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The Importance of Effectively Teaching Social Skills to Students with High-Functioning Autism

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The Importance of Effectively Teaching Social Skills to Students with High-Functioning
Autism

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Submitted in Partial Fulfillment of the Requirements for the Degree
Master of Science in Special Education

School of Education and Counseling Psychology

Dominican University of California

San Rafael, CA

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Signature Sheet

This thesis, written under the direction of the candidate's thesis advisor and approved by the Chair of the Master's program, has been presented to and accepted by the Faculty of Education in partial fulfillment of the requirements for the degree of Master of Science in Special Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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Abstract

Over the past decade, there has been a significant increase in the number of children diagnosed with an autism spectrum disorder. Due to this dramatic increase, the amount of children with high-functioning autism that have entered public schools across the United States has skyrocketed. Often times these children might have average IQs, but they often exhibit deficits in various social skills that can cause them to have difficulties in a variety of other areas.

Research supports and emphasizes the importance of effectively teaching social skills to children with high-functioning autism. Because social functioning is a critical part of today's society, children with high-functioning autism must meet developmental social milestones in order to be a successful and contributing member of society.

The researcher of this study examined social skills interventions and characteristics that made them effective. The researcher examined literature on this topic and gathered information from educational professionals who have had experience teaching social skills to children with high-functioning autism. Findings indicate a significant need for effective and structured interventions that target these unique social needs of these children.

Chapter 1 Introduction

After I graduated from college, I began teaching at a non-public school for moderate to severe children with autism. Prior to the beginning of the year, I assumed that my classroom would be filled with students that needed assistance with eating, toileting, and other basic life skills. Little did I know that my classroom would actually consist of twelve students, all of whom had high-functioning autism. Even though my students could feed themselves and do long division, they were classified as moderate to severe because they had such significant deficits in social skills and behavior.

My twelve students, all of who previously resided in a public school setting, could not appropriately interact with one another, could not take turns, and could not take someone else's perspective among other deficits. Due to the lack of adequate skills in these areas, each one of my students had to be removed from the public school setting and had to be placed in an alternative educational setting. My students did not receive the necessary social skill interventions during a critical time of development and growth. They missed out on crucial social skill development and suffered academically, socially, behaviorally, and emotionally in their previous educational settings. It was then that I realized how vital it is to effectively teach social skills to children with high-functioning autism.

Statement of Problem

With such an abundance of children with high-functioning autism in the schools these days, their substantial social deficits more often than not set them apart from the rest of the class. These social deficits are not properly being addressed and are causing these children to miss out on their learning, lack peer relationships, exhibit inappropriate behavior, and have long-term emotional issues.

Purpose Statement

The purpose of this study is to determine the importance of efficient social skills interventions for children with high-functioning autism. Research conducted in this study will attempt to understand what impact social skills deficits can have on a child's overall development. The research will also attempt to see if these interventions can be successful in improving these deficits for these children. Lastly, the research will seek to determine what factors, if any, make the interventions effective.

Research Question

What is the value of effectively teaching social skills to children with high-functioning autism?

Theoretical Rationale

For decades, children with special needs were not granted the same access to education as non-disabled children. Up until the Civil Rights Movement in 1975, a disabled child was almost always institutionalized or kept home from school because the school systems could not provide the support that these children required. According to *The History of Special Education* (2014), “Their options: remain at home or be institutionalized. Even those with mild or moderate disabilities who did enroll were likely to drop out well before graduating from high school” (Pardini, 2014). The number of students with special needs, who could not access education, was tremendous. Children with disabilities never had the chance at a typical childhood because they could not go to school to learn, develop, or grow (Pardini, 2014).

Luckily, called Public Law 94-142, set forth a new opportunity for students with special needs, regardless of the severity of their disability, to access free education. “Public Law 94-142 proved to be landmark legislation, requiring public schools to provide students with a broad range of disabilities - including physical handicaps, mental retardation, speech, vision and language problems, emotional and behavioral problems, and other learning disorders - with a free appropriate public education” (Pardini, 2014). This was monumental and for the first time allowed students with disabilities the opportunity to have an equivalent education to children without disabilities.

In 1997, Public Law 94-142 was revamped and renamed. It was changed to the Individuals with Disabilities Education Act (IDEA). IDEA’s main purpose was to better

serve children with disabilities in schools and provide services for these children to meet their diverse learning needs. The law now called for students with special needs to be served in specific environments that best suited the learners' educational, vocational and emotional needs.

IDEA was monumental in allowing children with all types of disabilities the opportunity to grow, develop and learn to the best of their abilities. "Thanks to IDEA, these students were not only in school, but also, at least in the best case scenarios, assigned to small classes where specially trained teachers tailored their lessons to each student's individual needs. Schools also were required to provide any additional services - such as interpreters for the deaf or computer-assisted technology for the physically impaired - that students needed in order to reach their full potential" (Pardini, 2014). Students with special needs were now given more opportunities to succeed and progress developmentally.

According to the Center for Disease Control and Prevention, Autism Spectrum Disorders, a group of complex brain development disorders, affects one in sixty-eight children in the United States. This disability has become more prevalent in the past decade than any other disability (Centers for Disease Control and Prevention, 2014).

Autism Spectrum Disorders (ASD) can be associated with difficulties in social interaction, communication, motor coordination, intellectual deficits and physical health issues. Since ASD is a spectrum, a child with this diagnosis may be considered high-functioning or low-functioning depending on severity of their symptoms. Studies show

that interventions in all areas of need are critical for these children and their overall development. The purpose of this study is to explore the effectiveness and need for social skills interventions for children with high-functioning autism.

Assumptions

The assumptions include the following: social skills deficits in children with high-functioning autism impact the child's overall development. Students with autism who receive social skill interventions are more likely to succeed in the real world than those who do not. More effective social skills interventions are needed to address the growing number of children with high-functioning autism.

Background and Need

American psychiatrist and pediatrician, Leo Kanner, was the first to observe and identify a new developmental disorder in children. Kanner began studying eleven children under the age of eleven in 1938. Each one of his subjects had similar behavioral characteristics that he could not understand or diagnose. Their desire and need for aloofness and sameness from others and from the world in general baffled Kanner (Kanner, 1943). "All of the children's activities and utterances are governed rigidly and consistently by the powerful desire for aloofness and sameness. Their world must seem to them to be made up of elements that, once they have been experienced in a certain setting or sequence, cannot be tolerated in any other setting or sequence; nor can the setting or sequence be

tolerated without all the original ingredients in the identical special or chronologic order” (p. 249).

After many thorough observations and research, Kanner classified this new unrecognizable disorder as *Infantile Autism* (Kanner, 1943). Kanner’s early classification of the disorder and its symptoms would later be expanded upon by hundreds of doctors and psychiatrists around the world.

In 1987, Ivar Lovaas conducted one of the first successful interventions for children with autism. Lovaas used a specific type of behavior intervention therapy, now called Applied Behavior Analysis, on nineteen autistic children. Each subject exhibited deficits in a variety of areas including social skills, behavior, coordination and others. “...All subjects evidenced deficiencies across a wide range of behaviors, and during treatment they showed a broad improvement across all observed behaviors” (Lovaas & UCLA, 1987, p. 8).

The study took three years and each year focused on targeting different areas of need.

During the first year, treatment goals consisted of reducing self-stimulatory and aggressive behaviors, building compliance to elementary verbal requests, teaching imitation, establishing the beginnings of appropriate toy play, and promoting the extension of the treatment into the family. The second year of treatment emphasized teaching expressive and early abstract language and interactive play with peers. Treatment was also extended into the community to teach children to function within a preschool group. The third year emphasized the teaching of

appropriate and varied expression of emotions; pre-academic tasks like reading, writing, and arithmetic; and observational learning (Lovaas & UCLA, 1987, p. 5). At the end of the three-year intervention, researchers anticipated seeing improvements in the participant's deficits.

The hope was that the intensive intervention would improve some of the significant deficits in the subjects, so that they would be at the same level as their typically developing peers. "We hypothesized that construction of a special, intense, and comprehensive learning environment for very young autistic children would allow some of them to catch up with their normal peers by first grade" (Lovaas & UCLA, 1987, p. 4).

Just as Lovaas and his researchers had hoped, the participants made significant gains in many areas of need. In fact, 49% of them reached "normal" educational and intellectual functioning. In addition to success in academics, some participants also were considered to be "indistinguishable from their peers." Thus, indicating significant improvements in social behavior. Results from this study demonstrated how effective interventions could be for children with autism.

Summary

Autism Spectrum Disorder has remained a high topic of interest for doctors and psychologists over the course of the past few decades. Since Kanner's classification in 1943, the disorder has become more prevalent and the need for a cure is evident. Since this developmental disorder cannot yet be prevented, cured, or thoroughly understood,

researchers are constantly attempting to create interventions that are successful in helping these children in any way they can.

Chapter 2 Review of the Literature

Introduction

This section served as an examination of the research literature on the effectiveness and need for social skills programs for children with high-functioning autism. More specifically, reviewed literature focused on three components of this practice. First, literature provided comprehensive insight into the description of social skills deficits and the effects that they may have on a child's overall development. Next, the literature analyzed the effectiveness of these programs and the need for more social skills interventions for children with high-functioning autism. Lastly, the literature defined various factors that social skills interventions need to have in order to be successful. Information was gathered from academic library searches using online resources. Research information was organized in the following categories: Historical Context, Review of the Academic Research, and Summary.

Historical Context

American doctor and child psychiatrist, Leo Kanner first characterized autism as a medical condition in the early 1940s. After observing a group of children with unique and strange tendencies that could not otherwise be explained or diagnosed, Kanner used modern clinical methods to give this puzzling condition a name, Infantile Autism (Thompson, 2013). The disorder was originally described as a form of psychosis due to the observed children's complete aloofness. Kanner wrote about these children's desire

for isolation from others in his published medical journal. “The children, he wrote, have come into the world with innate inability to form the usual, biologically provided affective contact with people (p. 203). This form of detachment was just one of the many bewildering characteristics of the newly identified medical condition. “He listed as the crucial symptoms an “extreme autistic aloneness”; abnormal speech with echolalia pronominal reversal, literalness and inability to use language for communication; and monotonous, repetitive behaviors with an anxiously obsessive desire for the maintenance of sameness” (p. 203). Kanner published his findings shortly after his classification of the disorder and the worldwide scientific study of autism was launched (Wolff, 2004). Wolff (2004) stated that on the other side of the world, Austrian pediatrician and child psychiatrist, Hans Asperger, was also identifying and publishing his own observations of children with autistic-like characteristics. Similar in some ways to Leo Kanner’s description of autism, Asperger observed different tendencies in the children that he studied. Asperger titled this condition “autistic psychopathy.” Wolff (2004) summarizes Asperger’s findings published in a medical journal in 1944. Wolff (2004) states:

They were often able, some with extraordinary gifts in mathematics or natural science with creative, original modes of thinking and objective self-appraisal. But their social and emotional relationships were poor and they were sometimes malicious. Themselves highly sensitive, they lacked feelings for others, had stereotypic behaviors as well as pervasive special interests and were clumsy. Language acquisition was not usually delayed, but language use was

idiosyncratic. (p. 204)

These findings showed significant similarities and differences with Leo Kanner's findings. Some differences between the two findings, such as the incredible creativity and giftedness the children had in areas such as math or science, set apart Asperger's findings from Kanner's (Wolff, 2004).

Even though Hans Asperger's findings were considered to be accurate and important to the overall study of autism, his work was never completed and therefore did not become publicized until forty years after it was written. Lorna Wing, an English doctor, publicized Hans Asperger's findings in 1981 when she found similar characteristics of children in her own studies to those children in Asperger's studies. She brought forth public attention to the condition, which she titled Asperger's Syndrome (Wolff, 2004).

As the years went by, autistic disorder slowly became a more prevalent diagnosis amongst children and therefore received more attention from the public eye. The disorder really came into the spotlight in 1975 when the US Developmental Disability Act of 1975 recognized autism as a developmental disorder. This meant that children with an autism diagnosis had the right to receive appropriate treatment, services and living accommodations to meet their developmental needs (Wolff, 2004). From there, autistic disorder was entered into the Diagnostic and Statistical Manual of Mental Disorders III (DSM-III) in 1980. Specific characteristics of the disorder were described and criteria to meet the diagnosis were explained (Verhoeff, 2013).

Doctors, psychiatrists and other medical professionals continued to research autistic disorder as more and more children received the diagnosis. According to Verhoeff (2013), in 1995, the DSM-IV was published and listed Asperger's disorder as a separate diagnostic category from autistic disorder. The differences identified in Kanner and Asperger's studies helped facilitate this separation between autistic disorder and Asperger's Syndrome.

Kanner's early infantile autism is a near psychotic or even a psychotic state, though not identical with schizophrenia. Asperger's typical cases are very intelligent children with extraordinary originality of thought and spontaneity of activity though their actions are not always the right response to the prevailing situation. (Verhoeff, 2013, p. 452)

The intelligence level and high-level of cognitive ability found in children with Asperger's Disorder separates it from autistic disorder (Verhoeff, 2013).

Due to the fact that autism was considered to still be a newly classified disorder, medical professionals set out to further explore the characteristics of autism and the severities that symptoms can range from. Wolff (2004) stated that it was not until Lorna Wing's work on autism that the real connection was made between autistic disorder and Asperger's disorder. Wing was the first to classify autism as a "spectrum disorder." This meant that the severity of the disorder could range from high functioning to low functioning. Wolff (2004) states, "...Wing's rediscovery of Asperger's work drew attention to high functioning autism with which Asperger syndrome, as currently defined,

is often equated and this culminated in the birth of the autistic spectrum which has been useful both clinically and as a basis for genetic and other studies” (p. 205). Asperger’s disorder fell right into this spectrum on the “high functioning” side. The concept of a spectrum made logical sense for medical professionals around the world (Wolff, 2004).

In 2013, the DSM V announced that the diagnostic category, Asperger’s disorder, would be removed, causing yet another shift in the understanding of this complicated disorder. Asperger’s disorder was to be integrated into the diagnostic category, Autism Spectrum Disorders. The DSM V describes the criteria for an Autism Spectrum Disorder diagnosis. One thing is known for certain, children with an Autism Spectrum Disorder diagnosis exhibit significant deficits in their social abilities, social interactions, and social communication. That being said, researchers, doctors, psychiatrists and other medical professionals have attempted to understand these deficits, comprehend how and why they materialize in these children and implement strategies or interventions that target these deficits (Verhoeff, 2013).

Autism is still being researched and is seen as puzzling and complicated for many professionals and families affected by the disorder. Regardless of severity, all children with this spectrum disorder exhibit social deficits in some form. “From a rare disorder characterized by a pervasive lack of responsiveness and gross deficits in language development, autism became first and foremost a disorder of sociality. The lack of intuitive skills that make complex social interaction possible is now central in yet again a new way of conceptualizing autism” (Verhoeff, 2013, p. 442). Families and

professionals are constantly looking for some effective approach to help these children have a chance at a typical life (Verhoeff, 2013).

Review of Academic Research

Effects of Social Deficits

The first set of reviewed literature focused on describing social skills deficits and portraying the overall effects of them on a child's development. According to Goldstein, Lackey, and Schneider (2014), social skills deficits are one of the most recognized characteristics of autism. "Problems with the development of social skills and social relationships have long been recognized as a hallmark of children with ASD" (p. 264). One social skill deficit in particular that is almost always apparent in children with high-functioning autism is their lack of peer interactions. "Compared to children who are typically developing, children with ASD spend less time interacting, have low-quality interactions when they engage with peers, often remain at a greater physical distance from peers, and spend more time engaged in purposeless activity" (p. 264-265). Tureck, and Matson (2012) expand on this by stating, "Children with ASD also exhibit impairments in social interaction related to speech abnormalities, linguistic conventions, and failure to initiate interpersonal interactions. Often children with ASD demonstrate poor imitation of both nonverbal and verbal communication. This hinders their ability to develop the appropriate communication skills necessary for social interaction" (p. 608).

Another social deficit commonly found in children with high-functioning autism is the inability to read social cues. DeMatteo, Arter, Sworen-Parise, Fasciana and

Paulhamus (2012) state that these children "...might not be sensitive to social cues that indicate appropriate pro-social behaviors in specific contexts. Thus, an individual with this type of deficit may be reluctant to discontinue a social interaction with the peer even though the peer is providing consistent verbal and nonverbal indicators that he or she is uninterested in the given activity" (p. 59).

DeMatteo et al. (2012) discuss what effects the lack of social cues can have on young adults with high-functioning autism in his research article. He states, "Young adults with ASD may be deficient in performing certain social skills because their environment does not provide natural cues that are necessary to evoke a specific pro-social behavior. Therefore, although the young adult might possess the skill, he or she will not be aware of when to appropriately exhibit it" (p. 60). This deficit can often cause these children to appear out of context because they cannot read the social cues of various situations.

Sansosti (2010) describes other various social deficits that these children often possess. He states, "In general, children with ASD demonstrate extreme difficulties engaging in even the simplest of social behaviors, such as engaging in appropriate eye contact, initiating and maintaining conversations, listening to or responding to verbal requests, developing and maintaining age-appropriate friendships, and interacting in basic games" (p. 257). These basic skills are often viewed by typically developing children as natural or simple to use. To children with high-functioning autism, these skills do not come as naturally.

One article written by Ostmeyer and Scarpa (2012) described the effects that these social deficits can have on a child's levels of functioning. The reviewed literature's purpose was to provide insight into the effects that social deficits can have on a child's overall development in order to emphasize the need for adequate social skills interventions for children with high-functioning autism.

The beginning of Ostmeyer and Scarpa's (2012) article focused on analyzing the detrimental effects that social deficits can have on a child. The identified problem discussed within this study was the concern over the growing number of children with high-functioning autism found in general education settings. These students may have an average IQ score, but they lack critical social skills. Research has proved that social functioning is fundamental and a vital skill for children to have if they are to succeed in the classroom. "Social ability can have a significant impact on a child's academic success in the classroom" (p. 932).

The first section of the article described three key areas of functioning that are impacted by social deficits: academic functioning, emotional well being and future-functioning. In terms of academic functioning, the whole concept of learning in a classroom requires children to use social skills constantly. Ostmeyer and Scarpa (2012) refer to learning in the classroom as a "social event" (p. 932).

Specific social skills are required in the classroom in order for students to succeed and learn to the best of their abilities. "A survey of teachers identified 10 social skills considered important to classroom success, including listening to others, following steps,

following rules, ignoring distractions, taking turns, asking for help, getting along with others, staying calm, taking responsibility for one's own behavior, and doing nice things for others" (Ostmeyer & Scarpa, 2012, p. 932). If a child exhibits deficits in any or all of these skills, he or she may not perform adequately in the classroom. "Thus, an environment that necessitates social communication as a method of learning could lead to academic underperformance relative to the child's cognitive ability" (p. 933). Since children with high-functioning autism exhibit such significant social deficits, their academic performance may be greatly affected. "These findings suggest that social skills play an important role in the academic performance of children with HFASD (High-Functioning Autism Spectrum Disorder) and that social enhancement may positively impact academic skills" (p. 933).

The next area of functioning that is affected by social deficits is the state of emotional well-being. According to Ostmeyer and Scarpa (2012), it is commonly known that social deficits affect the emotional state of the child in typical developing children and children with high-functioning autism. The research article described the effects of social impairment in children with high-functioning autism. The researchers state, "...deficits in social functioning have been related to increased feelings of anxiety and depression in individuals with HFASD" (p. 933). Children with high-functioning autism are at serious risk for various mood disorders including depression and anxiety. "Children with HFASD may be especially at risk, as their higher intellectual functioning allows for increased self-awareness of their social deficiencies, which in turn can increase the

likelihood of mood symptoms” (p. 933). In addition to the heightened risk of mood disorders for children with an autism diagnosis, these children also have a heightened risk of consistent negative peer interactions. “Children with HFASD are also more likely to be rejected, teased, and bullied by peers as a result of their social awkwardness” (p. 933).

Tureck and Matson (2012) supports this idea when stating, “Subsequently, individuals with ASD are at an increased risk of being rejected by their peers and often experience social isolation” (p. 608). These children miss out on valuable peer relationships and in turn make them more isolated. DeMatteo et al. (2012) states, “These deficits can significantly affect the ability to establish lasting and meaningful relationships and lead to rejection and isolation” (p. 57). These children can become confused and angry about these negative peer interactions and develop social anxiety or have aggressive reactions towards others (Ostmeyer & Scarpa, 2012).

The last area of functioning that is affected by social skills deficits that Ostmeyer and Scarpa (2012) discuss is a child’s future functioning. Children learn a variety of skills at school to help them succeed in the real world. “It is clear, however, that many skills beyond academics are needed to succeed in college and/or the work force, including adaptive social skills” (p. 933). If a child has social deficits, he or she may not have the opportunity to practice these crucial skills in preparation for transition to the world beyond school. “Impaired social skills can make the transition to postsecondary education more and impede attainment and maintenance of a job for individuals with HFASD” (p. 933). Typical lifetime milestones that often come naturally become intense struggles

for people living with high-functioning autism. DeMatteo et al. (2012) state “The ease of living independently, marrying, going to college, working in competitive jobs, and developing a large network of friends are challenges for individuals with autism spectrum disorder” (p. 57-58). Inadequate adaptive social skills could contribute to a life-long struggle for these children (Ostmeyer & Scarpa, 2012).

Schools often lack the resources to develop meaningful and effective social skills programs for students with high-functioning autism. The problem is that children with this disability need consistent and effective social skills interventions in order to succeed in the classroom. The majority of schools are not yet capable of offering these. This study focused on hearing directly from the parents of children with high-functioning autism and professionals about what social skills programs need in order to help these children. The purpose of the study was “...to gather information on the need for social skills interventions in schools, potential benefits, and barriers to school-based implementation” (Ostmeyer & Scarpa, 2012, p. 935). By analyzing the significant social needs of children with high-functioning autism and hearing directly from a variety of stakeholders, the authors were able to determine factors that need to be present in these programs in order to be effective (Ostmeyer & Scarpa, 2012).

The participants of this study were fourteen school staff and two mothers from a local elementary school in Virginia. School staff included: general education teachers, special education teachers, aides, principal, and specialists. All fourteen of the staff had worked with children with high-functioning autism. The two mothers both have children

with an autism diagnosis. All participants were women except for the students. The two student participants were boys at the school, one in the fourth grade and one in the fifth grade. Both of the boys had an autism diagnosis (Ostmeyer & Scarpa, 2012).

The results of the study showed the following, “Quantitative data indicated that a social skills program for children with HFASD was desired at this school, whereas the qualitative data provided details about strategies that might be needed to address barriers to implementation” (Ostmeyer & Scarpa, 2012, p. 938). It was clear that all stakeholders desired some form of social skill intervention in order to address the social needs of the children with high-functioning autism. “Additionally, stakeholders agreed that social difficulties of children with HFASD affect academic performance and peer relationships” (p. 938).

Schools often lack the resources to develop meaningful and effective social skill programs for students with high-functioning autism. The problem is that children with high-functioning autism need consistent and effective social skill interventions in order to succeed in the classroom. These programs must be set up in accordance with the specific population’s input and needs of the particular environment in mind. Thus, this study used directed information from the population in order to determine how to best create and implement a social skills intervention program for children with high-functioning autism (Ostmeyer & Scarpa, 2012).

It is known through previous research that social skill deficits can affect a child’s development in a variety of ways. The study aimed to show the importance of social skill

interventions for children with autism by analyzing the effects social deficits can have on the child's overall development in areas such as academics, emotional well-being and future functioning. "The existing research supports the proposition that improved social skills in children with HFASD can help reduce the risk of other emotional problems and enhance academic and vocational functioning" (Ostmeyer & Scarpa, 2012, p. 934). Thus, this research article emphasizes the importance of teaching social skills to children with high-functioning autism. "Given these potential positive outcomes, it is necessary to develop and provide effective social skills programming as part of the curriculum for children with HFASD" (p. 934).

Effectiveness and Need for Social Skill Interventions

The next set of research articles focused on describing the effectiveness of social skill interventions and the need for efficient programs for children with high-functioning autism. The research shows that many social intervention programs can have a variety of positive effects on social deficits exhibited by children with high-functioning autism.

Bellinger, Perlman, and DiPerna (2011) emphasized the need for more effective social skills interventions for children with high-functioning autism. The article discussed the effects that the intense increase of autism diagnoses have had on educators and service providers to meet the children's needs. "As rates of ASD have dramatically increased over the past 20 years, greater demands have been placed on educators to disseminate and implement evidence-based practices effectively within inclusive environments" (p. 155). Since social deficits are one of the most significant

characteristics of autism, interventions that target these deficits are vital for these children in order to help them learn how to become social beings. The article went on to discuss the positive effects social interventions can have on children with high-functioning autism. “This review indicates that specific types of social skills interventions are effective at promoting social communication, social engagement, and social competency skills among students with ASD” (p. 155). Thus, the need for the more organized and effective social interventions is necessary for these children to function in the social world.

Another study conducted by DeRosier, Swick, Davis, McMillen and Matthews (2010) focused on analyzing the effectiveness and positive outcomes of a specific social skill intervention for children with high-functioning autism. The purpose of this study was to test the efficacy of a new social skill intervention, designed to improve social behaviors in children with high-functioning autism. In this study, children diagnosed with high-functioning autism were split up into two groups. One group, the control group, participated in ten weekly sixty-minute traditional group sessions for typically developing children in the same age range. The program was not intended for students with high-functioning autism. The other group, the treatment group, participated in fifteen weekly sixty-minute group social skill intervention sessions. The program for the treatment group was designed to address the specific social deficits that children with high-functioning autism often exhibit (DeRosier et al., 2010).

Factors for Successful Implementation

The next set of research articles contributed great insight into specific factors that must be present for a social skill intervention for a child with high-functioning autism to be successful. The research indicates that organized and systematic approaches to intervention are often key to the success of the program. Since social skills are complicated to teach, the intervention must well structured and implemented to be effective. According to McMahon, Lerner and Britton (2013), “Social skills” is a complex, multidimensional construct that requires a multi-method measurement approach. A biased, insensitive, or overly simplistic measurement approach can cause effective interventions to be misidentified as ineffective; likewise, ineffective interventions can be incorrectly labeled as effective” (p. 34).

Leaf, Dotson, Oppenheim-Leaf, Sherman and Sheldon (2012) offered future researchers a guideline for creating and implementing a successful social skills program. “The main purpose is to provide an example of the general structure and critical features of a social skills group, which we hope will be useful to other researchers who are attempting to establish a social skills group for young children with ASD (p. 112).

The following are a few factors that were identified in the article as being critical to successful implementation of a social intervention for children with high-functioning autism: group based intervention, implementation of a reinforcement system and a long duration of the program. Often times, social skill interventions take place in a one on one setting (Leaf et al., 2012).

This article provided a few reasons for the importance of a using group-based intervention program. Leaf et al. (2012) stated, “First, social skills groups often involve peers as part of the intervention so that children have a higher likelihood of generalizing the targeted skills toward these peers” (p. 118). Due to the fact that children with autism often have difficulty generalizing skills from one setting to another, the use of peers in the intervention creates a better opportunity for these children to use the learned skills in different settings with the same peers. “A second advantage is that social skills groups provide opportunities for observational learning to occur” (p. 118).

Modeling is a great strategy to use with students on the autism spectrum because they often have to see what they are supposed to do. By observing their peers, these children have the opportunity observe and model others (Leaf et al. 2012). “Third, social skills groups more closely resemble natural learning environments, such as schools, and, therefore, may help promote more successful integration of the child into natural learning environments” (p. 118).

Generalization of skills is challenging for children on the autism spectrum. “...the child performs the skill or behavior only in the presence of a specific stimulus (person, prompt, directives, etc.). Generalization is particularly important for children with ASD who often have pronounced difficulties transferring skills across persons and settings” (Bellini, Benner and Peters-Myszak, 2009, p. 34). By resembling a school-like environment, the children will be more likely to use the learned skills in the school environment.

In addition to the need for a group-based intervention, Leaf et al. (2012) also claims that the duration of time that the intervention goes for is also considered a crucial component for the successfulness of the social skills program. Most social interventions for children with high-functioning autism often last for six to thirty-six weeks. Leaf et al. (2012) stated, “However, this group lasted for 16 months with little turnover of the children. This is far longer than the average social skills group intervention.

Having group instruction take place this long with the same children likely had two main advantages: increased opportunities for children to develop and display positive social relationships with each other and increased opportunities to enhance the variety and complexity of the social interactions” (Leaf et al., 2012, p. 114). Since children on the autism spectrum require a lot of repetitive practice in order to acquire a new skill. Therefore, if an intervention is to be successful, the duration of time that the program goes for must be long enough to allow for continued repetitive practice of a skill and use of that skill in a variety of situations.

Lastly, Leaf et al. (2012) described a key component of a successful social skill intervention is the use of a reinforcement system. “A final important feature of this social skills group was the reinforcement system used to promote appropriate social behavior” (p. 116). Often times, learning social skills can be difficult and confusing for children on the autism spectrum. Knowing this, there must be one or more key motivators in the foundation of the program in order for these children to participate and attempt to learn these new skills “...children with autism often need external reinforcement to display

appropriate social behavior. This was the case for the children in this group. Therefore, tangible items were used to help promote appropriate social behavior” (p. 116).

Leaf et al. (2012) provided strategies and techniques for the structure and implementation of a successful social intervention for children with high-functioning autism. All of the factors previously discussed allowed for the program to successfully make strides in each of the participants’ determined social deficits. “Results indicated that all participants displayed the four social skills at high level during role-plays and also generalized these skills in a different and more naturalistic setting” (p. 116). The four social skills evaluated included: giving compliments, making empathetic statements, showing appreciation, and changing the game. In conclusion, the authors of the article emphasized factors in the organization and structure of the program that contributed to the successful implementation of a social skills intervention for children with high-functioning autism.

The next article discussed taking a systematic approach when implementing a successful intervention program. According to Bellini et al. (2009), many social skill interventions are not successful because the children cannot generalize the skills they learn. “Results of these studies indicate that traditional SST is particularly ineffective in promoting the transfer of skills across settings and persons” (p. 26). Therefore, a successful intervention must be planned appropriately and must take into account a variety of factors. Bellini et al. (2009) describe five necessary steps that a successful social skill intervention program should take during the duration of the intervention:

assess social functioning, distinguish between skill acquisition and performance deficits, select intervention strategies, implement intervention and evaluate and monitor progress.

The first step includes conducting an assessment to determine each individual participant's current level of functioning in a variety of social skills. From there, the program can then target exact areas of need. "The purpose of the social skills assessment is to identify skill deficits that will be the direct target of the intervention and to establish a baseline for current social functioning" (Bellini et al., 2009, p. 28). Once the deficits are determined, the step in the process begins.

The next step of the process that is described by Bellini et al. (2009) is deciding if a child's area of need is a result of skill acquisition or a performance deficit. A skill deficit is described as the absence of a particular skill. A performance deficit is when a person has a skill but is not able to use the skill in certain settings. The article emphasizes making this determination so that an intervention strategy can be correctly matched to the deficit (Bellini et al., 2009).

In order to determine if a child's deficits are skill deficits or performance deficits, an informal evaluation must be done. Bellini et al. (2009) suggest answering a variety of questions about the deficit. These questions include the following:

"(a) Can the child perform the skill across multiple settings and with peers? (b) Can the child perform the skill without support or assistance? (c) Does the child perform the skill if reinforcement is provided? (d) Does the child perform the skill if environmental modifications are made?" (p. 30)

The authors of this study state that if any of the answers were “yes” to these questions, then the deficit would be deemed a performance deficit (Bellini et al., 2009).

As described in this article, the third step, selection of intervention strategies, must be taken. “Selecting strategies that match the type of skill deficit is a critical component of successful programming” (Bellini et al., 2009, p. 30). After reviewing the assessment data, the authors of this article recommend selecting intervention strategies that correctly match the deficits shown in the data. Bellini, Peters, Benner and Hopf (2007) supported matching an intervention strategy to the deficit in a previous article as well. The article states, “...a key component of effective social skills programming is the ability of the interventionist to match the intervention strategy with the type of skill deficit (p. 161).

In order to meet the needs of all of the children involved in the intervention, a large amount of strategies must be used. Bellini, Peters, Benner and Hopf (2007) state “...interventions should be designed to address the individual needs of the child, rather than forcing the child to “fit” into the selected strategy (p. 161). Therefore, the program should use a variety of strategies to match each child’s deficits and needs. “To successfully teach social skills, clinicians must have a large collection of intervention strategies at their disposal” (Bellini et al., 2009, p. 30). If a strategy works for one student it may not work for another. Thus, having an abundance of strategies at hand is key in the successful implementation of the intervention.

Once the strategies are chosen, the implementation of the intervention and the

evaluation of progress made can begin. The article recommends using various strategies to determine and evaluate the progress made by each child. Weekly observations, data collection at the end of each session, summary report for parents, and observations at school are all techniques the authors advise using to determine progress made during the course of the intervention (Bellini et al., 2009).

In conclusion, the research article provided a model from which practitioners could use to design a social skills intervention program of their own. "... our goal was to provide an example to practitioners wishing to design and implement systematic social skills instruction. Teaching social skills systematically allows practitioners to practice with purpose in the delivery of social skills programming" (Bellini et al., 2009, p. 38). The authors of this article emphasized the importance of using a systematic approach when conducting a social skills intervention for children with high-functioning autism in order to improve the chance for the generalization of skills.

Summary

The literature reviewed was analyzed and presented through three themes: 1) effects of social deficits, 2) effectiveness and need for social skills interventions, and 3) factors for successful implementation. The literature that was reviewed described how social deficits such as a lack of perspective taking skills, the incapacity to read social cues, and the inability to have peer interactions can have a variety of effects on a child's overall

development. Academic functioning, emotional well being, and future functioning were three key areas that were described as being negatively affected by social skills deficits.

The literature also emphasized an overall need for more effective, organized and systematic social skills interventions for children with high-functioning autism.

Interventions that target the specific deficits exhibited by children with high-functioning autism are seen as the most effective. The reviewed literature also emphasized the need for more social skills interventions for children with high-functioning autism.

Chapter 3 Method

Research Approach

Research was conducted qualitatively on the topic of social skill interventions for students with high-functioning autism. Three special education teachers, three Speech and Language Pathologists and two Social Cognition Specialists, from a non-public school in the greater San Francisco Bay area, voluntarily participated in personal interviews. The interview consisted of questions regarding the participant's opinions, knowledge and experience teaching social skills to students with high-functioning autism. The researcher conducted the interviews separately and at predetermined times. The researcher collected data by taking written notes during the personal interviews.

Ethical Standards

This study adheres to the standards published by the American Psychological Association (2010) on the ethical treatment of human subjects in research. Additionally, the researcher submitted an application to the Dominican University Institutional Review Board for the Protection of Human Subjects (IRBPHS) and received approval, assigned number 10251.

Sample and Site

Participants were all active service providers at a non-public school in the greater San Francisco Bay Area. The participants included three Speech and Language

Pathologists, three Special Education teachers and two Social Cognition Specialists.

Participants were 18 or over in age and were non-patient volunteers. Personal interviews were conducted at the school site in private and secluded rooms. All participants had one or more years of experience working with children with high-functioning autism. The identities of participants were kept confidential with the exception of the thesis advisor and author of the present study.

Access and Permissions

In order to be allowed to access and interview educational professionals, the author of the present study acquired written consent from the principal of the school where the educational professionals reside. Once written consent was given, the author then provided each educational professional with a written consent form.

Data Gathering Strategies

For interviewed educational professionals, data gathering strategies included the following. First, each interviewee was contacted individually through email to determine a date and time that fit appropriately into the interviewee and the author's schedule. Next, the interviewee and author of the study met at the predetermined time in a private room at the school to conduct the interview. The author provided each interviewee with the list of questions that would be asked and went through each question with the interviewee. The author of the present study hand-wrote each response to each question. After each interview was completed, the author compiled and evaluated the data.

Data Analysis Approach

When sifting through the data, the author of the present study looked for general themes that were consistent throughout the interviewees' responses. Once these themes were collected and analyzed, the author placed them into various categories depending on the theme.

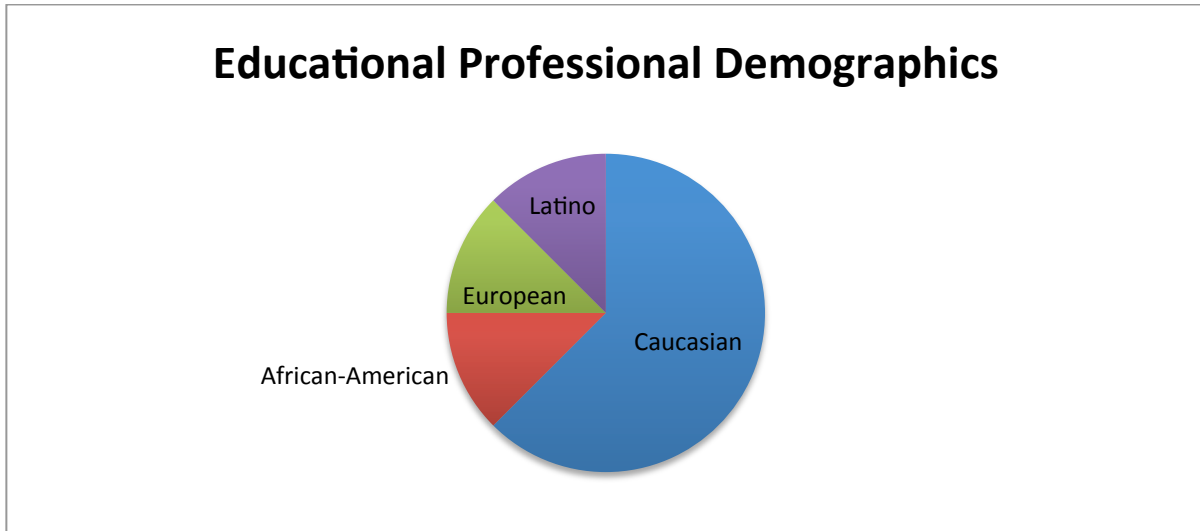
Chapter 4 Findings

Description of Site and Individuals

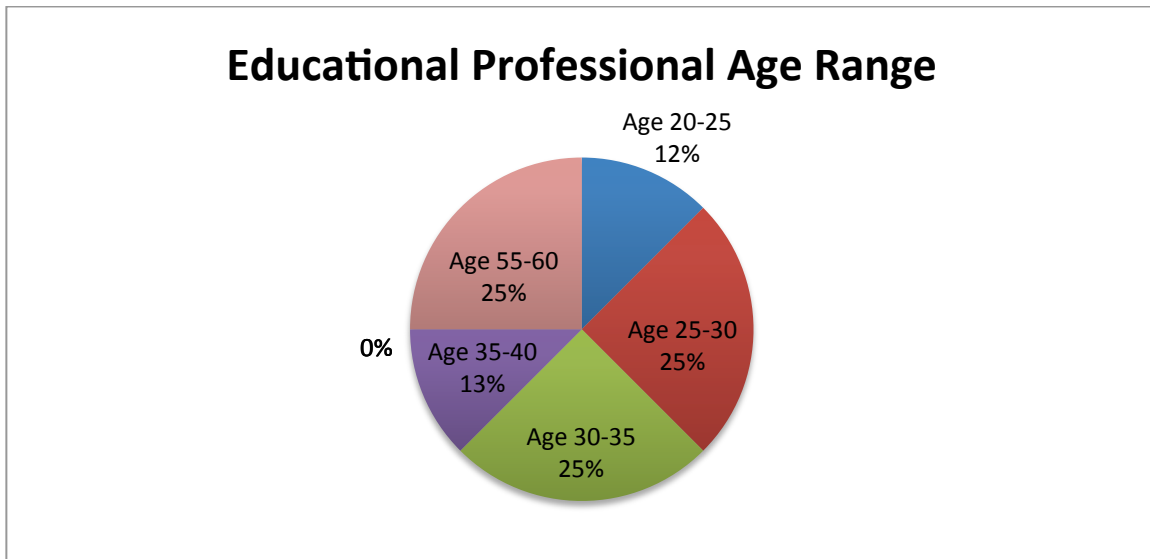
Individual interviews for this study were conducted at a small non-public K-12 school in the greater San Francisco Bay Area. Each interview took place in a private office located at the school. All eight educational professionals that were interviewed were active employees at the school during the course of the study. Interviewees include three special education teachers, three Speech and Language Pathologists, and two Social Cognition Specialists.

Seven participants were female and one participant was male. Five of the eight participants identified themselves as Caucasian. One participant identified themselves as Latino, one identified themselves as European, and one identified themselves as African-American. (See **Chart 1**).

Chart 1



Participants classified themselves in the following age ranges: 1) n=1 participant 20-25 years old, 2) n=2 participants 25-30 years old, 3) n=2 participants 30-35 years old, 4) n=1 participant 35-40 years old, and 5) n=2 participants 55-60 years old. (See **Chart 2**).

Chart 2

All participants had been employed at the school for at least one full year. Many of the interviewees have worked with had many years of experience working with children with high-functioning autism. Participants identified the number of years they have been working with children with high-functioning autism. The following is the amount of years each participant has had working with children with high-functioning autism: 1) n=2 participants 1-3 years, 2) n=3 participants 3-5 years, 3) n=1 participant 6-10 years, and 4) n=2 participants 10+ years. (See **Chart 3**).

Chart 3



Data

The following are responses from the interviews conducted during this study. All names have been changed for anonymity and confidentiality.

1) Please identify specific social deficits children with high-functioning autism might exhibit.

CR: Difficulty identifying social cues, problem solving, reading other's body language, difficulty initiating and maintaining conversations, perspective taking, interpersonal relationships, and following what the group is doing.

DL: Conversational skills, body language and posture, topic maintenance, perspective taking, problem solving, how to maintain friendships, making inferences, identifying and using emotion words, and reading facial expressions.

DY: A huge one would be problem solving. They often do not know how to solve problems appropriately. Also, not knowing how to read social cues, which often makes them say things that are abnormal or out of context.

MO: Peer interactions are very difficult for them. They often do not know what to say or how to begin conversations with others. They can be very egocentric and therefore are often isolated. Taking turns is really hard for them too.

JS: Reading social cues, making inferences or predictions, expressing emotions or identifying them in others. Perspective taking is a big deficit for them too.

MA: Problem solving and maintaining friendships are two big ones. Also, reading body language and social cues.

ES: Children on the spectrum generally lack theory of mind, which helps them to understand that other people have thoughts and those thoughts might be different from their own. I believe this is really important in a relationship because people want to know that you are interested in them and can talk about things other than your own interests. Also, perspective taking and engaging in social interactions are very difficult for these children.

DD: The inability to take turns is a big deficit. Also, problem solving and perspective taking are huge deficits for these children.

2) How can social skill deficits impact a child with autism's behavior?

CR: When these children have these deficits, their behavior may look out of place because they are not reading the social cues or the body language of others. They might also have big reactions to things because they do not understand certain situations and therefore become very emotional over small problems.

DL: They misread the series of events, social cues, social situation, and often do not see the perspective of others, which can cause them to escalate and have inappropriate behavior.

DY: These deficits can have a huge impact on behavior. They often do not understand what is going on in their social environment and therefore react to things in unusual or extreme ways. Their behavior can become unsafe because their emotional responses are so intense.

MO: A lot of times these children can exhibit aggressive behavior because they are socially out of place. They might think that everyone in the classroom is teasing them, when really no one is even talking about them.

JS: Misreading body language and social cues can sometimes cause the child to become secluded or isolated because they do not understand what is going on around them.

MA: Behavior is a form of communication. When these children do not know how to communicate or express themselves socially, they do so in their behavior.

ES: It could make the child feel secluded, or make them close into themselves because they don't know how to expand into the social world.

DD: Social deficits can cause a child to enter the "trigger" phase easier or sooner. This is because they do not often know how to handle social situations and therefore express themselves through their behavior.

3) When a child with autism exhibits social deficits, how can it affect the child's overall development?

CR: It can affect academic achievement, especially language arts. In language arts, students often have to take the perspective of others and therefore might have difficulty in this area. It can also affect how well these children learn the “social secrets” of life. This lack of understanding may delay how far they go with relationships.

DL: Academics, social interactions, behavior, sensory processing, and overall state of cognition.

DY: It can affect how well they do in the classroom, academically and socially. They might not be performing to best of their abilities in academics because they do not understand the social context of something that is going on in the classroom. This can cause them to become confused and frustrated and miss out on valuable learning.

MO: Academics are very affected. The classroom is all about social interactions. When these children do not have the capabilities to understand and interact in the classroom, they might miss out on learning.

JS: Behavior is affected greatly as well as overall cognition. This is because the lack of skills makes them less cognitively aware than neuro-typical kids. Academics are also affected.

MA: Their entire future is impacted. Everything from high school and college to getting married and having a baby are affected. Their lack of social skills causes them to constantly have to try to play “catch up” with their peers. Often times they will never catch up to them in academics, behavior, and socially.

ES: When a child without intervention grows older they could face challenges in finding a job, maintaining a job, and living on their own. Academics are also affected because they often cannot participate in classroom activities. People on the spectrum generally lack social skills which could make getting a job and working with people difficult. They also tend to lack executive functioning skills, which could make acts of daily living a challenge. When to get up, what to get at the store, when to go, etc., etc.... Depending on how severe the diagnosis is the person may not be able to do something as necessary as paying a cashier. I have worked with high school students on the spectrum who needed guidance with how to enter a grocery line, take out the correct amount of money and pay the cashier.

DD: These children's entire developmental level is lower when they have social skills deficits. Academics suffer as well as behavior and peer friendships.

4) Do you believe that effective social skill interventions can indeed improve these deficits?

CR: If a child has the cognitive ability to understand concepts behind social skills, which most children with high-functioning autism do, interventions can be effective. It can take a very long time, but interventions absolutely do help improve these deficits.

DL: Absolutely because these deficits are a cause of a lot of their problems, teaching them social skills gives them tools to use in different situations. Interventions are key!

DY: Interventions can be so effective. If they are implemented correctly, the child can make so much progress and can even exhibit no social deficits at the end.

MO: Yes! They are crucial for these kids to succeed in and out of school.

JS: Absolutely. Interventions provide the necessary training and explicit instruction that these children need!

MA: Yes. If these kids did not get interventions, their deficits would become worse and they could end up dropping out of school.

ES: Yes! We see it in our job all the time. So much progress can be made.

DD: Interventions are proven to be successful for improving these deficits. They are a necessity.

5) In your opinion, do you believe there to be adequate social interventions currently out there for students with autism?

CR: There are some, but there could be more. There should be more in public schools to help all the children who are in general education classrooms.

DL: Yes, there are some, but they are not very well known. There is not a lot of publicity around them to make them known for families. There have to be more in public schools.

DY: I think there are some out there, but there could be more.

MO: There should be social skills interventions in all public schools to help the ones in those settings.

JS: There are some really great ones out there right now, but I would like to see more and more effective ones.

MA: I think there are not enough social skills interventions out there. These deficits can be so awful and we need to help these kids as much as possible to live a normal life.

ES: No. There should be more. I have seen the knowledge growing and the services growing, and even public schools making services more available. The thing that I would like to see change is how hard it is to get help and how long the process is to get started.

DD: I do not think there are enough out there. They also need to publicize the ones that are out there.

6) Would you recommend a child with autism be involved in social skill interventions at school and outside of school? Why?

CR: Yes, it would be beneficial. These kids are not able to just pick up new skills right away. It takes a lot of teaching and skills for these kids to learn these complex concepts. The skills must be taught in a concrete way in the interventions are to be successful.

DL: Yes, because the more exposure they get, the better they will learn the skills.

Repetition is key for students on the spectrum. They need it to understand, comprehend and apply the skills.

DY: Absolutely. Anytime things can be reinforced at home as well as at school is so beneficial for the child.

MO: It takes such a long time for children on the spectrum to acquire new skills. Since they have such a difficult time generalizing skills over multiple areas, they should be given the opportunity to practice these skills in various contexts.

JS: I think it is vital for the social skills intervention to happen at home and at school. Otherwise, the child is not going to be able to practice the skills in both places.

MA: Yes. It would be the most beneficial to the child.

ES: School and outside services can be so beneficial. It can help with generalization, support for the parents, support for siblings, extra skills for the child too. Sometimes outside services can give more because that one child is the therapists focus for an hour, whereas in a school setting a lot of times intervention can move at a slower pace if the teacher is focused on multiple kids. Either way I think intervention is helpful and should be advocated for.

DD: Ideally it would be wonderful for the intervention to be done at school and at home, but sometimes parents cannot make that work for their child.

7) In our opinion, what should parents look for when choosing a social skill program for their child?

CR: Parents should look for specific material that can be taught in a concrete way. Also, the instructor is key. If the content is boring, the kids will not learn the skills.

DL: Parents should look for a program targeted towards students with high-functioning autism. Social skills are very broad and the intervention should be targeted for students on the spectrum.

DY: Parents should look for a program that teaches these skills systematically. An organized structure will explicitly teach these children the skills.

MO: The instructor is crucial in the effectiveness of the intervention. Also, the content should match the students' developmental levels.

JS: There are basic social skills programs out there and I think parents of children with high-functioning autism should avoid these programs.

MA: Parents should look for a clinically based and organized program that has been proven to be effective for students with high-functioning autism.

ES: Generalization of skills is crucial in my opinion. I would want my child to be able to have fun while learning instead of having to go through a drill and kill type setting. I would want to be somewhere where the communication between the parents and the teachers is a priority and also somewhere where my child feels safe.

DD: A fun environment that works on generalizing these skills.

8) At what age or stage of development would you recommend starting social skill interventions for children with autism?

CR: Preschool! The earlier the better. You can change the content of the material to meet the needs of young learners and older learners.

DL: Once the parents realize there is something wrong. It is easier to learn things at a younger age.

DY: Once the child is diagnosed, the parents should begin the intervention.

MO: Early intervention has proven to be so successful for children on the spectrum because they have a longer time to practice the skills they are learning.

JS: As soon as possible.

MA: Preschool or Kindergarten age would be ideal.

ES: The sooner the better. Early intervention is wonderful!

DD: The moment the diagnosis is made, intervention must begin!

9) Do you think that social deficits are one of the most detrimental characteristics of autism? Why or why not?

CR: Yes, because if you look at these children, often times you would not know they were disabled until you saw them interact in a social setting.

DL: I believe it is the number one deficit. It can be so debilitating and can cause these children to be totally isolated from the social world.

DY: Yes! This deficit has so much impact on the child's development and therefore controls everything else.

MO: I do think it is the most detrimental deficit of autism. It separates these children from everyone else.

JS: Yes, I do think so. There is really no other disability that causes such significant social deficits. I cannot even imagine how difficult it would be to have these deficits.

MA: Yes.

ES: Yes. I mean we live in such a social world, with so many spoken and unspoken social rules. Lacking in social skills for anyone can be a hard thing.

DD: I do. It would be awful to not know how to interact with others or how to fit into this world.

Themes

While analyzing the data, several themes emerged. First, 100% of participants stated that they believed social skills deficits to be the most detrimental characteristic of high-functioning autism. Interviewees described the negative impact of this deficit on the development of the child. All participants indicated social skills deficits to be debilitating.

Another theme that was apparent was the exact descriptions of social skills deficits that the participants gave. For instance, 50% of the participants indicated that children with high-functioning autism exhibited deficits in reading social cues and engaging in peer interactions. Sixty percent of participants identified large social skills deficits in the areas of problem solving and perspective taking. Lastly, 25% of participants stated that taking turns was difficult for children with high-functioning autism.

All eight participants agreed that social skills deficits impact a child with high-functioning autism's behavior and overall development. Sixty percent of the responses stated that often times a child with social skills deficits would exhibit abnormal or aggressive behavior because they are socially inept. One hundred percent of the interviewees also indicated that a child's academic achievement is affected by their social skills deficits. Other areas that were impacted included: future functioning, relationships, and level of cognition.

When asked if interventions could help improve social skills deficits for children with high-functioning autism, 100% of the participants stated, "yes." In addition to this, the interviewees also indicated that there could be more interventions out there for children with high-functioning autism, especially in public schools.

Participants were asked if interventions should occur at school and at home. One hundred percent of the interviewees were proponents for interventions in multiple

settings in order to help these children generalize the skills in various contexts. One hundred percent of the participants also indicated that interventions should begin at a very young age in order to help these children master these skills at an early age.

Chapter 5 Discussion /Analysis

Summary of Major Findings

To summarize, all of the educational professionals interviewed emphasized how important effective social skills interventions are for children with high-functioning autism. Participants indicated various social skills deficits that can affect children on the spectrum levels of functioning. Deficits include but are not limited to: inability to interact with peers, lack of perspective taking, incapacity to read social cues, and incapability to take turns. In addition to identifying various social skills deficits and describing their effects on children's levels of functioning, 100% of educational professionals indicated a need for more effective social skills interventions targeted for children with high-functioning autism.

Comparison of Findings to the Literature

Effects of Social Deficits

Social Deficits are one of the most common characteristics of children with high-functioning autism. An abundance of research articles describe the most common social deficits found in these children. Goldstein et al. (2014) states, "Problems with the development of social skills and social relationships have long been recognized as a hallmark of children with ASD" (p. 264). DeMatteo et al. (2012) supports Goldstein et al. (2014) and elaborated on specific social skills deficits. He states, "Social skill deficits are

central to the diagnostic criteria of ASD, as individuals with this disorder typically have difficulty initiating interactions, sharing enjoyment, maintaining eye contact, reciprocating conversation, taking another's perspective, and inferring interests of others" (p. 57).

According to various research articles, social skills deficits can have detrimental effects on the overall development of children with high-functioning autism. Multiple sources described these deficits in depth while also indicating how they affect different aspects of the child's life. Academics, social emotional well being, and future functioning were said to be three key areas that are most affected by these deficits as described by Ostmeier and Scarpa (2012). The article states, "Social skills are a core deficit of children with high-functioning autism spectrum disorders (HFASD) that can affect academic performance and other areas of well-being... (p. 932). Tureck and Matson (2012) support Ostmeier and Scarpa's (2012) claims in stating, "Those children with an excess of inappropriate social skills or a lack of appropriate social skills may struggle with making friends and have poorer school performance" (p. 607).

Effectiveness and Need for Social Skills Interventions

The analyzed research also intended to emphasize the importance of effective social skills interventions. Bellinger et al. (2011) conducted a study on the effectiveness of some of these interventions by analyzing improvements in the high-functioning autistic participants' deficits. "Given that social skill difficulties are one of the defining features of autism spectrum disorder (ASD), effective interventions ameliorating social

skills deficits have potential to benefit children with ASD and their families” (p. 141). Results indicated that the majority of the interventions that were analyzed in this study had overall positive effects on the participants’ social deficits.

This review indicates that specific types of social skills interventions are effective at promoting social communication, social engagement, and social competency skills among students with ASD” (Bellinger et al., 2011, p. 155). In addition to identifying how effective social skills interventions can be for children with high-functioning autism, the study sought to describe the need for more targeted interventions for these children. The article states, ...

While social skills deficits have been noted as the hallmark of this disorder, the majority of research in the field of ASD has focused on reducing behavior problems or increasing communication abilities. Consequently, social deficits in this population remain a major treatment challenge. In addition, the manner of providing these services remains unclear. (p. 142)

Similarly to the results of the study conducted by Bellinger et al. (2011), Sticher, O’Connor, Herzog, Lierheimer and McGhee (2012) also indicated that participants in their study exhibited improvements in their social abilities post social skill intervention. “Results indicate significant improvements on direct assessments measuring theory of mind and problem solving, and parent perceptions of overall social abilities and executive functioning for 20 students, aged 6-10, with HFA/AS” (p. 354).

DeRosier et al. (2010) also conducted a study on the effectiveness of social skills

interventions for children with high-functioning autism. In keeping with several past studies, results of the current study suggest that group-based social skills interventions can be effective in teaching social skills to children with high functioning ASD” (p. 1039). The research article also described the need dire for these interventions. “Given the social struggles that children with high functioning ASD experience are often multi-faceted, interventions that can successfully address multiple areas of social difficulty are particularly needed and useful for these children” (p. 1039-1049).

Factors for Successful Implementation

The last category of reviewed literature analyzed factors that need to be present in order for a social skill intervention for children with high-functioning autism to be successful. Leaf et al. (2012) conducted a study on characteristics of effective social skill interventions for children with high-functioning autism. According to Leaf et al. (2012), one identified variable of effective an effective intervention is group-based instruction. “Based on the results found in the social skills group literature and the results of this social skills group, it appears that a group instructional format may be an effective strategy for teaching children with autism” (p. 118).

A reinforcement system was also identified as an important characteristic of an effective social skills intervention for children with high-functioning autism. In the study conducted by Leaf et al. (2012), a reinforcement system was used in a group based social skills intervention. Children on the autism spectrum often need some type of reinforcement system in place to exhibit expected social behavior. “Therefore, tangible

items were used to help promote appropriate social behavior” (p. 116). Other characteristics and variables of a successful social skills intervention for children with high-functioning autism were discussed and analyzed.

According to Bellini et al. (2009), in order for social skills interventions to be effective, they have to be systematic and procedural. Bellini described a procedural intervention that followed a variety of systematic steps in his 2009 article. “The first step of the model consists of conducting a thorough assessment of the individual's current level of social skills functioning” (p. 28). Once an assessment is conducted to determine participants’ skill levels, the interventionist then must determine if each deficit is a skill deficit or a performance deficit. “After the initial assessment is complete, the next step is to discern between skill acquisition deficits and performance deficits” (p. 29). From there, the interventionist begins to choose specific intervention strategies. “Based on this information, the selection and implementation of intervention strategies takes place (p. 30). The last step of the systematic intervention is to implement that intervention.

Limitations/Gaps in the Research

The research study had a handful of limitations. First, the demographics of the participants of the current study would be considered a limitation. Almost all of the participants in the study were female. Over sixty percent of the educational professionals who participated in this study identified themselves as Caucasian. Additionally, all participants worked at the same school in the San Francisco Bay Area and therefore have

been trained on the same concepts. A more diverse and larger group may have provided different opinions and a larger abundance of knowledge to the present study.

Another limitation of this research study was that the educational professionals might have provided answers to the interview questions that they deemed desirable to the author of the study. Prior to each interview, the educational professionals understood that they were participating in a study on the importance of effectively teaching social skills to students with high-functioning autism. Due to the fact that the participants knew that the author was focusing on showing the importance of these interventions, the participants may have chosen to answer the questions with the theme of the study in mind. This could have affected the participants' word usage and could have also affected how they responded to each question.

Lastly, there were gaps in the research due to the fact that the researcher was limited. The researcher was only able to find and interpret various articles that were accessible and that the researcher could understand. The research was limited to the researcher's ability to find and understand the content. Therefore, there could have been gaps in the research.

Implications for Future Research

The results and findings of the study show that children with high-functioning autism exhibit a variety of social skills deficits and that systematic interventions are necessary to address these deficits. Future research should look at specific intervention

techniques that match each deficit and that should be used in these interventions.

Research should also focus on the organizational components of these interventions such as length of time for intervention, participant group size, parent involvement, and type of instruction used to teach the skills. In addition, future research should also focus on how to best help these children to generalize the skills they learn in the interventions.

Overall Significance of the Study

The past decade has seen a significant increase in children diagnosed with an autism spectrum disorder. Therefore, more and more children with high-functioning autism are being found in general education classrooms. Their significant social deficits are having detrimental effects on their academic success, emotional well-being, and future functioning. Many of these children are becoming isolated in the classroom or bullied by their peers. Effective social skills interventions are proven to be successful in improving some of these social deficits such as the inability to have peer interactions or the incapacity to take turns. In order for these interventions to be deemed successful, specific characteristics must be present in these interventions. A systematic approach has shown to be effective in improving some key social deficits for these children. It is apparent that more effective social skills interventions are needed to help the growing number of children diagnosed with an autism spectrum disorder. These interventions can be so successful in allowing these children to grow in all areas of development.

About the Author

Michaela E. Mirsky received her Bachelor of Arts degree in Elementary Education and a minor in Special Education from the University of Portland in May of 2013. After receiving her teaching credentials in both elementary and special education, she then became a special education teacher at a non-public school for moderate/severe students with autism and behavior issues in the greater Bay Area. At the same time, she began earning her Masters of Science degree in Special Education with an added Autism Authorization from Dominican University of California. Upon completion of her Master's degree in May of 2014, she will begin working as a special education teacher at a public school in the Bay Area.

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