledge to their children because they possessed important teaching qualities and utilized valuable strategies to help their children acquire and apply new concepts. Through their calm and flexible approach to the group sessions, leaders were able to be responsive to the individual needs of the children, while also carrying out the general objectives outlined by the program manual. They used a variety of strategies such as modeling, direct teaching, sociodramatic play, and educational experiences through naturally occurring situations to promote the learning of each child.

Both parents and group leaders taught by using clearly stated, and often scripted lessons involving step-by-step actions that the children could learn and then apply to their everyday living. While the teaching of group leaders only took place during the intervention sessions, parents were responsible for helping their children to maintain and generalize the newly learned social concepts to their normal environments. Through their teaching, parents became increasingly aware of their children's social abilities, areas where they needed more focused instruction, and methods that worked best in teaching

social lessons to each unique child. The motivation of each parent to help in the continued teaching of the concepts introduced by this program was a huge asset to this study, and parents even went over and beyond what was expected of them by providing suggestion for how they could further improve in their roles as teachers for their children.

Chapter 8: Discussion

The purpose of this study was to examine the changes in social interactions of children who participated in a social competence intervention program for young children. A model explaining what happened through the course of this program was developed through the data. This model emphasizes the key roles that communication and teaching strategies played in fostering the social development of the five children. The first section of this discussion section recapitulates the theoretical orientation of this program, followed by a review of the three components of the explanatory model of changes as they relate to previous research. The second discussion section will address limitations of this study, followed by sections regarding the implications of this study, and directions for future research.

Theoretical Overview

This intervention was based on Dodge's (1991) information processing model of social competence, and incorporated neuropsychological understandings of the social deficits that are the hallmark of autism and Asperger's Syndrome. Because play is the primary medium through which children develop social behaviors (Vygotsky, 1978, 1986; Luria, 1976) sessions were carried out in a play therapy context (Sweeney & Homeyer, 1999). Providing a three-phased program structure modeled after Dodge's three social processing phases of encoding information, interpretation, and behavioral output was useful in meeting the needs of parents and children. Phase one (encoding social cues) found that children had varying abilities in detecting social cues, and were more easily able to identify cues related to basic and less abstract emotions such as anger and sadness. This finding suggests that these children possessed a less developed

understanding of abstract and complex emotions, issues that are related partly to the age and developmental stage of the children (Semrud-Clikeman & Hynd, 1991). The next two intervention stages targeted issues of social interpretation and behavioral output. They involved more abstract ideas that were "difficult to teach" according to parents, although these were aspects of social functioning in which parents more strongly felt that their children needed instruction.

Each phase of the intervention was designed to address the neuropsychological deficits described by the 'Theory of Mind' model (ie: Begeer, Rieffe, Terwogt & Stockman, 2003; Castelli, Frith, Happé & Frith, 2002; Steele, Joseph & Tager-Flusberg, 2003), the executive dysfunction model (ie: McAlonan, et al., 2002; Ozonoff & Miller, 1996; Rinehart, Bradshaw, Brereton & Tonge, 2001; Williams, Moss, Bradshaw & Rinehart, 2002), and the "weak central coherence" theory (Frith, 1989). Each of these theories focuses in on the perceptual and processing difficulties that children with autism and Asperger's possess, which lie at the core of their social skills deficits. Examples of program activities that incorporated these three neuropsychological models included those that focused on raising children's awareness of the mental states of others, on planning and carrying out appropriate social behaviors, and on integrating all aspects of a social stimulus when forming social understandings.

Overview of the Three-Component Model

Development

The changes that were observed through the course of this intervention program can best be described as a dynamic process of development through communication and teaching. Children's social development involved changes emotionally and behaviorally,

providing supportive evidence for the utility of an ecosystemic treatment model (O'Connor, 1999) in which multiple aspects of the child's functioning (such as emotional, behavioral, social and physical) are addressed. The types of changes observed in the young participants of this study are in agreement with previous research by Kenny and Winick (2000) and Josefi and Ryan (2004) finding that a play therapy treatment mode can lead to increased empathy, compliance, and decreased irritability in children with autism.

For two children, transformations were seen in their abilities to more effectively regulate anger and anxiety so as to become more adaptable, aware, and able to send appropriate affective messages in changing social situations. Halberstadt, Denham and Dunsmore (2001) assert that this type of affect regulation is an important component of social competence. Overcoming feelings of anger and anxiety allowed these children to more successfully interact with their social environment, as it was then possible to pick up new skills such as perceiving cues, understanding the intentions of others, and carrying out appropriate social behaviors. For one child, such an improvement in emotion regulation even led to improved academic success.

One emotional issue that frequently arose throughout the course of the intervention was the children's tendency to become easily upset during competitive situations. During such events, the children had problems adapting to new rules and unexpected outcomes. This issue was related to inflexible thinking styles and to the children's rigid and restricted patterns of behavior, which are defining features of HFA and AS (APA, 2000). Nonetheless, problems with handling competition provided the

instructors with opportunities to teach the children "sportsmanship skills" which would enable them to better cope with competition and to handle it with more success.

An important finding expressed during the interviews was the positive emotional experiences during the intervention program experienced by the children. It was reported that they became more connected with other children, formed stronger bonds with their parents, and experienced boosts in self-confidence. These emotional developments helped the children to enter into social situations more confidently, to develop genuine interests in others, and to increase their verbal communication. Furthermore, enabling positive emotional experiences for the children may serve to buffer the children from developing later emotional problems such as internalizing disorders (Petti, Voelker, Shore & Hayman-Abello, 2003), feelings of loneliness (Bauminger, Shulman, & Agam, 2003), and peer victimization (Little, 2002) that are common in individuals with HFA and AS. Parents also reported that their active participation helped them to feel more connected to their children and to learn ways to be more responsive to their children's social needs. This finding supports previous research stating that increased parent responsiveness through intervention involvement is related to enhanced social-emotional functioning in children with ASD (Mahoney and Perales, 2003).

The children's developing awareness of themselves and of other individuals in a social context during the time of the program lends support to Luria's (1976) and Vygotsky's (1978, 1986) theory that development can be shaped by children's interactions with their environment. Parents described the behavioral changes that they saw in their children and attributed the changes to the guidance and instruction provided through the program. Caretakers saw their children applying the skills they had been

taught, thereby strengthening their social competencies. For example, children became more attentive to the feelings of others, developed interest in others' input during conversations, improved use of body and voice cues to communicate meanings, became more capable of carrying out social conventions such as greetings, and developed some ability to integrate skills and knowledge to a point of social mastery.

These findings suggest that, while children with HFA and AS have rigid interests and behavior patterns, these limitations can be improved when children are provided with the right environmental resources. Furthermore, providing such opportunities in their everyday lives may help to strengthen the neuropsychological deficits that underpin these disorders. For example, Frith's (1989) "weak central coherence" theory suggests that individuals with autism tend to process information globally (or focus excessively on details rather than the larger picture); however, some children in this study became more adept at integrating various social cues in a global fashion during the course of the intervention. Some children also developed improved ability to carry out appropriate social behaviors, and to consider the feelings of others as different from their own. In summary, the results of this program indicate that multi-faceted deficits that children with ASD's share are not static and resistant to change. Rather, when these individuals are placed in situations where they can interact with others while receiving frequent guidance and feedback, they are capable of minimizing these deficits while building their social competence.

Communication of Children's Needs and Program Expectations

The open and frequent communication that took place among parents, children, group-leaders and myself was influential to the success of this program. As a qualitative

researcher, I served as a "human instrument" (Merriam, 1998) for collecting data, and my ability to develop an "atmosphere of trust" by establishing rapport through warmth and empathy was helpful for eliciting useful feedback, especially from parents. This communication allowed for program expectations to be known, and for better understandings of the unique needs that each individual child brought to the sessions. During phase one of the intervention, parents communicated to me their expectations for their children's development during the program. The process of my understanding these expectations and working with group leaders to incorporate them into the sessions was a most important aspect of the first intervention phase because it in many ways set the direction for the remainder of its course.

Objectives outlined in the original intervention manual met many of the parent's expressed expecations. For example, several parents felt that the ideal program for their children provided instruction in a group setting, so that children could interact with peers and practice skills in naturalistic situations. These expectations were fulfilled in the program's content, and are supported by previous research (ie: Kransy, Williams, Provencal & Ozonoff, 2005; Rogers,1998) stating that they are important components of effective social skills intervention programs for children with ASD. Furthermore, the most influential naturally occurring events for promoting social competence were those that involved play, which is a crucial mechanism for the development of social perception skills (Vygotsky, 1978), and the primary way in which children interact with each other. Teaching strategies also successfully addressed other parent expectations such as those for children's increase capacity to overcome negative emotions and to more readily initiate social communication.

While some of the parent expectations such as those described above as well as teaching children reciprocation and turn taking skills were already addressed by the program's manual, other expectations became integrated components of the program as a result of the parents' communication of them. Examples of these program components included lessons on maintaining appropriate 'personal space' with others, and steps for carrying out a greeting. One parent expectation that could not be met was the participation of typically developing children so that the children with HFA and AS could enhance their social competence through peer mediation type situations. Although this learning tool could not be provided in this intervention program, researchers such as Garfinkle and Schwartz (2002) state that opportunities to observe and imitate the prosocial behaviors of such peers can promote generalization and maintenance of new social skills.

Parents were given opportunities to communicate to me their children's specific needs for social development, as they related to each of the three phases of the program. This communication of needs helped me to understand the utility of the learning opportunities provided in each phase, and the children's social weaknesses that required special teaching attention. For example, several parents spoke about their children's problems with perspective taking skills, in hopes that aspects of the intervention would help to improve this area of social functioning. These children had difficulty understanding that other individuals think and feel differently than they do, and that one way to know this was to pick up on socio-emotional cues. Such parent reports of Theory of Mind problems are in line with previous research such as Baron-Cohen (1995), Beeger, Rieffe, Terwogt and Stockham (2003), and Castelli, Happé and Frith 2002)

connecting perceptual difficulties, which are linked to brain structures such as the amygdala (Shaw, et al., 2004) to problems with social interactions.

Parents also spoke about the unique ways in which their children's perseverative tendencies made it difficult for them to adapt skills to be appropriately used in changing/differing social contexts. In other words, children found it challenging to be flexible in modifying their behavior and communication styles to fit with the social context. Such difficulties are in line with research pointing out the cognitive rigidity of individuals with ASD (Ozonoff & Miller, 1996; Williams, Bradshaw & Rinehart, 2002), which are linked to frontal lobe deficits, that prevent them from being able to adapt their behaviors to the changing expectations and demands of their environments. Knowing the children's general needs for social development and the unique ways in which the children experienced these difficulties was helpful because it enabled me to work with group leaders in carrying out a program that bolstered social competence through the use of individually tailored teaching strategies.

This program was effective in promoting the children's social competence because it addressed the objectives set forth by the manual while also attending to the unique needs of the five children in the study. Furthermore, my ability to tailor the program to address these individual needs was possible primarily because of the interchanges between parents and myself. My discussions with parents seemed to positively influence their active engagement in their children's progress, perhaps because they recognized their input as a valued aspect of the program. Parents expressed appreciation for the fact that program content was shared with them in written form, because this facilitated their clearer understanding of how they could engage in similar

activities with their children at home. The frequent communication that I maintained with the adults involved in this program helped to keep parents and leaders updated and in sync so that they could deliver instruction to children in similar ways. Bronfenbrenner (1978) explained that adults in various aspects of children's lives are active agents of enhancing social competence. In this study, the adults involved in promoting change for the children were group leaders and parents. The patterns of communication that unfolded allowed for a sharing of information that helped them to carry out their roles as teachers in similar ways.

Children's communication with me confirmed the importance of providing enjoyable and appealing teaching material for promoting the children's learning, which is in line with research findings from Mastergeorge, Rogers, Corbett and Solomon (2003). Through my interviews with them, I learned that the children were most engaged in events that were novel and fun. My communication with group leaders also confirmed that the activities that were actively engaging and enjoyable for the children were most influential, as opposed to those that required excessive talking by the leaders. The children most often remembered those activities that were appealing to them, and it was these activities that elicited the most cooperation. In response to this information, I worked to routinely change out session play materials, and to develop activities around themes of interest to the children. For example, I incorporated the use of clay, an item that has been found to be an effective and appealing learning tool for children with ASD (Minnis, 2001), in an activity where children had to utilize social communication, social awareness, and executive functions.

Teaching

The form of teaching that occurred during this program significantly contributed to the social development of the children. Results indicate that the instruction children received in session together with the teaching that took place at home by parents yielded important changes in the young participants. Furthermore, although their teaching occurred in different environments (in session versus at home), leaders and parents taught concepts in similar ways. These findings support research from Kransy, Williams, Provencal and Ozonoff (2003) who stated that children's development was maximized when given multiple learning opportunities, and claims by Rogers (1998) and Bronfenbrenner (1978) that children require the active participation of adults, such as parents, in their lives to learn and develop.

With personal qualities such as calmness, genuine interest in the children, responsiveness and confidence, teachers were able to foster a therapeutic environment that was conducive to the children's learning and development. This finding is in agreement with previous ones that children will show more positive outcomes in supportive and positive environments (Ginott, 1999; Kransy, Williams, Provencal & Ozonoff, 2003; Landreth, 2002). In addition, cognitive behavior strategies similar to those used by Roosa (1995) in order to help children solve problems and avoid social failure or frustration proved to be hugely helpful to the children in this study. Teachers utilized a variety of effective teaching strategies that promoted social skills acquisition for the children. Children were able to most easily maintain and generalize the social concepts that were taught through multiple modalities and on a repeated basis.

Furthermore, parents felt that their involvement as teachers for their children was crucial in facilitating continuity of skills use into other settings outside of the group sessions.

The effective teaching modalities that were used in this study provide support for previous research on targeted social skills intervention. For example, Bauminger (2002) and Scattone, Wilczynski, Edwards and Rabian (2002) found that focused, direct instruction of new skills was an important initial step in helping children to acquire social skills. Similarly, this type of direct teaching was crucial in the acquisition of social concepts for the five individuals in this study. During the program, direct teaching took place in a structured and concrete manner, and each lesson began with a clearly stated objective for the children. Furthermore, these types of lessons were carried out by teaching concepts in step-by-step fashion, and at times children were even provided scripts that they could internalize and use in social situations. Parents felt that this type of direct teaching was a very important aspect of the training program, because these children needed explicit instruction of social skills that often develop naturally for typically developing children.

Vygotsky's (1978,1986) theory of the Zone of Proximal Development underscores the importance children's opportunities to imitate adult behavior in the process of learning and development. In this study, parents and group leaders frequently modeled prosocial skills so that children could imitate them during social interchanges. Instructors would model specific language and motor behaviors that the children would subsequently imitate during instructional activities. Furthermore, some parents emphasized that simply going through the effort of being involved in this program with their children modeled its importance and would motivate their children to place

importance on this work as well. Freeman, Sullivan and Fulton (2003) described modeling to be an important teaching component in sociodramatic play activities, especially when used with corrective feedback and reinforcement. In this program, children engaged in sociodramatic exercises in which instructors modeled scenarios, followed by the children imitating the role-plays and receiving feedback from group leaders. These types of activities were often enjoyable to the kids, perhaps because they closely imitated play, which is children's way of comfortably communicating personal meanings (Sweeney, 1997).

The current study found that sociodramatic play activities to be particularly useful teaching tools when they incorporated the use of toys. When this occurred, the play experiences became very similar to those that occur naturally in the children's daily environments. Lessons that closely resembled children's natural play environments were most enticing to the children and elicited the most attention and cooperation from them. Sociodramatic and other activities involving play with objects were effective learning tools for the children in this study perhaps because, as Piaget (1962) explained, the use of toys may allow children to more easily express and communicate abstract experiences. Vygotsky's (1978, 1986) Zone of Proximal Development additionally suggests that the tangible objects used during the program may have served as tools for pushing the children to think more abstractly and to grasp new concepts. Finally, the toys gave the children opportunities to interact with each other and to connect through a common interest.

Behavior management.

A behavior management system was utilized during all sessions to deal with difficult behaviors. This system involved providing "sticker points" for children when they demonstrated good behavior. The system was created in response to the pilot group, and previous study results (Guli, 2004) suggesting that it was a necessary tool for maintaining children's attention curtailing disruptive behaviors. This token economy system was usually effective in motivating the children to increase good behaviors such as attentiveness and cooperation while decreasing distractability and acting out.

The least effective teaching tool, when used in isolation, was the use of discussion-based lessons. During discussions, children would become restless and distracted to a point that at time even the token-economy system was not motivating. We did find, however, that when discussion was used in conjunction with a more hands-on activity, children were more engaged. For example, each session began with a sit down discussion while children ate a snack together. While the children ate, they were able to practice conversational skills such as reciprocation and eye contact with the guidance of group leaders.

Social development.

The children in this program each experienced development in their social functioning in unique and individualized ways. Each child experienced some level of development because of the two essential program components of communication and teaching. My presence as a point person who could communicate with parents, group leaders and children was helpful in maintaining an open flow of information regarding the children, and it allowed all involved individuals to work as a team in promoting the social success of the children. The teaching strategies outlined in the manual were

generally useful in promoting learning among the children; however they could be modified if needed to meet the individual needs of the young participants. Finally, the program's ability to flex and adapt to the unique situations of the children was a valuable quality that ensured success for each participant.

In summary, this study provides evidence that, despite the rigid interests and behavior patterns of children with Autistic Spectrum Disorders, they are capable of making strides in developing social competence when provided with necessary environmental supports. This study supports a program model that utilizes an ecological orientation and a flexible structure that can be tailored to meet the needs of the children. Such a program may provide them the type of support that enables them to explore new ways of behaving and thinking. Furthermore, these experiences of social development can enhance the sense of self-confidence and hopefulness that will contribute to improvements in self-esteem.

Limitations

While parents appreciated that they took active roles in contributing to their children's learning during the program, they conveyed to me that they would have liked to have been involved in additional ways that the program did not provide. For instance, parents would have liked to observe some of the session activities so that they could see first hand how teaching strategies should be carried out. Some also would have liked to receive more frequent, session-by-session individualized feedback on their children. A parent also expressed the possible benefits of providing parent sessions that ran concurrently with the children's sessions so that parents could discuss ideas, and exchange literature.

Confidentiality issues prevented parents from being able to observe live sessions. Nonetheless, I believe that providing video- taped examples with confederates acting out teaching strategies would have been useful in giving parents teaching models that could enable them to more effectively and more uniformly teach their children skills. Similarly, providing concurrent parent-focused sessions and more extensive individualized feedback would have been ideal enhancements for this program. Limited time and resources on my part prevented me from extending parent involvement in these ways. I was, however pleased that parents felt comfortable enough in communicating these wishes to me, and I took time to explain to them the reasons for why these needs could not be met during the present study.

The dearth of opportunities for learning through peer mediation was another limitation of this study. Mastergeorge, Rogers, Corbett and Solomon (2003) discussed that improvement, maintenance and generalization of social skills are enhanced when children with autism are able to interact with typically developing peers who are motivated and/or trained. One parent wished that this intervention could have involved "neuro-typical" children, so that her son's interactions with them would help him to solidify his skills. All of the children would have benefited from interactions with typical peers who could model the appropriate use of skills. Although resource limitations prevented me from making peer mediation an aspect of my intervention program, school settings would be ideal venues where such a component could be included.

Scheduling issues also proved to be a limitation of this study. The sessions took place during after school hours, and parents often had to drive considerable distances to bring their children. Children's behavioral and emotional states during the sessions may

have been affected by the fact that they were attending directly after a full day of school. Perhaps this scheduling issue contributed to some of the behavioral issues that arose during sessions. Some parents wondered about the possibility of carrying out this program at their children's schools, which lends further support for the utility of basing a program like this in the school setting.

Children may have benefited if this program included focused strategies for involving their teachers in the skills building process. Bronfenbrenner's (1978) ecological view of development suggests that teacher involvement would have further contributed in providing needed opportunities for skills maintenance and generalization. Nonetheless, when parents asked me what more they could be doing to help their children, I often encouraged them to share the program's ideas with teachers in effort to involve them in the process of building their children's social competence. One parent reported that her son's teacher was responsive to this type of sharing, and the sharing seemed to connect the parent and teacher in a way that allowed them to work as a team in dealing with the child's school-related issues.

This study is based on the experiences of a group of five children and their parents during the Social Competence Intervention Program for Young Children. Some limitations of this study are inherent in the qualitative nature of the data analysis. For instance, since the findings are based on the experiences of only a select few individuals, conclusions cannot easily be projected to the larger population of children with Autistic Spectrum Disorders. Although the findings of this study are in many ways concurrent with previous research on the topic, deductions must be made with caution given the issues regarding the internal validity of this study (do these findings capture what is really

happening?). It is important to mention, however, that significant steps were taken to ensure the trustworthiness of the data. Furthermore, since the behavior of the individuals in this study was not static, it is difficult to conclude that these results can be exactly replicated.

A final limitation of the study was my dual-role as data collector and evaluator. Despite extensive efforts to maintain objectivity during the analysis of my data, it would have been ideal to have another individual conduct interviews. Spending time with participants during the data collection process allowed me to bond with them, and the resulting relationships could have influenced my ability to maintain an unbiased stance during the analysis process. Although limited resources left me no option but to do both procedures myself, having a separate individual for data collection may have influenced the results of this study.

Implications of the Study

Implications for Research

An exploratory approach to examining the processes that took place in the intervention was very useful in uncovering key program aspects contributing the social changes observed in children. A perhaps most noteworthy outcome of this study was that the children's chronic deficits in social interaction (APA, 2000) are not static, and are responsive to intervention. For the children in this study, responsiveness was facilitated through the communication and teaching that took place during the program. It is also important to mention that the children in this study came from similar socio-economic and cultural backgrounds. They all attended similar schools, came from middle class families, and English was the first language for all participants. Factors such as these

should not be taken for granted, as they may have in ways been related to the outcome of the study.

The parents who participated in this program were highly motivated and responsive to my expectations of them. Without this level of involvement on the part of the parents, the children's success in the study would have been minimized. Although all of the children were similar in age, they were somewhat less similar in their levels of social functioning, and in their learning styles. In anticipation of these differences (Kransy, Williams, Provencal & Ozonoff, 2003), the study's intervention program was designed so that multiple types of learning opportunities could be provided to address the varying levels of the children's functioning. Another observation about the makeup of the intervention group was that its gender ratio of four boys to one girl reflected the gender makeup of the general population of individuals with ASD, which is indicative of role of genetics in its etiology (Frombonne, 2002).

A research study such as this requires a great deal of involvement and genuine interest on the part of the researcher. He or she must have a genuine interest in the population being studied, while also possessing a willingness to put forth the time needed in forming relationships and understanding the unique stories of each individual involved in the project. In an intervention study such as this one, the researcher assumes many roles, each involving focused attention and energy.

Implications for Practice

This study implies that social skills programs targeting individuals with ASD can be worthwhile in practice. One parent in the study expressed frustration that personnel at her child's school were not focused on enhancing her son's social development, as these

skills were in the mother's eyes as important as academic ones. This comment helped me to realize the need for such programs to be carried out in school settings. Implementation in school environments could enable the communication and collaboration among necessary personnel and caretakers that would be needed for maximizing the success of the children. Furthermore, schools could more easily provide children with ASD opportunities to engage in peer mediated learning experiences. Such opportunities for peer interaction would possibly facilitate the formation of friendships that are often difficult for these children to develop independently (Klin & Volkmar, 2003). Finally, children's involvement in such programs in the school setting may serve to decrease the incidence of common comorbid problems such as internalizing disorders, behavior problems, and attentional difficulties (APA, 2000; DuCharme & McGrady, 2003) that often stem from social dysfunction (Safran & Ellis, 2003) and may further contribute to school related problems.

If a program such as this were utilized in the school setting, resources would need to be made available to involve a trained individual in leading the group, and to acquire the variety of toys and materials needed for the program. The ratio of group leaders to children would have to be considered, with at least one group leader available for every 3 children. The room in which the sessions are conducted would need to be large enough to allow for the active movement, but small enough for group leaders to be able to manage the group with relative ease. A school-based intervention program would also alleviate scheduling stresses for parents, and it would resolve issues related to the children's fatigue from having to travel distances after school hours to attend the sessions.

Each parent in this study felt that her child's needs for social development were in great need of attention. Furthermore, these parents were willing to make great time commitments and sacrifices to ensure that their children could attend the sessions. These behaviors underscore the need for focused intervention from trained individuals, and suggest that its implementation in clinical settings may also be worthwhile. Implementation in a clinical setting may, however, limit the accessibility of services for those who are in need. For instance, if a psychologist implemented this program in her private practice, parents of the participants would need to be motivated enough to bring their children to sessions regularly. The services would require that parents have more abundant resources such as reliable transportation, financial means to pay for the services, and time to attend sessions. Given these possibly limiting factors in receiving treatment, social skills intervention programs that are implemented in clinical settings may treat a less diverse group that is not reflective of the more general population in need. Nonetheless, individuals pursuing such services in non-school settings may be more motivated and compliant with treatment.

Future Directions

Future research that more closely examines the communication and teaching aspects of this program may be useful in promoting better understandings of their roles in the process of development in the children. Specifically, what aspects of each component are most important in relation to social development? As Vygotsky (1978) explained that language is a key mechanism for development in children, a study that focuses in on the role of children's language during the process of the intervention would add further valuable insight into the communication aspect of the program. What could be done to

improve the communication and teaching so as to even further bolster the social advancement of the children? While thick, rich descriptions of the three components of development, communication and teaching were provided through this study, quantifying these variables would provide additional evidence supporting the validity and reliability of the Social Competence Intervention Program for Young Children.

Future studies may also benefit from evaluating the utility of incorporating a more involved parent piece such as parent sessions where ideas can be exchanged among caretakers. The inclusion of a school piece that involves collaboration with teachers may also positively influence the outcome of the study. Increased parent involvement as well as active teacher collaboration, would likely facilitate a higher level of maintenance and generalization by children, which would make a powerful contribution to research on interventions targeting ASD children.

It would also be beneficial to address whether the developmental processes that took place here would similarly occur for individuals of more diverse backgrounds. Vygotsky's (1978, 1986) socio-cultural developmental approach and Bronfenbrenner's (1978) ecological to development imply that cultural factors do play a role in the socio-developmental process that unfolds. In what ways would such factors influence the outcomes of the children? One way to diversify the participating children would be to make the program more accessible to children and their parents by implementing it in public school settings. Intervention research studies based in the schools would also be able to more easily elicit involvement from school personnel, and collaboration among adults in the lives of the children.

In conclusion, the results of this study lend promising support to the idea that children with Autistic Spectrum Disorders are responsive to carefully implemented group intervention programs. The findings in this study were encouraging, showing that social information processing abilities could be strengthened, resulting in development that was behavioral and emotional in nature. Development was made possible through dynamic interchanges with communication and teaching components of the program. Together, these three components (development through communication and teaching) interacted to form an explanatory model of the process through which children evolved socially. Hopefully future researchers will continue to better understand these three key aspects of the intervention program, as they served help each child achieve his or her own unique social success.

Appendixes

Appendix A.

Interview Questions

Parent Interview #1*: To be given during input phase of intervention.*

Introduction: Thank you for taking the time to talk with me today. This interview is part of my dissertation research, and the goal of these interviews is to gain insight into your perceptions of your child's social functioning, and of the social competence intervention group. There will be 3 parent and 3 child interviews. In today's interview, I will inquire about your thoughts and observations regarding your child's abilities, as well as your ideas about the intervention. This interview will take about 30-45 minutes. The interview will be tape recorded, however the content on the interview will be kept confidential and your anonymity is assured. You have the right to withdraw your participation, with no consequence to either you or your child. Do you have any questions? I will begin tape-recording now.

1. Tell me about your child.
    a. What does he/she like to do?

    b. Can you tell me about a time when he/she did [the things mentioned in part a]?

2. Now I would like to focus on social behaviors. When your child is with other children, what do you notice that he does well?

    a. Can you tell me about a time when he did [the things mentioned that child does well]?

3. When he is with other kids, tell me about the things that your child does not do well?

    a. Can you tell me about a time when he did [the things mentioned that child does not do well]?

4. The first four sessions of this social skills program focus on helping the children to pick up on social cues such as body language, facial expression and voice tone. What are your thoughts about that?

5. Tell me about your child's ability to pick up on social cues such as body language, facial expression and voice tone?

6. If you could create the ideal social skills program for your child, what are some things you think it should include?

7. What are some things you would like for your child to learn during this social skills intervention program?

8. Do you have anything else you would like to add?

Thank you for your time! SCHEDULE SECOND INTERVIEW WITH PARENT AT THIS TIME.

Child Interview #1**:** *To be given during input phase of intervention*

<u>Introduction:</u> Thank you for allowing me to talk with you. What you tell me is very helpful to me for a project that I am working on. Today I would like to ask you some questions about making friends. I am going to tape record our interview, so that I do not forget the good information you are going to give me. If you ever feel uncomfortable, just let me know and we can stop, ok? Let's begin.

1. Tell me about the things you like to do?

    a. Why do you like to do [things mentioned in previous question]?

2. Tell me about the things that you do not like to do?

    a. Why don't you like to do [things mentioned in previous question]?

3. Different people do different things to show that they feel happy, mad or sad. When you are playing with your friends, how do they show you that they are feeling:
    a. Happy?

    b. Sad?

    c. Mad?

4. Think about a time that you were playing with your friends, and you were feeling:
    a. <u>HAPPY</u>. What did you do to show you were happy?

    b. <u>SAD</u>. What did you do to show you were sad?

    c. <u>MAD.</u> What did you do to show you were mad?

5. Pretend you go to the park, and you notice some kids playing a game together. You want to play the game with them. What would you try to do to meet these new kids and play with them?

6. Pretend it is your first day at a brand new school, and you don't know anyone. You walk into your new classroom, and you begin talking to a group of kids who

want to be your friend. What would these children do to show you that they want to be your friend?

7. Is making friends easy for you, hard for you, or a little bit of both?
    a. Tell me about a time that making friends was [easy, hard, both]?

8. I know that you have just started coming to a group with some other children here at UT. What is your favorite thing about the group so far?

9. What have you learned in the group so far?

10. Do you have any questions that you would like for me to answer? Is there anything else you would like to tell me about what we discussed here?

Parent Interview #2: *To be given at Social Processing Phase of Intervention.*

<u>Introduction:</u> Thank you for taking part in this second interview. I have appreciated your participation in this study. Today I would like to talk more with you about your child and the social skills intervention. This interview will take about 30-45 minutes. I will tape record this interview as I did the first one. Do you have any questions? I will begin recording now.

1. How would you describe your child's ability to process social information (ie: take the point of view of others)?

2. The fifth through eighth sessions of our intervention are focused on helping the children to process social information. For example, we are helping them to interpret voice cues and to take the point of view of others during social interactions. What are your thoughts on this aspect of the intervention?

3. How has your child's behavior changed since the beginning of the intervention?

    a. How has it changed?
    b. Do you think these changes are related to the intervention?
    c. In what way do you think it is related to the intervention?

4. An important part of our program is the parent involvement in the home-based activities. Tell me your thoughts about the parent involvement piece of this program.

5. Tell me about the ways in which you feel your involvement has so far helped your child. (Prompt for specific examples of behaviors).

6. What are the most valuable things you think your child has learned through this program so far? (Prompt for specific examples of behaviors).

7. Is there anything else that you would like to add related to the things we discussed here today?

Child Interview #2: *To be given during phase 2 of the intervention.*

Introduction: Thank you for talking with me today. We are glad that you are part of this program. Today I would like to ask you some questions about your experiences so far in our groups. I am going to tape record the interview, so that I do not forget the good information that you are going to give me. If you ever feel uncomfortable, just let me know and we can stop, OK? Let's begin.

1. Your group leaders have been teaching you lots of things. Tell me about some of the things that you have learned in your groups.

2. Tell me about some of your favorite activities in the groups?
    a. Why are those your favorite activities?

3. What are your least favorite activities in the groups?
    a. Why are those your least favorite activities?

4. Are there any questions you would like to ask me?
    a. Is there anything else that you would like to say?

Parent Interview #3: *To be given at Output Phase of Intervention.*

<u>Introduction:</u> Thank you for taking part in this second interview. I have appreciated your participation in this study. Today I would like to talk more with you about your child and the social skills intervention. This interview will take about 30-45 minutes. I will tape record this interview as I did the first one. Do you have any questions? I will begin recording now.

1. The tenth through fifteenth sessions of our intervention are focused on helping the children to demonstrate proper behaviors during social situations. For example, we are helping them to show polite manners and to compliment others. What are your thoughts on this aspect of the intervention?

2. How would you describe your child's ability to demonstrate proper social behaviors (ie: compliment others or show good manners?)

3. Do you think your child's behavior has been affected by the instruction he is receiving in the intervention, yes or no? [*If parent answers NO, move on to question #4*].
    a. How has it changed?
    b. Do you think these changes are related to the intervention?

4. Tell me about the ways in which you feel YOUR involvement in this program has so far helped your child. (Prompt for specific examples of behaviors).

5. Do you feel this program has had in impact on YOU?
    a. Explain how this program has impacted you.

6. Tell me about the high points of your participation in this program?
    a. What are the low points of your participation in this program?

7. Describe anything about the program that you would change if you could.

8. How do you feel that this program may help your child in the future?

9. Is there anything else that you would like to add related to the things we discussed here today?

Child Interview #3: *To be given during phase 3 of the intervention.*

<u>Introduction:</u> Thank you for talking with me today. We are very happy that you have been a part of this program. Today I would like to ask you some more questions about the groups. I am going to tape record the interview, so that I do not forget the good information that you are going to give me. If you ever feel uncomfortable, just let me know and we can stop, OK? Let's begin.

5. Your group leaders have taught you some new things during the past two weeks. Tell me about some of the things that you have learned in your groups.

6. Some kids feel that they can use what they learned in the groups to help them at school and with their friends. How do you think the things you have learned in the groups will help you when you are at school and with your friends?

7. Last time we talked, you told me about your favorite activities in the group. Tell me about some new activities that are your favorites?
    a. Why are those your favorite activities?

8. Last time we talked, you told me about your least favorite activities in the group. Tell me about any new activities that are your least favorite activities in the groups?
    a. Why are those your least favorite activities?

9. Are there any questions you would like to ask me?
    a. Is there anything else that you would like to say?

Appendix B.

Parent Feedback Form

Date: _____

Please fill out this form as a way to share your thoughts and experiences about your child's participation in the Social Competence Program for Young Children.

Circle your answer:

1.How would you rate the quality of YOUR experience as a participant in this social skills group thus far?

4	3	2	1
Excellent	Good	Fair	Poor

2. Is your child receiving the type of service you hoped for?

1	2	3	4
No, definitely	No, not really	Yes, generally	Yes, definitely

3. To what extent has our program met your needs?

4	3	2	1
Almost all of my needs have been met	Most of my needs have been met	Only a few of my needs have been met	None of my needs have been met

4.If a friend were in need of similar help, would you recommend our program to him or her?

1	2	3	4
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely

5. How satisfied are you with the amount of help you have received?

1	2	3	4
Quite dissatisfied	Indifferent or mildly dissatisfied	Mostly satisfied	Very satisfied

6.Have the services you received helped you to deal more effectively with your child's problems?

4	3	2	1
Yes, they helped a great deal	Yes, they helped somewhat	No, they really didn't help	No, they seemed to make things worse

7.Have the services you and your child received helped how you and your child get along?

1	2	3	4
No, they seemed to make things worse	No, they really didn't help	Yes, they helped somewhat	Yes, they helped a great deal

8. Have the services you and your child received helped your family feel more hopeful about the future?

1	2	3	4
Yes, definitely	Yes, I think so	No, I don't think so	No, definitely not

9.In an overall, general sense, how satisfied are you with the services you have received?

4	3	2	1
Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied

10.If you were to seek help again, would you come back to our program?

1	2	3	4
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely

Please provide us with any other comments about the services you are receiving, or about recent noteworthy experiences that you and your child have had. _____

_____

Appendix C.
Observation Checklist

1. **The Physical Setting:** Observe physical environment, context, and spatial layout of the room.

2. **The Participants:** Who is in the scene, how many people, and roles. Is anyone not here who would be expected to be present? What are the relevant characteristics of the participants?

3. **Activities and Interactions:** What is going on? How do the people interact with the activity and with one another? How are the participants and activities interrelated, from the observer's point of view?

4. **Conversation:** What is the content of conversations in this setting? Who speaks to whom, and who listens? Use direct quotes if possible. Note silences and nonverbal behaviors that add meaning to the interactions.

5. **Subtle Factors:** Unplanned activities, symbolic meanings of words, nonverbal communication s.a. dress and physical space, note what does not happen if something should have happened.

Appendix D.
Group Leader Feedback Form

DATE: **SESSION #:**

1. Overall, this session went:

   1: Very well 2: Somewhat Well 3: Somewhat Badly 4: Very Badly

Please briefly elaborate on the above answer.

2. Please use the 5-point scale to answer the following questions.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	**2**	**3**	**4**	**5**
As I think about today's session, I feel:					
Energized	**1**	**2**	**3**	**4**	**5**
Frustrated	**1**	**2**	**3**	**4**	**5**
Hopeful	**1**	**2**	**3**	**4**	**5**
Optimistic	**1**	**2**	**3**	**4**	**5**
At my wits end	**1**	**2**	**3**	**4**	**5**
Doubtful	**1**	**2**	**3**	**4**	**5**

For each child who was present at the group today, please describe what you noticed to be the child's biggest strength and biggest weakness, as demonstrated during today's session. Please list a strength and a weakness for each child. If the child was not present for this session, please note this in the space provided.

Child 1
Strength: _____
_____
Weakness: _____
_____

Child 2
Strength: _____
_____
Weakness: _____
_____

Child 3

Strength: _____

_____

Weakness: _____

_____

Child 4

Strength: _____

_____

Weakness: _____

_____

Child 5

Strength: _____

_____

Weakness: _____

_____

Appendix E.
IRB Forms

IRB# 2001-04-0022

Informed Consent to Participate in Research

The University of Texas at Austin

You are being asked to participate in a second research study that involves more elaborate interviews and observations based on your participation in the first study. The interviews will be audio-taped and some of the intervention sessions will be videotaped (with your permission). This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or his/her representative will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study:

Assessment of social competence in children with developmental disorders

Principal Investigator(s) (include faculty sponsor), UT affiliation, and Telephone Number(s):

Margaret Semrud-Clikeman, Ph.D. 471-4407

Funding source:

Not applicable.

What is the purpose of this study?

This goal of this study is to collect indepth interviews and observations of parents, children, and group leaders who participate in a social competence intervention program for young children, ages 6-8. The intervention groups will meet for 90 -minute sessions in the University of Texas Education Building over the course of 12-14 weeks. The intervention includes activities that are game-like in nature which involve interpretation and recognition of emotions, role-playing situations, and discussing a DVD that shows children playing together. Child participants and their parents will be interviewed to determine their evaluation of the intervention

procedures. These interviews will be audiotaped and the tapes will be erased after the information is coded.

What will be done if you take part in this research study?

In order to evaluate the effectiveness of the social competence program for young children, the researcher will use several methods to gather information regarding parent/child perceptions and experiences of the intervention.

Interviews: In-depth interviews will be conducted in order to gain a deep understanding of participant experiences, perceptions and feelings. Each child participant and his/her primary caregiver will complete formal interviews on three occasions: during the beginning, middle and ending phases of the intervention. These interviews will take place at the University of Texas, at a time that is convenient for the parents and children. They will last about 30 minutes for each child and 30-45 minutes for each parent.

Audio Taped Recordings of Interviews: Each interview will be audiotape recorded. In order to protect the privacy of the participants, the cassettes will be coded so that no personally identifying information is visible, and they will be kept in a locked cabinet at the University of Texas. The tapes will be heard or viewed only for research purposes by the investigator her associates. The tapes will be erased once they have been transcribed.

Video Taped Recordings and Child Observations: Observations will be based on video taped viewings of 3 previously recorded intervention sessions.

Fieldnotes: Group leaders will keep running logs of noteworthy events/interactions during each session.

Parent Feedback Forms: During each session, parents will complete a brief survey that will provide the researchers with feedback regarding the intervention group.

What are the possible discomforts and risks?

There are no known discomforts or risks for participants at this time.

What are the possible benefits to you or to others?

It is hoped that your participation will facilitate a better understanding of the important elements in social intervention programs for children with social deficits. Your child's participation in this program may help to strengthen his/her social skills, and it may provide parents strategies to further facilitate social development.

If you choose to take part in this study, will it cost you anything?

There are no financial costs for your participation in this study.

Will you receive compensation for your participation in this study?
What if you are injured because of the study?

No compensation will be provided for you in this study. Participants' involvement is not associated with physical risk. No treatment will be provided for research related injury and no payment can be provided in the event of a medical problem.

If you do not want to take part in this study, what other options are available to you?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin.

How can you withdraw from this research study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact: Margaret Semrud-Clikeman at (512) 471-4407, or Elizabeth Portman at (512) 232-2295. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact Clarke A. Burnham, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, 512/232-4383.

How will your privacy and the confidentiality of your research records be protected?

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsors also have the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

Videotapes of session recordings and audio tapes of interviews will be kept coded so that no personally identifying information is visible, and they will be kept in a locked cabinet at the University of Texas to protect the privacy of participants. Once the study is complete, the tapes will be erased or destroyed.
Will the researchers benefit from your participation in this *study* *[beyond publishing or presenting the results]*?

The information you give through your participation in this study will be used to facilitate the development of a social skills intervention manual for children. This manual will serve as a guide for clinicians and educators who work with children with social deficits in group settings.

Signatures:

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

_____

Signature and printed name of person obtaining consent **Date**

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

_____

Printed Name of Subject **Date**

_____

Signature of Subject **Date**

_____

Signature of Parent or Legal Guardian **Date**

_____

Signature of Principal Investigator **Date**

I hereby give additional permission for the video and audio taping of research and interview sessions. I understand these tapes will be used only for educational purposes and that my confidentiality will be protected.

Printed Name of Subject	**Date**
Signature of Subject	**Date**
Signature of Parent or Legal Guardian	**Date**
Signature of Principal Investigator	**Date**

Assent form for child between the ages of 6 and 12

ASSENT FORM

Assessment of Social Competence in Children with Developmental Disorders

I agree to be in a study about how children understand emotions and friendships. This study was explained to my parents and they said that I could be in it. The only people who will know about what I say and do in the study will be the people in charge of the study and my parents.

In the study I will be asked questions about how I feel about myself and my friends. I will also be asked about my experiences in the groups.

Writing my name on this page means that the page was read (by me/to me) and that I agree to be in the study. I know what will happen to me. If I decide to quit the study, all I have to do is tell the person in charge.

_____	_____
Child's Signature	Date
_____	_____
Signature of Researcher	Date

CONSENT FORM

TITLE: Assessment of social competence in children with developmental disorders

You and your child are invited to participate in a project about social competence. My name is Margaret Semrud-Clikeman. I am a faculty member in the Department of Educational Psychology at the University of Texas at Austin. In cooperation with the Austin Independent School District, we are trying to learn the best ways to evaluate children suspected of having difficulties with social skill development. More importantly, however, we are looking for better and more effective ways for parents and teachers to help students with social skill problems. We are asking parents of children who do not have these problems to participate in this study to determine how these children differ from children who do have social competence difficulties. Your child's teachers have indicated that he or she may qualify for this project and we are seeking your permission to have your child participate. Your child will be one of several hundred asked to participate in the project over several years.

The purpose of the study is twofold. First, we will conduct a comprehensive assessment to determine whether your child has social skills difficulties or not. This assessment is a longer version of the one school districts use to determine eligibility for special education services. This assessment will take place in the School Psychology assessment rooms at the University of Texas or at your child's school. We will also ask you to have your child's teacher complete two rating scales. We will deliver these to the teacher. Parents will also be asked to complete an interview regarding their feelings of competence in the navigation of the public schools' special education referral and placement process. Second, we will provide students with interventions designed to improve their academic performance and their social skills. As with assessment, all interventions are extensions of techniques offered in schools. Children participating in the intervention will also be asked to complete a measure of social perception before and after the intervention to help determine effects of the intervention. Children participating in the intervention will also be observed by graduate students in two different settings (P.E. and lunch/recess) both before and after the intervention to measure changes in their social skills.

If you decide to participate, each step of the assessment and intervention phases of the project will be described to you in detail. We encourage you to ask any questions you may have regarding why certain tests are administered, how long each phase will take, and how often we will see you and your child. In addition, we will explain possible risks and discomforts as well as the benefits of the project.

All information gained from the project will–with your permission–be made available to your child's teachers so that they are aware of all of the information we have. Any information that is gathered can also be made available to other professionals (doctors, therapists, private tutors), but only with your written permission.

You decision to participate or to refuse to participate in this project will in no way adversely affect your child's present school program or placement. By signing this Consent Form, you are indicating that you have read and that understand this project and that you agree to participate. You may withdraw your permission at any time after signing this form should you choose to discontinue participation in this study.
If you have any questions about this project, or should you have questions after the project begins, please call us at (512) 471-4407. You may keep the copy of this consent form.

Signature of Participant	Date
Signature of Parent of Legal Guardian	Date
Signature of Investigator	Date

ASSENT FORM

TITLE: Assessment of social competence in children with developmental disorders

I agree to participate in a project that is interested in improving how students learn in school and get along with others. I understand that this project has been explained to my parents or guardian and that he/she has given permission for me to participate. I understand that I may decide at any time that I do not wish to continue this study and that it will be stopped if I say so. Information about what I say and do will not be given to anyone else.

I understand that I will be given a number of tests and that I will be asked questions about how I feel about myself and my family and friends. I also understand that it is all right if I decide to stop participation in this study at any time.

When I sign my name to this page I am indicating that this page was read to (or by) me and that I am agreeing to participate in this project. I am indicating that I understand what will be required of me and that I may stop the study at any time.

Child's Signature	Date
Signature of Investigator	Date

Appendix F: Pilot Interview Questions

Parent Pilot Interview Questions

1. How would you describe your child's ability to interact socially with peers compared to other children his age?

2. What are his social strengths?

3. What are his social weaknesses?

4. Please describe your child's ability to recognize the emotions of others during social interactions? For example, how well does he recognize when others are irritated/angry?

5. How well is your child able to differentiate between positive and negative social responses from other children?

6. Describe your child's ability to express his own emotions? For example, describe his ability to show emotions with facial expressions and other nonverbal body cues.

7. Also describe how your child shows emotions verbally.

8. How would you describe the appropriateness of your child's expression of emotions compared to other children his age?

9. Describe the appropriateness of your child's behaviors when he interacts socially with others. Think about his behavior during common social situations such as meeting a person for the first time, playing a game with a peer, having a conversation with another person. (Probe for strengths and weaknesses).

10. In what ways are you satisfied with the social intervention program in which your child participated?

11. Describe any things that you might like to see improved?

12. If you could provide the ideal intervention program for your child, what would it look like?

13. If we asked your son what he thought of this program, what do you think he would say?

Child Pilot Interview Questions

1. What is your favorite thing about coming to groups?

2. What is your least favorite thing about coming?

3. Tell me what you think about the activities that we do in groups?

4. Different kids say that they learn different things from participating in groups like this one. Tell me a little bit about what you have learned?

5. Two years from now, what do you think you will remember most about the groups?

Appendix G.
Outline of Intervention Sessions

Social Competence Intervention Program for Young Children, Spring, 2005

(Sessions One-Four: Input)

Session One—Establishing Group Rapport

Materials

- *Name tags*
- *Snacks*
- *Posterboard and markers for group rules*
- *Emotion Cards*
- *Magazines, glue, paper for collages*
- *Point poster and rewards*

Objectives:

- *Introduce group and each other*
- *Establish group identity through discussion and cooperative activities*
- *Establish group as a place where it is safe to share feelings, express personalities and ask questions*
- *Create group guidelines*
- *Normalize difficult feelings people might experience when meeting new people through discussion about making friends*
- *Help children to foster friendships with each other.*
- *Inform parents that they will be asked to participate in at-home activities with their children.*

Sessions Two & Three—Emotional Knowledge

Materials:

- *Snacks*
- *Games and toys*
- *Emotion cards*

Objectives:

- *Discuss feelings and how they affect our lives (discussion is in group setting, during snack).*
- *Review vocabulary of different feelings, and explain importance of noticing how others are feeling*
- *Teach relaxation techniques for stress meltdowns*
- *Engage in cooperative play activities where new skills can be practiced*

Session Four— Focusing Attention

Materials:

- *Snacks*
- *Games and toys for cooperative play*

Objectives:

- *Discuss how focusing attention is an important part of getting along with others*
- *Practice focusing attention and self-control, both visually and auditory*
- *Increase trust and cohesion among group members*

(Sessions Five- Eight: Processing Social Information)

Session Five—Interpreting Vocal cues

Materials:

- *Snacks*
- *Toy masks*
- *Games*

Objectives:

- *Experiment with using vocal expression in different ways in front of peers*
- *Discuss how we also know how people are feeling by their tone of voice*
- *Practice saying the same sentence with a variety of emotions*
- *Engage in tasks that evoke reciprocal conversation skills.*

Session Six–Point of View

Materials:

- *Snacks*
- *Toys and Games*
- *List of emotions/situations for "act it out game"*
- *Parent Assignments*

Objectives:

- *Engage in reciprocal social activities*
- *Discuss what it means to think/see from another person's point of view*
- *Practice understanding the connection of thoughts, feelings and behaviors*
- *Practice accepting and building on others' ideas in preparation for role drama activities*

Session Seven—Point of View, Continued

Materials:

- *Snacks*
- *Toys and Games*
- *Parent Assignments*

Objectives:
- *Engage in reciprocal social activities*
- *Discuss what it means to think/see from another person's point of view*
- *Practice understanding the connection of thoughts, feelings and behaviors*
- *Practice accepting and building on others' ideas in preparation for role drama activities*

Session Eight—Putting Cues Together

Materials
- *Snacks*
- *Materials for sociodramatic play sequences*
- *Games*

Objectives:
- *To have children practice in integrating all social cues and apply them to sociodramatic play activities*
- *To help children to apply "point of view" concepts to play scenarios.*
- *To teach children the importance of attending to various social cues in order to decide how to respond to social situations.*

(Sessions Nine-Fourteen: Output)

Session Nine—Be Polite

Materials:
- *Snacks*
- *"Be Polite" Handout*
- *Toys and Games*
- *Parent Assignments*

Objectives:
- *Engage in reciprocal social activities*
- *Discuss and role- play polite solutions to social situations.*
- *Continue to practice perspective-taking techniques that are important in building empathy in social interactions.*
- *Promote social interaction among children in the group.*

Session Ten: Being Polite, Continued

Materials:
- *Snacks*
- *Toys and Games*

- *Parent Assignments*

Objectives:
- *Engage in reciprocal social activities*
- *Discuss and role- play polite solutions to social situations.*
- *Continue to practice perspective-taking techniques that are important in building empathy in social interactions.*
- *Promote social interaction among children in the group.*

Session Eleven: Being Polite, Continued

Materials:
- *Snacks*
- *Toys and Games*
- *Parent Assignments*

Objectives:
- *Engage in reciprocal social activities*
- *Discuss and role- play polite solutions to social situations.*
- *Use coaching and dramatic play techniques to practice behavioral techniques that are important in engaging in social interactions.*
- *Promote pro social interactions among children in the group.*

Session Twelve: Politeness continued, relaxation strategies revisited

Materials:
- *Snacks*
- *Toys and Games*
- *Parent Assignments*

Objectives:
- *Engage in reciprocal social activities*
- *Discuss and role- play polite solutions to social situations.*
- *Continue to practice perspective-taking techniques that are important in building empathy in social interactions.*
- *Promote pro social interactions among children in the group.*
- *Promote use of relaxation strategies during stressful times.*

Session Thirteen: Verbal Communication

Materials:
- *Snacks*
- *Show and tell items brought by children*
- *Toys for pretend play scenarios*

Objectives:
- *Practice using language to promote interpersonal interactions.*
- *Practice orienting attention to others during interpersonal interactions.*

- *Practice complimenting others.*
- *Use naturalistic play experiences to practice verbal and nonverbal social interaction skills.*

Session Fourteen: Teasing vs. Complimenting Others

Materials:

- *Snacks*
- *Markers, Paper, Tape*
- *Parent Assignments*

Objectives:

- *Raise awareness of the negative impact of teasing, and normalize negative feelings associated with being teased.*
- *Understand the positive impact that complimenting others has on our relationships.*
- *Practice complimenting one another.*
- *Prepare for last session.*

Session Fifteen: Preparation for Last Session

Materials:

- *Snacks*
- *Magazines and other materials for "picture for your partner"*
- *Toys/games for interactive play experiences*
- *Parent Assignments*

Objectives:

- *Reinforce newly formed friendships by engaging children in an "others oriented" activity where they make an art project for their partner.*
- *Process feelings about groups ending soon*
- *Have children prepare memoirs of their experiences during groups.*
- *Prepare for last session.*

Session Sixteen: Goodbye and Closure

Materials:

- *Paper, pens*
- *Certificates with names of kids*
- *Props for demonstration activity if needed*
- *Food for party*

Objectives:

- *Discuss intervention experience*
- *Give positive feedback to peers*
- *Celebrate time spent together*
- *Demonstrate a favorite activity to parents*

- *Say goodbye*

Appendix H.
Leader Training Outline

Training Session #1

1) Leading Groups

Intro to skills groups
Roles of leaders—our goals
Issues involved in Co-leading groups
General guidelines when working with groups of kids
Praise incremental improvements
Never leave children alone (even for an instant)
Liability issues
Creating a safe place emotionally—how to reinforce this
Confidentiality

2) Review of behavior management strategies

Cooperative discipline—the four goals of misbehavior
Reinforcement strategies
Issues specific to autistic spectrum disorders

Training Session #2

3) Review of manual

Intervention model of social perception
Structure of each session
Session by session review
Examples of activities

Training Session #3

4) Practical matters

Field Journals
Assignment of responsibilities to group leaders (materials, video camera, etc.)
Supervision/Treatment integrity

Appendix I.

Table of Data Collection Process for Social Competence Intervention Program for Young Children

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9-10**	**11-12**	**13**	**14-16**
Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey	Parent Survey
Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes	Group Leader Notes
	Observ -ation				Observ -ation			Observ -ation (10)			
	Parent &Child Interview 1				Parent &Child Interview 2				Parent &Child Interview 3		

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