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**EXAMINING PARENTAL PERCEPTIONS AND EXPERIENCES REGARDING
SOCIAL SKILLS INTERVENTIONS FOR CHILDREN WITH AUTISM
SPECTRUM DISORDER**

BY

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DISSERTATION

Submitted in Partial Fulfillment of the Requirements
for the Degree of

Doctor of Philosophy

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DEDICATION

To my son, Trazon Jimerson, the most amazing individual I know and have been blessed to have in my life that also embraces my belief system related to everyone having opportunities for inclusionary and social opportunities. As a young child you embodied qualities of openness towards others around you regardless of diversity, abilities, and disabilities. You are the epitome of how society can embrace diversity, acceptance, love, and equality among all individuals. Thank you for all the love, encouragement, and support you have provided me throughout this journey. You were and will always be my number one supporter as I will be yours. I know it was a long and tough road for us, especially being a single-working mother while continuing my dream of receiving a Ph.D. I also know this educational endeavor has not been easy on you due to the countless hours in participating in classes, writing papers, doing homework, conducting research, and completing my dissertation. Always remember my motto to you “You can do anything. If Momma can do it, you can do it.” Continue to believe in yourself as you are an amazing, bright, talented, and respectful young man that has so much to offer to the world. I love you, my son!

I also like to dedicate this journey to my family, friends, and colleagues that have been by my side throughout this long journey. You have all supported me and provided me motivation to finish my Ph.D. I would especially like to provide a special dedication to my father, Joseph Perish. Although he is no longer with us, he continued to provide me strength throughout this journey and encouraged me to finish. He will not be with me as I

graduate, but he will be with us in spirit, and I know he will be celebrating with us. I would also like to pay tribute to my brother, Myron Perish who has been my superhero throughout the years in supporting me in every means imaginable. In addition, I would like to thank my sister, Denise Bristlin and my niece, Amanda Dahms for always being positive and supportive of me throughout this process for my son and myself. I would also like to dedicate this journey to one of the most amazing educators I have been blessed to work alongside throughout the past decade, Paul Howard. This educator has gone above and beyond in educating individuals with ASD, providing social opportunities, and believing in their fullest potentials.

Lastly, I would like to provide dedication for all the wonderful colleagues, mentors, and leadership teams that I have been able to work with for the last 20 years. I have learned so much from each and every one that I have worked with. I hope we can continue to provide the best supports possible for family members and individuals with ASD.

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**EXAMINING PARENTAL PERCEPTIONS AND EXPERIENCES REGARDING
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A.A., B.A., M.A.,

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ABSTRACT

Individuals with autism spectrum disorder (ASD) and their families often engage in various interventions to address social skills as this is a core area of development and often described as a challenge for individuals with ASD. Although interventions may vary in service delivery and the interventionists' training and background, all encompass social skills interventions. The purpose of this study was to conduct a qualitative investigation to explore the experiences and perceptions family members had while their child participated in social skills interventions. Five family members participated in this study which included a questionnaire and an individual interview. Qualitative analyses of data were examined related to experiences and perceptions. Prominent themes were discovered including challenges with access to and scheduling of social skills interventions as well as benefits of the interventions. Overall, the participants found value in the services and continued services despite the challenges they experienced to obtain and secure social skills interventions.

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Chapter 1

Introduction

Chapter 1 provides an overview of social and emotional developmental theories, skill development, and various disabilities that may be impacted in the areas of social and emotional development. In addition, this chapter discusses social outcomes (i.e., relationships, employment, education) and critical life-long components related to acquisition of such skills. This chapter also presents a review on diagnostic aspects for individuals with autism spectrum disorder (ASD) and social skills challenges that individuals with ASD may face. Lastly, various social skills interventions and elements are outlined.

Developmental disabilities, diagnostic processes, and educational treatments and interventions have been studied in various fields to increase educational and social outcomes for students with disabilities. Certain developmental disabilities include deficits and/or difficulties in the areas of social and/or communication skills. Such disabilities include emotional and behavioral disorders (EBD), oppositional defiant disorder (ODD), autism spectrum disorder (ASD), social pragmatic communication disorder, and social-emotional distress and disorders. With increased awareness and access to diagnostic evaluations educators and ancillary staff members are submerged in the development of educational and behavioral plans that address social-communication outcomes. Furthermore, educational staff and family members are encouraged to use evidence-based practices that best meet the individual needs of the student.

Social-emotional development is critical for success in educational, employment, and relationship aspects throughout life. Bellini (2006) expressed “social interaction

skills are critical to successful social, emotional, and cognitive development” (p. 5). This perspective places additional emphasis on other areas of development that can be affected by high-quality programming. Also, students who have social-emotional disorders or issues are at greater risk for not being included in social arenas, such as school environments, and can become targets for social isolation or bullying. Additionally, more research has been devoted to the field of early childhood development and social-emotional health due to the Educate America Act (1994). Perry et al. (2007) stated:

The group of young children who are at risk for early school failure is sizeable – somewhere between one fourth and one third of all young children. The risk factors for poor social-emotional development fall into four categories that have been repeatedly identified in research. (p. 3)

The categories for children at risk for poor social-emotional development were described by Perry et al. (2007) including poverty, poor educational and childcare experiences, parental risks, and behaviors, and diagnosed emotional and behavioral problems. The number of students identified as having social distress and disorders are substantially high when adding these categories to students with disabilities. This factor makes it increasingly important to devote attention and resources to social skills interventions and treatments. Bellini (2006) added:

Our lives are filled with thousands of social interactions and relationships that make up our social network, or support system. Many of these relationships are rich and meaningful; others are not so fulfilling. Regardless, our social network provides the foundation for later social relationships and career opportunities. (p. 5)

This perspective lens alludes to the validity of social skills for building and sustaining social relationships. Building a foundation of importance helps administrators, educators, ancillary staff, and family members prioritize goals related to social-communication skills. This concept can prove to be challenging in educational settings that place high priority in academic skills, such as literacy, mathematics, science, and social studies due to high stakes testing. However, without social skills a student may find it difficult to participate in social settings.

Understanding the complexity of navigating a social world is invaluable for professionals working with individuals with disabilities or those who are at risk for social-emotional disorders. “Lack of prosocial behavior during early childhood is the *single best predictor* of mental health problems during adulthood” (Elksnin & Elksnin, 2000, p. 27). Understanding the life-long implications of social skills increases the value of teaching such skills to students who are vulnerable.

There are numerous social skills and nuances that develop naturally during the early childhood years for children who follow typical developmental trajectories. These social skills are frequently overlooked or taken for granted, such as joint attention, social reciprocity, shared enjoyment, and social communication skills. However, attention arises for caregivers, family members, and professionals when children and students have difficulty exhibiting such skills that appear to develop naturally for others. Understanding the contextual aspects of social communication skills, definitions, theories, and interventions can help family members, educators, and professionals better understand the individual and the path to take in providing appropriate supports. These aspects are not subject only to the field of special education, but rather expanded to educational

systems due to the fact that many students face challenges with social-emotional well-being and skills.

Autism spectrum disorder (ASD) is defined by qualitative impairments in social communication, social interactions, and restricted, repetitive behaviors (American Psychiatric Association, 2013). The National Research Council (2001) stated “Autism is a disorder that is present from birth or very early in development that affects essential human behaviors such as social interaction, the ability to communicate ideas and feelings, imagination, and the establishment of relationships with other” (p. 11). Social-communication skills are impacted and are core deficits of individuals with ASD. Koegel and Koegel (2006) suggested that due to the difficulties in communication and social interactions children with autism have challenges interacting with adults and peers.

In the most recent report by the Centers for Disease Control and Prevention (2021) it is estimated that one in every 44 children aged 8 years across 11 communities was identified as having ASD. Given this estimated prevalence rate more family members, interventionists, and educators are discovering the importance of systematic social skill interventions.

Diagnostic Criteria and Social-communication Deficits

Gaining knowledge regarding the diagnostic criteria and core deficits can create a basis for understanding one’s abilities, challenges, and supports needed to provide the best services and supports. Interventionists, providers, and educational staff members should be made aware of the diagnostic criteria of children receiving a diagnosis of ASD, but also be made aware of the core deficits, levels of supports, and ways to provide interventions for individuals with ASD and their families.

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association, 2013) changed the diagnostic criteria for ASD that currently includes two categories (i.e., deficits in social communication, social interactions and restrictive, and repetitive patterns of behavior and interests) along with specifiers of support to quantify the levels of support needed. DSM-5 also includes aspects of sensory processing issues that have not been previously captured in the diagnostic process even though they are a commonality for individuals with ASD. The DSM-5 provides detailed criteria and developmental markers in social communication, which evaluate social-emotional reciprocity, nonverbal communication utilized in social interactions, and deficits in social relationships.

Many researchers have dedicated their professional career focusing on early identification and core deficits of ASD including the area of social communication.

Wetherby (2006) stated:

Research has identified social-communication deficits in children with ASD that can be organized into two major areas: (1) the capacity for joint attention, which reflects difficulty coordinating attention between people and objects; and (2) the capacity for symbol use, which reflects difficulty learning conversational or shared meaning for symbols and is evident in acquiring gestures, words, imitation, and play. (p. 3)

Social pragmatic communication disorder is another disability that is centered around similar deficits. This disorder is defined by the DSM-5 which includes difficulty with the use of verbal and nonverbal communication. Students may display difficulties with using communication for social situations, matching communication to the context,

following the rules for communication, and making inferences and interpretations (American Psychiatric Association, 2013).

Early identification of a student's abilities and deficits can help to prioritize goals. Focusing on social interventions may lead to successful outcomes in other areas of development and help the student in inclusive environments. The National Research Council (2001) stated:

Research that has documented changes in the communication skills of children with autism falls into three categories organized by the goal of the intervention: functional communication training to replace challenging behavior, increases in initiation of verbal and nonverbal communication, and increases in the core communication skills. (p. 54)

These social communication skills can be taught through the implementation of systematic instruction and intervention programs that are designed to target such skills.

History of Social Developmental Theories

Early childhood researchers and psychologists have provided a basis for understanding typical social development. The major contributors were described along with their developmental theories to illustrate the manner in which social skills have been assessed and promoted throughout time. Reviewing and understanding the seminal work of early contributors of social developmental theories helps an educator or practitioner appreciate the longevity of related research. Some theories are comprised of stages contributing to the idea that milestones and skills develop in a sequence and build upon each other. Other theories are based on the interactions and responses of the child and caregiver. Historically, these theories have a strong basis of typical development, but can

be used in understanding the basis of social development even with students with disabilities.

Lev Vygotsky

Lev Vygotsky studied the aspects of play in the area of social and socio-cultural development. Vygotsky developed theories such as the zone of proximal development and contributed to sociocultural theory. The zone of proximal development utilizes the approach of assessing development and providing the supports needed to acquire the next developmental skill that the individual maybe capable of learning. Socio-cultural theory encompasses the contextual environments that individuals are members of which help formulate and contribute to their perspectives and learning experiences. Berk and Winsler (1995) described socio-cultural development suggesting “One of the main tenets of Vygotsky’s theory...is that people are products of their social and cultural worlds and that to understand children, we must understand the social, cultural, and societal contexts in which they develop” (p. 1). Both theories studied by Vygotsky can be associated with students with disabilities.

Erik Erickson

Erik Erickson was a developmental psychologist who developed a theory regarding psychosocial development from infancy and through adulthood. Erickson’s model included the following developmental stages: “(a) trust vs. mistrust; (b) autonomy vs. shame; (c) initiative vs. guilt; (d) industry vs. inferiority; (e) identity vs. role confusion (f) intimacy and solidarity vs. isolation (g) generativity vs. self-absorption or stagnation; and (h) integrity vs. despair” (Charlesworth, 1992, p. 6). This theory examines aspects of social-emotional development that begin during infancy. Maier

(1965) studied the early theories of development and suggested that the relationship between a child and his mother establishes the foundation of their identification and can provide a sense of belonging.

In regard to social emotional development Erikson also placed emphasis on the stage of initiative vs. guilt contributing to the identification of self during the early childhood years. This developmental stage impacts social interactions with others. Maier (1965) discussed that during or at most of the child's life at a time when their social environment challenges them, they should be encouraged and have opportunities to be active and purposeful. Initiation within a social environment may be challenging for students with social difficulties and disabilities adding to the level of importance of this stage.

Jean Piaget

Jean Piaget was a developmental psychologist and philosopher who examined social development through the use of play. Piaget identified three stages of play, often fundamental for early social interactions, as practice play, symbolic play, and games with rules (Charlesworth, 1992). Maier (1965) suggested that play occupies much of the child's day and replicates experiences through play. Piaget also attributed characteristics within play that included assimilation and accommodation that stem from the functions of imitation and play (Phillips, 1969).

This theory identifies the importance of accommodation of imitation skills to develop or assimilate play skills. Maier (1965) also concluded that play was in the form of the child acting out real life situations and tasks. The emphasis of developing play schemas was woven throughout Piaget's theories. Maier (1965) stated "Play reflects

much of the evolutionary intellectual development of these early childhood years” (p. 131-132). Through these play experiences children are expected to develop social relationships, which can enhance cognitive development and increase the necessary social communication skills needed to successfully navigate the world around them.

Robert Sears

Robert Sears was a psychologist who examined child psychology and developed a theory regarding social learning, which involves three phases based on early learning, behavioral systems, and motivational systems (Charlesworth, 1992). Within Phase I early learning develops based on meeting the innate needs of food, comfort, and personal comfort. During Phase II, the child becomes acquainted with behavioral systems stemming from family-centered learning experiences which includes dependency, aggression, and sex role learning (Charlesworth, 1992). During Phase III, the child learns from the motivational systems from family engagement, which fosters the development of independence versus dependence and management of aggression (Charlesworth, 1992). This theory focuses on how children develop their social understanding from their family members initially and later develop social understanding from other relationships.

Maier (1965) also referenced this by stating “Socialization involves learning to communicate - above all to relate verbally to others. Socialization also teaches the child behavior which can serve as nonverbal communication in his interpersonal relationships” (p. 191). This theory also includes how motivation plays a role in developing independence, learning, and along with how a child manages emotions. Maier (1965) described play as the opportunity for the child to explore and express various emotions through play activities, such as joy, frustration, and anger. The expression of emotions

can influence social relationships in a positive or negative manner. If a student does not understand the social appropriateness of emotions, they may be misunderstood or have difficulty sustaining relationships.

Albert Bandura

Albert Bandura was a psychologist who developed social learning theory that placed an emphasis on vicarious, symbolic, and self-regulatory processes found within psychological functioning (Bandura, 1977). This theory focused on the aspects of social learning which examines how people learn from observing behaviors, attitudes, and behavioral outcomes (Alderman, 2008). This illustrates that learning begins with the experience itself resulting in positive or negative effects of the action (Bandura, 1977). Children make observations from their environment, which is also dependent on the reaction from others including family members and educators. Bandura (1977) suggested that learning is not acquired through observation alone, but also through an approximation of the action through modeling, refinement of the skill through corrective adjustments, and informative feedback.

Bandura's theory on social learning stresses children learn from the people around them and use imitation to express their learning and level of understanding through observed behaviors. Bandura (1974) explained "The views about the nature of man conveyed by behavior theory require critical examination on conceptual and social grounds" (p. 859). The use of imitation and critical examination may be more present in children who are typically developing but may be difficult for children with social difficulties due to the act of observation and replication of social behaviors. Bandura (1977) expressed this difficulty saying, "Observational learning is hindered by deficits,

and increased by improvements, in its component functions” (p. 29). Drawing from this perspective students who have difficulty with learning from the environment alone may need increased supports and opportunities to improve social skills.

Abraham Maslow

Abraham Maslow was a psychologist who is known for his development of Maslow’s Hierarchy of Needs, which included a five-stage model of physiological needs, safety needs, belonging and love needs, esteem needs, and self-actualization needs (Maslow, 1987). Within this model there are needs that must be met including a sense of belonging which can increase self-esteem. Students with disabilities, especially social disabilities, also need to feel accepted by the community and peer group.

Carl Rogers

Carl Rogers was a psychologist that developed a personality theory which examined how a child develops a positive self-concept (Charlesworth, 1992). This perspective involves a process that a child goes through in developing their own perceptions of themselves that can be influenced by others. Rogers (1969) described this concept as:

I think of it as prizing the learner, prizing his feelings, his opinions, his person. It is an acceptance of this other individual as a separate person, having worth in his own right. It is a basic trust—a belief that this person is somehow fundamentally trustworthy. Whether we call it prizing, acceptance, trust, or by some other term, it shows up in a variety of observable ways. (p. 109)

This development of a positive self-concept is also acquired through the manner in which they perceive and talk about their emotions. This concept includes the ability to

talk about emotional experiences to build self-concept and self-actualization. Also, when children feel love from their parents and educators they participate in positive interactions with peers as they develop and move towards self-actualization (Charlesworth, 1992). The development of self-concept and self-actualization may pose challenges for students with social difficulties.

These concepts require a student to self-reflect and modulate their perspectives based on the learning from social experiences. Rogers (1969) also provided insight on the acts of learning and teaching. He stated, “I see *the facilitation of learning* as the *aim* of education” (p. 105). Rogers (1969) described qualities of facilitated learning including the realness or genuineness of the facilitator towards the learner, providing acceptance, prizing, displaying trust, and having empathic understanding towards the student. These qualities can improve the relationships between the educator and their students along with providing a positive model of social skills.

Sociocultural Factors, Legislative Actions, and Public Policies

Sociocultural and ecological systems may differ between students. Some children are members of a family and community that place value and emphasis on individualistic perspectives while others may be raised to value social interactions and social groups. Brown et al. (2008) expressed that families have their own perspectives and ideals that may shape the social competence of the child. These differences can provide insight on how a student may respond to authority figures, solve conflict with peers, initiate or sustain conversations, or utilize nonverbal communication skills.

Odom (2002) was a part a project called The Early Childhood Research Institute on Inclusion (ECRII) and reviewed the influences of cultural expectations between child

relationships and family interactions. This was an initiative to determine strategies for inclusive experiences for children. This initiative found the following components were necessary to create inclusive practices for young children: identification of the peer culture, understanding family and program personnel interactions, supporting students and family members from various backgrounds, becoming culturally competent, implement appropriate assessment and goals, value diversity, and avoid cultural conflict (Hanson & SooHoo, 2008).

These sociocultural factors are important when professionals consider assessments, educational goals, and interventions as they may not match the perspectives and values of the student's community that extend beyond the educational ecological system. Rivera and Rogers-Adkinson (1997) suggested "Familiarity with the parents' views of their children's social behaviors and their children's social difficulties is necessary to understand the context from which the behavior may be derived" (p. 79). They provided a framework that encompasses cultural sensitivity and social skills interventions and suggested: "assess the behavior to determine the cultural influences, integrate cultural beliefs and values into the social skills program, promote cultural understanding, and alternate techniques when using role playing" (p. 78-79). These are valuable principles when teachers and practitioners determine the actions to take in providing interventions.

Brown et al. (2008) also provided tips for educators to become culturally competent, which included examination of one's own background, gathering information regarding sociocultural and cultural perspectives, and applying the knowledge to practice. These guidelines can aid in assessing the hierarchy of social skills and determining

appropriate intervention programs that are best suited for the student and their sociocultural membership. Koegel and Koegel (2006) provided elaboration:

Recognizing that the diverse values, child-rearing practices, and behavioral expectations of CLD families may affect the implementation of behavior supports plans, many PBS researchers have developed excellent guidelines for using culturally responsive practices during functional assessment and behavior support plan development. (p. 125)

Interventionists and educators need to consider sociocultural and linguistically diverse students they are serving and educating. Whether developing behavioral support plans, providing assessments, or implementing interventions, educational team members and interventionists should be socially and linguistically responsive and sensitive. This would include making sure the social skills interventions are reflective of the cultural norms of the child and family.

Legislative initiatives have been developed to identify young children and students with disabilities providing them with educational safeguards through various federal laws and regulations. Initial laws and regulations included the Elementary and Secondary Education Act (ESEA) of 1965, which provided resources for students with disabilities or that were disadvantaged. Various laws, regulations, and reauthorizations followed including the Education of the Handicapped Act of 1970, the Education for All Handicapped Children Act (ECHA) of 1975, and the reauthorization of ESEA also known as No Child Left Behind.

Individuals with Disabilities Education Act (IDEA) was first approved in 1990 and has since been reauthorized, most recently in 2004. IDEA continues to guide current

educational systems by providing regulations for an individualized education program (IEP), free and appropriate public education (FAPE) in the least restrictive environment (LRE), and appropriate evaluations. The law also requires educators to assure the student's access to the general education curriculum and achievement assessments at both the state and district level. In addition, federal regulation, 34 C.F.R. sec. 300.226 (b) (1) states that "school districts must ensure that scientifically based research drives their professional development activities and services." This legal requirement holds educators responsible for providing scientifically based instruction when providing educational programming, services, evaluations, and supports for students with disabilities.

The Individuals with Disabilities Education Improvement ACT (2004) requires assessment and development of present levels of academic achievement and functional performance (PLAAFP) which guides the development of goals and educational programming based on the needs of the student. In addition, Yell and Drasgow (2007) suggested the IEP team should address the following areas in the PLAAFP: (a) physical, health, and sensory status, (b) emotional, behavioral, and social development, (c) information from a student's parent, general education, and special education teachers, (d) prevocational and vocational skills, and (e) the results of an independent evaluation (p. 199). The components of assessment and development of PLAAFP address the overall development of the student including social and emotional development. In addition, PLAAFP components include the need for individualized programming to support the specific needs of the student.

Public policies, national standards, and recommendations have provided frameworks and guidelines for administrators, educators, and family members to evaluate

efficacy of services and interventions. The National Research Council (2001) was a committee assigned by the U.S. Department of Education's Office of Special Education Programs to evaluate research from scientific, theoretical, and policy frameworks to develop recommendations for educating children with autism. The committee developed recommendations for educating children with ASD that included teaching the following educational skills and objectives: (a) social skills, (b) expressive, receptive, and non-verbal communication skills, (c) functional communication system, (d) engagement and play, (e) fine and gross motor, (f) cognitive skills including symbolic play and academic skills, (g) replacement behaviors, and (h) independent and organizational skills (p. 218). These recommendations provide a hierarchy of skills that should be addressed with students with ASD, which included social, communication, and play skills even above academic domains.

Additional federal programs stemming from public policies have been developed to identify and support young children to increase development and monitor at-risk children. These programs include the following: Early Head Start and Head Start, mental health services, early intervention, and maternal and child health programs (Perry et al., 2007). These programs were also designed to promote social and emotional development in preparation of entrance into educational settings.

Jones and Bouffard (2012) emphasized the importance of social and emotional learning (SEL) and the need to have these skills addressed in school systems. The authors stated that SEL is frequently defined as effortful control, emotion regulation, prosocial skills, and aggressive behavior problems. The educational programs used include bullying prevention, character education, conflict resolution, and social skills training.

Jones and Bouffard (2012) also discussed four principles in creating school-based approaches: (1) continuity and consistency are essential for SEL skill development, (2) social, emotional, and academic skills are interdependent, (3) SEL skills develop in social contexts, and (4) classrooms and schools operate as systems (p. 8). This systematic approach should be available at a global level extending beyond students that are at risk or have disabilities. Also, with the increase in bullying, school violence, crimes, and school shootings there is an absolute need to increase awareness and implementation of social skills interventions in school systems.

The aspects of sociocultural, legislative, and public policies influence the way students with disabilities are taught and supported in classrooms across the country. Sociocultural aspects help educators understand cultural and familial norms, values, and perspectives that mold the student. Legislative regulations include student's rights and safeguards that ensure a quality education that promotes the right to a meaningful and productive life. Regulations also inform the consumers of special education and increases accountability. Public policies provide a process for change and forward movements to decrease stagnation in the field.

Current Implementations of Social Skills Interventions

Many schools implement school-wide approaches to combat bullying, increase prosocial behaviors, and teach character traits utilizing large group social skills instruction programs. School districts typically adopt generalized social skills interventions and individually monitor progress of implementation. Sansosti (2010) discussed character education programs and suggested that skills taught in these programs are usually under the realm of social-emotional learning, violence prevention, conflict resolution,

mediation, and character qualities. The training may involve school-wide meetings, buddy programs, and family and community events (Sansosti, 2010).

Large Group Social Skills Interventions

Large-group social skills interventions combine academic instruction regarding specific social skills (Sansosti, 2010). Instruction can be incorporated as a whole class and taught in small increments daily. Sansosti (2010) discussed implications for students with disabilities:

Although not meant intentionally to remediate the social skills deficits of students with ASD specifically, many large-scale, school-based SST programs can assist with reducing the number of social skills deficits experienced by these students, as well as increase their overall behavioral functioning because students with ASD (as well as students with other disabilities such as Attention-Deficit/Hyperactivity Disorder and/or Social Anxiety Disorder) need to be taught the skills needed to succeed in school, no matter how routine the skill may appear. (p. 261)

Lessons implemented in a large-scale approach can be taught through curricula to guide the educators in scripted lessons and activities. However, additional social skills training may be needed to break down the skills and provide more explicit direct instruction for students with ASD and other disabilities.

Small Group Social Skill Interventions

Some schools employ more specialized approaches that include small-group interventions. These interventions are social skills groups, peer-mediated approaches, integrated play groups, or peer buddies (Sansosti, 2010). There are various types of

curricula that can be implemented in small social skills groups for students with ASD and other disabilities. These programs can be used to guide the process of teaching social skills for interventionists and educators.

Social Skills Groups. Major components of social skills groups include systematic instruction, creation of lesson plans to teach target skills, instructional procedures, evaluation of efficacy, progress monitoring, and adjustment of lessons based on student data (Sansosti, 2010). Some social skills groups incorporate the use of peers to model the target skills, while other social skills groups include the use of various strategies, such as Social Stories™, comic strip conversations, video modeling, and power cards. They are also described in the individual strategies section of this paper.

Peer-mediated Approaches. Peer-mediated interventions emphasize building friendships, acceptance of others, knowledge of disabilities, and providing models of social-communication skills. This approach is designed to teach the peers that are typically developing ways to initiate, respond, and interact with students with disabilities. The peers and students with disabilities are supported by the facilitator to elicit social skills as practiced in the training sessions. Students with disabilities and ASD receive individualized instruction associated to the skills also taught to the peers. Sansosti (2010) stated “Overall, most peer-mediated approaches provide structure for students with ASD, which adds a sense of predictability” (p. 266). Peer-mediated interventions are also conducted in naturalistic settings to increase the likelihood of maintenance and generalization.

Integrated Play Groups. Integrated play groups focus on providing an environment that supports play, social interaction, and communication with other

children that are typically developing (Sansosti, 2010). Peers are taught skills to engage and interact with the student with ASD in play-based settings and activities. Small groups are created to include peers and a child with ASD along with an adult to facilitate interactions. Integrated play groups are more frequently used with young children with ASD but could be beneficial for other children that exhibit social difficulties.

Peer Buddy Systems. Peer buddy systems are a natural support for students with disabilities and require minimal to no training. Peer buddies model skills they have mastered and can be utilized to support classroom behaviors and academic skills. Sansosti (2010) suggested using peer buddies has less effect on social and communication skills due to the lack of specific training. To increase successful social communication training this approach may need to be paired with social skills training or direct teaching models (Sansosti, 2010).

Individualized Social Skill Strategy

Lastly, schools also implement social skills strategies that are based on the needs of the individual students. These strategies typically include Social Stories™, comic strip conversations, video modeling, and power cards. These strategies are designed to give the student relevant information about the social situations, increase social initiations, or target specific skills (Sansosti, 2010).

Social Stories. Gray (1998) described Social Stories™ and comic strip conversations as:

...*social stories*, short stories that describe social situations, and *Comic Strip Conversations*, an instructional process that illustrates shared information with simple drawings, symbols, and colors. These social interventions are based on a

philosophy of improved social skills through improved social understanding, and a shared responsibility for social success. (p. 168)

Gray and Garand (1993) stated “The rationale behind social stories is based on the growing understanding of social cognition in autism, and a belief that this understanding should be reflected in how social behavior is taught to students with this disorder” (p. 2).

The components of writing a Social Story™ begins with the educator first identifying the target behavior and examining contextual aspects that need to be addressed. The Social Story™ is designed to target specific skills and meet unique needs of the student. The Social Story™ is written following a guideline including types of sentences used and ratio of sentences. The story is then read by or to the student prior to the social experience or demonstration of the desired behavior.

Comic Strip. Comic strip conversations are written with the student to provide them with ideas to navigate social situations. This can be a creative way to discuss and provide a visual framework for the social scenario. This strategy uses a visual representation of a social situation which may help a student process information in a visual modality (Heflin & Alaimo, 2007). The educator can facilitate the conversation and help the student draw conclusions. The educator can also help the student identify alternatives behavioral outcomes which may lead to future success.

Video Modeling. Video modeling is another strategy used to teach skills, such as social, academic, and self-help skills (Sansosti, 2010). This strategy is connected with the social learning theory developed by Bandura with the premise that children learn from observing and imitating the actions of their surroundings (Alderman, 2008; Sansosti, 2010). It relies heavily on the visual presentation of a behavior, task analysis, and

repetition. Video modeling includes the following steps: identification of the target skill/behavior, conducting a task analysis, creating a script or plan, training a peer model or adult, and recording the video (Sansosti, 2010). After the video model is created by recording a demonstration of a specific skill or sequence of skills it is presented to a student with the disability. The student is then asked to imitate the behavior/skill depicted on the video model. Since the video is a fixed demonstration of the skill it can be replayed during the acquisition phase. Teachers might be familiar with this teacher modality as they are frequently taught in teacher preparation courses. These are also strategies that are commonly utilized with learners with disabilities.

Power Cards. The Power Card strategy incorporates the student's interest to provide motivation on ways to interact in social situations. Power cards provide the student with visual information written on a small business card. The front of the card displays the student's interest or favorite character while the back of the card holds information regarding a specific situation or skill and ways the character would solve the problem (Sansosti, 2010). Power cards are created by identifying the particular interest or character the student likes along with determining the desired behavior. A script or sequence of events are written out to reference the character or interest (Sansosti, 2010). The student is presented with the power card and can participate in role playing with the teacher or others. This strategy is used as a proactive approach to prepare and prime the student of social events and situations while including motivational factors.

Implications for Practice

Future implications for interventionists, educators, and family members would include using a systematic approach in designing, assessing, and providing social skills

interventions to support the child with ASD. A tiered approach encompasses this framework in providing various levels of support for students with disabilities (Sansosti, 2010). Using a systematic approach allows the student to receive a variety of supports stemming from school-wide systems, small group supports, and individualized programming, and direct instruction for social skills development.

Using an approach that targets varied methods will broaden the opportunities to teach and elicit social skills from children receiving social skill interventions. The result of a tiered approach can create more inclusive environments, increasing social opportunities with peers, family members, team members, and others within their social circle. This is also an important aspect as more children are feeling social pressures, social isolation, and possibly affected by bullying.

Interventionists, educational staff members, and administrators would need to understand the direct value and implications of social skills connected with other domains, such as academics, ability to be part of a learning community, increased success in school, and future endeavors for students that struggle with social skills. This would demand more time spent on social skills instruction throughout the academic day. This would need to be supported at the district and school levels so that educators could plan for instructional time. Additional resources should be given to family members about the interventions being provided or the social skills taught so family members can be involved and implement the strategies they feel are most important for. In addition, professional development opportunities would also be an important component as team members need to receive training on a variety of approaches and methods.

It is important to involve families in social skills assessment and monitoring; because family members know their child the best; however family involvement is frequently missing. Social skills interventions are not a one size fits all approach; therefore, assessment is essential in placing the student in programs that best meet students' needs. Effective data collection used to drive decisions would give the educational staff members information regarding effectiveness of the approach, need for more modifications or adaptations, and progress monitoring for IEP goals. This type of data collection goes beyond anecdotal notes and would be matched with the target behavior being addressed through the intervention.

In an ideal world, interventionists, educational staff members, and families would be able to work as a multidisciplinary team to conduct assessment, implement interventions, and monitor progress in order to provide the child with a seamless approach to social skills interventions. This would include dedicated time to function as a team and receive support from educational administrators and provider agencies. This would also include training opportunities to ensure treatment fidelity using the appropriate intervention specific to the student's needs. And lastly, social skills interventions should include family members and peers to increase social opportunities to help children with ASD to enhance their social skills and generalize those skills.

Conceptual Frameworks of Social Skills Interventions

There are three main frameworks that guide social skills interventions, which include behavioral, developmental, and social systems perspectives. Interventionists and educators tend to form their own perspectives favoring one or more frameworks when providing interventions and practices. Interventionists and educators also use their

perspective lens to evaluate a student's level of development, assess their acquisition of skills, and monitor progress. These factors are also influential during collaborative experiences due to the fact that professionals may tackle situations from varying perspectives.

Behavioral Theories

Behaviorism is a philosophy that examines the science of behavior, basic research, such as experimental analysis, and developing technology to improve behaviors (Cooper et al., 2007). "Applied behavior analysis can be fully understood only in the context of the philosophy and basic research traditions and findings from which it evolved and remains connected today" (Cooper et al., 2007, p. 7). B. F. Skinner was a psychologist who is known for his work regarding behavior analysis, respondent and operant behaviors, experimental analysis, and behaviorism (Skinner, 1974). Operant conditioning is the manner in which a person deals with the environment and the consequence of the behavior increases the likelihood of occurrence (Skinner, 1974). He also suggested problems in the world could be solved if people understood human behavior (Skinner, 1974) indicating the importance of behaviorism. Skinner was also influential in examining the aspects of verbal behavior noting that it is a behavior that is reinforced by other people and later the speaker himself (1974).

Educators are frequently responsible for using behavioral principles to determine responsiveness to interventions, rates of behavioral improvements or declines, and analyzing behaviors, which all fall under the umbrella of behaviorism. Baer et al. (1968) stated the following to describe applied behavior analysis (ABA):

Analytic behavioral application is the process of applying sometimes tentative principles of behavior to the improvement of specific behaviors, and simultaneously evaluating whether or not any changes noted are indeed attributable to the process of application – and if so, to what parts of that process. (p. 91)

Determining the variables for change is essential to this approach. This is an important component of ABA and teaching because it draws on scientific conclusions versus generalized assumptions. Educators are encouraged to make data-based decisions in their teaching practices and implementation of interventions which are intertwined in this theory.

Another aspect of applied behavior analysis is the value placed in examining behaviors that are socially important (Baer et al., 1968). It is important for students with disabilities to develop relevant and socially important skills. Successfully navigating a world that is full of social opportunities or acquiring the skills necessary to form relationships may be valued by the individual, family members, educators, and future employers. There are several methods and programs derived from ABA.

Discrete Trial Training. ABA also includes reinforcement of desirable behaviors to decrease undesirable behaviors (Wolfberg & Schuler, 2006). An ABA approach can take form in utilizing discrete trial training (DTT) which was described by Wolfberg and Schuler (2006):

In discrete trial training, the play is broken down and taught as subskills through a series of repeated teaching trials. The environment is highly structured and

controlled by the adult, who relies on prompting, shaping, and reinforcement to elicit the target response. (p. 191)

Ole Ivar Lovaas was a psychologist known for designing behavioral programs and using DTT with students with autism. He used a learning theory framework to research language acquisition for students that struggled to develop language naturally (Lovaas, 1977). Through the lens of this framework Lovaas proposed children learn language through acquiring certain behaviors or responses occurring under a stimulus context which regulates the occurrence of the verbal behavior (Lovaas, 1977).

Lovaas (1987) conducted research on the effectiveness of an intensive behavior modification treatment program that provided 40 hours per week of intensive one on one support to students with autism assigned to the experimental group for 2 years. Students that were assigned to the control group received 10 hours or less of one-on-one treatment. Lovaas hypothesized that providing intensive treatment to students with autism would teach them the skills needed by first grade similar to their peers. The treatment consisted of the implementation of operant theory procedures, behavioral programs for target behaviors, and behavioral strategies to reduce self-stimulatory or aggressive behaviors, which included some aversive strategies. The treatment goals included reducing self-stimulatory behaviors and aggression, and increasing compliance, imitation, appropriate toy play, language, interactive play, expression of emotions, and pre-academic skills.

The results indicated that there were significant increases in the intellectual functioning, educational readiness, and placements with students in the experimental group. However, mental age was unchanged, and the spontaneous recovery rate was unknown. The results of inappropriate behaviors using contingent aversive techniques

indicated a stable decline and increase in appropriate behaviors with the experimental group. The results of play and communicative speech were inconclusive and needed further analysis. The results focused more on the intellectual functioning and educational placements rather than the other variables.

Rogers (2006) also described DTT stating “the first interventions, which specifically targeted development and remediation of spoken language, came from the operant tradition” (p. 145). She continued to state, “the didactic method applies these principles in teaching sessions that are marked by high levels of adult control and directed, massed practice periods of preselected tasks, and precise antecedent, teaching, and reinforcement practices” (Rogers, 2006, p. 145). The skills taught through DTT should include components of generalization to enhance social opportunities with peers and the maintenance of target skills.

Pivotal Response Treatment. Pivotal Response Treatment (PRT) is based on ABA principles (Koegel & Koegel, 2006). PRT is a comprehensive model that includes developmental and ABA approaches that incorporates early intervention, intensity of hours, family involvement, and natural environments (Koegel & Koegel, 2006). Another component of PRT includes the active involvement of family members and implementation in both home and school environments. PRT focuses on the individual’s motivation to engage in social-communicative interactions, social initiations, and behavioral self-regulation (Koegel & Koegel, 2006). This comprehensive intervention was designed to target pivotal skills, such as social communication, possibly resulting in modifications of behaviors (Koegel & Koegel, 2006). Social communication behaviors that can be taught through this modality include prosocial behaviors (i.e., sharing

materials, sharing space, attending to others), communication behaviors (i.e., greetings, initiating and sustaining conversations, directing communication attempts to others, and gaining the attention of the communication partner), and social skills (i.e., taking turns, accepting help, and social reciprocity) (Koegel & Koegel, 2006). These are pivotal skills to target when developing social skills interventions for students with disabilities and those that are at risk for social-emotional disorders.

PRT uses the following techniques to teach skills: child attention, child choice, natural reinforcement, interspersing maintenance and acquisition tasks, reinforcement of attempts, and contingent reinforcement (Koegel & Koegel, 2006). Stockall and Dennis (2013) suggested that PRT emphasizes the importance of targeting areas of functioning and responding, which can be embedded in natural environments. They also suggested the ability to initiate conversations requires motivation and joint attention (Stockall & Dennis, 2013).

Naturalistic Language Approaches. Naturalistic language approaches are derived from contemporary ABA which include enhanced milieu teaching (EMT) and incidental teaching. These approaches are frequently used with children that have language-based disabilities or disorders including ASD and can be implemented in natural environments, such as home, school, or the community. These approaches can be taught to parents, caregivers, and educators to increase language opportunities.

EMT. EMT is a naturalistic approach that targets early language development through the implementation of behavioral and social interactions. The procedures include requesting, prompts, corrective prompts, expansion, positive feedback, and access to

requested item (Hall, 2009). This approach can be used with a variety of children who exhibit language difficulties or ASD.

Kaiser and Roberts (2013) studied the effectiveness of EMT using a group design with children with intellectual disabilities, including Down syndrome and ASD. The participants included 77 children that were randomly assigned to a treatment group. One group included parents and therapists, while the other treatment group only included a therapist. The purpose of the study was to examine the effectiveness of including parents in the sessions with therapists to determine if the language gains and implementation at home would increase compared to the sessions with only a therapist. The researchers also examined the fidelity of parent training, use of EMT strategies, generalization at home, and maintenance of skills after a year.

Kaiser and Roberts (2013) collected data using child observations, parent measurements, norm-referenced standardized assessment of language, and parent reports. The data were collected and analyzed during pretest and three post-treatment probes (i.e., immediately following intervention, 6 months, and 12 months). The intervention consisted of the following components: environmental arrangement, responsive interactions, language modeling and expansion, and milieu teaching prompts. The language targets included semantic structures, requesting, and vocabulary.

The results indicated no difference in language between groups using the norm-referenced assessment and parent reports during the first post intervention probe. The observational measures also indicated no difference in mean length utterances (MLU) and number of different words (NDW) at the end of intervention. The researchers predicted this initial outcome due to the intensity of the intervention. At the 6-month

probe the children in the parent and therapist group exhibited longer MLU and greater NDW than the therapist-only group. Also, children in the parent and therapist group used significantly higher percentage of utterances than the therapist only group after 6 and 12 months. They also used more unique language targets, EMT strategies, responsive interactions, language modeling, expansions, and milieu teaching prompts than the therapist only group. This study indicated that using EMT parent-implemented training was effective for children with intellectual disabilities and the language skills were maintained after 12 months.

Incidental Teaching. Incidental teaching approaches include the arrangement of the environment, motivating stimuli, immediate delivery of reinforcers for correct responses, prompting, waiting, and praise. LeBlanc et al. (2006) discussed different versions of incidental teaching stating they all included similar components, such as arranging the environment and child-selected reinforcers intended to increase spontaneous language and generalization. Creating opportunities that can be naturally elicited by caregivers and exhibited by children can increase communication possibilities and generalization.

Hsieh et al. (2011) examined the effects of training caregivers using a training package to teach them how to implement incidental teaching with three children diagnosed with autism. Two participants also had a diagnosis of intellectual disability, and one participant was diagnosed with Phelan-McDermid syndrome. The researchers used a concurrent multiple baseline design across participants measuring the percentage of correct caregiver responses using the incidental teaching procedure. The caregivers

were given instructions during each session and consisted of three trials. Data were collected during each trial and scored using a mean percentage of correct responses.

The components of incidental teaching included arranging the environment, gaining child's attention, providing a discriminative stimulus, waiting 5 seconds, delivery of item or help combined with praise, and providing a prompt if necessary. Additional steps were added if the child did not exhibit the target behavior. The caregivers were involved in a procedural review, shown a graph, and given verbal feedback of the baseline performance. Following the feedback session, the caregivers were asked to rehearse the steps and given additional feedback. This phase was repeated until they reached 80% correct responses for three consecutive sessions. In the following phase the caregivers were only given feedback primarily on the incorrect steps. The post-training phase consisted of no feedback, training, rehearsal, or modeling and the caregivers were asked to demonstrate the incidental teaching procedures. In the last phase the caregivers were asked to implement the procedure with a different skill.

The results of this study indicated that caregivers could learn incidental teaching strategies. During the review, model, and feedback phase all caregivers increased their ability to implement the strategies, increased in the criterion level, and exhibited high levels in the subsequent phases. During baseline, the children did not exhibit any correct responses and the following phase indicated inconsistent responses from the children. During the post-training phase, the children exhibited at least 33% correct responses. The data from the different skill phase resulted in a range from 11% - 55% correct responses. The caregivers' performance increased and given an extended amount of time the performance of the children may have increased.

Developmental Theories

Developmental theories include approaches and skills that are appropriate for the age range and socially significant. These interventions can elicit behaviors that are in the child's social repertoire and schema as the adult elaborates on current skill set to teach and reinforce additional skills. Some of the intervention combined developmental and ABA principles and approaches. Brown et al. (2008) stated that child-specific interventions can foster engagement and target problematic behaviors. These programs include naturalistic developmental behavioral programs, Early Start Denver Model (ESDM), and SCERTS model implement play-based strategies to teach social communication skills.

Naturalistic Developmental Behavioral Programs. Schreibman et al. (2015) described naturalistic and developmental behavioral interventions (NDBIs) as:

In the NDBIs, a constructivist approach is taken – children's learning experiences are strategically designed to actively engage children's attention, help the, connect new experiences with existing knowledge, teach within developmental sequences, and through systematically increasing complexity of the learning experiences, enable them to discover the regularities in the world around them. Child initiative and spontaneity are fostered and rewarded, further promoting children's contributions to the own learning in the constructivist tradition. (p. 2413)

Using a NDBI approach that focuses on the child's ability to learn from the contextual aspects of previous knowledge and acquisition of new information from the natural environment would likely increase generalizability and spontaneous use of the target skill.

Early Start Denver Model. The Denver model is a multidisciplinary intervention that utilizes play to target development, play, and social skills with young children with ASD (Rogers, 2006). This model was later revised and called the Early Start Denver Model (ESDM). Due to the multidisciplinary aspects of this intervention family members, educators, therapists, and paraprofessionals are involved in the process of treatment. This intervention program targets the following developmental areas: social interaction, communication, play, fine and gross motor, cognition, and independence skills (Hall, 2009). This intervention has been implemented with children with autism, PDD, severe emotional disturbances, behavioral disorders, ADD, ADHD, and ODD (Hall, 2009).

Vivanti et al. (2014) conducted a quasi-experimental study to examine the effectiveness of the ESDM in a long-day community program with 27 preschool students with ASD. The purpose of this study was to determine the effectiveness of this program in a community-based setting in which children received 15-25 hours per week of intervention versus children in a less comprehensive program. The second purpose of the study was to evaluate the feasibility of implementing this model in a long-day program. The researchers measured various developmental domains of visual reception, fine motor, receptive and expressive language. The researchers also measured ASD symptoms using the Autism Diagnostic Observation Schedule (ADOS) and adaptive skills. They also measured feasibility by examining acceptability, demand, implementation, practicality, adaptation, and integration. These measurements were used to collect baseline data and post-treatment data, which was 12 months later.

The participants were divided into the ESDM and comparison groups. The ESDM group incorporated an interdisciplinary approach that implemented a developmental and play-based framework that also implemented small group and play center activities to target expressive and receptive language, gestural and vocal imitation, joint attention, turn-taking, cognitive, social, and play skills. The children were assessed using the ESDM checklist and individual objectives were established. The center-based activities included age-appropriate materials that were intended to motivate students to increase play skills, social interactions, engagements with others, and intentional communication skills with others. In addition, the parents received six sessions lasting two hours during each session to learn more about ESDM strategies.

The comparison group used a multidisciplinary approach and did not implement a specific intervention, however, used teaching strategies known as best practices in the preschool setting. Each child was assessed, and individual plans were derived from their strengths and areas of need. The interventions used included visual supports, ABA, augmentative communication systems, naturalistic teaching strategies, and PRT. Parents also received parent training covering a variety of topics.

Treatment fidelity was measured by the ESDM fidelity tool. The therapists received training and were involved in videotaping themselves to determine fidelity. The therapists received certification as they all reached fidelity which continued at the 6-month fidelity check. The researchers analyzed the data indicating significant increases in cognitive abilities over the span of 12 months, however the ESDM group demonstrated more gains. There were no significant differences in adaptive skills between the groups, both exhibited similar gains. The ADOS severity scores did not indicate significant effect

change. Evaluation of the developmental domains resulted in both groups improving in all developmental areas and the ESDM group made more gains in receptive language than the comparison group. The communication subscales improved significantly in both groups over a year.

Feasibility was measured by examining acceptability, demand, implementation, practicality, adaptation, and integration. The parents and staff members rated acceptability using a five-point Likert scale resulting in a 90% rating from parents on suitability and satisfaction. The staff members rated acceptability as 80%. Demand was measured by the number of families (i.e., 255) that applied for the program indicating the demand was higher than capacity. Implementation was measured by an independent evaluator to monitor treatment fidelity and adherence. The components of ESDM were consistent with the Australian Children's Education and Care Quality Authority earning a rating of meeting overall national quality standards and exceeding in other standards and areas. Adaptation and integration were evaluated by a federal government program and officials reported this autism-specific model provided positive outcomes. The integration process included staff activities, environmental changes, ESDM assessments, goal writing, and progress monitoring. The evaluation results indicated a high level of service and need for additional programs for more families to assess.

SCERTS Model. The SCERTS model is a comprehensive model based on developmental theory and ABA. It targets social communication, emotional regulation, and transactional supports used with individuals with ASD and related disabilities (Prizant et al., 2000). The major philosophies of this model contain an individualized approach, implementation of an intervention program, and creation of goals and

objectives that are specific to the child (Prizant et al., 2000). This model also encourages multidisciplinary applications and a holistic approach to target multiple skills. This collaborative aspect could be appealing for family members and educators to implement a treatment program in a clinical, school, and home settings (Prizant et al., 2000). This also allows professionals and family members to concentrate on target goals and skills, increasing social-communication, emotional-regulation, and transactional supports opportunities. Social communication is a pivotal area targeted in this approach to enhance the areas of joint attention, social reciprocity, and interactions. The SCERTS model provides an emphasis on functional communication to replace problematic behaviors along with enhancing communication exchanges between social, language, and conversational partners (Hall, 2009).

Social Systems Theories

Social systems theory focuses on the interactions and relationships of the individual within their environments. Talcott Parsons was a sociologist known for his work on social systems theory and action theory. Parsons (1951) stated:

Since a social system is a system of processes of interaction between actors, it is the structure of the *relations* between the actors as involved in the interactive process which is essentially the structure of the social system. The system is a network of such relationships (p. 25)

The framework of social systems is structured around the individual, interactive system, and the system of cultural patterns (Parsons, 1951). He also described two necessary aspects including the importance that the social system is compatible with the individual, cultural system, and support from other systems (Parsons, 1951). It is

important for students with disabilities to feel they are part of a whole system, such as social systems. Similar perspectives can be extended to the relationships in educational settings. Rogers (1969) reflected "...the facilitation of significant learning rests upon certain attitudinal qualities which exist in the personal relationship between the facilitator and the learner" (p. 106). Relationships are a major component of social system theory. When connecting this theory to social skills interventions the context of the intervention should align with the individual's sociocultural and belief systems. These aspects have also been addressed in the sociocultural and school-based approaches within this paper.

Social system theory has been used more frequently in the fields of psychology, social work, and counseling. Kargman (1957) discussed the use of this framework as it related to marriage counseling. She stated, "All meaningful behavior between individuals is carried on in terms of some system or partial social system" (Kargman, 1957, p. 264). Kargman (1957) found that when using the social system theory approach with a married couple her male client was able to define his problems and the roles of the relationship. Social system theory also includes roles, expectations, personality, motivation, and patterns of behaviors (Kargman, 1957). This theory can be applied and used to examine the manner in which students behave, relate to one another, and fulfill certain roles and expectations.

Peer-Mediated Interventions. Peer-mediated interventions based on social systems theories are utilized to teach peers acceptance, understanding of disabilities, ways to facilitate and elicit social communications skills from students with disabilities, and strategies that foster and reinforce demonstration of skills. This type of intervention can be extended to change the culture of the school to increase acceptance, increase

social interactions amongst all students, and decrease the likelihood of bullying of students that have disabilities and social deficits. Brown et al. (2008) stated “interventions to promote peer-related social skills have targeted social interaction in general as well as specific social behaviors that a child may use in play and peer interactions” (p. 126). They further proposed that social interactions of children with ASD and other developmental disabilities increased due to the implementation of peer-mediated interventions.

Heflin and Alaimo (2007) suggested “peers should be educated, trained as social agents, and have opportunities to practice the strategies with schoolmates with ASD” (p. 279). Increasing social experiences outside of training sessions is an important aspect of utilizing this intervention. Social acceptance within learning communities can enhance academic skills and friendships (Heflin & Alaimo, 2007). This intervention program can be implemented to benefit students with various disabilities and that are at risk for social difficulties.

Schmidt and Stichter (2012) conducted a study to examine the impacts of two peer-mediated interventions on generalization of social interaction skills in a school setting for students with high-functioning autism (HFA) and Asperger’s syndrome (AS). The purpose of this study was to evaluate the efficacy of peer-mediated interventions and enhance the generalization to improve social competence. They also wanted to compare the effectiveness of peer-mediated proximity and peer-mediated initiation interventions. There were three students with high-functioning autism or Asperger’s syndrome and three students who were typically developing that participated in this study.

The intervention consisted of two peer training models (i.e., peer training curriculum and SCI-A curriculum). The peer training curriculum provided training once a week for six weeks and met for 40 minutes during each session. The sessions included information on the social deficits of HFA/AS, review of the previous session, role of the peer, introduction of a skill, role-play of strategies, feedback, and addressing any questions and concerns. The researchers also provided six 40-minute sessions during the implementation phase. The SCI-A curriculum is based on based on cognitive behavioral theories designed to address social competence for students with HFA/AS. The sessions covered five units consisting of recognition of facial expressions, sharing ideas, taking turns in conversations, feelings, emotions, and problem-solving skills. The students with HFA/AS were involved in 20 group sessions in the special education classroom. The peer models received training in their middle school classrooms.

Schmidt and Stichter (2012) used a multiple treatment design to examine the two interventions and the generalization of the target behaviors. Data were collected during baseline and the following five phases (i.e., SCI-A program, peer-mediated initiation, peer-mediated proximity, peer-mediated initiation, and peer-mediated proximity). They collected data during lunch and math classes. The dependent variables consisted of appropriate and inappropriate initiations, responses, and continuations directed to the peers. Reliability data were collected and the mean rate of interobserver agreement (IOA) for the 37 sessions was 88%, while the mean rate for target students ranged from 83% - 90%. Fidelity checklists were used to measure data during the implementation of the peer training resulting in 100% fidelity during sessions. Fidelity was also measured for peer-

mediated initiations indicating 80%-100% fidelity of peers and 90%-100% for peer-mediated proximity.

The results of this study indicated effectiveness of generalizing the skills and increasing social competence for three students with HFA/AS after receiving intervention using the SCI-A program. Data collected during the lunch setting for the peer-initiated phase indicated that the first student displayed substantial improvements in responses and continuations, however initiations remained low. This student also had decreases during the peer-mediated proximity phase. The second student had variable results during the peer-mediated initiation phase and peer-mediated proximity phase. The third student displayed improvements in responses and continuations during the peer-mediated initiation phase and variable results for the peer-mediated proximity phase. Data collected from the math setting indicated generalized improvements for the first and third student in social interactions during the peer-mediated phases including initiation and proximity phases. The results for the second student were variable in the math setting similar results to the lunch setting.

The researchers were not able to provide conclusive evidence that the peer initiation intervention was more effective than the peer proximity intervention. However, this study showed positive outcomes for students with HFA/AS along with providing the peers with training opportunities. Overall, the students with HFA/AS increased their social behaviors in the areas of responses and continuations compared to baseline data. The peer training component demonstrated the possibility of providing support in natural environments along with increasing social interactions. This aspect is valuable when including students with disabilities in more inclusive environments. Training can help

peers understand disabilities, aid in sensitivity, create peer networks, and increase social opportunities.

Summary

Social skills interventions can be implemented in a variety of settings. This review demonstrates that such interventions can be beneficial for a variety of students including students with disabilities, those who are at risk, and students who struggle in social arenas. Social skills interventions also can be implemented using a large-scale approach to help create inclusive environments that embraces diversity, differences, similarities, and disabilities. This is also an essential component in combating school violence and bullying that many schools face today. Taking proactive and preventative measures instead of reactive responses to such issues would better equip students to handle such challenging situations. Social skills interventions will not stop the occurrences of such acts completely, but they can establish a systemic approach to increase social awareness and competency along with providing vulnerable students with necessary strategies. Providing students with the skills necessary to become more social increases their likelihood of being accepted in the world around them extending beyond their years in school. Preparing students for their future is the premise of education along with being successful in their social communities.

Statement of the Problem

Social skills interventions are a common recommendation given to families from clinicians, educators, and therapists as an intervention for individuals with ASD (Hall, 2009). Due to the social complexities of everyday life and limited social skills that may pose challenges for individuals with ASD and their family members, it is imperative to

examine whether family members view these interventions as being effective and socially valid.

Given the changes within society and the global pandemic it is even more important to evaluate the experiences, accessibility, and social validity of social skills interventions. Numerous quantitative studies have been conducted to examine the efficacy of social skills interventions as demonstrated in the literature review.

Previous studies that have been conducted using qualitative methodology focused on exploring parental experiences raising a child with ASD, stressors (e.g., financial, time, marriage, depression), cost of treatments, parental perceptions of the importance of the friendship of children with ASD (Neysa et al., 2015). Few qualitative studies have explored parental experience and perceptions specifically related to effectiveness of the intervention, gaining access to the intervention, and social validity of the intervention. The purpose of this study was to use a qualitative multiple case study to explore and gain deeper understanding parental experiences and perceptions related to many aspects of social skills interventions (i.e., gaining access and social validity). Therefore, it was necessary to conduct a study that examined and analyzed the phenomenon of family experiences and perceptions and allow their voices to be heard.

Purpose of the Study

The purpose of this case study was to explore and understand the experiences and perspectives of parents and/or guardians of children, adolescents, or adults with ASD related to (a) gaining access to social skills intervention (i.e., gaining access to social skills interventions; and (b) the social validity of implementation of social skills

interventions to address core deficits in the domain of social communication skills. The following questions guided the case study.

Research Questions

1. What are the experiences and perceptions of parents and guardians of individuals with ASD have associated with gaining access to social skills interventions (i.e., logistically, financially, or providers)?
2. What are the experiences of parents and guardians of individuals with ASD related to social validity (i.e., feasibility, cost, and generalizability) of the implementation of social skills interventions?

Rationale for the Study

I chose to employ a multiple case study method, which is both intrinsic as I have a genuine interest in learning from families, and collective as there are multiple cases within the group being studied (Stake, 1995; Yin, 1993). This approach allowed me to examine parents' experiences and perceptions related to social skills intervention programs their children received, gaining access to social skills interventions, and social validity in this proposed study. It is important to allow parents and guardians to express their experiences and perceptions related to social skills interventions related to the above recommendations and possibly direct future professionals, clinicians, and educators to view social skills inventions more holistically from a familiar perspective.

The case defined under this proposed study is an individual, more specifically, parents of children with ASD, which were units of analysis. Data collection included a survey and interviews. Using these forms of data provided valuable insights into the participants' beliefs, allowing their stories to be heard.

Baxter and Jack (2008) discussed the framework of using a qualitative case study design to study the phenomenon and to answer questions related to the “Why” and “How” questions related to the case. This method can help describe the context of the phenomenon which may be more difficult to describe in other methodological contexts. The researchers described definitions and descriptions of various types of case studies, and I was most interested in a multiple-case design to discover differences and similarities within and across cases to better understand the comparisons of parental and guardian’s experiences and perceptions related to social validity of social skills interventions. In addition, Baxter & Jack (2008) stated:

If a study contains more than a single case, then a multiple-case study is required. This is often equated with multiple experiments. You might find yourself asking, but what is the difference between a holistic case study with embedded units and a multiple case study? Good question! The simple answer is that the context is different for each of the cases. A multiple or collective case study will allow the researcher to analyze within each setting and across settings. While a holistic case study with embedded units only allows the researcher to understand one unique/extreme/critical case. In a multiple case study, we are examining several cases to understand the similarities and differences between the cases. (p. 550)

Significance of the Study

This study filled the gaps in research by extensively exploring the parental perspectives and experiences associated with social validity and access to social skills interventions for their children with ASD using a case study approach. I was particularly interested in learning about the perspectives related to social validity including feasibility

of interventions and strategies, generalization of target skills, and cost efficiency. The findings from this study can provide practical implications for interventionists, educators, clinicians, as well as researchers and policymakers.

Definitions of the Terms

Social Skills Interventions

For the purpose of this study, social skills interventions are defined as ongoing comprehensive social skills interventions focusing on increasing social communication skills (e.g., discrete trial training, social skills groups, speech and language therapy, occupational therapy, social work services, counseling services, etc.) to address social skills) for six months or longer within the last five years versus a single strategy (e.g., social story or video modeling) that can be applied infrequently or inconsistently.

Zager (2005) described such social skills interventions and provided priorities, such as (1) functional spontaneous communication, (2) day-long social programming, (3) teaching of play skills, (4) other instruction for cognitive development carried out in natural environments, (5) proactive approaches to behavior problems, and (6) functional academic skills when appropriate to the skills of the child (p. 189-190).

In addition to the core features of social skills interventions and the need for intensive, ongoing, and concise interventions there is a desperate need for social skills partners and peers to increase inclusive practices. With that being said, Zager (2005) described the need for intensive interventions stating, “For interventions to be effective it must be intensive” (p. 195). There are school-based programs that implement social skills interventions for all children. However, children with ASD may need more specialized

instructions. Zager (2005) also described the need for the presence of typical peers, using an educational approach, and communication between the educational team and family members.

Social Communication Skills

Social communication skills are defined as “nonverbal communication, social initiation, reciprocity, terminating interactions, social cognition, perspective taking, and self-awareness” (Bellini, 2006, p. 34). There are different definitions of social communication skills. Definitions of social communication skills vary amongst researchers, practitioners, and educators. However, there are commonalities and features of social-communication skills that are frequently relevant to the individual with a disability. This factor speaks to the individuality and uniqueness of students with disabilities implying that not every student will meet a particular definition to the fullest extent. Additional skills are associated within each of those social behaviors adding layers and complexity to the general sense of social communication skills.

The importance in this definition is the act of sending and receiving information, which involves social communication partners. Reciprocity tends to be difficult for many students with disabilities, especially those with ASD and social pragmatic disorders. Researchers use different tools to measure social communications skills, such as the *Checklist for Autism in Toddlers (CHAT)*, *Social Communication Questionnaire (SCQ)*, *Vineland Social-Emotional Early Childhood Scales (SEESC)*, *Temperament and Atypical Behavior Scale (TABS)*, and *Gilliam Autism Rating Scale (GARS)*. Many of these tools are focused on developmental aspects of the child with ASD and not so much on the experiences and perspectives of the parents and guardian’s related to access and social

validity. This connects to my major research questions as I found a gap in literature that extended beyond the efficacy of social skills interventions. We need to hear from the individuals the most that can articulate their experiences and perceptions so that educators and interventionists can provide effective social skills interventions that will best meet the needs of children with ASD and their family members.

Social Validity

Social validity “refers to the extent to which target behaviors are appropriate, intervention procedures are acceptable, and important and significant changes in target and collateral behaviors are produced” (Cooper et al., 2007, p. 704). My study took a deeper look into the aspects of social validity, such as feasibility, cost, and generalizability to evaluate the social acceptance of social skills interventions (Cooper et al, 2007).

Summary and Organization of the Dissertation

Chapter 1 provides the theoretical framework and history of the importance of social skills of students with ASD. Chapter 2 provides a review of research literature and discusses the gaps within the research related to parental experiences and perceptions of social skills interventions for their children with ASD. Chapter 3 describes the methodology, research design, and procedures for this study. Chapter 4 provides major findings of the study. Chapter 5 discusses the results of the study.

Chapter 2

Review of the Research Literature

Introduction

In Chapter 2, I present a review of the literature, indicating key terms, search engines, and inclusion and exclusion criteria. In addition, this chapter provides a detailed review of research literature related to social skills intervention programs, efficacy of the programs, and child outcomes mainly related to quantitative research; however, there is still a lack of in-depth qualitative research related to parental experiences and perspectives on social validity of such intervention programs. Also, this chapter discusses the gaps within the research related to family members' experiences and perceptions of social skills interventions for their children with ASD.

Some comprehensive social skills intervention programs use manualized approaches rather than a single strategy to target the social communication skills. Typically, a systematic model uses an assessment tool or program reviewing the development of current skills of the child, which determines the next steps for social development and interventions. Implementing manualized approaches (i.e., the implementation of an assessment tool or protocol to deliver social skills interventions in a systematic manner) rather than a single strategy to target the social communication skills can be more effective.

Using an organized and standardized approach increases fidelity treatment and assists the interventionist during the implementation phases of providing social skills interventions. The purposes of this review of research literature were to examine the types of social skills intervention programs that have been implemented in school,

clinical, and home settings using experimental designs and to examine the efficacy of using a program-based approach to target social communication skills with individuals with ASD.

Theoretical Framework

This study was guided by the social cultural theory of Lev Vygotsky who studied the aspects of play in the area of social and socio-cultural development. Socio-cultural theory encompasses the contextual environments that individuals are members of which help formulate and contribute to their perspectives and learning experiences. Berk and Winsler (1995) described socio-cultural development suggesting, “One of the main tenets of Vygotsky’s theory...is that people are products of their social and cultural worlds and that to understand children, we must understand the social, cultural, and societal contexts in which they develop” (p. 1). Social-cultural theory proposed by Vygotsky can be associated with students with disabilities and tie into the way in which individuals learn social communication skills, the context of where to elicit those social skills, and the relevance of the skills.

Review of Research Literature

Search Process

Systematic and electronic searches were conducted using the following databases: PsycINFO, Academic Search Complete, Medline, and PsycArticles (See Table 1). The searches included the following keywords and phrases: *social skills training, disabilities, and social outcomes; social skills intervention programs, autism spectrum disorder, social communication skills; social skills intervention training, ASD, and social communication skills*. The searches were limited to peer-reviewed articles, written in

English, published from January 2001 – April 2022. The research conducted mainly focused on quantitative research and there is still a significant lack of qualitative research which was discussed in the search process of qualitative research involving family members later in this chapter.

Criteria for Selecting Studies

Criteria for inclusion were peer-reviewed articles written in English that included studies: (a) that implemented social skills intervention programs (i.e., packaged intervention programs, manualized intervention programs (i.e., interventions that followed specific protocols), (b) that used an intervention program including more than a single strategy), (c) that targeted social communication skills (i.e., social reciprocity, conversational skills, initiations and responses, social-pragmatic communication, social competence, and social engagement skills), (d) that included participants under the age of 21 years with ASD, (e) that implemented interventions in school, home, or clinical settings, (f) that used experimental designs (e.g. group, single-case or single subject designs, including A-B design), and (g) that were published from January 2001 to April 2022.

Criteria for exclusion included studies: (a) that did not implement social skills intervention programs (i.e., studies using a single social skills strategy or using forms of psychotherapy), (b) that targeted skills other than social communication skills (e.g., vocational skills, parenting skills, or feasibility of intervention alone), (c) that included participants over the age of 21 years, (d) that included individuals with disabilities other than ASD (e.g., Down syndrome, emotional and behavioral disorders, bipolar disorder, schizophrenia, rheumatoid arthritis, and other developmental disabilities not including

comorbidity with ASD), (e) that implemented interventions in settings outside of school, home, or clinic, and (f) that did not use a group or single case design (e.g., case study, meta-analysis, pilot study reviews, pilot studies to review feasibility of interventions, and literature reviews).

Final Pool

A total of 17 studies met all the above selected criteria for the purpose of this research review (see Table 2 for summary of articles) These studies examined comprehensive social skills interventions that were conducted in school, clinical, home, or community environments with students with ASD.

Results

Seventeen studies revealed comprehensive social skills interventions that were conducted in school, clinical, home, or community environments with students with ASD.

Studies Using Single-Case Research Design

Yang et al. (2003) conducted a study to compare effects of social-emotional training on positive social behaviors using a curriculum with six students ages of 7-9 with autism in general and resource education classrooms in Taiwan. Three participants had a dual diagnosis of autism and intellectual disability which made up the first trial. The other three participants had average to above average IQ's and autism, which comprised the second trial.

Yang et al. (2003) provided training in a small group setting using the curriculum and additional strategies, such as direct instruction, role play, modeling, visual cues, rehearsal, and reinforcement. Objectives were created for each unit taught including

checklists for the resource teachers to collect baseline data prior to the intervention. The resource teachers implemented the curriculum which covered all 12 units.

The researchers used a single subject design (A-B design) and assigned the participants to either a treatment or control group. The participants were given a variety of tests during baseline to determine IQ, language, and positive social behaviors. During the baseline phase both groups received remedial regular education services. After baseline, the experimental group received training sessions in resource classrooms for 80 minutes a week for a total of 13 weeks. The control group continued to receive the remedial curriculum. The researchers used a social-emotional skills curriculum which included 12 units to cover a variety of topics including attending, imitation and following directions, knowing student's names, understanding personal belongings, identification of gender, expression of preferences, introduction of self, recognition of happy and unhappy faces, recognition of feelings including happiness, sadness, fear, and anger, and tolerating frustration. The units were divided up into categories including social skills, affective skills, and both social and affect skills.

The results indicated that all participants in the experimental group exhibited statistically significant increases in the frequencies of positive social behaviors. Findings a medium effect for two participants and a small effect size with the other two participants in the experimental group. In the control group the two participants did not exhibit significant statistical changes in positive social behaviors.

Thiemann and Goldstein (2004) conducted a study examining the effectiveness of two social skills interventions to create a program (i.e., peer training and written text treatment) with five students with pervasive developmental disorder (i.e., autism or

Asperger syndrome) within integrated elementary and resource classrooms. The participants were between the ages of 6-9 years and enrolled in first or second grade. Peers without social deficits were placed in triads to form intervention groups. The dependent variables included the following social communication skills: (a) securing attention, (b) initiating comments, (c) initiating compliments, (d) initiating requests for information, (e) initiating requests for actions/objects, and (f) contingent responses. The purpose of the study was to determine the efficacy of a social intervention program that included peer training and written text treatment (WTT) on specific social communication skills for student with PDD, examine collateral effects of the intervention program on peer responsiveness and peer acceptance, and evaluate if teachers perceived frequency changes in social behaviors. The researchers hypothesized that peer training alone would not result in significant effects, however providing an intervention program that included written text treatment would increase social communication skills for students with PDD.

Thiemann and Goldstein (2004) administered standardized testing prior to the study to measure verbal and non-verbal IQ, language, reading, adaptive skills, and social skills. During baseline, the researchers grouped participants into groups of three, one focus student and two peers, and observed them engaging in a 10-minute activity. They were given an agenda, job list, expectations, and materials. No prompts were given to the group while the researchers collected data on dependent measures. Baseline data were collected for five sessions and coded. The investigators used a multiple baseline design across participants initially and then across social communication skills.

During the peer training intervention phase peers were taught skills to facilitate social communication skills with the focus child, who was not present during these training sessions. The sessions focused on one social skill during a 30-minute period resulting in 5 sessions and 150-minute training. The skills included (a) look, wait, listen, (b) answer questions, (c) keep talking, (d) say something nice, and (e) start talking. The peers were also involved in training regarding behavioral steps, writing bubbles or cartooning, role play, adult feedback, and review of behavioral steps. The second intervention phase consisted of instruction on written text and pictorial cues consisting of 25-minute session per skill 3-4 times a week. The sessions consisted of teaching the following skills: (a) a skill sheet with a target skill in comic format, (b) written scripts for planned activities (c) monitoring and feedback, (d) role play, (e) the focus child reads the script, and (f) goal setting for frequency of target skills developed by children.

Maintenance data, peer acceptance, and social validity were also measured. Peer acceptance was measured using a pre- and post-questionnaire administered to a random selection of eight peers using a 5-point Likert scale. Social validity was measured using the SSRS teacher report questionnaire to assess social skill development including (a) cooperation, (b) assertion, and (c) self-control. Social validity was also measured using a 5-point Likert scale filled out by blind raters. Treatment fidelity was above 80% and IOA mean average during baseline, treatment, and maintenance ranged between 85-94 %. Results indicated that peer training alone demonstrated improvements of rates of interactions for two of the five students and stabilized interactions for two other students. The WTT intervention phase demonstrated improvements in repertoires and three targeted social communication skills (i.e., initiate comments, compliments, and initiate

requests for information) and was replicated across skills for all five participants. Overall, four out of five participants increased their rates to initiate during the WTT phase. Four out of the five participants were able to maintain the targeted social communication skills.

The data for peer responsiveness indicated that four out of 56 dyads increased their responsiveness towards the participants after peer training and during the maintenance phase. The results of the WTT and maintenance conditions showed higher responsiveness levels in all five dyads. Peer acceptance data indicated variable results amongst questions and participants but overall showed positive change. Social validity measured by teachers indicated marked improvements in two of the five participants.

Sansosti and Powell-Smith (2008) conducted a study to evaluate the effects of computer-represented Social Stories™ with video modeling to increase social communication skills with three participants HFA/AS. The purpose of this study was to demonstrate efficacy of a treatment package of combining interventions with the use of technology in general education classrooms and during recess. The researchers used a multiple baseline across participants' design. The dependent variables were individualized based on interviews to address specific social communication skills including joining in (i.e., initiating or participating in play activity or conversation) for two participants and maintaining conversations (i.e., reciprocal conversations or attendance of topic within a conversation) for one participant. The independent variables included a treatment package of computer-presented Social Stories™ and video modeling.

The researchers provided training to the observers and calculated IOA. The intervention began once the observers reached 80% IOA. The researchers continued to monitor reliability during baseline, intervention, and follow-up conditions with a mean range of 81%-100% across the observers. They identified target behaviors and recorded data to include these behaviors in the intervention. The researchers used a variety of measurements to determine cognitive level, functional communication, and confirmation of ASD diagnosis.

The intervention consisted of individualized computer-assisted Social Stories™ and video models created to illustrate a peer using the target behavior. These two strategies were combined to create a slide show that could be advanced by the participant. Each participant was presented with the video prior to the social activity by an educational staff member. Two participants received additional prompting from the teacher to provide priming opportunities as peers were prompted to elicit the behavior. Fading of prompts and treatment package occurred throughout the study with no intervention during the follow-up phase, which occurred two weeks after the intervention. Generalization probes occurred throughout all phases of the study. Validation of the intervention and procedural reliability were assessed to ensure validity and fidelity. Treatment fidelity ranged from 92% - 96% indicating high levels of fidelity. Social validity was also measured through a teacher rating scale.

Results suggested that all participants exhibited low frequency rates of the target behaviors during baseline. Immediate improvements were present after the presentation of the intervention, however two participants displayed declines during intervention due to the lack of reinforcement from peers. This decline prompted modifications within the

intervention to provide additional support. After modifications, the two participants regained their skills and increased social communication as compared to baseline data. One participant made consistent improvements with the original intervention. Two participants maintained skills during the follow-up condition and one participant maintained slightly less skills during follow-up. Overall, positive outcomes were exhibited amongst all participants. Social validity results indicated acceptance with agree to strongly agree ratings.

Ferraioli and Harris (2011) conducted a single-subject multiple probes across participants design to examine sibling-mediated intervention to increase joint attention with children with autistic disorder. The participants ranged in age of 3-5 years and their siblings 6-8 years old. The purpose of this study was to replicate an adult-mediated intervention with siblings in naturalistic settings. The dependent variable was joint attention (i.e., social orienting and imitation). The independent variable was joint attention peer-mediated intervention.

The researchers used a developmental measure to assess areas of development prior to the study. They also provided the siblings with training to implement the program. The training sessions consisted of description and review of new skill, modeling, role play, and feedback.

The siblings were taught a set of procedures to gain responses from the target participant. The sibling participants also received prompts to ensure all components and review of session with additional modeling and role-play. The siblings were also taught how to promote play interactions. Criteria were established and reached prior to the introduction of the participant. Baseline data were collected for 2-12 weeks, and follow-

up data occurred 3 months after each dyad completed their training. The intervention consisted of sibling dyads participating in two to three sessions per day lasting 15 minutes each for 1-2 times per week. Mastery criteria were set at 80% independent opportunities for two consecutive sessions. Intervention programs lasted for 7-9 weeks dependent on mastery criteria. Play materials were available and the siblings were asked to use the joint attention probes to encourage use of the target skill from the participants. Data were collected through videotaped play probes for pre and post measurements. The researchers also used a social communication scale to measure reliability and validity. IOA was collected during training (i.e., 93.9%) and joint attention probes (i.e. 91.4%). Treatment fidelity was measured resulting in acceptable fidelity with 3 out of 4 dyads and high fidelity in all but one component of the procedure. Social validity was also measured by both siblings and parents indicating overall satisfaction from siblings and high-level satisfaction ratings from parents.

The results of this study were mixed across participants. One participant increased in both initiating and responding to joint attention probes and continued to increase skills during follow-up condition. Whereas the other three participants increased in responding only but were able to maintain responsiveness during follow-up condition. Two participants exhibited small increases in unprompted joint attention initiations. However, all participants were able to exhibit some joint attention and initiations reflective on the social communication scale. The siblings were also able to implement the procedures to high fidelity on most of the components. However, fidelity was low in the area of reinforcement however, positive praise was given by the adult.

Hundert et al. (2014) conducted a study to evaluate the use of social script training in isolation and with the combination of peer buddies to increase social behaviors with three students with ASD ages 4-5 years. The purpose of this study was to evaluate the two conditions in inclusive settings to increase play skills and peer interactions. The researchers used a multiple-baseline design across participants. The dependent variable was social behaviors within interactive play (i.e., engaged in a play activity for at least 2 minutes with at least one child and interacting verbally or non-verbally). The independent variables were social script training alone and in combination with a peer buddy program. Baseline data were coded, and the observers reached 90% agreements.

The intervention began with the introduction of social script training that was individualized for the participants in regard to their level of communication and motor skills pertaining to a particular activity of interest. The scripts included eight steps illustrating reciprocal play. The scripts were first introduced to the participants and lasted 5 to 10 minutes. Then the children in the class were presented with the script, shown a video of two children playing using the script, and volunteers were recruited. Materials pertaining to the script were available along with an adult to provide prompts and praise. A token economy system was used, and tokens were delivered on each correct step of the social script along with a class contingency system. The next intervention phase included the use of a peer buddy system to teach all the students the following skills: initiation of play, acceptance of the play invitation, and maintaining play behaviors. The teacher also explained the roles of the peer buddy which were to stay with, play with, and talk to the buddy. The students received praise and stickers for following the rules of being a play

buddy. The students that did not receive a sticker were asked what they could have done to receive a sticker to provide corrective feedback.

The researchers conducted IOA checks resulting in a mean IOA of 93.1%. They also conducted fidelity checks resulting in 100% during peer buddy program, 98.4% during social script training, and 94.2% combination of social scripts and peer buddies. The results of this study indicated baseline interactive play was low for all three participants. During the social script alone phase the researchers used a staggered introduction which resulted in immediate increases with two participants. The generalization sessions indicated declines for two participants after the social script alone and similar results in the generalization phases of the combination treatment. During the combination training sessions, the two participants exhibited significant increases. The generalization phases indicated declines suggesting a lack of generalization. One participant received an altered introduction to the phases to control order effects. This participant exhibited low rates of interaction during baseline, training, and generalization phases. After baseline, this participant received peer buddy training alone which showed a moderate increase during the training session but remained low during the generalization session. Then the social script training was introduced alone exhibiting significant increases, however dropped again during the generalization session. The combination treatment was then introduced resulting in an increase in the training and generalization sessions. Overall, the participants increased their ability to interact during the social script alone phase and in combination with a peer buddy program but were not able to generalize when the materials and adult support were absent.

Studies Using Group Design

Roberts et al. (2011) conducted a group randomized control study in Australia to evaluate the effectiveness of an individualized home-based program, a center-based program using the Building Blocks manualized program with parent support, and a non-treatment comparison group. There were 85 participants with ASD ranging in age from 2-5 years that were randomly assigned to one of the three groups (i.e., home-based program $n = 28$, center-based Building Blocks program $n = 28$, and non-treatment group $n = 29$). One participant did not complete the entire study. They also wanted to determine if there were significant differences between the groups. Dependent variables for participants were communication, social skills, adaptive functioning, and psychopathology. The dependent variables for the parents included levels of stress, perception of competence in managing their child, and quality of life. The independent variables were the programs, one using a manualized approach (i.e., center-based Building Blocks program).

The researchers used a variety of assessments to measure communication, language, social communication, adaptive functioning, psychopathology with the children. They also used assessments to measure parental stress, competency, and quality of life. The researchers collected pre and post measurements.

The participants in the center-based program attended 2-hour sessions for 40 weeks over the course of a year. The program incorporated a manualized preschool program to focus on social, play, functional communication, and participatory skills within a small group setting. Children also received direct instruction to address specific needs. They also participated in routines and activities with less direct support. The parents participated in manualized parent training and a support group while the children

attended the program. The parent training covered a variety of topics, such as communication, positive behavioral supports, self-help, services, school, and sensory issues.

The home-based program consisted of a 2-hour visit every two weeks for a total of 20 sessions over 12 months. The family received support from a member of a trans-disciplinary team. An individualized program was established to address the specific needs of child and family which were typically in the areas of social skills, speech, and sensory issues. The program also covered areas, such as behavior, social skills, functional communication, play, self-help, gross and fine motor, and pre-academic skills. The training consisted of the trainer providing modeling, feedback, and discussions to address needs. The trainers also conducted observations and provided feedback to additional staff members at the child's daycare or preschool.

The researchers conducted fidelity checks, reviewed records, and reviewed data to ensure compliance of the programs. Data were analyzed using SPSS to determine statistical significance. The researchers also analyzed statistical differences between outcomes. Overall gains were made for children in all three groups in the areas of behavior, communication, and social interactions. The results also indicated that the children in the center-based Building Blocks program exhibited greater significant improvements than the children in the home-based program and non-treatment comparison group. Between groups comparison data showed close to statistically significant improvements for communication and statistically significant improvements social scale. The children in the control group improved significantly more than the children in the home-based program on the social scale. There were also statistically

significant improvements in comprehension in the center-based group as compared to the home-based group. There was a greater, but not significant improvement in the area of expression in the center-based group compared to the home-based group. The parent outcomes indicated parental stress increased in the home-based group and decreased in the center-based group; however, the difference was not significant. Parental competence indicated significant improvements in the center-based group as compared to the home-based group. Quality of life indicators showed best outcomes for parent of the center-based group and then non-treatment group. The home-based group indicated more gains in support with regards to disabilities.

Laugeson et al. (2012) conducted a study examining the efficacy and durability of the PEERS Program (i.e., parent-assisted social skills group intervention) with 28 adolescents with high-functioning autism, Asperger's syndrome, or PDD-NOS. The purpose of this study was to evaluate effectiveness of this intervention program utilizing parent involvement to increase social communication skills amongst adolescents with HFA/AS/PDD-NOS. The researchers also wanted to compare the immediate change in social functioning, maintenance of skills, and results of a 14-week program. The researchers used a battery of tests during baseline to evaluate social skills, quality of play to measure get-togethers, social skills knowledge, intellectual functioning, and adaptive functioning.

The participants were assigned to a treatment or a control group. Fourteen participants were assigned to the treatment group that received PEERS intervention after baseline and fourteen participants were assigned to the control group who received

intervention after a 14-week delay. The groups were divided up into three cohorts comprised of 8-10 participants.

The PEERS intervention included fourteen 90 minutes sessions, once a week for a total of 14 weeks. Parents and adolescents attended separate sessions lead by clinical psychologists along with team coaches to provide instruction on socialization, making, and maintaining friendships. The intervention also included role-playing, feedback, rehearsal exercises, and monitoring of treatment fidelity. The program consisted of a social skills curriculum, parent involvement, and structured lessons. The lessons covered a variety of topics including conversational skills, electronic communication, developing peer networks, humor, joining and exiting a conversation, successful get-togethers, ways to handle bullying, sportsmanship, changing a reputation, and various ways to resolve arguments, rumors, and conflict. Parents were also given socialization assignments to complete with their adolescent and provided coaching if needed. The parents were also responsible for completing pre and post parent measures. The PEERS intervention included a manual and fidelity was measured in both groups.

MANOVAs were conducted to evaluate treatment outcomes, and follow-up measurements. The results indicated immediate improvements for the treatment group and greater improvements reported by parents of the treatment group than the delayed group. Additional analyses also revealed significant improvements with the treatment group compared to the delayed treatment group in the domains of cooperation, assertion, and responsibility. The parents in the treatment group also reported reduction in ASD symptoms in relation to social responsiveness compared to the delayed treatment group. Significant increases were also found in social awareness, social cognition, social

communication, social motivation, and decreases in mannerisms associated with ASD. Additional findings included a greater increase in social get-togethers and greater improvements in hosting the social events with participants from the treatment group verses the delayed group. Overall children in the treatment group displayed significant more improvements in social knowledge compared to their counterparts. Follow-up data also revealed maintenance of all outcome measures with the exception of social cognition with the treatment group. Follow-up data were not collected from the delayed group due to the time constraints of the study.

Eapen et al. (2013) conducted a pre-post group design to evaluate the effects of the Early Start Denver Model (ESDM) in a community setting with 26 children with ASD ranging in age of 4-5 years. The purpose of this study was to evaluate the effectiveness of using this model in a community-based program to increase active engagement across developmental areas. The dependent variables were functional communication, social interaction, cognition, play, and positive behaviors. The independent variable was the implementation of the ESDM which is a manualized intervention that provides a developmental curriculum that incorporates ABA.

The researchers collected baseline data using a standardized measure for overall development, social communication, and adaptive measures. Data were collected prior to intervention and during the follow-up condition. The intervention was implemented using the ESDM curriculum by trained therapists. Each child had a treatment plan that was tailored to their developmental needs. The therapists used objectives from the ESDM to include a variety of domains, such as communication (i.e., expressive, and receptive), social skills, joint attention, motor skills (i.e., fine and gross), imitation, play, cogitation,

behavior, and adaptive skills. The preschool setting incorporated small group activities that were facilitated by the adult. Children received individualized therapy for 30 minutes twice a week and 15-20 hours of group instruction on an average of 10 months. Parent education opportunities were offered in the evenings. Parents also completed the social communication and adaptive measures at the beginning and end of the study.

The researchers analyzed data using SPSS. The results of the developmental measurement showed significant increases in the participants' overall developmental quotient with a medium effect change. Significant improvements were found in cognition and communication (i.e., receptive, and expressive). There were no significant changes in fine motor skills. The results of the social communication measurement indicated decreases in autism symptoms. The adaptive measurement indicated significant increases in receptive communication and motor skills. Overall, the participants exhibited significant increases in communication and language development which are also associated with social communication skills. The results also indicated that deliverance of the ESDM can be an effective way of providing support to a greater number of children at the same time within a community-based program.

Laugeson et al. (2014) conducted a study to examine the effectiveness of *Program for the Education and Enrichment of Relational Skills* (PEERS) which is a school-based social intervention. The participants included 73 adolescents (i.e., ages 12-14 years) with ASD, parents, and eight teachers. The purpose of this study was to evaluate the efficacy of a manualized social skills intervention that was facilitated by teacher in educational settings to target social functioning. The researchers used a group design collecting pre-and posttest measurements. The dependent variable was social

functioning, and the independent variable was using PEERS facilitated by educators and aids. Participants were assigned to either the treatment group or control group that utilized an alternative social skills curriculum.

The researchers used a battery of tests to evaluate social responsiveness (i.e., social awareness, social information processing, social communication, and social anxiety/avoidance), quality of play, social anxiety, friendship, self-concept, and social skills knowledge. Measurements were completed by the participants, parents, and teachers prior to treatment and following treatment. The teachers received training and consultative services in agreement to follow the manualized program daily in their classrooms.

The intervention was a 14-week intervention program consisting of 30-minute lessons presented five days a week. The sessions also included rehearsal of skills and feedback. Socialization homework was given to the participants and parents received handouts and communication logs from the teacher. Fidelity was monitored using fidelity sheets in correspondence with the intervention. The lessons covered a variety of topics on social communication skills, developing peer networks, and ways to handle bullying and conflict. The control group received 14 weeks of intervention for 30 minutes a day, 5 days a week. This intervention implemented the *Super Skills* manualized curriculum. This intervention also targeted additional social communication skills, such as eye contact, voice volume, initiations, getting along, following directions, social responses, and acknowledging others. The teachers that implemented this intervention were previously trained and had been using this as a school-wide approach.

The researchers analyzed the data using SAS/STAT and SPSS. The results indicated greater improvements in social knowledge and get togethers, with the treatment group compared to the control group. There were significant differences in the frequency of invitations to social gatherings in the treatment group. The treatment group also showed a significant reduction in ASD symptoms related to social responsiveness than the control group. Additionally, the results indicated greater results in the treatment group as compared to the control group in the following areas: social awareness, social communication, social motivation, social cognition, and ASD mannerisms. The parent ratings indicated a decreased trend in social anxiety in the treatment group versus the control group. Overall, the participants in the treatment group exhibited significant improvements in social functioning as compared to the control group.

Liao et al. (2014) conducted a study examining the effects of the DIR/Floortime™ intervention program to increase social interactions and adaptive functioning with 11 children ages 3-5 years with ASD in Taiwan. They also examined parental stress level and hypothesized a reduction in stress due to training. The participants and their parents were involved in this study. The dependent variables were emotional functioning (i.e., self-regulation and interest in the world, friendships, attachments, and engagements, two-way communication, behavioral organization, representational capacity, and representational differentiation), adaptive skills, and parental stress. The researchers assessed the participants IQ using a non-verbal IQ test and collected additional data measuring emotional functioning, adaptive skills, and parental stress. The researchers also collected data from video clips of parent and child interactions from measuring pre

and post interactions. These video clips were used to measure interrater reliability resulting in .85 correlation coefficient.

The researchers used the principles of DIR/Floortime™ to provide an intervention program to train parents. The parents attended one on one training in a clinical setting for three weeks to learn and acquire skills associated with the program. The parents also viewed a video lecture describing the components of DIR and examples of play strategies. The parents created goals to address through the program. Parents received a manual consisting of the intervention program and strategies. The intervention included parental implementation of the intervention program for 10 hours per week for a total of 10 weeks and meeting with the researcher every two weeks to discuss program and address concerns. SPSS was used to analyze the data and determine effect size. The results indicated medium to large effect changes related to functional emotional skills, specifically in the total score, engagement, relating, two-way communication, and social problem solving. In the area of adaptive skills, the effect size was medium to large in all areas except motor skills. Significant improvements in total, communication, daily living, and social skills. The results of the parental stress measures indicated small effect size for distress, decrease in dysfunctional interactions resulting in a medium effect.

McFadden et al. (2014) conducted a study to evaluate the effectiveness of a peer-network recess intervention package (PNRI) to target reciprocal social communication skills with four students with ASD and students that were typically developing during recess. The researchers also wanted to evaluate the effects of this intervention program that included the following components: class-wide social skills lessons with priming, peer prompting and adult feedback, and token economy systems on reciprocal initiations

and responses between the participants and the peers. The researchers used a multiple baseline across participants design and collected baseline data during recess for 6-13 baseline sessions.

The researchers recruited school personnel and provided them with description of the intervention, outline, and met with the staff members to answer questions prior to the implementation of the intervention. The dependent variables were total number of social initiations, responses towards peer, and total number of initiations and responses from the peers to the participants. These social communication behaviors included commenting, requesting, organizing play, turn-taking, niceties, helping, or nonverbal behaviors. Behaviors were observed and coded using NOLDOS for 10 minutes during two to four sessions a week. McFadden et al. (2014) also collected data from teachers using a teacher rating scale to determine social validity and impacts of maintenance. Generalization and maintenance data were collected using probes. Fidelity was measured using a checklist related to the components of PNRI and was collected during 14 observations resulting in mean fidelity of 89%. IOA results during the training for observers was at least 80% across three sessions. IOA was also collected during baseline and intervention phases across various target behaviors resulting in a mean range of 76% - 95%.

Prior to the intervention phase the researchers trained the implementers on the intervention procedures, modeling, coaching until the implementers were able to implement the procedures independently. The intervention package consisted of class-wide lessons, pre-recess huddles, prompting and feedback, whistle stops, post-recess huddles, and class parties. The intervention also utilized ABA strategies, such as direct instruction, priming, prompting, token systems, group contingencies, and reinforcement.

The class-wide sessions provided descriptions of social skills, role playing, and a description of the contingency reward (i.e., class party). The social skills taught included how to play together and have fun, complimenting and encouraging others, talking about what they are doing and giving ideas, and using names and gaining attention of others. The pre-recess huddle was used to gather peers, provide priming on the target social skills, modeling of behaviors, and review of reward. During whistle stops the implementers reviewed the checklist with the participants and peers, provided praise, gave reminders of the target skills and ways to earn check marks on the checklist. Post-huddle was implemented after recess when the implementer would transfer the data from the checklist to the group token economy chart. When the participants and peers earned the number of checks needed to the phase of the reinforcement system, they gained access to a class party.

The results of this study indicated large increases in all participants and their peers. During baseline, the participants exhibited low intervals of the target behaviors and after the introduction of the intervention displayed rapid increases. All participants increased in their social communication behaviors after baseline with minimal returns to baseline. Initiations also resulted in increases from averages of 20% during the baseline phase to an average of 60% after the intervention. Responses also increased for all participants from baseline to intervention. Responses from the peers demonstrated increases as well. Social communication skills (i.e., commenting) resulted in large increases after intervention. The mean range for the participants' during baseline was 2% - 47% to 40%-61% after the intervention. Social validity was measured by the implementers resulting in an average range of 3-5 ratings on a 5-point scale. Overall, the

results indicated positive outcomes using PNRI to increase social communication behaviors and peer interactions during a naturalistic activity, such as recess.

Mason et al. (2014) conducted a research study on three elementary-aged children with autism that were enrolled in a randomized control trial examining peer networks focusing on recess interactions. The purpose of this study was to examine the effects of a peer network intervention program to increase communicative acts (i.e., verbal communication towards a peer combined with using eye contact, gestures, or body orientation) during recess. The researchers also wanted to determine if there was a relationship between a peer-mediated intervention package and communicative acts. The participants were involved in peer-mediated social intervention program that provided lessons on conversational skills, visual cues, and reinforcement for initiating or responding in structured play. Six peers also received training regarding how to socially interact with students with ASD and ways to prompt initiations and responses within reciprocal communication.

The researchers used a multiple-baseline design across participants and data were collected on participants during the baseline phase to measure verbal, social, and overall adaptive functioning. Baseline data were also collected during free play at recess without prompting from an adult or peer. The intervention phase included the implementation of the peer network intervention package which included a triad of one student with ASD and two peers. The intervention phase consisted of no more than 3 sessions per week that was delivered prior to recess throughout the school year.

The intervention consisted of priming conversations and activities reviewing a target skill. The interventionist facilitated the conversation, gave examples of the target

behavior, prompted discussion, gave affirmation, and wrote examples down on a cue card. The interventionist also gave corrective feedback for all inappropriate responses or non-examples of the target behavior. The interventionist implemented the use of a reinforcement system using a card, stickers, and access to the treat bag when the card was full of 20 stickers. The group was given access to play time and received prompting and feedback from the interventionist. If the student with ASD did not initiate the target behavior the interventionist gave prompts to the peer to elicit the communicative act from the student with ASD. This continued for 10 minutes, and the interventionist gave specific feedback regarding the exhibited communicative acts. The interventionist also reviewed the reinforcement card with the group to determine if criterion was met. The entire group received access to the treat bag if they met criterion.

Data were evaluated using visual and statistical analysis using a graph and Tau-U to determine effect size. All three students with ASD exhibited an increase in communicative acts after baseline. Two of the three participants never returned to their baseline after receiving the intervention and one student only returned to baseline at one data point. Overall, the mean frequency rate on communicative acts increased during the intervention phase. Also, the statistical analysis using Tau measurements were 1.00, 1.00, and .97 all indicating large magnitude of change. Social validity was measured using a survey administered to the adult implementers resulting in agree to strongly agree responses to social interaction changes between the student with ASD and their trained peers. This study demonstrated effectiveness using a multiple-baseline approach to evaluate a peer-mediated intervention package to increase social communication with peers during a naturalistic activity, such as recess.

Radley et al. (2014) conducted research on four children with ASD in public educational settings. The participants were referred to the researchers from two public schools in the southeastern part of the United States and included four male students ranging in age from 8- 10 years with a clinical diagnosis of autism or Asperger syndrome. The purpose of this study was to test the efficacy of Superheroes Social Skills program to increase social engagement in generalized settings. The researchers also hypothesized that involvement in social skills training would increase social engagement during recess. The secondary purpose was to evaluate the frequency of initiations and responses as a result of the social skills training.

Radley et al. (2014) used a single-case design that utilized a concurrent multiple baseline design across participants to evaluate the efficacy of the intervention. Baseline data were collected using a friendship survey and an autism-specific social skills profile to assess the acquisition of skills. The intervention phase consisted of eight sessions lasting 30 minutes per session. Peers were included in the intervention sessions and used to role play the target skills. The participants viewed a video depicting a particular social skill presented by an animated superhero. Then the participants were involved in a role play to target a specific skill along with receiving coaching by a group facilitator. The participants and peers were also involved in a social game and prompted to use a self-management to evaluate their use of the social skills.

After analysis of data the researchers found improvements in social engagement (i.e., joint engagement with others or game) and social initiations and responses (i.e. general or negative initiations and negative responses) as measured and analyzed. Another form of data analysis reviewed the pre and post scores used to assess social

skills, social reciprocity, participation/avoidance, and detrimental behaviors. The results indicated significant improvements in the areas of social reciprocity, detrimental behaviors, and total social functioning. There was not significant statistical improvement in participation/avoidance. The researchers could not analyze the friendship surveys due to the lack of returned surveys during the post intervention phase. Lastly, the researchers assessed participant acceptability of the intervention using a rating scale, which was a 6-point scale. The average rating of acceptability was 5.96 indicating a high rating.

Strasberger and Ferreri (2014) conducted a study with four children with autism ranging in age from 5-12 years that exhibited no verbal communication skills. The purpose of this study was to evaluate the use of augmentative and alternative communication (AAC) and peer mediated interventions to increase communicative behaviors and socialization. The dependent variables were independent and prompted mands and responses using AAC. The independent variables included peer assisted communication application (PACA) which is similar to the PECS training phases.

The researchers used a multiple baseline design across participants. IOA was measured resulting in 95% agreement across conditions. Procedural fidelity was evaluated resulting in 92%-100% during various phases of the PACA training. Baseline data were collected during a session with the participants and the AAC device which was an iPod speech generated device (SGD). No training was given to the participants as the researchers collected data on 10 opportunities given to the participants to request access to a preferred item listed on the preference assessment and choice assessment.

The researchers conducted peer training prior to baseline to teach the peers how to use the device, roles of a communication partner, how to find the preferred item, when to

give access to the preferred item, procedures if the participant was not interested, how to ignore problematic behaviors, asking questions, and how to react when the participant doesn't respond. This training was completed through video modeling and evaluation. Criteria was set at 100% accuracy to begin the intervention. The intervention consisted of PACA training with the participants to teach them how to use the device. The primary investigator prompted the participant as the peer acted as the communication partner and provided access to the requested item. ABA strategies were applied such as graduated guidance, time delay, and immediate reinforcement of the desired item. The participants received physical prompting if they were unresponsive or exhibited an incorrect sequence. During the various phases four items were displayed on the device. Each session included ten opportunities to communicate, and the participants were taught different phases of the program as they reached criteria.

The researchers collected data during generalization probes after completion of the intervention and maintenance probes after 4 weeks. The results of the study indicated that all four participants were able to use the device to communicate a purpose. During baseline the participants were able to use the device independently on average from .4-6 times. The participants moved through the phases at various rates which is common for this type of treatment. During phase IV two participants met criteria and independently responded using the device with an average range of 6-9 times. The other two participants did not meet criteria to move on to the next phase however, still used the device with an average range of 3.5-4.3 times. During phase V two participants used the device with an average of 9 times while the other two participants return to baseline for additional training. During phase VI two participants independently responded to the

communication partner on an average range of 6.6-6.8. After returning to baseline one participant remained at phase IV with an average of 3 responses and the other participant exhibited an average of 6.6 responses and moved on to the next phase. Two participants met criteria for phase VI and data were collected in the generalization phase resulting in an average range of 10 responses and 7.7-9.5 during the maintenance phase. One participant had an average of 5 responses during generalization and no data collected during maintenance. One participant exhibited an average of 2 responses during generalization and no data were collected in maintenance due to time constraints. The researchers also gathered data from the teachers using a behavioral intervention rating scale using a 6-point Likert scale. The average rating across teachers and items was 4.9 in agreement with acceptability and effectiveness. Overall, all participants use the device to some degree. Two of out the four reached highest criteria and exhibited significant increases from baseline to generalization and continued to demonstrate increased responses from baseline to maintenance.

Ventola et al. (2014) conducted a study examining Pivotal Response Treatment (PRT) to evaluate the efficacy of this treatment program with ten students with ASD ranging in age from 4-6 years. The purpose of this study was to determine if a 16-week PRT intervention program would result in improvements in social communication and adaptive skills. The researchers used a clinical replication design to examine clinical effect on a different set of cases (i.e., preschool aged participants with average cognitive skills to target more sophisticated social skills). The dependent variables were social communication and adaptive skills. The independent variable was PRT intervention program. The researchers collected baseline data using a variety of instruments to

measure cognitive abilities, autism-specific parent interview, ADOS, social responsiveness, adaptive skills, language, and a clinical rating scale. Clinicians received PRT training from faculty members at UCSB where the developers have a training facility. Treatment fidelity was measured using a standard assessment created by the developers of PRT. The clinicians met fidelity during the study. The intervention consisted of direct instruction and parent training for a total of 8 hours per week for a total of 16 weeks. Post data were collected at the end of the intervention phase. PRT implements naturalistic and behavioral-based approaches that include child choice, attending, clear opportunities, contingent and natural reinforcement, reinforcement of attempts, and combination of maintenance and acquisition tasks (Ventola et al., 2014). The approach also utilizes a variety of other principles and components of ABA.

The researchers measured both overall clinical effect and specific clinical effects (i.e., social communication and adaptive skills). The clinical effect was measured by two independent clinicians using a 7-point rating scale designed specifically to evaluate clinic change. The clinicians agreed on six of the ten participants and within one point for four participants. All of the participants were rated to have minimal improvements by at least one clinician. One rater suggested no change for one participant while the other clinician indicated minimally improved. Five out of ten were rated to have much improvement by at least one clinician. Five were rated as making minimal improvements by at least one rater. Eight students were able complete both pre- and post-treatment measurements of social communication skills resulting in six participants having marked improvements. The ADOS was used to measure treatment response resulting in seven participants' scores which decreased showing improvements.

Adaptive skill measurements were completed by the mothers of all the participants indicating variable results. In the area of receptive language six of the ten participants exhibited over 4-month gains, two remained stable, and one lower. Expressive language indicated eight of the ten demonstrated over 4-month gains, one remained stable, and one was lower after treatment. Socialization scores indicated nine of out ten made gain of 4 or more months. Play and leisure scores resulted in eight of the ten participants made at least 4-month gains. Community subdomains indicated eight of the ten made over 4-month gains and in the domestic domain resulting in seven of the ten made over a 4-month gain. In the personal subdomain six of the ten made at least a 4-month gain. The coping domain indicated eight of the ten made at least 4-month gains. In interpersonal skills five of the ten made greater than 4 months gains, three remained stable, and two declined.

Overall, all the participants made improvements and PRT was specifically effective in the areas of social communication skills. Adaptive skills increased especially in the targeted areas of communication and socialization. Other gains were observed in a variety of developmental skills.

Einfeld et. al (2018) conducted a study to evaluate the effectiveness of the Secret Agent Society (SAS) program to target social skills, emotional regulation and awareness, and social problem-solving skills. The SAS program included a social skills curriculum incorporating a computer program to teach children with ASD how to recognize emotions, play and social-communication skills, ways to solve social problems, and how to manage situations that involve bullying. The SAS program also incorporated group sessions using discussions and role play techniques to practice the social skills. In

addition, this program included supplemental materials that could be utilized at home and school. Facilitators received a two-day training prior to delivery of the intervention and weekly phone supervision. The SAS program was conducted over 10–13-week period which consisted of sessions with the participants (i.e., 9 sessions for 90 minutes), parents (i.e., 4 sessions for 2 hours), and tip sheets for the teachers. Participants and their families were recruited from autism specific programs in Australia that incorporated the Aspect program (i.e., school-wide program) for all students with ASD. A total of 84 participants enrolled in the study, resulting in the retention of 70 participants to complete the study.

Cognitive and language assessments were administered to the participants and parents and teachers completed questionnaires to assess social skills and emotional regulation. Social problem-solving skills were assessed using vignette-based tasks involving social problems and the participants were asked to generate solutions or ways to respond to the social problem. The researchers used a control group (i.e. treatment as usual) which consisted of the Aspect curriculum to teach social, communication, sensory, learning, and behavioral skills to students with ASD.

The teachers were trained in the Aspect program and delivered the content of the curriculum. The participants in the treatment group were then provided with the SAS program in addition to the Aspect curriculum. Pre-and-post data revealed significant improvement in social competence with the participants that were involved in the SAS intervention while no significant effect changes were found in the control group that only utilized the Aspect curriculum. In addition, post-intervention measurements found maintenance of skills after a 12-month period.

Thomeer et al. (2019) conducted a study examining the efficacy of the summerMAX program (i.e. comprehensive treatment program) with 57 participants (i.e., 28 participants in the treatment group and 29 participants in the wait-list group) students with ASD ranging in age from 7-12 years participated in this study. The purpose of this study was to determine if the 5-week intervention program would result in improvements of social-communication skills, interpretation of language skills, recognition of facial and emotional skills in others, and expand social interest. The participants were recruited within the local area of the research site and screened prior to participating in the research. Diagnostic eligibility of participants was confirmed prior to participating in the study.

The researchers used the Social Communication Questionnaire (SCQ) as an assessment tool prior to the research study. In addition, language skills were assessed prior to the study using the Comprehensive Assessment of Spoken Language (CASL), Adapted Skillstreaming Checklist, Social Responsiveness Scale (SRS-2), and the Behavior Assessment System for Children, Second Edition- Teacher Rating Scales (BASC-2-TRS). The researchers used multidimensional approach to assess the participants levels prior to examining the efficacy of the intervention. The researchers examined 57 students ranging in age from 7-12 years with high functioning autism-spectrum disorder (HFASD). The researchers used a randomized waitlist control group and conducted the intervention in a local community setting with five treatment groups with individuals with HFASD and trained clinicians. The clinical supervisor was also trained in the implementation of the summerMAX, which was a manualized program to teach social skills for children with ASD.

The manualized social skills program included teaching children social-communication skills, recognition of emotions, language skills, and interest expansion. All clinicians were trained using this manualized program and were able to demonstrate a level of “mastery,” prior to the study consisting of over 40 hours of training. In addition, the participants were involved in therapeutic activities to practice skills in a natural manner and in environments that elicit such social skills. Data were analyzed using ANCOVA for pre-and post-testing scores. The results indicated an effect size estimate of 95% and increased satisfaction ratings from parents and teachers from the treatment group. The results of the study also compared the groups using ANCOVA results, which indicated that the treatment group demonstrated a higher posttest scores than the control group. Lastly, this study indicated the importance for comprehensive treatments for individuals with HFASD or ASD and the need for research in this area, which was precisely my motivation for this research.

Summary of Methodologies Used in the Studies

This review focused on the experimental methodologies of single subject designs and group designs as they are frequently used in the field of autism due to diversity and homogeneity of this population. Single subject or single-case designs are commonly used in behavioral sciences as the participant can be used as the control and measurements of the target behaviors can be repeatedly collected through baseline and intervention phases (Gast, 2010). More weight is given to studies that use replication of alternating conditions, withdrawal, or staggered intervention across behaviors, participants, or conditions (i.e., A-B-A-B, multiple baseline designs) as these designs control for threats to internal validity. Group designs are also used in behavioral sciences to examine

averages amongst a group and to evaluate the efficacy of an intervention within a group. Group designs can include experimental, quasi-experimental, and correlational studies (Gast, 2010). These studies implement a control and an experimental group to comparatively analyze the two groups, typically examining the effects of an intervention.

Of the 17 studies reviewed, nine were single case design studies including one A-B design (Yang et al. 2003) and eight multiple baseline or multiple probe designs (Ferraioli & Harris, 2011; Hundert et al., 2014; Mason et al., 2014; McFadden et al., 2014; Radley et al., 2014; Sansosti & Powell-Smith, 2008; Strasberger & Ferreri, 2014; Thiemann & Goldstein, 2004). Eight studies used a group design (Eapen et al., 2013; Einfeld et al., 2018; Laugeson et al., 2012; Laugeson et al., 2014; Liao et al., 2014; Robert et al., 2011; Thomeer et al., 2019; Ventola et al., 2014).

Among the single-case design studies, eight studies had more functional evidence included designs that exhibited more experimental control and control for internal and external validity. These studies included measurements of at least two experimental conditions (Gast, 2010). As stated, increased control can be determined through replication of the conditions, withdrawal of the treatment, alternation of treatments, or staggering of intervention.

Participants

A total of 409 participants were included and completed the research studies. The participants ranged in age from 2-17 years of age. The sample sizes ranged from 3-84 participants. Of the participants, 18 were identified as having a diagnosis of autism, 30 participants were identified as having autistic disorder, 158 were identified as having a diagnosis of autism spectrum disorder, three participants were identified as having

Asperger syndrome/high-functioning autism, 84 participants were identified as having autistic, ASD, or non-ASD, 28 participants were identified as having high-functioning autism, Asperger syndrome, or PDD-NOS, four participants were identified as autism or Asperger syndrome, and 84 participants were identified as autistic disorder, Asperger syndrome, or PDD-NOS.

The studies that reported ethnicity included the following: 72 participants were identified as Caucasian, 14 were Hispanic/Latino, 24 Asian, 6 African American, 3 Middle Eastern, 26 Australian and/or other, 5 other ethnic groups (Laugeson et al. 2012), 3 unknown (Laugeson et al. 2014). Other studies did not specifically report ethnicity (Einfeld et al. 2018; Ferraioli & Harris, 2011; Hundert et al., 2014; Mason et al., 2014; Robert et al., 2011; Sansosti & Powell-Smith, 2008; Thiemann & Goldstein, 2004; Thomeer et. al 2019; Ventola et al., 2014). Since demographics were not reported on all the participants, it is unknown if the participants were ethnically underrepresented or disproportionate.

Interventions

The interventions were coded into four categories: traditional behavioral-based interventions, developmental and behavioral interventions, peer-mediated and sibling-mediated interventions, and curriculum-based or combination of two strategies interventions. Traditional behavioral-based interventions in this review included the study evaluating PRT (Ventola et al., 2014). The studies that incorporated a developmental and behavioral approach reviewed the efficacy of the ESDM and DIR/Floortime™ (Eapen et al., 2013; Liao et al., 2014). This review revealed nine studies that incorporated peer and sibling-mediated interventions (Ferraioli & Harris, 2011; Hundert et al., 2014; Laugeson

et al., 2012; Laugeson et al., 2014; Mason et al., 2014; McFadden et al., 2014; Radley et al., 2014; Strasberger & Ferreri, 2014; Thiemann & Goldstein, 2004). The last category included five studies that implemented interventions that used a focused social skills curriculum or combined at least two social interventions (Einfeld et al. 2018; Roberts et al., 2011; Sansosti & Powell-Smith, 2008; Thomeer et al. 2019; Yang et al., 2003).

Descriptions of the interventions in this review were thoroughly defined in the review portion of this paper. Analysis was conducted on the research studies that implemented ABA components within their studies. This analysis revealed that all of 17 studies used components within their interventions that implemented principles and components of ABA. The behavioral components were coded into the following ten categories: task analysis, discrete or direct instruction, modeling, role play, forms of reinforcement, priming, rehearsal, corrective feedback, token economy systems, and group contingency systems.

Seven out of 17 studies demonstrated the use of task analysis to break down the skills and teach them in a sequential manner (Eapen et al., 2013; Ferraioli & Harris, 2011; Laugeson et al., 2012; Robert et al, 2011; Strasberger & Ferreri, 2014; Thiemann & Goldstein, 2004; Ventola et al., 2014).

Twelve out of 17 studies utilized discrete or direct instruction which provided explicit instruction within multiple opportunities (Eapen et al., 2013; Einfeld et al., 2018; Hundert et al., 2014; Laugeson et al., 2012; Laugeson et al., 2014; Radley et. al., 2014; Robert et al, 2011; Strasberger & Ferreri, 2014; Thiemann & Goldstein, 2004; Thomeer et al., 2019; Ventola et al., 2014; Yang et al., 2003).

Five of the 17 studies utilized modeling within the training phases to demonstrate the target behavior(s) (Einfeld et al., 2018; Ferraioli & Harris, 2011; Hundert et al., 2014; Thomeer et al., 2019; Yang et al., 2003). Eight of the 17 studies used role play exercises to provide opportunities to practice the target skills (Eapen et al., 2013; Ferraioli & Harris, 2011; Laugeson et al., 2012; Laugeson et al., 2014; McFadden et al., 2014; Thiemann & Goldstein, 2004; Thomeer et al., 2019; Yang et al., 2003).

Thirteen of the 17 studies used reinforcement systematically to foster future occurrence of the skill and provided direct feedback on the appropriate usage of the skill (Eapen et al., 2013; Einfeld et al. 2018; Ferraioli & Harris, 2011; Hundert et al., 2014; Liao et al., 2014; Mason et al., 2014; McFadden et al., 2014; Radley et al., 2014; Sansosti & Powell-Smith, 2008; Strasberger & Ferreri, 2014; Thomeer et al., 2019; Ventola et al., 2014; Yang et al., 2003).

Nine of the 17 studies implemented various levels prompts and prompting techniques (i.e., full physical, partial physical, verbal, gestural, visual, or independent). These studies implemented the above-mentioned techniques during social skills training with individuals with ASD (Einfeld et al. 2018; Hundert et al., 2014; Mason et al., 2014; McFadden et al., 2014; Sansosti & Powell-Smith, 2008; Strasberger & Ferreri, 2014; Thiemann & Goldstein, 2004; Thomeer et al., 2019; Ventola et al., 2014). Three of the reviewed studies implemented priming opportunities to help prepare the students with ASD and increase their knowledge of expectations (Mason et al., 2014; McFadden et al., 2014; Sansosti & Powell-Smith, 2008).

Four of the 17 studies indicated that they implemented rehearsal strategies of the target skill to increase accuracy (Laugeson et al., 2012; Laugeson et al., 2014; Strasberger & Ferreri, 2014; Yang et al., 2003).

In addition, 7 out of the 17 studies implemented strategies such as, reinforcement practices and/or corrective feedback as a way to teach and reinforce the appropriate demonstration of the targeted social skills (Einfeld et al., 2018; Ferraioli & Harris, 2011; Hundert et al., 2014; Mason et al., 2014; McFadden et al., 2014; Thiemann & Goldstein, 2004; Thomeer et al., 2019). Three of the 17 studies used token economy/reinforcement systems to increase the likelihood of the target behavior. And lastly, two studies included group contingency systems which promoted a collective goal and monitoring system (Hundert et al., 2014; Mason et al., 2014).

Target Skills

All of the studies focused on components of social communication skills as this was a major focus of this research review. The National Research Council (2001) addressed similar findings within research stating:

Research that has documented changes in the communication skills of children with autism falls into three major categories organized by the goal of the intervention: functional communication training to replace challenging behavior, increases in initiation of verbal and nonverbal communication, and increases in the core communication skills (p. 54).

Wetherby (2006) also stated “Social communication consists of a number of different theoretical constructs, such as shared or coordinated attention, intentionality, and reciprocity...” (p. 19).

The use of these target skills within the reviewed research provided overwhelming evidence of the importance of teaching attention, intentionality, and reciprocity. Additional skills were also addressed in this review and were coded into four categories including cognition, adaptive skills, psychopathology, and parental factors (i.e., stress, competence, or quality of life). One of the 17 studies included cognition as an additional target skill (Eapen et al., 2013). Two of the 17 studies included adaptive skills (Liao et al., 2014; Ventola et al., 2014). Two of the 17 studies included psychopathology or psychosocial treatments (Roberts et al., 2011; Thomeer et al. 2019). And three of the 17 studies included parental effects as a result of the interventions (Einfeld et. al., 2018; Liao et al., 2014; Roberts et al., 2011).

Effectiveness

Researchers conducted a visual analysis to evaluate the effectiveness by determining the strength of the research design, intervention efficacy, visual analysis, effect size, mean scores, positive outcomes, and social validity (see Table 3 for analysis of effectiveness). Effectiveness was coded into six categories: strength of research design (e.g., weak or strong), evidence of control (e.g., control evident or control lacking), evidence of effect size changes, evidence of increased mean scores, positive outcomes, and social validity. Thirteen of the 17 studies implemented a strong research design. Four of the 17 used a weak design (Eapen et al., 2013; Ferraioli & Harris, 2011; Liao et al., 2014; Ventola et al., 2014).

Effectiveness was also evaluated by reviewing the ability to exhibit functional control. Thirteen of the 17 studies demonstrated functional control. Four of the 17 studies lacked in proving functional control (Ferraioli & Harris, 2011; Strasberger & Ferreri,

2014; Ventola et al., 2014; Yang et al., 2003). Analysis of effect size changes were coded into four categories: small to medium, medium, medium to large, and large. Thirteen of the 17 studies evaluated overall effect size changes. Small to medium effects were exhibited in one study (Radley et al., 2014). Four studies demonstrated medium effects (Eapen et al., 2013; Roberts et al., 2011; Ventola et al., 2014; Yang et al., 2003). Four of the studies exhibited medium to large effect changes (Laugeson et al., 2012; Liao et al., 2014; Thiemann & Goldstein, 2004; Sansosti et al., 2008). And four studies demonstrated large effect size changes (Einfeld et al., 2018; Laugeson et al., 2014; Mason et al., 2014; Thomeer et al., 2019).

Evidence of mean score increases were coded into four categories: no increases, mixed increases, increases, and significant increases. Thirteen of the 17 studies reported mean scores. No studies indicated no increases. Three of the 17 studies demonstrated mixed increases (Ferraioli & Harris, 2011; Hundert et al., 2014; Strasberger & Ferreri, 2014). Five of the 17 studies demonstrated mean score changes indicating increases in the dependent variables (Einfeld et al. 2018; Laugeson et al., 2014; Mason et al., 2014; Sansosti & Powell-Smith, 2008; Thomeer et al., 2019). Seven of the 17 studies demonstrated significant increases (Eapen et al., 2013; Einfeld et al. 2018; Laugeson et al., 2012; Liao et al., 2014; McFadden et al., 2014; Radley et al., 2014; Thomeer et al., 2019).

Outcomes were also coded into two categories: lack of positive outcomes and demonstration of positive outcomes. Two out of 17 studies exhibited a lack of overall positive outcomes amongst the participants (Ferraioli & Harris, 2011; Strasberger & Ferreri, 2014). Fifteen of the 17 studies demonstrated positive outcomes as a result of the

intervention. Eleven of the 17 studies evaluated social validity indicating overall satisfaction, acceptance of the intervention, or implementation of socially important dependent variables. Six of the 17 did not fully measure social validity (Eapen et al., 2013; Hundert et al., 2014; Laugeson et al., 2014; Liao et al., 2014; Roberts et al., 2011; Ventola et al., 2014).

Major Findings

This literature review also demonstrated that using a systematic approach to teach social communication skills to students with ASD produces positive outcomes. Systematic approaches using intervention programs creates more direction and guidance for the provider than a singular approach. Intervention programs typically use a protocol or manual to support lesson planning and implementation. These programs typically instituted ways to monitor and check for fidelity to ensure treatment procedures. Also, the use of typically developing peers or siblings were used in nine out of 17 studies increasing the likelihood of maintenance and generalization of skills. The whole premise with teaching social skills is to apply the target skills to increase social interactions.

A major finding in the literature was the dedication to intervening early to enhance social communication skills for students with ASD. A majority of the studies were conducted with participants ranging in age from 2-17 years old. Early intervention is optimal for students with disabilities. However, adolescent students with ASD often require continued support as the social demands in middle and high school are significant. This was a gap in the literature suggesting continued research in sophisticated social communication skills should be conducted with adolescent students.

Another major finding with this review included evidence of principles of ABA across various intervention models supporting previous literature that has found ABA-based approaches effective for students with ASD. Using social skills intervention programs were used in educational settings in 13 out of 17 studies demonstrating the feasibility of providing structured social supports to students in their naturalistic environments.

Discussion

This review provides evidence that children and adolescents with ASD can acquire social communication skills when provided with appropriate intervention programs. Social communication is a core deficit for individuals with ASD which suggests a pivotal need in addressing social skills through the use of early intervention and educational services. This review also provided promise of addressing other skills through the implementation of social interventions, such as adaptive, cognition, and autism symptoms.

There were notable limitations to some of the studies, such as using a single subject design, lack of randomization, and the lack of using experimental and control groups. The studies that implemented single subject or pre-posttest designs lack in experimental control, are vulnerable to internal and external validity and cannot provide information on the effects of withdrawal of the intervention (Eapen et al., 2013; Yang et al., 2003). Another limitation is the absence of randomization to reduce bias, which was lacking in all but one study (Robert et al., 2011). Using experimental and control groups were implemented in four out of 17 studies (Einfeld et al. 2018; Laugeson et al., 2012; Laugeson et al., 2014; Robert et al., 2011).

Other limitations found in the reviewed studies include small sample size, lack of follow-up data, or collection of follow-up data shortly after the intervention. Nine out of 17 studies had a small sample size of under 10 participants. Eight of out 17 studies did not collect follow-up data to determine the effects of the intervention. Two studies conducted follow-up conditions shortly after the implementation of the intervention (Sansosti & Powell-Smith, 2008; Thiemann & Goldstein, 2004). One study was only able to gather data from 2 out of 4 participants (Strasberger & Ferreri, 2014). Two studies collected data 3 months after the completion of the study (Ferraioli & Harris, 2011; Laugeson et al., 2012). And one study collected follow-up data nine months after the study (Eapen et al., 2013). One study collected data after 12 months (Einfeld et al. 2018). Stronger evidence of the intervention can be presented in the collection of long-term follow-up data.

Strengths of the studies included using a strong research designs, such as multiple baseline, multiple probe designs, and group designs that incorporate experimental and control groups (Einfeld et al. 2018; Ferraioli & Harris, 2011; Hundert et al., 2014; Laugeson et al., 2012; Laugeson et al., 2014; McFadden et al., 2014; Radley et. al., 2014; Robert et al, 2011; Sansosti & Powell-Smith, 2008; Strasberger & Ferreri, 2014; Thiemann & Goldstein, 2004). These designs also provided experimental control and aid in evaluating for internal threats.

Additional strengths were the studies that determined social validity to evaluate the significance and acceptance of the intervention. Eleven out of 17 studies evaluated social validity, which is an important component when conducting behavioral research.

The influences of the interventions and evaluation of the application should be considered, especially with vulnerable populations, such as students with disabilities.

Overall, despite the limitations this review demonstrated efficacy of using social skills intervention programs with students with ASD to increase social communication skills. The importance of this review indicates that interventions can be applied in naturalistic settings, such as home and school and that educators, parents, and peers can implement interventions to fidelity. The acquisition of social communication skills can be influential in other areas of development, such as cognition, adaptive, behavior, and psychopathology. The analysis of this review also revealed that all of the research studies included components of ABA, which has a long-standing history in the field of disabilities. And lastly, this review demonstrated positive outcomes influencing the student's ability to navigate a social world by increasing their skill set. These skills are found to form and sustain relationships with others, which is a common challenge for individuals with ASD. This area of development can also improve the sense of community within educational settings and decrease the likelihood of feeling isolated or targets of bullying, which is a huge dilemma that students with disabilities face today.

Search Process

Studies Using Qualitative Research Design

Systematic and electronic searches were conducted using the following databases: PsycINFO, PsycArticles, and Academic Search Complete. The search included the following keywords and phrases: *social skills interventions, ASD and autism spectrum disorder, and parental experiences and perceptions*. The searches were limited to peer-

reviewed journal articles, written in English, and published from January 2001 – April 2022.

Criteria for Selecting Studies

Criteria for inclusion were peer-reviewed articles written in English that included studies: (a) that implemented social skills intervention programs (i.e. packaged intervention programs, manualized intervention program, or studies that use an intervention program including more than a single strategy), (b) that targeted social communication skills (i.e., social reciprocity, conversational skills, initiations and responses, social-pragmatic communication, social competence, and social engagement skills), (c) that included participants under the age of 21 years, (d) that implemented interventions in school, home, or clinical settings, (e) that used qualitative methods, and (f) that were conducted from January 2001 to April 2022 and; (g) that included parent perspectives and experiences

Criteria for exclusion included studies: (a) that did not implement social skills intervention programs (i.e., studies using a single social skills strategy or using forms of psychotherapy), (b) that examined skills other than social communication skills (e.g., vocational skills, parenting skills, and feasibility of intervention alone), (c) that included participants over the age of 21 years old, (d) that included participants with disabilities other than ASD (e.g. Down syndrome, emotional and behavioral disorders, bipolar disorder, schizophrenia, rheumatoid arthritis, and other developmental disabilities not including comorbidity with ASD), (e) that implemented interventions in settings outside of school, home, or clinic, and (f) did not include parental/guardian experiences and

perceptions, (g) that did not use qualitative case studies designs, and (h) that were meta-analysis, pilot study reviews, and literature reviews.

Results. Despite the results of quantitative research in the field of social skills interventions, there is still a lack of qualitative research to better understand parent perspectives and experiences related to their child receiving social skills interventions. No studies met the inclusion criteria on parental experiences and perceptions of social skills interventions received by their child with ASD indicating that there is a significant gap in the literature that used qualitative research to examine parental experiences and perceptions related to gaining access to social skills interventions and aspects of social validity.

In summary, this chapter revealed mainly quantitative research that has been conducted related to social skills interventions, efficacy of interventions, and child outcomes, from the perspective of the interventionist, researcher and sometimes the family member. The literature review also found much research focused on efficacy of the social skills program. After conducting literature reviews to specially examine qualitative research associated with parental experiences and perspectives related to social skills interventions, I found a significant gap in this type of research. Due to the lack of in-depth research related to how family members perceived and experienced these interventions for their child with ASD, I conducted a qualitative study. I wanted to further explore their experiences and perceptions of social skills interventions.

Chapter 3

Methodology

Introduction

Chapter 3 provides the rationale for using a case study approach, research design, data collection and data sources, data management and analysis, validation strategies, and researcher's position.

A qualitative multiple case study design was implemented to examine family members' experiences and perceptions related to social skills intervention their children received, gaining access to these interventions, and the social validity of the interventions. Case study research is frequently known in the fields of social sciences, such as psychology and education (Creswell, 2013). That type of research allows researchers to explore real life and multiple bounded systems (cases) through multiple sources of information (Creswell, 2013). Because the majority of published research focused on the efficacy of social skills interventions, using single-case design or group design, which lacks qualitative case studies to examine family members' experiences and perceptions related to access and social validity, I used a bounded multi-case study (Creswell, 2013) to examine this phenomenon by using a questionnaire and individual interviews. In addition, Merriam (2009) stated:

Often qualitative researchers undertake a qualitative study because there is a lack of theory, or an existing theory fails to adequately explain a phenomenon.

Therefore, another important characteristic of qualitative research is that the process is *inductive*; that is, the researchers gather data to build concepts, hypothesis, or theories rather than deductively testing the hypothesis, or theories,

as in positivist research. Qualitative researchers build toward theory from observations and initiative understandings gleaned from being in the field. (p. 15)

Therefore, due to the lack of qualitative research to fully understand family members' experiences and perceptions of gaining access to social skills interventions and the social validity of such interventions, the purpose of this study was to dive deeper than just clinical and educational aspects of efficacy but rather than to hear and understand the people most influenced by such interventions (i.e., family members of individuals with ASD). Due to this phenomenon, it was valuable to learn from the family members as to their experiences and perceptions related to social skills interventions for their child.

Purpose of the Study

The purpose of this case study was to explore and understand the experiences and perspectives of family members of children from preschool to fifth grade with ASD related to social skills intervention. The following questions guided the case study.

Research Questions

1. What are the experiences and perceptions of family members of individuals with ASD that were associated with gaining access to social skills interventions (i.e., logistically, financially, or providers)?
2. What are the experiences of family members of individuals with ASD related to social validity (i.e., feasibility, cost, and generalizability) of the implementation of social skills interventions?

Research Design

I utilized a multiple case study design to conduct this study. Case study is an approach typically used in qualitative research. “A central characteristic of qualitative research is that individuals construct reality in interaction with their social world” (Merriam, 2009, p. 22). Merriam (2009) further stated, “Thus qualitative researchers conducting a basic qualitative study would be interested in (1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences” (p. 23). Those qualities of qualitative research are precisely why I chose this methodology to further explore experiences and perceptions associated with social skills interventions in the field of developmental disabilities.

I was specifically interested in learning from family members within the community of autism spectrum disorder. Creswell (2013) also described the use of a small sample size in qualitative research to collect and report extensive data in a detailed manner. Using a case study allowed me as the researcher to examine a case and to review contextual information related to the examined case (Creswell, 2013).

Case study research was also defined by Yin (2009) as having unique qualities that can reveal a phenomenon and provide knowledge on cases; such case studies which may include rare data that could be missed using standardized approaches. That type of methodology allowed me to investigate the units of data, which could be a social unit to describe human experiences (Yin, 2009). In addition, the case in this study were individual units of data to further explore parental and family members’ experiences and perspectives related to their children with ASD and within social skills interventions, which were used as units to analysis to study cases within the phenomenon.

Merriam (2009) described features of a case study that included gathering data and being particularistic, descriptive, and heuristic. Particularistic refers to focusing “on a particular situation, event, program or phenomenon” (Merriam, 2009, p. 43). Descriptive means “the end product of a case study is rich, “thick” description of the phenomenon under study” (Merriam, 2009, p. 43). Heuristic refers to the case study bringing “about the discovery of new meaning, extend the reader’s experience, or confirm what is known” (Merriam, 2009, p. 44). My study used the case study approach to provide rich descriptions of participants’ experiences and could provide me with heuristic information related to parental experiences and phenomenon of social skills interventions.

The common methods used in qualitative case studies include forms of collecting data to reveal the phenomenon, such as questionnaires and interviews (Creswell, 2013). Using such forms of data provided valuable insights into the participants’ beliefs, allowing their stories to be heard and possible future recommendations to interventionists, educators, and interventionists. In addition, the results of the study may provide an opportunity for family members to tell their stories related to social skills interventions and provide researchers with a deeper understanding beyond the traditional use of surveys and rating scales as frequently used in the field and as described in the literature review.

Employing a case study design allowed me to further examine family members’ experiences and perceptions related to social skills interventions. In addition, that approach provided me with rich descriptions of participants’ experiences and could potentially provide heuristic information related to their experiences and phenomenon of social skills interventions.

Selection of Participants

After the IRB approval, I was able to recruit participants for this study. Inclusion and exclusion criteria were used to recruit and select participants for this case study in my effort to obtain a sampling of participants and to gain multiple perspectives in social skills interventions as suggested by Creswell (2013). Although the participants were not as diverse as I had anticipated, possibly due to the pandemic, I tried to recruit a diverse sample. Gail et al. (2010) suggested “using researcher judgment to select instances that are information-rich with respect to the phenomenon being studied” (p. 348). Creswell (2013) also described the use of a purposeful sampling strategy. My initial research design and selection for participants I was hopeful to be able to have a more diverse group of participants and to be able to conduct a purposeful sample of participants.

The initial goal when designing this study was to have a more purposeful sampling as to providing a more diverse and representative selection of family members within this state for this study using a sampling strategy to investigate diverse and unusual cases to describe multiple perspectives related to the phenomenon (e. g., family members’ experiences and perspectives on implementing social skills interventions). However, during the global pandemic I was not able to recruit a diverse sample as I had originally anticipated during the design of the study. However, during these challenging times I was still able to conduct the study and discover meaningful data and hear insightful stories from family members.

Five family members, specifically mothers of individuals with ASD within New Mexico, participated in this study. Interviewing the participants and analyzing the cases allowed me to hear and better understand various experiences and perspectives. Ideally,

as mentioned above, I hoped to have a more diverse group of participants but, was not able to have such a diverse group as intended, which were described in the limitations.

Selection Criteria

Participants of this study consisted of individuals who met eligibility which was confirmed prior to participation in the study. Inclusion criteria for participation in this study is described below.

Participant inclusion criteria included the following:

- (a) The participant must be a parent or family member who lives in the home of an individual with ASD (i.e., preschool to fifth grade).
- (b) The child participated in social skills interventions for at least six months during the previous five years.
- (c) Participants were able to communicate fluently in verbal and written English.

Participant exclusion criteria included the following:

- (a) An individual was not a parent, guardian, or family member who does not live in the home of an individual with ASD (i.e., preschool to fifth grade).
- (b) The participant had a child younger than 3 years of age or older than fifth grade.
- (c) The participant had a child that participated in social skills interventions less than at least six months during the last five years and during the time the questionnaire was completed and validation of eligibility.
- (d) A parent, family member, or guardian was not able to communicate fluently in verbal and written English.

- (e) An individual who had a cognitive disability that would make assent or consent a challenge for participation.

Recruitment of participants ended after five parents met the inclusion criteria, and who agreed to participate in the study. The participants who were recruited for this study were not a diverse group, and an explanation for that was provided in the limitation section in Chapter 5.

Recruitment of Participants

After IRB approval, I started to recruit participants by sending a recruitment flyer to individuals on various listservs from across the state including a statewide advocacy group within the autism community, University of New Mexico Special Education Department, and various therapy companies that provide social skills interventions.

Participants received a description of the main research questions and a description of the study in the recruitment flyer via email. Interested participants contacted me directly via email or phone after reviewing the recruitment flyer which described the purpose of the study, eligibility for participation, and compensation for participation. Once the interested participants contacted me, I scheduled a preferred time to conduct an initial conversation to introduce myself and verify eligibility to determine if the participant met criteria and/or was interested in participating in the study.

Ethical Considerations

Participation for this study was voluntary, and all participants were fielded prior to the study to ensure inclusion and exclusion criteria as discussed above. All participants met the criteria to participate in this study upon verification during the initial phone conversation and prior to receiving the questionnaire. All potential participants were sent

the consent form prior to participating in the study; the consent included the purpose of the study, components of participation, and a right to withdraw at any time. Participants received a follow-up email prior to the interview to inquire if they had any additional questions prior to the individual interviews and/or questions related to the consent form. All participants indicated that they had no additional questions and agreed to participation by completing the questionnaire and taking part in an individual interview.

Informed Consent

As briefly mentioned above, after determination of eligibility for the study, participants were sent the informed consent form along with the questionnaire (Appendix A-1: Informed Consent; Appendix A-2: Questionnaire). All participants consented to take part of participating in the study, completed the questionnaire, sent the questionnaire to me, and were given the opportunity to ask any questions they had prior to the interview. As mentioned above, participants were informed that their participation was voluntary in various manners, such as the initial recruitment flyer, informed consent, and during the recruitment process, which also included the option to decline participation at any time during the study. All participants provided verbal consent prior to the individual interviews which were recorded.

Data Collection and Source of Data

Data collection processes included administering a short questionnaire and individual interviews. The first phase of data collection included a short questionnaire to gather information about their child prior to the interview. The questionnaire assisted in gathering initial data and I tried to create a purposeful sample of participants. Creswell (2013) described purposeful sampling as an approach to make decisions about

participants, type of sampling strategy, and sample size. The second source of data was derived from semi-structured interview responses from the individual interviews.

Each participant completed the questionnaire prior to the individual interview, which gave the researcher additional information regarding demographics and what the participants perceived as social skills prior to the interview. All participants were interviewed, and due to the COVID-19 pandemic and health and safety of all individuals involved in this study, all interviews were conducted and recorded using video-conferencing due to maintain the safety of all individuals involved in this study. Recorded interviews were professionally transcribed verbatim (i.e., word for word and line for line) for accuracy. This method of data collection was efficient during the pandemic and also provided me with accurate data. The professional transcription company used the Express Scripts program to transcribe the data, and I reviewed the transcriptions and recorded interviews for accuracy.

Questionnaire

Questionnaires were sent to the participants to their preferred locations (i.e., email or mailing address). All participants completed the questionnaires and received a follow-up email to give them an opportunity to ask questions or express concerns. Each participant answered these questions:

- (1) Can you tell me about your child?
- (2) Can you tell me what social skills mean to you and your family?
- (3) What is your ethnic background?
- (4) Is there anything you want me to know before the interview?

The questionnaire gave me some initial information about each participant, their child, and demographics prior to conducting the interviews.

Interviews

For this study, qualitative interviews were also used as another method of data collection to study the phenomenon of parent and family members' experiences and perceptions related to social skills interventions. I implemented a semi-structured interview approach to inquire about parent's and family members' experiences and perspectives associated with social skills interventions. Interviewing was described by Merriam (2009): stating "In all forms of qualitative research, some and occasionally all of the data are collected through interviews (p. 87)." Merriam (2009) also elaborated on the implementation of interviews, stating, "The most common form of interviews is the person-to-person encounter in which one person elicits information from another." (p. 88).

In addition, Merriam (2009) described the value and importance of interviewing, stating, "Interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them" (p. 88). Merriam (2009) further stated, "It is also necessary to interview when we are interested in past events that are impossible to replicate" (p. 88). Because this phenomenon could not be observed in person nor could a researcher, such me to fully understand the phenomenon is exactly why this research was necessary. In addition, there is a long history of using this method for data collection as described by Merriam (2009), which stated, "As a means of collecting information, interviewing has been with us for centuries. Census taking, surveying, and opinion polling were and still are measurement-orientated forms of interviewing" (p. 91). Not

only does the history provide us with a high level of importance for collecting interview data, but also, the reactions and responses from the participants provide such information and data that otherwise may not be collected and analyzed.

I used a semi-structured format to collect data during the interview that was framed in an open-ended context to provide the participants with an opportunity to discuss and describe the phenomenon being studied. Additional probes were implemented when needed, such as the need for clarification or elaboration. Merriam (2009) described the use of semi-structured and open-ended questions as:

Less structured formats assume that individual respondents define the world in unique ways. Your questions thus need to be more open-ended. A less structured alternative is the *semi structured* interview... the semi-structured interview is in the middle, between structured and unstructured. In this type of interview either all of the questions are more flexibly worded, or the interview is a mix of more and less structured questions. Usually, specific information is desired from all the respondents, in which case there is more structured section to the interview. But the largest part of the interview is guided by a list of questions or issues to be explored, and neither the exact wording nor the order if the questions is determined ahead of time. This format allows for the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic. (p. 90)

I tried to create a comfortable environment that allowed the participants to feel free to discuss their experiences and perceptions while maintaining a stance of true curiosity. In addition, Merriam (2009) stated:

Since the respondent has been selected by the investigator on purpose, it can be assumed that the participant has something to contribute, has had an experience worth talking about, and has an opinion of interest to the researcher. This stance will go a long way in making the respondent comfortable and forthcoming with what he or she has to offer. (p. 106)

Conducting interviews provided a space for participants to share their experiences and perceptions related to social skills interventions in a one-on-one setting versus a focus group. The stories and experiences shared during the interviews were powerful and filled with various emotions. I followed the guidelines for interviewing established by Yin (2011):

All interviews involve an interaction between an interviewer and a participant (or interviewee). Structured interviews carefully script this interaction. First, the researcher will use a formal questionnaire that lists every question to be asked. Second, the researcher will formally adopt the role of an interviewer, trying to elicit responses from an interviewee. Third, the researcher as interviewer will try to adopt the same consistent behavior and demeanor when interviewing every participant. The interviewer's behavior and demeanor are therefore also scripted, usually the result of some earlier and study-specific training aimed at conducting the data collection as uniformly as possible. (p. 133)

I also used an interview protocol (Appendix A-3) to guide the interview process as referenced by (Creswell, 2013), I asked follow-up questions as needed and encouraged the participants to talk freely by nodding my head. I participated in active listening as the participant responded and shared their stories. I also implemented the recommendations

from Creswell (2013), which would include the following data collection process during the interviewing process, such as deciding on the research questions that will be answered in the interviews, identifying the interviewees who could answer the questions, determining the type of interview, using adequate recording procedures, design and use an interview protocol, determine the place for the interview, obtain consent from the interviewee, and lastly during the interview use interview procedures (pp. 163-166).

I made efforts to create a comfortable, safe, and secure environment for the participants, such as conducting the individual interviews in a private office space and minimizing auditory and visual distractions during the interviews.

The interviews were scheduled at a time convenient for each participant. An email was sent with a Zoom invitation link. Each interview was conducted via Zoom to protect the safety of the participants and myself during a global pandemic. The participants indicated their familiarity of the platform during the initial phone contact and were comfortable using Zoom prior to the interviews. The recordings of the interviews captured the fluid conversations between me and the participants and increased accuracy of data collection and analysis, to which all participants gave verbal consent at the start of the interview. I found that utilizing individual interviews provided me with an opportunity for the participants to share their different experiences with me without others around, and that may have influenced their level of participation and comfort level.

For this study, five participants were interviewed. Prior to the formal interview, I began the conversation with my appreciation for their participation. I introduced myself, described my background in the field of ASD and, my position as a doctoral student, and

asked if they had any questions regarding consent. None did have any questions related to the consent form.

Each interview began with a recorded verbal consent and my opening statement, which included the following: “I would like to talk to you about your experiences and perspectives of social skills interventions your child received in the last five years for at least six months. I am very interested in knowing about your experiences and perspectives. I am going to focus on three main areas beginning with gaining access to the social skills intervention. Then I want you to share your experiences about the interventions. Finally, I would like you to talk about if the interventions are important, easy to do, and affordable.”

I asked the following questions during the interviews (Appendix A-3: Interview Questions):

- (1) What are your experiences with finding the social skills interventions for your child? Please give me some examples.

Follow-up question:

- Tell me about if it was challenging or easy in finding social skills intervention? If it was challenging, do you want to tell me why you found it challenging? (e.g., lack of insurance coverage)?
- Tell me if your child was able to gain access right away or if there was a long waiting list? If your child received the intervention right away, could you tell me why your child received the intervention right away? If not, how long did your child have to wait? Tell me why it took so long? What did you do during that time?

- (2) Can you describe your experience(s) of the social skills intervention your child received? Can you describe if your child's social communication skills are getting better from the social skills interventions?

Follow-up questions:

- Can you describe any possible barriers if any that you experienced, such as getting insurance coverage, travel to the intervention sites, scheduling conflicts, and/or receiving services in your residence?
- Could you tell me some positive experiences you had about your child's social skills interventions?

- (3) Can you describe your perceptions related to your child's participation in social skills interventions?

Follow-up questions:

- Did you feel welcome by your child's service providers? If so, why? If not, why? Could you please give me some examples?
- Can you describe how you felt if professionals provided social skills interventions in your home? Did you find them intrusive? Did you feel stressed? Could you please give me some examples?

- (4) Please tell me if you were able to implement the interventions at home or in the community? If so, why? If not, why?

Follow-up questions:

- Please tell me more if the social skills intervention was too expensive or not (cost effective). Please tell me why.

- Please tell me more if it took too much time for you to try the interventions with your child (feasible). Please tell me why.
- Please tell me more if the skills your child learned are important to you and your child. (socially important). Please tell me why.

At the end of each interview, each participant was asked for their preference of either a \$25.00 gift card or a \$25.00 Amazon gift card and their preference for receipt of the compensation for their time. All participants indicated their choice and received a \$25.00 gift card along with a summary of the questionnaire and interviews. The participants relayed their gratitude for this type of research and having their stories told, and many indicated they did not care about the \$25.00 gift card compensation for their time.

The average length of the interviews were 39.8 minutes, and the interviews ranged from 18 minutes to 62 minutes. The times varied because of the participants' level of participation and responses to the interview questions. Due to the iterative aspect of qualitative research, the length of the sessions was a not fixed length.

Data Management and Analysis

Data Management

For the questionnaire responses, I reported data in a descriptive manner. I described the participants' responses and reported demographics. Questionnaires were used to collect data in an open-ended manner, and the questions elicited data that were found useful in gaining feedback from a targeted audience prior to the interview (Lapan, et al., 2012). For the open-ended items, I coded data and categorized based on initial codes, created secondary codes, and conducted thematic analysis to create themes.

Before interview data were analyzed, all individual interviews were transcribed by a professional transcriptionist using Express Scribe transcription software and I reviewed data for accuracy prior to data analysis. Kisely and Kendall (2011) described qualitative data analysis as an inductive process, which allows meaning to emerge, versus a hypothetical-deductive approach often used in quantitative research. Braun and Clarke (2006) stated, “Inductive analysis is therefore a process of coding the data without trying to fit it into a preexisting coding frame, or the researcher’s analytic preconceptions. In this sense, this form of thematic analysis is data driven.” (p. 83)

I created an organizational system and used Dedoose for data management, read through the transcripts, reviewed the recorded interviews, and formed initial codes (e.g., a short list of codes, considered “lean coding”) and used color coding in Dedoose to organize my data.

The written transcripts and video and audio-recorded interviews were uploaded to Dedoose. Dedoose provides a data management system that allowed me to upload transcripts and videos and to facilitate coding by organizing initial and secondary codes, which helped me create themes. Dedoose provides an increased level of security and an organizational system to sort data while creating codes (i.e., first cycle and second cycle).

Dedoose was also used to assist in data analysis by comparing first-cycle and second-cycle coding. I reviewed and analyzed the professional transcriptions and compared the transcriptions to the recorded interviews for accuracy.

The first stage of coding consisted of first-cycle coding, specifically implementing in vivo coding. “In Vivo coding uses words or short phrases from the participant’s own language in the data record as codes (Miles et al., 2014, p. 74). First-

cycle coding included reviewing forms of data, such as questionnaires and interview transcripts. Prior to the development of themes, I conducted second-cycle coding, which included grouping the data found in the first-cycle coding into a smaller unit of categories.

Examples of Coding for Interviews Transcripts

Code (in vivo coding)	Interview Transcripts	Themes
“Access”	Interview transcript sample: I was that I was lucky to be in the right place at the right time. That if you (pause) if I hadn't been referred to ... my entire life would be different, and I can't emphasize that enough. I'm going to cry. If it wasn't for ... we would be in a totally different.	Access

Development of themes was described by Saldana (2021) as: “Generally, a theme is an *extended phrase* or *sentence* that identifies what a unit of data is *about* and/or what it *means*.”(p. 258) In addition, Saldana (2021) further explained the importance of themes, stating, “Themes that help answer the research questions of interest is one of the core criteria for their place in analysis” (p. 258). The themes were developed by reviewing data repeatedly (Saldana, 2021). Below, I describe the results of the research study. I conducted a member’s check to ensure validity of data from my participants. After receiving confirmation from the participants, I reviewed data and began data analysis.

I first interpreted data within a case and then conducted a cross-case analysis to examine common categories across multiple cases to develop generalizations derived from the data (Miles et al., 2014). As I continued my examination of family members’

experiences and perceptions, I discovered commonalities that lead to themes related access and social validity of the interventions. I conducted a thematic analysis using compare and contrast techniques to develop emerging themes to convey the understanding of the case (Merriam, 2009). The thematic analysis included reviewing the themes or otherwise known as categories as broad units of data and that are typically created by identifying five to seven themes (Creswell, 2013).

Validation Strategies

During this study, I used strategies to enhance the credibility and trustworthiness of findings and methods. Creswell (2013) recommended using two validation procedures both of which were reasonable and cost effective to establish credibility for this study. The validation strategies included triangulation and member checks. Creswell (2013) stated:

Unquestionably, procedures such as triangulating among different data sources (assuming that the investigator collects more than one), writing with detailed and thick description, and taking the entire written narrative back to participants in member checking all are reasonably easy procedures to conduct. They also are the most popular and cost-effective procedures. Other procedures, such as peer audits and external audits, are more time consuming in their application and may also involve substantial costs to the researcher (p. 253).

Triangulation

Data were triangulated to enhance methodological rigor using the use of multiple methods to collect data (i.e., questionnaire and individual interviews) to increase accuracy and credibility (Merriam, 2009) as well as to “confirm research findings or to

resolve discrepant findings “ (Gail et al., 2010, p. 348). I used triangulation across the data sources to corroborate the evidence from questionnaires and individual interviews to better assist in developing themes and in decreasing threats of validity. Maxwell (2013) suggested that:

This is the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your biases and understandings of what you observed (pp. 126-127).

Member Checks

I conducted member checks with each participant to ensure accuracy of data and to increase validation of the study by providing a summary of the questionnaire and interview data. Providing member checks supported respondent validation; and thus increased the validation of this study. After receiving confirmation from the participants, I began data analysis. All participants received summaries via their preference of delivery (i.e., email or mail) and were asked to review the summaries for accuracy. All participants were given the summaries and were informed about how to respond if there were discrepancies. Merriam (2009) described member checks as, “A second common strategy for ensuring for internal validity or credibility is *member checks*. Also called *respondent validation*, the idea here is that you solicit feedback on your emerging findings from some of the people that you interviewed.” (p. 217) This process gave me additional insight into the accuracy of data I received and increased the validation of data to proceed to the analysis phase of the study.

Critical Friends

I also asked critical friends to provide input, review data, and provide feedback. Miles et al. (2014) discussed the implementation of a critical friend and perspective as “... respond to audiences of critics ... through honest, retrospective, and reflective commentary about the larger issues at stake (p. 331). One of the critical friends has worked in the fields of disabilities, ASD, ABA, and social skills interventions for 48 years. In addition, this person also published various journal articles in the field. In addition, I also participated in deep discussions related to the identified themes and subthemes with my dissertation committee chair who has extensive experiences in the field of ASD. I gave both critical friends recognition for their time, feedback, input, and mentorship in the acknowledgment section of the dissertation.

Researcher’s Reflexivity

Reflexivity is acknowledging one’s own biases, dispositions, experiences, and assumptions that may contribute to the research (Merriam, 2009). Creswell (2013) described reflexivity as: “How we write is a reflection of our own interpretation based on the cultural, social, gender, class, and personal politics that we bring to the research” (p. 215). In addition, Creswell (2013) also discussed how qualitative researchers are more transparent and self-disclose their own biases, values, and experiences. Gail et al. (2010) also stated:

Because the researcher is the primary “measuring instrument” in case studies, researchers can also be a primary source of bias or error that might confound the study's findings. To address this potential problem, researchers sometimes engage in researcher reflection, also known as reflexivity, a process in which researchers

ponder their role in the research setting and their assumptions, worldview, and personal and theoretical orientation toward the phenomenon being studied. This process helps both to clarify the basis for their etic perspective and, to the extent possible, to remove any unintended bias or error based on such factors. (p. 359)

I have been in the field of ASD, developmental disabilities, and early childhood development more than 20 years. I am currently an early childhood instructional coach providing support to preschool teachers and young children with and without disabilities in New Mexico. I took steps to avoid bias, by implementing an interview protocol to support the interview process in decreasing bias as much as possible. I also provided the participants with a summary of results, including data from the questionnaire and interviews to conduct member checks to reduce bias.

In addition, my educational position encompasses being a Ph.D. Candidate in Special Education with a minor in Educational Psychology: Cognitive and Psychological Processes. Although I have worked with many diverse family members (i.e., linguistically, and culturally diverse backgrounds, socially economic statuses, and educational backgrounds) I lack the knowledge, perceptions, and experiences that family members have related to social skills interventions. I have made efforts to reduce such bias.

Because my lens is different from family members, I wanted to extend my knowledge and have a better understanding of their perceptions and experiences related to the social significance and access to social skills interventions. This case study could provide others with a broader lens and could create an increased level of understanding of

how families perceive the social validity and accessibility of a frequently recommended type of intervention for their child with ASD.

Chapter 4

Findings

Introduction

Chapter 4 provides the results of the questionnaire that the participants completed prior to the individual interviews. This chapter also addresses the major themes that emerged from the interview data. Summaries for each theme are also provided.

Questionnaire results

For this qualitative study, questionnaire data were the first type of data source. All participants completed the questionnaire, which gave me information about their demographics and what social skills interventions meant to them prior to their individual interviews. Descriptive data from the questionnaires are described below:

Participant	Description
Participant 1	Mother of a 6-year-old boy diagnosed with autism, attention-deficit/hyperactivity disorder (ADHD), and sensory processing disorder. Mother's ethnic background was White. The mother indicated what social skills meant to her and stated social skills are "age-appropriate skills to successfully communicate and interact with peers." Mother also described that her child did not have a positive experience in kindergarten.
Participant 2	Mother of a 3-year-old boy diagnosed with autism spectrum disorder and speech delay. Mother's ethnic background was Hispanic. The mother indicated what social skills meant to her and

	<p>stated, “It means being able to get along with people out in society, like going to the store and knowing what’s expected, and knowing what behaviors are expected in different settings and with different people.”</p>
Participant 3	<p>Mother of a 9-year-old girl diagnosed with autism spectrum disorder. Mother’s ethnic background was White, non-Hispanic.</p> <p>The mother indicated what social skills meant to her and stated, “Social skills are the unspoken rules by which many people interact with others. These include conversations, body language, play, and other daily interactions. Many people pick them up easily, but we sometimes have to teach them to [child] like one would teach math or any academic subject.”</p>
Participant 4	<p>Mother of a 5-year-old boy diagnosed with autism spectrum disorder (ASD). Mother’s ethnic background was White. The mother indicated what social skills meant to her and stated, “Ability to participate actively in social situations with family, strangers, or peers. Provide meaningful insight to conversations, ability to recognize nonverbal cues (facial expressions) and differing tones of voice. Ability to express himself and be understood by others and enjoy time with others/peers.”</p>

Participant 5	<p>Mother of a 7-year-old boy diagnosed with autism. Mother's ethnic background was White. Mother described participating in ABA, social skills interventions, and speech therapy. Mother also stated her son had finished first grade and "was doing extremely well."</p> <p>The mother indicated what social skills meant to her and stated her child was in "regular education at school" and his "social skills remain a challenge, particularly his slow processing time for speech"; "yet he has good friends and is well liked by his peers."</p> <p>The mother indicated social skills meant "our child can fit in with his peers and make friends, that he is accepted, and knows appropriate behaviors in different situations."</p>
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Theme 1: Gaining Access

The first theme is gaining access to social skills intervention. Each participant shared stories during the interviews, and although there were variations between their individual experiences, I discovered this theme among all participants. Five subthemes emerged within this theme. Subthemes included: resources to obtain services in a timely manner; communications with agencies; finding a skilled and engaging providers emerged; financial impacts on the family; and financial challenges, such as insurance coverage, co-payment, private pay, and applications for a scholarship program. Most parents had difficulty finding qualified providers to provide social skills interventions, information about how to address challenges with insurance coverage, co-payments, and

for how to go about paying the provider using private pay or apply for a scholarship to supplement the costs of social skills interventions.

Resources to Obtain Services in a Timely Manner

Parents had different experiences of getting services for their child in a timely manner. Two parents struggled to find quick access to services and expressed frustration with a long wait list for services, two had a quick access to interventions, and one had a mixed experience.

Participant 1 said:

For some people (pause) I think there's some areas that I'm still in the waiting list on. I never have got into [agency]. I have been on their waiting list for over a year, and just gave up So, I don't know how long that list even is. I would say at a minimum everything (pause) if something was a three month to four month, that would be okay.

The participant also said:

And most people don't have the time to [find a provider] that or the ability to do that. I found her email. I kept calling and calling. I think I drove to [the agency]. And then I said, 'I'm jumping your list. I will pay you out of pocket.'

Participant 4 shared a similar negative experience with initial access to intervention, stating:

...After he [child] was diagnosed, I was referred by his clinical psychologist to an applied behavior analysis program, and they started working with him on social skills kind of at that like, early social skills, I guess, and it was kind of, it was actually pretty difficult to [intervention]...to get it in place. It took a while. There

was a long waiting list but things kind of moved along, and then we were able to start services.

Two participants had positive experiences of finding services in a timely manner.

Participant 3 shared her experiences of getting services quickly stating, “Yes, and they were excellent about getting me help as a parent, not nearly doing therapy for her [child], but that was immediate.” This participant said, “I was immediately accepted,” when describing access to a social skills group. She further provided insight to the barriers for families to secure services in a timely manner due to the lack of resources even within a metropolitan area, stating:

I think there's a huge number of people who need help more than I think people are willing to admit it, and I can say that both as a parent and teacher, and community member, that we have so many people who need help in getting a diagnosis or going out is getting harder and harder, because even though our city is big, it's not big enough to have the resources to get the amount of people what they need.

Participant 5 described the challenges of navigating social skills interventions between two states as the family was temporarily relocated to another state for a short period of time, and returning to New Mexico stating:

So, we did social skills sessions with my son in sort of two separate Areas...So, we accessed two sets of social skill groups while we were there. One of them, my husband found just as he was trying to find my son had just been diagnosed with autism. We tried to make sure that we started some support for him immediately. He needed some speech as well as the social skills, and we also did some ABA,

but the social skills. One of the groups was sort of a speech ... with the social skills, and so it was the speech therapy, and my husband found that when just Googling and looking around, you know, he just sorts of stumbled upon it [social skills intervention program]....So, they did four days of evaluation with him, and then on the fifth day, we sat down with the team, and they talked about different recommendations, and through that we found this other social skills group that was being run by a PhD and (pause) and so that one was more just straight up social skills.

Participant 2 had mixed experiences of their child receiving services quickly, stating, “They were good, I think, partly due to the pandemic [the child] was diagnosed in 2020, and I called up different ABA agencies in town. There were one or two that weren't accepting people, but the rest had wait lists from (pause) really, not, not much wait at all to three months.”

Communication with Agencies

Two participants were concerned about the lack of communication with agencies; one of them was concerned about the loss of their paperwork by the agency and lack of follow up.

Participant 1 expressed frustrations with loss of paperwork and no follow-up from the agency and said she sent out two applications, but the agency lost one of them. She said, “Maybe if I'd follow it up, I could get it. I've sent in two different applications and the first one they said they lost. The second one I never heard.”

Participant 2 was not satisfied with the style of communication when she contacted an agency to find a provider stating:

I found some of them off-putting. Some of them had like a 1-800 number and it went somewhere non-local and then they took a lot of intake questions, but then I didn't really hear back from them. So, I developed a preference for the people that seem to have a somebody that was in [the area or familiar with the location] ...even if they were based from out-of-state.

Finding Skilled and Engaging Providers

Two parents expressed concerns about finding qualified and engaging providers for their children, one had mixed experiences, and one parent was satisfied with the provider during initial stages of finding a skilled and engaging provider. Participant 3 described difficulties finding a good fit for her family immediately to address her child's social skill needs.

The [service] was hard to get started and hard to find someone who I was willing to work with, because we had some interesting people. But maybe that took six months to a year to find someone who was just right.

She further explained, "Part of it was also finding the right person who I felt comfortable with. We met [a] few people and suddenly this isn't a good fit."

Participant 1 shared her negative experience with some providers including a therapy environment now appealing and child friendly. She said, "You know, I went to some providers, and it was so depressing. I was like, 'I'm not coming back here.' You know, it was a four cornered walls, dark, of course, half the toys are missing, right? Like, it's just that environment, and it's sad. I'm like, if I have to come here every day, I'm going to be sad."

Participant 4 had mixed experiences with therapists at different ranks, indicating

the BCBA was “skilled” and knowledgeable, but the RBT was not skilled and “effective.”

My first experience with ABA was I didn't know anything about it, nothing. The company that we were working with, the BCBA, was really good, but the RBT that was implementing the program was not very skilled, and so it wasn't very effective. I didn't think it was very effective.

Participant 4 also compared her experiences with corporate providers who focused on “fitting on their textbooks” and described how she felt the local company did a much better job of meeting the needs of her child and addressing her needs and barriers in the community.

When they [previous providers] did move on, I was kind of happy, because it wasn't really working anyways. Then the provider that we ended up finding next was a local provider, it wasn't a corporate, and they were able to tailor his needs. The program was more tailored to his needs and instead of fitting into their ...textbook, ‘Okay, well, he's this age and so we're going to work on these things.’ And the other company that came in after that I thought was more effective. They actually did a thorough assessment of his needs and they asked me what my needs were and that was, like, huge.... And this company [local company] that intervened at the second ABA company, they were amazing at helping. They took what my needs were, what his needs were in the community, and what barriers we had for him to, like, actually participate in the community, and she targeted all of those...we moved kind of out of in-home services to in community service.

Although some participants felt their interventionists were not skilled, Participant 3 experienced the opposite. She said:

I think we always, for the most part, felt welcome. She [my child] responded to everything very well. A lot of it she thought was fine. She liked the people she worked, or work and I still work with. I think it has always been, for the most part, a positive experience.

Financial Challenges

The second subtheme was associated with lack of insurance coverage, the need to make co-payments to cover services, utilize private pay for services, need to apply for a scholarship program, or additional financial challenges related to access to social skills interventions. Many participants expressed difficulties with financial aspects related to social skills intervention. For those who did not have financial difficulties, they had to pay for their child's social interventions out of pocket because they did not want to wait for insurance to approve before their child received service. These were challenges that the participants faced on behalf of the family for their child to participate in social skills interventions, such as paying privately (i.e., co-payments or complete private pay) submitting additional paperwork, and executing scholarship programs to support the cost of interventions.

Challenges with the lack of insurance coverage. This challenge was described by two participants related to finding coverage that would accept the agency to provide social skills interventions. Participant 4 stated:

Well, first of all, we had issues with insurance. Actually, in the beginning his insurance provider would not actually, didn't contract with this second agency.

So, the first agency wouldn't have any problems, then when I moved to the second agency, they didn't contract. So, I had to remove him from our plan. We had to dis-enroll him from the plan and enroll him on [another insurance company].

Participant 3 also described lack of coverage stating, “[provider] is not covered by insurance, so that one is tricky.” This statement illustrated that not all of the interventions were covered by insurance, and this was “tricky,” for the family to navigate to receive services for their child to receive social skills interventions.

Challenges with co-payments. Participant 3 described how the family had to make decisions with services due to co-payments. Participant 3 expressed, “[service] was covered for a couple years and then all of a sudden it was \$50 a week for a half hour session. That was not pleasing. So, after a while we stopped that one.” The family initially was able to receive services under one insurance carrier for several years with less co-payments. They later discovered that the services their child received previously would require additional co-payments. Therefore, they had to make decisions on which interventions they could afford to have.

Challenges with insurance coverage so participants chose private pay. Two participants expressed challenges related to initial access and decided to pay their child’s intervention out of pocket. Participant 1 said,

So, I would say access is awful, because I just got lucky, and I also am fortunate enough to be able to pay all that privately. And so, if I wasn't able to do that, if I didn't have a [advanced] degree, if I didn't have all these things, my family would have nothing.

Participant 1 further recounted the conversation she had with the provider stating,

“I will pay out of pocket.” She said if she was not able “to pay for services privately my family would have nothing.” Participant 5 also made a similar decision to pay out of pocket rather than “waiting” on insurance stating:

We weren't waiting for insurance, and so I don't know if either of those programs even took insurance. I'm really not sure. We were so just, like, focused on getting him services as quickly as we could and we were thankful that we had the means that we could pay out-of-pocket for that period of time, knowing that when we got back to New Mexico that we would go through the insurance pathways, but we didn't want to have to wait that long for insurance in [another state].

Need to apply for a scholarship program. Only one participant needed to apply for a scholarship to pay for their child’s intervention. Participant 3 described her experience with writing an application for a scholarship to cover a certain percentage of the co-payments. Although she was able to navigate the application process, she felt she still needed to apply for the scholarship program “because things do get expensive, and they've always said yes.” She further stated,

All I do is write an email once a year, and I actually am writing it to my boss as well So, it's not too bad. I just write a quick letter and say, you know, ‘May we be part of the scholarship program?’

Participant 5 described getting into social skills interventions quickly, however stating “...but those two programs we were paying out-of-pocket for. We weren't waiting for insurance, and so I don't know if either of those programs even took insurance. I'm really not sure.”

One of the big issues found in this study was the complexities in regard to family

members trying to fund social skills interventions. For example, Participant 4 shared how her family experienced financial stressors because she had to leave her job to ensure that her child could receive services 40 hours a week. She said:

Another barrier after that was resolved was, I was (pause) at the time I left my job, so it was kind of a barrier actually...financially was (pause). I had to leave my job, so I could stay at home with the ABA provider, you know, and so I chose to do that but financially it was (pause) it was a (pause) we took a hit as a family from going from a two-person income family to one-person. My husband at the time (pause) it took a toll....He had the burden and he had to work more, and so it was difficult.

Parents had issues with increased co-payments or paying the interventions for their child out of pocket. They wanted insurance companies to cover the service. Participant 4 had to remove her child from one insurance policy and find another insurance and “dis-enroll him from the plan and enroll him on...into interventions. It is important to provide families of children with ASD financial support to cover co-payments for their child’s services. With such support, more families can afford to get interventions for their child without placing a financial burden on the entire family.

Furthermore, there was a lack of communications from agencies which caused children not to receive appropriate interventions timely. It can be difficult and time consuming for some families to find qualified and engaging providers to address their child’s and families’ needs. Finally, families experienced frustrations related to navigating the insurance companies for coverage, having to make high co-payment, or having to pay out of pocket. Hearing from the family members firsthand was an eye-

opening experience in regard to the challenges they faced in gaining and continuing to gain access to social skills interventions.

The participants provided insight related to various challenges they experienced while obtaining and sustaining services to address social skill interventions to teach their child social skills. It was apparent that these participants faced varied experiences they all endured their personal challenges to have their child participate in social skills interventions, which speaks volumes to not only their dedication, but also to the value these participants placed in proving this intervention for their child with ASD. These aspects of the phenomenon will be discussed later and possible aspects with related to future directions and possible implications.

In summary, Theme One provided insight into family members' experiences and perceptions associated with gaining access to social skills interventions. This theme revealed various aspects of how family members engaged in researching and navigating systems to access services for their child with ASD. All participants described challenges related to getting social skills interventions services for their children. Parents had mixed experiences in getting services for their children. Some of the participants reflected on various challenges they faced with getting interventions for their child with ASD while others described challenges related to insurance coverage, co-payment, private-pay, or applications for scholarships. Some families had difficulty finding skilled service providers, while others had opposite experiences. Findings from this study provided a better understanding of families' perspectives and their challenges.

Theme Two: Scheduling Conflicts

The second theme revealed challenges with scheduling that emerged from learning more about the personal experiences and perceptions was scheduling. Four subthemes emerged. Those experiences included (1) scheduling conflicts with providers, (2) switching providers, (3) having a provider in the family's home, and (4) having to coordinate with multiple service providers.

Scheduling conflicts with providers

Participants experienced scheduling conflicts between providers and family members and availability of providers. Participant 2 provided examples of the challenges she experienced with scheduling difficulties with the provider, stating, "I felt that that was another barrier, like different expectations for my anticipated schedule versus the RBT anticipated schedule and the lack of flexibility, and "then now poor communication with [agency] so that's been upsetting." In addition, this participant indicated the need to find a provider that better fit their schedule.

Switching providers

Another challenge families experienced is switching providers. Children with ASD have difficulties with transitions and building new relationships with unfamiliar people. Changing providers often causes anxiety for a child as they have to get to know a new provider, their style of service delivery, and adjust to a new routine. Participant 2 discussed differences between the two providers, stating that "I just felt like she was sort of negative about him and then she kind of just sit there. We switched her out.... I feel like when the other person was here, I felt like it was more of a babysitter."

Having a provider in the family's home

Families receiving social skills interventions had mixed emotions of relief and stress with the provider being in their home. Participant 3 said:

I think the biggest challenge was probably having someone come to my residence. It was (pause) I knew it was helpful, but as a parent, especially with another child to take care of, I felt like I was ignoring the other one. Or I wanted to be on his session, even though I don't have to be there, but I needed to. It was very weird to bring in my home life and you need to put dinner on the table, and the other one needs to go to, you know, soccer practice or whatever. It is very daunting. You know, it's an invasion of privacy and they see you at your emotional worst too.

Scheduling around other family members' needs and family life

Families found it challenging to schedule their child's interventions around other daily activities and routines. Participant 1 expressed her thoughts and provided recommendations of services and scheduling and said:

You know, the recommendation was like, he was first diagnosed with mid-level, or I don't remember, and that the hours he needed were like 40 to 50 hours a week, which is also just not possible. Like, we just can't sit at home.

Participant 2 discussed the stress related to scheduling around family life and routines, such as mealtime and napping:

But it's little stressful sometimes. Or trying to time his eating and naps with the schedule has been hard, because he still does benefit from a nap, but he tends to nap later than other kids. It didn't really fit that well. Normally, he will sleep from like 3 to 5, but then that overlaps with the session, and then even (pause) we'll

have a lot of times where he's napping when the afternoon person comes in, and then he has to wake up and, you know, it's 50-50 as to what kind of mood he wakes up in.

Participant 2 further expressed concerns about not having time for household routines and errands because of a provider constantly being at home providing interventions:

I just don't think they're practical for people who aren't (pause) I don't know, who (pause) I mean, even full-time at home parents still have to do (pause) trying to run the house and pay bills and do different things, you can't just focus on your kid the whole time, and just mentally it's very taxing to try to (pause). I think some people are more skillful with that, but I find it really taxing to keep trying to demand that he do all of these things.

Participant 2 also described alternating schedules with her husband, especially during the pandemic to meet the needs of their child receiving social skills interventions while also meeting the needs of other family members:

So, that's a barrier, and then the scheduling is a barrier...after my husband and I (pause) we rearranged for our schedule. We're pretty lucky because our jobs continued in the pandemic, and we adjusted our schedule. He works Sunday through Thursday from (pause) he was working from 11 to 7 and then I work more in the mornings...and he's off on Fridays, and I would work all day Friday, but on Tuesday and Thursday we would both work in the afternoon and be able to go to see my [family member].

Two parents described challenges of having to coordinate with multiple therapists

and interventions for their two children, who were concurrently receiving services.

Participant 5 said:

That's honestly, from the feasibility of adding social skills in on top of other, you know, what feel like more rigorous therapies to me is that it does get hard when you're in a lot of different things and you're trying to figure out, you know, first getting him there. Yeah, you know, I have a color-coded calendar of each kid and how it's going to all happen and it does. It takes a huge commitment of not just money but time to make all of those happen and the driving and the (pause) you know, well, if you're sick, you have to, if you call in and don't show up, then you have to pay the fee and all of that. You know, it's huge juggling, and I'm a very organized person, and I, you know, have our system down, but I can see for parents who, you know, are working two jobs and trying to do this kind of stuff for their kids, that it's hard. You know, getting services for your kid is hard.

Participant 1 described similar experiences with the difficulty of coordinating with many providers and changing schedules to fit into the therapists' schedules and family life. She said:

I know that the only reason we were able to do it is because I was able to change my work schedule. My husband...has four days off and two days on. We had three different providers come to the home, and it took all of that, and still takes all that. So, I mean that's a lot. I mean, as we sit here two days later...has therapy three days a week at different places, and it takes five of us to coordinate all those things.

In summary, Theme Two uncovered the concerns and difficulties parents

discussed with scheduling social skills interventions. Some participants described their child's involvement in multiple interventions to address social skills, resulting in significant effort required between family members to coordinate and deliver social skills interventions. In addition, some participants altered their work schedule with other family members so their child could receive services. One participant described the need to quit her job to be available so her child could receive services in the home. Family and daily routines were impacted as well, such as mealtimes, naps, paying bills, other daily routines. Participant 3 described juggling responsibilities with another child, saying she knew it was helpful for her child with ASD, but also "felt like I was ignoring the other one." That theme also reminded me of the amount of effort and dedication families expend so their child can receive services. It also demonstrates the value they see in these interventions to continue to accept such challenges, sometimes daily, to provide an early foundation of teaching social skills interventions.

Theme 3: Benefits of Social Skills Interventions

The third theme that emerged from the qualitative data and interviews included the benefits for both family members, but also the children with ASD. There were two subthemes: benefits for families and benefits for children. The benefits for the families were multiple, including receiving direct services and supports from providers, having strategies demonstrated by a provider to enhance their child's social skills and prosocial behavior (e.g., responding to name), and participating in an intervention that is easy to implement. Benefits for children included receiving direct interventions from service providers, participating in social skills opportunities, and engaging in social interactions with other children and adults.

Benefits for Families

Some participants described benefits for their family that included life changing aspects of their family life. Participant 1 described various positive attributes related to social skills interventions and described specific interventions to teach social skills, such as social skills groups, occupational therapy, social work, and applied behavior analysis. The parent described her initial experiences related to gaining access to services saying:

I was that I was lucky to be in the right place at the right time. That if you (pause) if I hadn't been referred to [provider], my entire life would be different, and I can't emphasize that enough. I'm going to cry. If it wasn't for [provider], we would be in a totally different situation. If I didn't have [provider], I wouldn't have even been able to access services, and I don't even know if I would have ever been able to access service outside of school, and it would have just been through the school, which the individuals are lovely, but the overall school system is nowhere close to providing enough resources for my child and don't provide any resources for my family.

Participant 4 noted the positive attributes related to the social skills interventions her child received, to her interventionist, to working on social skills in the community, stating:

And she [provider] helped me to get back into the community and she (pause) the RBT followed me everywhere I went. So, we weren't having to (pause) prior to that we were staying home, and we were trying to create a social kind of environment at home which was (pause) it was Ok, you know, but this was much more broad. We worked at home for some of the (pause) half of the week and

then we also went out, and so we were able to really, I think, help. It was very beneficial. Really, he made a lot of advances and strides, because we were challenging the areas that were needing to be addressed, you know. So, that (pause). I was very, very happy with.

Other benefits for families included receiving advice and suggestions from interventionists so that families did not have to figure out priorities in skill development, appropriate social skills interventions based on the child's present levels of development, evidence-based practices that may be beneficial for the child and their family members. It can be overwhelming for families to determine which social skills to focus on after their child receives a diagnosis of ASD, establishing priorities, determining which interventions would be developmentally appropriate for the child, and creating a plan for implementation by the interventionists and family members. Having a provider to talk to and engage in conversations about which strategies might be effective for particular social skills can be beneficial.

Participant 1 said this:

... one thing that is huge is the families have to be on the same page. That this is what we're doing right now....And just like a leap of faith that, Ok, [we] are going to just do what you tell us to do right now, which takes a huge weight off parents' shoulders because before somebody's telling you, you know, you're guessing at what to do or you're arguing at what to do. 'It didn't work, let's try something else,' you know, all of that stuff. And just take a leap of faith that, this is what we're going to do it, and implement it and then also knowing if it doesn't

work, you know, the provider telling us we can try something else, so it doesn't feel (pause) but, you know, the families have to be on the same page.

Participant 3 described the benefits of using strategies demonstrated by providers and applying those strategies at home and in the community. She said:

We did see a lot of it get better, and it always felt like one step, a couple back down. You know, it's kind of a roller coaster, and then you have a month or so where things get rough. But overall, we did see an upward trend in general. It also helped us that what they would do in sessions, we would communicate about it, and we would also do that ourselves. As parents, you have to have consistency, and I think that really helped.

When asked questions about whether it was easy or time consuming for the family to implement the social skills interventions at home, Participant 3 said:

I think it was pretty easy, though as a teacher, I'm used to making interventions. I think for some people it would be very difficult, and the consistency end of things would be very difficult. I think the thing that made it easier just from the parent perspective was writing down how you reacted to a bad moment, what you did, and what happened, making it more math (pause) mathematical, you know. How long (pause) how long did they have a tantrum for? Those kinds of things made it easy to implement.

Participant 2 had frustrations about receiving recommendations about the same strategies from various providers to work on communication skills. The interventionist did not adjust the intervention strategies based on the parent's feedback that the strategies did not work. What is more, the intervention recommended by the providers was not easy

for Participant 2 and said:

Yeah, those ones, some of them, they were always wanting me to do choices. I can't tell you how many people said, 'You know, offer him a cup, offer him one cup and then another cup, and then make him choose the cup,' and then you have a child that probably is supposed to eat, and they didn't tell you, and now you're supposed to point to a cup, and plus, who has time for this when you're trying to like start meals and stuff. 'Okay, I'll stop, and you choose the cup. Alright, I'll give you a bite of food, and then you have to ask for more food,' I mean, I don't know.

Participant 4 had a similar negative experience about how much time it took to implement the intervention in the initial phase. However, she later realized there was long-term benefits to implementing the strategies, such as communicating wants and needs, playing with others, and participating in community life. Participant 4 said:

I feel like sometimes. Well, at first, I thought it took too much time, but when I started to implement them, and as I was consistently implementing them, it's like, I realized that when you put the work in in the beginning and, like, set it up and have the routine and this and then it becomes easier and easier and easier and not as much time as you go along. So, it's kind of, like, an investment for the future, and that was easily apparent. You know, it was (pause) once I started doing it, I realized, OK, yeah, this is way more beneficial, and it just works way better to do it this way than continue the way that I was doing it, you know.

When asked questions related to the cost of the interventions Participant 1 said, "They are priceless. So, I wouldn't say too expensive, because I think it's a hard job, I

think it's related to an undervalued job, and I think that they deserve more money.”

Participant 1 continued to elaborate on the value of social skills interventions compared to the cost:

No, even private pay is cheaper than what you could spend on a meal....I think it's just where you want to prioritize your money, but, no, I wouldn't say it all that it's too expensive. That doesn't mean that some families can't afford it, but I wouldn't say that it's too expensive. I think that it's very much has the value to dollar, if not expensive enough.

Participant 3 had a similar perspective related to the cost of interventions verses social validity and said:

They were expensive, but I think I completely understand why they were expensive. Paying an individual for one-on-one service in most cases. I think it was worth it, and I would tell anybody that a young (pause) especially the younger, the better to just pay it, because you have a small window in which to make changes. The older they are, the harder it is.

Participants also said they believed and commented on how the social skills taught to their child were meaningful and relevant. Participant 4 provided the following:

Yeah, I definitely feel like it was socially relevant and important for our family to receive these services and I really think that had he not received these services, he would not be able to be (pause) I mean, he wouldn't be as independent as he is now. He wouldn't child's name] he would be so limited (pause) so much more limited and also the stress (pause) the stress level of the family and just the total dynamic would (pause) would be increased, like, substantially.

Participant 5 described the interventions as being cost effective and said, “The ones that we were able to do through [provider] were very cost effective for us.

Benefits for Children

Many participants talked about how their children enjoyed social skills interventions or providers. Some of the parents said their child liked the play-based interventions that were child-centered in an inclusive setting. They also preferred the play-based intervention in a naturalistic environment rather than a one-on-one in a clinical setting. Participant 1 said:

I mean, he really enjoys it. I would say that for him with [agency] and that amazing program that they’re doing, where it is kid-based and social kid-based, not like one-on-one stuff, he loves it. He doesn’t think he’s going to therapy. Like, he doesn’t think he has a therapist. He doesn’t think (pause) he thinks he’s going to play with his friends. So, he loves it. He looks forward to it.

Participant 2 also described the progress her child made after an RBT worked on several social skills, such as eye contact, requesting items, and responding to a name. After the intervention, her child began talking and responding to his name. She said:

Well, someone comes into the house, an RBT, and they work with [the child], the first thing I think they worked with was eye contact. When [the child] was diagnosed (pause) this kind of made sense to me, because he was talking more but he has difficulty coordinating communication to get a need met or to interact effectively with people. They worked on having him make eye contact when he was requesting something or asking a question. That was one of the first kind of social skills that they did with him.

Participant 2 also said that her child could respond to his name after the therapy. She said, “But he will sometimes yell and say things. Oh, they worked on him responding to his name, and that's improved.”

Participant 5 also described her experiences with social skills groups to address emotional regulation, transitions, and social reciprocity with others, stating:

And then when we got here and we were doing it with [provider] you know [provider] focused a lot as well on emotional regulation, which was really helpful for [the child] at that point, you know, as he was a little bit older, and doing transitions, and doing them as a group and that reciprocal back and forth.... You know, they were at the trampoline park, so someone would fall and get hurt and that expression of the empathy....

Participant 5 also described positive attributes (i.e., feeling comfortable, welcome, and given opportunities to ask questions) with two different social skills groups her family was involved in. She said:

So, when I finally did get a chance to go, I do remember that they knew I hadn't been there before, and they let me sit through the class with the kids so that I could see, the whole session beginning to end, and, very welcoming...letting me ask questions along the way and ask questions when it was over. So, I felt comfortable with what he was doing. Then with [provider] it's just like, 'Come on, in. Come, jump with us.' You know, sometimes on some of these and this is sort of hard to say, but sometimes as a parent with kids with a lot of needs it's nice to be able to go to therapy and hand them off to somebody else and have an hour to sit and look at a book.

Participant 3 described her perception of how social skills interventions have impacted her child's life and said:

...Now that she's older we're a very blessed, she's doing quite well, and no one would ever sense that anything was different. When she was younger, we totally would. You know, we would bring a visual chart or talk about the steps needed when we were running errands. It was nice to have something that someone would give to us as a visual aid.

She also compared academic and social skills and the life-long need for social skills interventions:

Particular to our family. You know [the child], she was incredibly intelligent. She started reading and spelling words before she turned 3. She could sound out all the upper and lowercase letters when she was one and a half. But none of that meant anything if we were getting kicked out of preschool, which is where we were...it was about to happen. It means nothing if you can't make friends in the future, if you can't do an interview for your first job. We took it very seriously, because it doesn't matter how intelligent you are if you don't know how to look someone in the eyes, shake a hand, go to the store without crying, it's worthless.

Participant 5 said her child maintained the social skills that were taught in a social skills group setting in another state upon returning to the state:

So, it was a lot of those same skills that he was getting that we tried to take to other environments. Then once we got back here, it was towards the end of his time that he was doing the social skills with [provider] that we felt like he was ready to do more of it without so much assistance. You know, [provider] provides

a ton of support [providing directions]. ‘Now, we are going to transition, and this is what’s coming next and next,’ and all of that was so good...He was about to start kindergarten.

In summary, all of the participants described positive aspects related to experiences and perceptions associated with social skills interventions for their children. The benefits for the children were social communication skills and increased social opportunities with providers and other children in various settings. Another benefit for the children was the modality of the interventions, such as being child friendly, child focused, in the context of social environments. Due to the complexities of various social skills, it is important that children find the interventions fun and playful.

Children often learn through play, as described in Chapter 2, and the only difference for children with ASD is the possible need for more direct and discrete instruction to acquire social skills. Benefits for family members included receiving supports, learning strategies from the providers, and implementing strategies that were easy to use at home and in the community. One family member discussed the connections she made with other parents and children in the social skills groups and how they were able to extend the social opportunities beyond the social skills group. When families can meet one another during social skills interventions, they can create a social network of their child and other families.

Summary of Chapter 4

Participants described challenges related to access in gaining interventions to teach social skills to their child with ASD while others described challenges related to insurance coverage, co-payments, private pay, or application for scholarships. Some of

the participants described challenges with scheduling. Most said they believed that social skills interventions provided positive benefits for their children and themselves.

Therefore, although the challenges may have been difficult for families, they all were able to navigate such challenges to provide their child social skills interventions.

Chapter 5

Discussion

Chapter 5 first addresses key findings and how the findings answered the research questions. Second, it discusses limitations of the study. Third, it presents implications for policy and practice. Finally, it provides recommendations for future research.

Discussion of Key Findings

The purpose of this qualitative case study was to examine experiences and perceptions related to social skills interventions, such as types of interventions, social skills taught, access of services, and social validity. This research study was designed to increase knowledge and understanding from family members' experiences and perceptions of their child's involvement in social skills interventions. Three main themes emerged from this study. These themes answered my research questions to help me better understand parents' experiences of their child's social skills interventions. The findings suggested that all participants found various methods to obtain and sustain social skills interventions for their child. Some participants had challenges related to insurance coverage, co-payment, private pay, scheduling, and changing providers. Finally, participants found the value of the interventions to outweigh the cost and challenges.

Maxwell (2013) stated "Your research questions formulate what you want to understand; your *interview* questions are what you ask to people to gain that understanding (p. 101)." Due to the lack of qualitative case studies related to parental and family members' experiences and perceptions of social skills interventions, this study conducted individual interviews which provided valuable insight and understandings of this issue. In addition, the interview questions may have provided a conduit in providing

a platform for parents and family members to share their experiences and perceptions. This study also provided an opportunity for family members to have their stories told and to be valued and heard. Understanding this phenomenon is important because it revealed how parents viewed various aspects of the social skills interventions. These features include finding agencies that could provide the service when their child just received a diagnosis, navigating through systems so their child could engage in interventions, and participating in the interventions with their child.

Although these experiences and perceptions are unique to each participant, I found commonalities and thus created themes. This study provided data related to varied experiences participants went through to navigate a multilayered system of gaining access, such as finding providers to provide the intervention for their child, getting their child on a waiting list, and maintaining these services for their child. This study also provided evidence of social validity aspects associated with social skills intervention by examining participants' perceptions of whether the interventions were feasible and costly, and if the skills taught could be generalized in other settings or with other people. Findings from the study revealed three major themes, which will be described in the next section.

Theme 1: Gaining Access

All five participants described positive experiences related to access or delivery of services. One participant expressed gratitude and said how their lives would have been different had their child not participated in social skills interventions. That is a bold statement of the impact the interventions had and continue to have on their lives.

Three participants indicated that their child received quick access, was accepted immediately by a provider, or did not wait long for services to begin services. These experiences were interesting, especially in the midst of a pandemic. Two participants said they felt welcomed by their service provider. Creating a positive partnership with providers and families is a vital part of the process for this type of intervention because the family members are with the child much more than the provider(s). When family members believe they are part of a team and of the process, they might feel more comfortable and confident in implementing the social skills interventions and reporting back to the providers.

The participants also shared negative experiences with gaining access to interventions, interactions with agencies, and finding the right provider. One participant described that if both parents did not work and have an advanced degree their child would not have been able to participate in social skills interventions. Another shared her negative experiences about contacting agencies for services that were out of state, did not receive a call back, and were “off-putting.” Two participants discussed their experiences of having providers that were not a good fit for their families and did not demonstrate the skills they desired from a provider.

In addition, participants also described mixed attributes and experiences related to either gaining access or while engaging in interventions with their child. One participant provided a contrast between providers, saying one agency was “fun” and provided an “organic” environment that contributed naturally to social interactions, while another agency she felt was “depressing,” “dark,” and “sad.” Additionally, one participant had similar mixed attributes between providers and made comparisons with providers and

service delivery. That participant said how she was “happy to move on” and that one agency used a “textbook” approach while another agency provided interventions that were “tailored” to her child’s needs.

One participant had mixed experiences associated with gaining access to social skills interventions and related this to the large number of families that need support outweighs the availability of the services and resources.

Few qualitative studies have addressed parent perspectives and experiences related of individuals with ASD and social skills interventions. Hillier et al. (2021) studied parental perspectives of adolescents and young adults with ASD entering college and their concerns. Hillier et al. (2021) also found a lack of research and stated, “While still limited, a number of studies have begun to look at the role and perceptions of parents of college students with ASD” (p. 91). Hillier et al. (2021) also found the need to include parent perspectives and input to “fill in some of the gaps in potential needs that students with ASD may be unable to identify or express themselves” (p. 92).

The findings in my research and the types of interventions children with ASD received were similar to the findings of Hillier et al. (2021) indicating that the adolescents in this study were involved in similar services either privately or educationally, such as social skills groups, occupational therapy, and counseling. Despite the difference in the age groups within my study as compared to the study by Hillier et al. (2021), all individuals with ASD received similar services. It is apparent that regardless of the age of the individual with ASD, parents continue to have similar concerns related to their child’s social skills and seek out services to foster development of social skills.

Another interesting similarity between my study and the findings from the Hillier et al. (2021) study was the parents' concerns related to their child's social interactions and social skills accounting for 24 out of 29 participants in this study were concerned with communication, connections, friendships, social cues, self-presentation, bullying, vulnerability to coercion, and needing to be flexible and accepting of others. Many parents of children or young adults with ASD continue to have concerns related to the complexities of the social skills that are needed to navigate a social world. It appears that some parents continue to think of these concerns as affecting their child beyond the early childhood years and that they might need ways to gain access to supports and services.

Finding a service provider that meets the needs of the family and child with ASD is important because families are allowing these providers into their lives, homes, and are rearranging personal and work schedules to provide the services to their child. One participant described logistical challenges in gaining access and finding a provider stating the intervention "was hard to get started and hard to find someone who I was willing to work with." It is important for families to find a provider they like and trust because family members are the "experts" with their children and devote countless hours to the supports and implementing the strategies suggested by providers.

Two participants discussed having similar circumstances of experiencing "long waiting lists" for some services. Four of five participants discussed various services their child participated in to address social skills, which may be a factor to experiencing long wait lists for some service providers and gaining access to others more quickly. All of the services addressed social skills interventions. Those services consisted of social skills groups, speech and language services, ABA, occupational therapy, and social work.

One subtheme on financial challenges uncovered the lack of insurance coverage, co-payments, private pay, applying for scholarship programs, and additional financial challenges related to access to social skills interventions. Two participants said they had challenges with their insurance companies' coverage for services. One of those two participants found an agency, but the insurance carrier did not contract with the intervention company which forced the family to disenroll from the insurance carrier so their child could receive services. The other participant found a service that was not covered by her insurance and said it was "tricky" and that they had to apply for a scholarship due to the lack of coverage. This same participant said their insurance covered their expensive for "...a couple years, and then all of a sudden it was \$50 a week for a half hour session. That was not pleasing. So, after a while we stopped that one."

Two participants made the decision to pay for services privately instead of navigating the insurance systems so their child could receive social skills interventions. One family said, "I will pay out of pocket" and "if not being able to pay for services privately my family would have nothing." The other family had to temporarily relocate to another state for family reasons and said, "We weren't waiting for insurance," and discussed when they returned to New Mexico that they would seek insurance coverage. This participant also said that they were focused on getting interventions quickly after the diagnosis and therefore made the decision to pay for services. "We were thankful that we had the means that we could pay out of pocket for that period of time." Both families decided to pay for services for their children so that services would begin in a timely fashion.

Theme 2: Scheduling Conflicts

The second theme was scheduling challenges that was related to logistical aspects of their child participating in social skills interventions. One participant described the amount of time she spent on getting her child services and said, "... most people don't have the time to do that or the ability to do that." The participants found scheduling difficult and challenging, and many families may not be able to commit to their child's interventions due to the having multiple providers and the time it takes to coordinate services (i.e., social skills groups, ABA, speech and language services, occupational therapies, social work, etc.).

Other challenges parents described include constantly having a provider in the family's home, which posed a risk of interfering with the families' routine and daily activities and with parent's interactions with other children. Over the past few years, other researchers have delved into that important issue. Families need a good balance to not only to take care of their child with ASD but also with other children and family members.

One participant described having to leave her job and going from a two-income family to a one-income family so her child could receive services and the subsequent financial hardships it took on her family. She said, "I had to leave my job, so I could stay at home with the ABA provider.... My husband at the time (pause) it took a toll....He had the burden and he had to work more, and so it was difficult." This has to be a difficult decision that some families unfortunately are placed in when evaluating the desire for their child to receive services.

Many participants have struggles with scheduling their child's intervention

around other family members' needs and family life. Most of the interventions required 20-40 hours a week at home and in a community setting such as group - or clinical-based environment. The intensity of the interventions placed extra stresses on families. One participant worked full-time, from home, and found the implementation of the interventions at home demanding while also trying to participate in other daily activities such as paying bills. Another participant had similar concerns about a large number of hours, sometimes 40 to 50 per week for services.

Theme 3: Benefits for Children and Families

The third theme was benefits for children and families. The majority of participants talked about how their children enjoyed participating in social skills interventions or with their providers. Some of the parents said their children looked forward going to the social skills groups in community settings or clinically- based groups with other children and sometimes saw the interventions as if they were going to play with friends and "love[d] it." One participant said her child preferred "where it is kid-based and social kid-based, not like one-on-one stuff. He loves it." Other participants said that their child looked forward to their provider coming to the home and their child would be "happy," once the provider arrived. Findings from this study suggested that the interventionists provided engaging social opportunities and fun activities that also were developmentally appropriate in eliciting social skills.

Many parents found that their children learned social skills, such as communication skills (i.e., verbal, and nonverbal communication skills, American Sign Language, and expressive and receptive communication skills). As a child's communication skills improved, many participants reported a decrease in "behavioral

challenges or tantrums.” Many parents also reported increases in their child’s ability to adapt to changes in routines, showed improved emotional flexibility, increases with play skills and was better regarding social interactions with siblings or parents. Findings from this study suggested that direct instruction improved verbal and nonverbal social communication skills and undesirable or maladaptive behaviors (i.e., tantrums) occurred less frequently.

Participants had various feelings about benefits for their children. Some reported that their children benefited from direct interventions to address social skills in a child-centered environment. Some reported mixed feelings. For example, one participant described mixed responses to her child’s development of social skills, noting she observed “one step, and a couple back down,” “a roller coaster” but overall, saw “upward tends” with her child.

Additional findings from this study suggested that families benefited from receiving guidance and supports to teach social skills to their children. All participants shared positive aspects of their child being involved in social skills interventions and the impacts the interventions made on the family in one way or another. Some families felt that they received the support they needed to determine which social skills to focus on without “guessing.” Some families also found that they could consult with their providers if an intervention was not working for their child or family. Interventionists should be able to readjust the interventions to best meet the needs of the child and families.

Families also found a benefit from respite. In this study, some families communicated that they felt a sense of respite with having a provider engage with their child. Two participants said they felt welcomed to join the social skills groups but were

not pressured to do so. They also said they could participate or watch but the choice was theirs. One participant described that sometimes she participated in the social skills sessions and other times she just needed to sit back and “read a book.” Due to the stresses families faced that were related to scheduling and access to services, interventionists should give the family opportunities to take breaks during sessions. In addition, although interventionists should encourage parental involvement, however, they should not criticize or place judgements if families did not want to participate in their child’s intervention session.

Two participants said the interventions created numerous social opportunities for their families to participate in the community. These participants were satisfied that social opportunities created by the interventionist could benefit families throughout the day in various environments. They also reported that it was important to provide naturalistic social opportunities while teaching social skills that could foster the development in various settings and with other people.

Strengths of this Research

Strengths of this research include learning more from the family members themselves concerning interventions their child received in a more in-depth manner beyond a completion of a survey, which was a major focus of data found in the literature review in Chapter 2 which was mainly focused on parental views of satisfaction or skill development. This research study provided additional detailed information from family members themselves regarding that phenomenon. Providing family members an opportunity to discuss various features and details related to how they experienced and perceived social skills interventions is critically important to the success of the

implementation of strategies. As described above from family members, it is important for the children to be able to demonstrate social skills outside of the realms of the intervention session with other member of their family and community.

The administration of a questionnaire also provided a foundation of demographics prior to the semi-structured interviews, which allowed me to have an insight prior to the interview. These data provided me with information related to the family, but also the meaning of what social skills meant to them. This was very important prior to the interview to understand the family members' perceptions on social skills interventions. In addition, the interviews allowed for a broader scope of data collection resulting in honest and personal conversations that transpired during the interview process.

Given that minimal qualitative literature exists on parental experiences and perceptions related to social skills intervention for children with ASD, another strength of this research is studying a topic that has not yet been fully investigated using this method in the literature. This study also provided a forum for parents to have their stories told using a rich platform for such data. Understanding the family members input is also critical in providing or giving recommendations for interventions, such as social skills interventions.

Limitations

There were three limitations in this study that I would like to address and acknowledge. First, I had originally anticipated conducting the individual interviews in person at a private office prior to COVID-19. However, due to the pandemic I conducted individual interviews via Zoom-video conferencing. Although this platform is not always ideal for individual interviews, it provided a private and safe place to conduct the

interviews that also met the needs of the participants, their busy schedules, and eliminating the possibility of exposing the participants and their families to COVID. However, this was the best next option in interviewing parents during a global pandemic.

Second, the study included a homogenous group of participants (i.e., mothers). All the participants were mothers of individuals with ASD between the ages of preschool and fifth grade. All participants lived within a metropolitan area, although recruitment for participation was posted using various modalities including state-wide listserv specifically geared to family members with individuals with ASD. Four out of five participants described their ethnic background as “White,” and one participant described their ethnic background as “Hispanic.” I anticipated researching a more diverse group of participants; however, I was only able to recruit a less diverse group of participants possibly due to COVID 19. Hillier et al. (2021) also conducted a qualitative study related to parent perspectives of high-school children with ASD entering a college setting and also found the same limitations in having a homogenous group of participants mainly “Caucasian” and “female.”

Finally, although, generalizability within qualitative research is not often a priority in studying a phenomenon, it may be considered a limitation. Merriam (2009) discussed how qualitative research differs in relationship to quantitative research and the underpinning of generalizability stating, “Although generalizability in the statistical sense (from a random sample to the population) cannot occur in qualitative research, that’s not to say that nothing can be learned from a qualitative study (p. 224).” This quote reminds me as to the “why,” I wanted to research this phenomenon. The information and data from my participants provided me with a much wider perspective than I anticipated or

imagined. Although not all of the data can be generalized to all family members, I found this qualitative approach of research as being very insightful and provided me with a humbling experience.

Implications

Implications of the study include changes in policies that support family members to gain access and sustain interventions. Other implications for practices are development of a multi-layered support systems among family members, providers, and educators to provide tri-directional communication so that effective social skills interventions can be delivered to children with ASD across multiple people and settings. Participant 1 provided words of wisdom related to the importance of providers and family members to work together as a team to provide better services for children with ASD. Providers could also create opportunities for sibling and extended family members involvement in the interventions to support child with ASD.

Participant 1 expressed frustrations that as her child received multiple services from school and private therapy companies, each interventionist worked independently to provide services to address social skills. This participant felt there was a disconnect between services and there was no communication among service providers. She suggested that an integrated approach should be used in the service delivery.

This may include frequent communication between service providers via email, phone calls, meetings, or co-treatment related to the social skills addressed, modality of intervention (e.g., social stories, video modeling, discrete trial training) and goals. For example, the speech and language pathologist can email a social story that is implemented during a speech and language session to an ABA provider or registered

behavior technician. The ABA provider can review it with the family members including the siblings at home. It is important for all service providers to provide support to the whole family including siblings. Consequently, if interventionists and educators can provide integrate services for not only the child, but also the family members, there are more opportunities to elicit social behaviors from the child with ASD at home because more family members will know how to provide social opportunities to the child.

Evaluation, educational team members, and interventionists normally recommend that children participate in social skill interventions after receiving a diagnosis of ASD. The implications of the study include providing additional support, such as finding interventions and providing information about how services can be covered for family members. In addition, interventionists should provide a flexible schedule when working with family members that are not available during regular working hours to increase access to interventions and decrease the demands of making tough decisions between work life and interventions for their child with ASD to receive social skills interventions.

Another implication from this research is providing an insight to providers and educators about parents and family members' challenges of getting services. Findings from this study provide a gateway in understanding families' experiences to a greater depth, the challenges they work through on an individual level to obtain and sustain services for their child with ASD.

Participant 3 also gave advice for family members to be a strong advocate for their child stating:

Don't give up on doing what's best for your kid. Keep calling. It feels weird. I'm not pushy person, but I found that when I had a child diagnosed is the first had to

become the person who calls every day. Is there an opening? Has someone dropped out? Is there a new person? This person isn't a good fit. I don't like this person. You know, it's really hard, but you have to be your child's advocate. If you're offered something, do it unless you just, you know, can't physically get there, or afford it.

The mother stated the family members can change the provider if they are not satisfied with their service. In the process of finding the best services for their child, parents may feel uncomfortable of being persistent of calling to check the availability of the services or providers. Parents should also be supported in ways to navigate the system.

Additional implications include pre-service and in-service training, professional development, and providing supports to interventionists to assist in providing high-quality social skills interventions to children with ASD and their families. The findings from this study suggest that participants desired to have skillful and engaging providers that meet the individual needs for their child and family. This would require recruitment of qualified interventionists and provide training opportunities for them. In addition to training programs, the need to retain qualified and engaging providers in our rural state is essential. Such sustainability would require incentives for providers to continue to provide high-quality services in New Mexico. Those incentives may include motivational systems and competitive benefits to provide financial stability to providers. The relationship between the provider and family is pivotal to the success of implementation of interventions; therefore, the recruitment and retention of a qualified and engaging workforce is critical.

Recommendations for Future Research

Based on the results of this study, the following recommendations for further research were identified:

1. This study included only mothers with children with ASD. Future research should include other family members, such as fathers, guardians, and grandparents of children with ASD to understand if similar experiences and perceptions are found.

2. This study was conducted in a midsized metropolitan city. Even though I used state-wide recruitment listservs along with other ways to recruit participants, all of my participants lived in an urban area. It is possible there is more access to services in larger communities. Future research should explore the experiences and perceptions of family members in rural areas.

3. Only English-speaking families participated in this study. Future research should examine the experiences and perceptions of family members who are Spanish-speaking or dual language speaking to examine if there were any differences as compared to English-speaking family members. The researchers would have to be fluent in other languages in both verbal and written abilities.

4. This was a qualitative study focusing on families' experiences with their child's social skills interventions. It is recommended that future research use other research designs to further explore family members' perspectives of whether their child was able to generalize the skills previously taught in other settings, such as the home environment, classrooms, and community settings.

Conclusion

It was important to conduct this study to hear from family members' voices. What

I have learned during this study is as follows, “What I thought I knew; I do not know.” Meaning, as I ponder my conclusions for this research study and the many years working with family members with children with ASD, I literally had no idea what family members go through every day to support their children in receiving social skills interventions. We all know social skills interventions are essential as we live in a social world. It is important that educators, practitioners, and interventionists continue to meet families where they are on their journey and provide support as they navigate and participate in services. This study was important to fully examine family members’ experiences and perspectives, specifically related to their child’s involvement in social skills interventions. Findings from this study can provide us knowledge so that timely and effective services are provided by skilled and engaging interventionists to support the development of social skills for children with ASD. Lastly, this study demonstrates that more efforts should be made to train and recruit qualified interventionists, provide education, training, and support to pre-service and post-service teachers, and maintain a workforce in this field.

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*Denotes articles included in literature review.

Table 1

Search Results

Database	Search Terms	# of Articles	Notes
PsychINFO	Social skills training, disabilities, social skills outcomes	60	Initial search-7 met criteria.53 did not meet criteria do not meet criteria due to other dependent variables, social validity studies, parent outcome studies, did not use experimental designs, included other disabilities, literature reviews, or only implemented a strategy instead of a program
Psych INFO	Social skills, autism spectrum disorders, social communication skills	32	Second search-4 intervention programs met criteria. 28 did not meet criteria due to other independent or dependent variables, literature reviews, review of pilot studies, pilot study to examine feasibility of intervention, or non-experimental designs.
Academic Search Complete	Social skills intervention programs, autism spectrum disorders, social communication skills	65	Third search-5 met criteria. 61 did not meet criteria due to age, other dependent and independent variables, reviews, and other designs. 2 duplications.
Medline	Social skills intervention programs, autism spectrum disorders, social communication skills	6	Fourth search-1 met criteria, 5 did not meet criteria due to other dependent variables, reviews, duplications, and commentary.
Psych Articles	Social skills training, ASD, social communication skills	3	Fifth search – 0 met criteria
Psych INFO	Social skills training, ASD, Social communication skills	134	Fifth search – 2 met criteria

Table 2

Article Summaries

Authors/ Years	Participants	Setting	Dependent Variable	Independent Variable	Research Design	Results
Yang et al. (2003)	5 M, 1F, 7-9 years, Autism, Ethnicity- Asian	Resource rooms	<ul style="list-style-type: none"> • Positive social behaviors 	<ul style="list-style-type: none"> • Social-emotional skills curriculum 	Single subject design	All participants in the experimental group exhibited statistical significance in increasing positive social behaviors using regression. Effect size changes revealed medium effect in 2 participants and small effect size change in 2 participants. No Significant statistical changes with participants in the control group.
Thiemann & Goldstein (2004)	5 M, 6-9 years, Autism, Ethnicity was not reported	Inclusion & Resource Classroom	<ul style="list-style-type: none"> • Social communication skills 	<ul style="list-style-type: none"> • Peer training & written text cues (WTT) 	Multiple baseline design	Peer training alone showed improvements for 2 out of 5 students. The introduction of WTT demonstrated improvements in 3 target social communication skills in all 5 students. Overall, 4 out of 5 students increased rates of initiation during WTT. 4 out of 5 maintained skills.
Sansosti & Powell-Smith (2008)	3M, 6-10 years, Asperger syndrome	General education classroom & recess	<ul style="list-style-type: none"> • Social communication skills 	<ul style="list-style-type: none"> • Computer-presented Social Stories™ & Video Model – 	Multiple baselines across	Overall, positive outcomes were exhibited amongst all participants. All participants exhibited a level of

	and High-functioning Autism			combined treatment package	participants	maintenance, and one was able to generalize the skills.
Ferraioli & Harris (2011)	3M, 1F, 3-5 years, Autistic disorder, ethnicity was not reported	Home	<ul style="list-style-type: none"> • Joint attention 	<ul style="list-style-type: none"> • Sibling-mediated intervention 	Single subject multiple probe design	Mixed results across participants. One demonstrated increase in both initiating and responding to joint attention probe and continued to increase skills during follow-up condition. Three participants increased in responding only but were able to maintain responsiveness during follow-up condition. All participants were able to exhibit some joint attention and initiations on the social communication scale.
Robert et al. (2011)	84 completed the study (1 dropped out during study), 2-5 years, autistic disorder, ASD, and non-ASD, gender and ethnicity	Home & preschool	<ul style="list-style-type: none"> • Social • Communication • Parental stress, competence, and quality of life 	<ul style="list-style-type: none"> • Center-based Building Blocks program • Home-based program • Non-treatment 	Group randomized control study	Overall, improvements in the center-based group as compared to the home-based group.

	were not reported					
Laugeson et al (2012)	23 M, 5 F, 12-17 years, High-Functioning Autism, Asperger Syndrome, PDD-NOS, Ethnicity- 15 Caucasian, 3 Hispanic/Latino, 1 African American, 4 Asian, 5 other ethnic background	Clinical	<ul style="list-style-type: none"> • Social skills • Social responsiveness • Social get-togethers • Social knowledge • Adaptive behaviors 	<ul style="list-style-type: none"> • PEERS Intervention Program -with parent assisted social skills groups 	Group design	Immediate improvements with the treatment group vs the delayed group. Significant improvements in social cognition, social communication, social motivation, and decrease in ASD symptoms with the treatment group compared to delayed group. Increased and improved social get-togethers with treatment group. Maintenance of social outcomes except for social cognition with treatment group.
Eapen et al. (2013)	21M, 5F, 3-4 years, Autistic disorder. Ethnicity- Australian and other	Preschool	<ul style="list-style-type: none"> • Functional communication • Social interactions • Cognition • Play • Positive behaviors. 	<ul style="list-style-type: none"> • ESDM 	Pre-post group design	Significant improvements in cognition, receptive and expressive communication. Decreases in autism symptoms One measurement indicated There were no significant changes in fine motor skills while another indicated increases in motor skills.

Hundert et al. (2014)	1 M, 2 F, ASD, 4-5 years, Ethnicity not reported	Inclusive classroom	<ul style="list-style-type: none"> • Social behaviors related to peer interactions and interactive play 	<ul style="list-style-type: none"> • Social script training alone • Combination of social script training and a peer buddy program 	Multiple baselines across participants	Increases of peer interactions with social script training alone and combination of peer buddy program during training sessions. Decrease in skills during generalization phases.
Laugeson et al. (2014)	64M, 9F, ASD, 12-14 years, Ethnicity – 50 Caucasian, 10 Hispanic/Latino, 4 African American, 3 Asian, 3 Middle Eastern, 3 Unknown	Nonpublic middle school for students with ASD	<ul style="list-style-type: none"> • Social functioning 	<ul style="list-style-type: none"> • PEERS – teacher facilitated (Treatment) • Super Skills Curriculum (Control) 	Group design Pre-posttest	Overall, the participants in the treatment group exhibited significant improvements in social functioning as compared to the control group.
Liao et al. (2014)	11 M, 3-5 years, ASD, Ethnicity – 11 Asian	Clinical & Home	<ul style="list-style-type: none"> • Social interactions/emotional functioning • Adaptive skills • Parental stress 	<ul style="list-style-type: none"> • DIR/ Floortime™ 	Single group design	Results indicated medium to large effect –social interactions/ functional emotional skills. Adaptive skills - the medium to large effect size except motor skills. Parental stress measures indicated small effect size for distress, decrease in dysfunctional

						interactions resulting in a medium effect.
McFadden, et al. (2014)	4 M, 5-8 years, ASD, Ethnicity- 4 Caucasian	School & Recess	<ul style="list-style-type: none"> • Social communication behaviors 	<ul style="list-style-type: none"> • Peer network recess intervention package (PNRI) 	Multiple baselines across participants design	Results indicated large increases in all participants and their peers including rapid increases after introduction of intervention. Initiations increased from 20%-60%. Participant responses increased from a mean range of 5%-24% during baseline to 47% - 63%. Peer responses increased from 2%-47% during baseline to 20%-61%.
Mason et al. (2014)	3 M, 6-8 years, Autism, Ethnicity was not reported	School & Recess	<ul style="list-style-type: none"> • Social communicative acts 	<ul style="list-style-type: none"> • Peer-mediated interventions 	Multiple baselines across participants design	All participants increased in communicative acts. Overall mean rate of frequency increased. Statistical analysis revealed large magnitude of change. Social validity indicated positive changes in social interactions between participants and peers.
Radley et al. (2014)	4 M 8-10 years, Autism, Asperger Syndrome, Ethnicity- 1 African	Inclusion Class & Recess	<ul style="list-style-type: none"> • Social engagement • Social initiations • Social responses 	<ul style="list-style-type: none"> • Social skills training – Superheroes social skills program & peer training 	Concurrent multiple baselines across participants	Significant improvements social engagement, social initiations and responses, social reciprocity, detrimental behaviors, and social functioning. No statistical significance with participation/

	American, 3 Caucasian					avoidance.
Strasberger & Ferreri (2014)	4 M, 5-12 years, Autism, Ethnicity -3 Caucasian, 1 Hispanic/Latino	SLP room & sensory room within special and general education buildings	<ul style="list-style-type: none"> • Independent mands and responses using PACA 	<ul style="list-style-type: none"> • PACA training 	Multiple baseline	Overall, all participants increased their ability in mands and responses using an AAC device. Two of out the four exhibited significant increases from baseline to generalization and maintenance.
Ventola et al. (2014)	8 M, 2 F, 4-6 years old, ASD, Ethnicity was not reported.	Clinic	<ul style="list-style-type: none"> • Social communication and adaptive skills 	<ul style="list-style-type: none"> • PRT 	Clinical replication	Overall, all the participants made improvements. PRT was found effective in the areas of social communication and adaptive skills. Other gains were made in various developmental areas.
Einfeld et al. (2018)	75 M, 9 F, 8-14 years old, autistic disorder, Asperger disorder, PDD-NOS	School and home	<ul style="list-style-type: none"> • Social skills 	<ul style="list-style-type: none"> • Aspect alone (Control) Aspect and Secret Agent Society (SAS) programs (Treatment) 	Group design	Significant and positive improvements with the participants involved in the SAS program. Maintenance of social skills after 12-month follow-up.
Thomeer et al. (2019)	48 M, 9 F, 7-12 years old, ASD	Community	<ul style="list-style-type: none"> • Social skills 	<ul style="list-style-type: none"> • summerMAX program 	Group design	Results indicated that the participants that participated in the study indicated higher post-test scores and increased parent rating satisfaction.

Appendix A-1: Informed Consent

Examining Parental Perceptions and Experiences Regarding Social Skills Interventions for Children with Autism Spectrum Disorder Informed Consent for Questionnaire and Interviews February 24, 2021

Mary Jimerson, a doctoral student, and Dr. Cathy Huaqing Qi, Professor, from the Department of Special Education are conducting a study. The purpose of the study is to understand family members' perceptions and experiences regarding social skills interventions for children with autism spectrum disorder (ASD). You are being asked to participate because you (a) are a family member with a child with ASD, ages Pre-K to 5th grade that participated in social skills intervention for at least six months within the last five years, and (b) are able to read and speak English fluently.

Your participation will include completing a short questionnaire and an individual interview. The questionnaire should take about 5 minutes to complete. It includes questions such as demographics and questions such as (1) Can you tell me about your child; (2) Can you tell me what social skills mean to you and your family; (3) What is your ethnic background; (4) Is there anything you want me to know before the interview?

The individual interview will be conducted via Zoom video conference and will be video- and audio-recorded. It should take about 45 minutes to complete. The interview includes questions, such as (1) What are your experiences with finding the social skills interventions for your child? (2) Can you describe your experience(s) of the social skills intervention your child received? (3) Can you describe your perceptions related to your child's participation in social skills interventions; (4) Please tell me how you were able to implement the interventions at home or in the community?

Your involvement in the study is voluntary, and you may choose not to participate or to stop participating at any time. You can refuse to answer any of the questions at any time. A pseudonym will be given to your responses. There are no known risks in this study, but some individuals may experience discomfort or loss of privacy when answering questions. Data in electronic forms will be secured in a password-protected computer and secured software program. A link to the identifiable information will be stored in a separable location in a locked cabinet at the researcher's home. All data will be destroyed 3 years after completion of the study.

All identifiable information (e.g., your name, study ID) will be removed from the information collected in this study. After we remove all identifiers, the information may be used for future research or shared with other researchers without your additional informed consent.

The findings from this study will provide information on family members' perceptions and experiences with their child participating in social skills interventions. There are no direct benefits from participating in the study. This information may benefit other families, providers, and educators and advance the field of social skills interventions. If published, results will be presented in summary form only and direct quotes with pseudonym will be used in the final findings.

If you have any questions, concerns, or complaints about the research, please feel free to call Mary Jimerson at (505) 307-5746 or contact Dr. Cathy Huaqing Qi at hqi@unm.edu. If you have questions regarding your rights as a research participant, or about what you should do in case of any harm to you, or if you want to obtain information or offer input, please contact the UNM Office of the IRB (OIRB) at (505) 277-2644 or irb.unm.edu.

If you are eligible for the study the researcher will review the consent form with you via phone and/or Zoom conference. Verbal consent can be given if you are willing to participate.

Appendix A-2: Questionnaire

Examining Parental Perceptions and Experiences Regarding Social Skills Interventions for Children with Autism Spectrum Disorder

Name: _____ Phone Number: _____

Email Address: _____

Mailing Address: _____

Preference for contact: _____

The purpose of this questionnaire is to gather information before individual interviews to better understand your family and your experiences and perceptions associated with social skills interventions with children with Autism Spectrum Disorder (ASD). Please complete the questionnaire and return it to me via email at jimersonmary@yahoo.com or in the self-addressed stamped envelope in two weeks.

(1) Can you tell me about your child?

(2) Can you tell me what social skills means to you and your family?

(3) What is your ethnic background?

(4) Is there anything you want me to know before the interview?

Appendix A-3: Interview Questions

Interview Questions

I will begin my interviews with an opening statement of my purpose of this study. My opening statement will include the following statement: “I would like to talk to you about your experiences and perspectives of social skills interventions your child received in the last five years for at least six months. I am very interested in knowing about your experiences and perspectives. I am going to focus on three main areas beginning with gaining access to the social skills intervention. Then I want you to share your experiences about the interventions. Finally, I would like you to talk about if the interventions are important, easy to do, and affordable.”

- (1) What are your experiences with finding the social skills interventions for your child? Please give me some examples.

Follow-up question:

- Tell me about if it was challenging or easy in finding social skills intervention? If it is challenging, do you want to tell me why you found it challenging? (e.g., lack of insurance coverage).
- Tell me if your child was able to gain access right away or if there was a long waiting list? If your child received the intervention right away, could you tell me why your child receives the intervention right away? If not, how long did your child have to wait? Tell me why it took so long? What did you do during that time?

- (2) Can you describe your experience(s) of the social skills intervention your child received? Can you describe if your child’s social communication skills are getting better from the social skills interventions?

Follow-up questions:

- Can you describe any possible barriers if any that you experienced? such as getting insurance coverage, travel to the intervention sites, scheduling conflicts, and/or receiving services in your residence?
- Could you tell me some positive experiences you had about your child’s social skills interventions?

- (3) Can you describe your perceptions related to your child’s participation in social skills interventions?

Follow-up questions:

- Did you feel welcome by your child’s service providers? If so, why? If not, why? Could you please give me some examples?
- Can you describe how you felt if professionals provided social skills interventions in your home? Did you find them intrusive? Did you feel stressed? Could you please give me some examples?

- (4) Please tell me if you were able to implement the interventions at home or in the community? If so, why? If not, why?

Follow-up questions:

- Please tell me more if the social skills intervention is too expensive or not (cost effective). Please tell me why.
- Please tell me more it took too much time for you to try the interventions with your child (feasible). Please tell me why.

Please tell me more if the skills your child learned are important to you and your child? (Socially important). Please tell me why.

Appendix A-4: Participation Letter and Summary

Participant: _____

Date: _____

Thank you for participating in this research study to examine family members' experiences and perceptions related to your child receiving social skills interventions. I have included a summary of your responses to show you my appreciation for participating in this study. I will begin data analysis. Enclosed you will receive your gift card for participating in this study via email or mail depending on your listed preference during the questionnaire response. Thank you for your time and dedication during this study to provide greater insight on family members' perspectives and experiences related to their child's social skills interventions.

Sincerely,

Mary Jimerson