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Best Practices in Addressing Autism Spectrum Disorder Reevaluation in Preschool Children

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The Messiah College

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The Department of Behavioral Sciences and Education

Best Practices in Addressing Autism Spectrum Disorder Reevaluation in
Preschool Children

A Qualitative Study

A Thesis in

Special Education

by

Lyndi Ann Janny

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Abstract

This threefold study uses a criterion-based analysis research approach to explore the best practices in addressing the need for reevaluations for preschool children with Autism Spectrum Disorder (ASD). The study focuses on differentiating the characteristics of preschool children with and without ASD, recognizing indicators of ASD that warrant re-evaluation, and exploring protocols for when the need of a reevaluation is suspected. Data was collected through a literature review and analyzed using a criterion-based analysis grid.

Upon completion of the criterion-based analysis an underlying theme, was discovered, namely, that, within the four domains of early childhood, maturation can impact an ASD prognosis, thus, warranting a reevaluation. The criterion-based analysis also revealed two theories: the seesaw theory and the theory of developmental metamorphism. The study ends with a discussion of current research limitations and suggestions for future research to further the understanding of the evaluative process for preschool children with ASD.

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Chapter 1

Introduction

This chapter provides an overview of a qualitative research study that explores the importance of recognizing the need for reevaluations for early childhood learners diagnosed with Autism Spectrum Disorder and identifying the protocol to follow when a reevaluation is warranted. This threefold study focuses on best practices in recognizing indicators of Autism Spectrum Disorder that warrant reevaluation, differentiating characteristics of young children with and without Autism Spectrum Disorder, and exploring evidenced-based protocol implemented in situations where the need for reevaluation had been suspected by a parent or a teacher. Because this research study is qualitative, I thought it appropriate to begin with a narrative of how I became interested in the study. This chapter then goes on to provide a background to the problem and brief overview of the literature on the reevaluations of early childhood learners with Autism Spectrum Disorder, the purpose of the study and research questions. It also provides an overview of the methodology and a consideration of the limitations and assumptions of the study. The chapter ends with a consideration of how this thesis is organized, as well as definition of terms.

Forging a Research Topic: A Narrative

It was the first day of fifth grade as I sat listening to my new teacher introduce himself and start explaining how the school year was going to go. I glanced to the front left corner of the room and noticed three boys sitting side by side with three adult females standing behind them. At first glance, I did not pay much attention to them, but as I continued to listen to my teacher, I could not help but redirect my attention towards these boys and the ladies standing behind them. It was then that I realized that this school year was going to be different from any of my previous

school years. I had the opportunity to experience an inclusive classroom environment for the first time. I was excited and overwhelmed with questions about the three boys joining our class that year, but most of all I wanted to get to know them and learn about who they were.

This was the first of many experiences throughout my life that I have had the opportunity to interact with individuals with special needs, but it was during that first experience that I felt God had put me in that specific classroom to begin my journey towards the field of special education. I forged friendships with the boys in our class that year and enjoyed their personalities and senses of humor, but most of all I enjoyed their love for life. I was an average fifth grade girl, who grew up in a loving home with my parents and two younger sisters, and life seemed to be good enough. Throughout my fifth grade year, I learned many life lessons from those three boys and their families, especially about being thankful for the life I had. I remember at the start of fifth grade, praying to God each night before going to bed and praying for him to protect my friends and family and to keep them healthy. As that school year went on, I began praying to God for different reasons, such as praying for answers about why he allowed children to be born with disorders that limited their experiences in life. It was not until the end of the school year that I once again changed what I was praying to God for and it was because of what I had learned throughout the year while interacting with those three boys. I began praying to God for guidance and strength, as I wanted to make a positive difference in the lives of individuals with special needs. I thanked God for blessing me with the opportunity to get to know the three boys with special needs in my class that year and I thanked him for shining a light on something I quickly learned was going to be a passion of mine to help others.

While my early experiences in life are the reason I went into the special education field of study, it is more recent experiences that have encouraged me to pursue my current research

study. Upon graduating from college with my Bachelors of Science degree, I took a part-time job as a long-term substitute teacher in a preschool center. I first viewed this job as a way to make some money while focusing on finding my “real job” in a local school district.

Unbeknown to me, God had a different plan in mind and I am blessed and thankful for believing in him and his plans for me.

Shortly after I began my long-term substitute job, a part-time teacher position opened up and I was asked to take the position, which I graciously accepted. Only a few months after accepting my new teaching position I was approach by my bosses about the opportunity to become a full-time employee to teach in the preschool classroom in the mornings and provide special education therapy to young children and their families in the afternoon, and once again, I graciously accepted. At times, I felt like God was testing me to see if I had enough faith in him to be patient and willing to accept the plans he had created for me or if I would disregard the plans he made in search of my own path. I chose to follow God’s plans and waited patiently and as each new opportunity presented itself to me I knew I was right where God intended me to be. My most recent opportunity came in the form of a co-teaching experience with the Capital Area Intermediate Unit. I was blessed with the opportunity to work alongside a preschool early intervention teacher for the Capital Area Intermediate Unit and together we established an inclusive classroom environment for young preschool children. It was this learning experience that set me up for a transition into a new position that was offered to me by the supervisors of the Capital Area Intermediate Unit. Once again, I knew that God had planned these opportunities for me to continue to grow as an educator and become the special education teacher I had always prayed to become.

Upon the acceptance of my new preschool early intervention teacher position, I immediately found myself looking to be the best teacher for my students and provide them with all the educational experiences they deserved. It was during the second year of my new position that I began having questions about the labels some of my students had been given as a result of their recent diagnoses. There is one case in particular that stood out to me and has pushed me to pursue further research on the topic of reevaluating students with Autism Spectrum Disorder (ASD). The case I am referring to is about twins, one boy and one girl, both diagnosed with ASD. From the first day these students entered my classroom, I felt they were very different from one another. The typical characteristics of ASD were very much apparent in the young girl's behaviors and interactions, but I had some doubt regarding the young boy's behaviors as far as the spectrum is concerned regarding autism. Upon some informal screenings and data collection throughout the school year, I found my data to support my doubts and suspicions. Now that I had this information supporting my initial suspicions, what was my next step supposed to be? How do I go about helping this young boy and providing more accurate and appropriate services and instruction to him? Do I tell the family about my suspicions or do I seek help from my supervisors? I had many questions running through my head and was afraid to make the wrong choice, but at the same time I knew that something had to be done for my student to ensure he was receiving a proper education that met all of his needs. I began praying to God for some direction and support about how to help my student and the very next day I received a visit from my supervisor who was "just checking in" to make sure everything was going well and asked if I needed any help. I knew then that God was answering my prayers and providing me with the support I needed to help my student. From that moment on we began the reevaluation process for my student and engaged the family in communication about my

concerns and the need to pursue a reevaluation to determine the appropriate educational placements and opportunities for this young boy.

I am thankful that God answered my prayers and helped to guide me to this place in my life and career. I continue to follow his guidance and seek further support for my current and future students by researching the need for reevaluations of young children diagnosed with ASD. I have faith that God has chosen me to complete this research so that I can provide valuable support to other educators struggling with the same questions I once did regarding a student with an ASD diagnosis. It was my initial experience in fifth grade that put me on the path to become a special education teacher, but it is my recent experience with the young boy diagnosed with ASD that has encouraged me to follow God's plan and pursue this research study.

Contextualizing the Problem

The number of children receiving an Autism Spectrum Disorder (ASD) diagnosis continues to increase with initial diagnoses taking place around the age of 3 years old. "Autism Spectrum Disorders (ASD) is early onset conditions considered to be lifelong and characterized by delay and deviance in development of social and communication skills with restricted, repetitive, or stereotyped behavior (Hedvall et al, 2014)." There is a concerning question, however, that asks: Should it be a standard rule that preschool children, identified with ASD, be re-evaluated at some point, since the signs and symptoms of ASD are markedly similar to the social and communication patterns of a preschool child without ASD? Thus, if so, what protocol is appropriate in requesting a reevaluation. Baudino (2010) indicates that intervention, incompatible to a child's learning needs, jeopardizes health and development. Thus, children, who are not on the autism spectrum, but receive intervention based on an earlier evaluation,

could possibly experience outcomes and stigmatism corresponding to those who are appropriately diagnosed with ASD. Voelker (2011) points out that unnecessary ASD intervention “can stigmatize children, expose them to unnecessary treatment, and trigger excessive costs” (p. 1). Some repercussions have social implications. For instance, according to the American Psychiatric Association, “Failure to develop age-appropriate friendship is considered as a diagnostic characteristic for children with ASD” (Bauminger-Zviely & Agam-Ben-Artzi, 2014). Jones and Schwartz state, “children with ASD might have difficulty initiating, joining, and responding to social interactions and they may lack the ability to keep a conversation on topic” (Whitby, Lyons, & Baxter, 2015). However, Bauminger-Zviely and Agam-Ben-Artzi (2014), also stated upon the completion of their research study, “Friendships among children with ASD are feasible, durable, and offer some of the same benefits afforded to typical children.” When children are given a diagnosis of ASD, and symptoms have changed due to maturation, they may be provided with treatment that is potentially harmful to their development and the current diagnosis may actually limit their ability to grow and be healthy (Baudino, 2010). As Voelker (2011), stated there is a stigma associated with individuals diagnosed with ASD, as well as their families. Once a child receives a diagnosis of ASD, they wear this label for the rest of their life. Thus, this study addresses the problem of justifying the need to have standard, routine reevaluations for preschool children diagnosed with ASD

Purpose of this Study

The purpose of this criterion-based analytical research study is to add to the current information regarding the reevaluation of ASD in preschool children. The study will explore particular symptoms of ASD that are characteristic of preschool children with and without ASD in order to identify the indicators signaling a need for reevaluation. The exploration of research-

based data in identifying and clarifying the reasons for reevaluation of ASD will enable a child who meets reevaluation criteria to have a better opportunity to succeed in school. Thus, the purpose of this research is to explore the need for ASD reevaluations in preschool children and to equip stakeholders in making those requests appropriately.

Research Questions

Main Research Questions

1. What are the academic and social characteristics of children with and without an Autism Spectrum Disorder diagnosis?
2. What are the best practices in recognizing indicators of Autism Spectrum Disorder that warrant a need for reevaluation?
3. What is the protocol if the need for a reevaluation is suspected?

Methodology

I used a meta-analysis approach to complete my research. This research method allowed me to complete an analysis of qualitative study data and use the information from these former studies to develop a conclusion regarding best practices in recognizing the need for ASD reevaluations for students and a protocol for when a the need for reevaluation is suspected.

- First, I began my research by seeking empirical and conceptual research studies relevant to my topic of best practices in recognizing the need for ASD reevaluations and protocols for when a need for reevaluation of ASD is suspected.

- Next, I completed my literature review and analyzed the data from the research by using the criterion based analysis grid focusing on three criteria as they relate to best practices in the following areas:
 - Recognizing identifiers pointing to the need for reevaluation of students with ASD
 - Comparing academic and social characteristics of students with and without ASD
 - Addressing protocol in making a request for reevaluation of ASD in preschool children
- Upon completion of my analysis of the literature, I discussed the findings of my research and addressed implications for theory, practice, and future research.

Limitations to the Study

In any research study there are limitations that may impact the outcome of the study. The limitations for this study are as follows:

1. The researcher's own bias toward the need of increased reevaluations of young children with Autism Spectrum Disorder may impact the results of the study. The researcher is a special education teacher that is familiar with the significance of evaluations and reevaluations as it pertains to young children. The personal experiences of the researcher influences the researcher's perspective which may impact the researcher's ability to remain impartial when conducting research.
2. Due to the narrow and very specific topic chosen for this research study there may be a limited amount of previously conducted research as it pertains to this specific topic. As the researcher continues to conduct the research study the lack of resources available on

this topic may impact the ability for this research to be generalized to larger population groups.

3. The topic of this research study is grounded in the field of special education but closely aligns itself with the medical field. Due to how closely this topic relates to the medical field, it will be difficult to obtain research that does not question the integrity of medical professionals. This will impact the researcher's ability to conduct the research study to the fullest extent possible.

Definition of Terms

The following definitions are contextually descriptive of this research. These terms may be defined differently in other research. These definitions are scripted for the reader of this paper as they are used in this study, lending understanding to the context of the study and the research informing this thesis.

1. Autism Spectrum Disorder (ASD): Early onset conditions considered to be lifelong and characterized by delay and deviance in development of social and communication skills with restricted, repetitive, or stereotyped behavior (Hedvall et al, 2014).
2. Early Childhood Learner: A child who is between the ages of 2 and 6 years old that is attending an educational classroom setting.
3. Evaluation: The process of evaluating a child using standardized procedures and testing materials by a qualified educational team and medical practitioner to determine a child's eligibility for an Autism Spectrum Disorder diagnosis.
4. Reevaluation: The process of evaluating a child with an Autism Spectrum Disorder diagnosis again using the same standardized procedures and testing materials by a

qualified educational team and medical practitioner to re-determine a child's eligibility for an Autism Spectrum Disorder diagnosis.

5. Optimal Outcome: The term is associated with an individual with a history of Autism Spectrum Disorder diagnosis but no longer qualifies for Autism Spectrum Disorder and is functioning within typical developmental ranges.
6. Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS): This is one of several former subtypes of autism prior to the introduction of the DSM-5. Individuals with PDD-NOS did not meet the full criteria of autism but had characteristics and symptoms that were considered to be mild. Since the implementation of the DSM-5 in 2013, PDD-NOS is no longer a subtype of autism.

Chapter 2

Literature Review

This chapter provides the reader with a review of past research that has been completed regarding best practices for recognizing indicators of Autism Spectrum Disorder that warrant reevaluation, differentiating characteristics of young children with and without Autism Spectrum Disorder, and exploring evidenced-based protocol implemented in situations where the need for reevaluation had been suspected by a parent or a teacher. This chapter begins by reviewing some of the research that includes the three-fold purpose of this thesis including: differentiating characteristics of children with and without ASD, best practices in warranting reevaluation for children with ASD, and the exploration of protocol to implement when a reevaluation is needed. After reviewing, some of the past research that includes key terms found within this thesis, the chapter will take a closer look at studies that support, as well as discredit, the beliefs that reevaluations play an integral role in academic success for children diagnosed with ASD. While reviewing previous literature the author will make connections between past research and highlight where there is the need for further research. After completing a review of the research studies, attention to some of the limitations to this study are acknowledged.

Differentiating Characteristics of Children With and Without ASD

One of the main research questions for this thesis revolves around the comparison of academic and social characteristics of children with and without an ASD diagnosis. A literature review conducted by Tony Charman and Gillian Baird (2002) revealed that common social characteristics of children with ASD are apparent from an early age. By the first birthday, a typically developing child is consistently responding to their name and seeking eye contact with others, whereas children with ASD are inconsistently completing these basic skills. A two-year

old child with ASD seeks isolation, ignores interactions with others, and displays a lack of emotional expressions. These characteristics are essential for clinical evaluators to understand in order for them to evaluate young children for a possible ASD diagnosis. Charman and Baird, (2002) used this information to determine what are the best approaches to diagnosing a preschool child with ASD and determining the stability of an initial diagnosis of ASD for a child 2-years old. As a result, of their research Charman and Baird, (2002) determined that it is possible to accurately diagnose a 2-year old child with ASD, but the specific diagnosis may need to be refined as the child grows and matures. Their research revealed that a two-year old with ASD may display characteristics that are not as prevalent by the time the child turns four or five-years old. By closely monitoring the child's progress and working with the family, the specific prognosis of the child may need to change to meet the needs of the child and the family.

Communication Development

During the preschool years a child's communication development is constantly changing and progressing as they acquire new skills. The American Speech-Language-Hearing Association (ASHA) produced a list of skills that typically developing children should be doing between the ages of 3-5 years old that includes both expressive and receptive language skills (2016).

According to ASHA (2016) some of the receptive skills that children between the ages of 3-5 years old should be exhibiting include: hearing the television and radio at similar volumes as others, understands words for some colors and shapes, understands some words for family members, follows 2-3 step directions, understands words for time (yesterday, today, tomorrow), and understands words for order (first, next, last). Some of the expressive skills that typical preschool children between the ages of 3-5 years old are exhibiting are: uses sentences that have 4 or more words, speaks clear enough for most people to understand, answers simple questions,

uses pronouns, talks about activities that occurred outside of the home environment, names letters and numbers, tells short stories, carries on conversations with others, says all speech sounds in words, and talks without repeating sounds or words (ASHA, 2016).

One of the main developmental areas that are affected by ASD is the area of communication development. Charman and Baird (2002) highlighted that decreased communication skills are evident in children at a young age and serve as characteristics of children with ASD. In a research study, Itzhak and Zachor (2009) agree that communication skills are lacking for individuals with ASD, but they took a closer look at communication predictors of improved outcomes for children with ASD. The research study conducted by Itzhak and Zachor (2009), included 74 children between the ages of 18-35 months during the initial pre-intervention testing time. The results of their research study revealed that children who scored higher in verbal scores during the pre-intervention testing period had significantly improved overall development during the second, post-intervention, testing time which took place one year later. While the majority of children tested during post-intervention continued to qualify for ASD, the improved group's level of ASD severity greatly improved. The findings of this study demonstrate that improved verbal communication scores during initial ASD evaluations could predict improved overall development for children diagnosed with ASD who receive intervention.

Social Development

Typical social development for preschool students includes a wide range of skills from engaging in social interactions with peers and adults to taking turns with others. According to the CDC (2016, May 10) some of the milestones of typical social development for preschoolers, ages 3-5 years old, include the follow skills:

- showing empathy and affection for others without prompting
- expressing a wide range of emotions
- separating easily from parents
- copies behaviors of adults and peers
- engages in pretend play scenarios
- participates in cooperative play with others
- prefers social interactions with peers versus solitary play
- seeks to please their friends
- wants to be like their friends
- follows the rules and is more likely to agree with the rules

While typically developing children are actively developing and displaying these skills, children with ASD have difficulties with these social skills due to their diagnosis.

Bauminger-Zviely and Agam-Ben-Artzi (2014), studied the concept of friends and friendships among preschool children with High Functioning Autism Spectrum Disorder (HFASD) and their typically developing peers. It is commonly known that children with ASD have difficulties in social development which can result in the lack friendships with age equivalent peers. However, Bauminger-Zviely and Agam-Ben-Artzi (2014), have found that children with ASD that have higher cognitive functioning tend to have increased numbers of friends versus their peers with ASD and lower cognitive functioning. The study conducted by Bauminger-Zviely and Agam-Ben-Artzi (2014), revealed that not only could preschool children with HFASD have friends, but also their friendships were close and demonstrated similar qualities as friendships among same-aged typically developing peers. The typically developing children observed in this research study engaged in more sharing, social conversations, positive affect, and collaborative parallel play than their peers with HFASD did. This demonstrates how ASD affect the children with HFASD's ability to engage in typical social interactions with peers. While there were obvious differences in the quality of social interactions among friends with the two peer groups, there were also many similarities when it came to the types of interactions shared with friends versus non-friends (acquaintances). Both typically developing and children

with HFASD engaged in closer and more fun interactions with their friends versus an acquaintance. These results from the Bauminger-Zviely and Agam-Ben-Artzi (2014), study show that children with HFASD have the ability to engage and participate in meaningful social interactions with friends and build positive friendships with their same-aged peers.

Adaptive Behavioral Development

Adaptive behavioral development for typically developing preschool students involves children becoming more independent and seeking the opportunities to complete new tasks on their own. According to the Learning Disabilities Association of America (1999) children between the ages of 3-5 years old are displaying adaptive skills that include: independent use of the bathroom, washing and drying hands independently, successful manipulation of large buttons, increased independence in serving and feeding oneself, ability to successfully blow ones nose when prompted, and working toward complete independence in dressing oneself. The acquisition of these skills is necessary for the child to become independent in a variety of environmental settings.

The definition of Autism Spectrum Disorders (ASD) is worded differently depending upon the source used, but all definitions include the disorders to have impaired social skills, communication, and include restrictive or repetitive behaviors. While these three areas are crucial to the ASD evaluation process of a child, Tomanik, Pearson, and Loveland, (2007) suggest that evaluators take a closer look at the adaptive behavior skills of the child being evaluated to gain a more comprehensive picture of the child and to improve stability of a diagnosis. The research conducted by Tomanik, Pearson, and Loveland, (2007) compared the reliability of two commonly used diagnostic tools when evaluating individuals for a possible ASD diagnosis. The diagnostic tools the researchers compared were the Autism Diagnostic

Interview-Revised (ADI-R) and the Autism Diagnostic Observation Schedule (ADOS). While the participants in this research study ranged in age from 7-18 years old the results of the study revealed compelling information for evaluators to consider when making an ASD diagnosis. Both the ADI-R and the ADOS are reliable tools when used in the evaluation process of an individual to rule in or rule out an ASD diagnosis, but the inclusion of adaptive behavior skills during this evaluation process could improve the reliability of the ASD diagnosis according to Tomanik, Pearson, and Loveland (2007). The researchers used a standardized test known as VABS (The Vineland Adaptive Behavior Scales, Interview Edition: Survey Form) which is a parental interview that measures the child's adaptive behavior. Tomanik, Pearson, and Loveland (2007), found that when the VABS was used in conjunction with the ADI-R or the ADOS, the reliability of their diagnoses improved and revealed consistent true positives (ASD diagnosis) or true negatives (non-ASD diagnosis). While Charman and Baird (2002), revealed that early diagnosis of ASD is reliable at the age of two, they also supported that a diagnosis may change as a child matures, but Tomanik, Pearson, and Loveland (2007), argue that if the adaptive behaviors of a child are measured during initial evaluation the resulting diagnosis is more accurate and more reliable, meaning there is a smaller possibility that the diagnosis of the child will change. The VABS may not be the appropriate diagnostic tool to use with young children ages 2-5 years old but the inclusion of adaptive behavior skills is something evaluators may need to take a closer look at during initial evaluations.

The Value of Reevaluation

Although the value of reevaluation is well supported and recognized by most in the special education field, some disagree. Al-Qabandi, Gorter, and Rosenbaum (2011) argue against the idea of implementing routine screenings for young children in the community.

According to the research conducted by Al-Qabandi, Gorter, and Rosenbaum (2011), there is insufficient evidence to support that any of the current screening tools are good enough to conduct such a screening program that would not do more harm than good. Al-Qabandi, Gorter, and Rosenbaum (2011) conducted a review of current literature to assess the effectiveness of community screening programs for autism. As a result, of their research they concluded that further research needed to be conducted in this field, including the development of an excellent screening instrument as demonstrated by clinical trials to prove the effectiveness of the instrument. While Al-Qabandi, Gorter, and Rosenbaum (2011), agree that preschoolers that present with impairments in the social, communication, and cognitive developmental domains should be closely monitored and assessed as needed, but the implementation of screening all preschool students is currently premature.

During their research study, Chawarska, Klin, Paul, Macari, and Volkmar (2009), compared the diagnostic stability of toddlers with ASD over the course of two years. Chawarska, Klin, Paul, Macari, and Volkmar (2009), increased the generality of their study by including toddlers with initial ASD diagnosis, toddlers with initial Pervasive Developmental Disorder- Not Otherwise Specified (PDD-NOS) diagnosis, and toddlers with non-ASD diagnosis. The toddlers in the non-ASD category qualified for a type of developmental delay including, but not limited to language delay and global developmental delay. As a result of the their study Chawarska, Klin, Paul, Macari, and Volkmar (2009) found that the majority of initial diagnoses were confirmed during the follow-up evaluation and the majority of toddlers from the ASD group showed improvement in the severity of their ASD symptoms.

The results of the study showed that the major differences in developmental skills when comparing the groups were in the area of social functioning. The toddlers in the non-ASD group

had significantly improved social functioning skills than their peers in the ASD or PDD-NOS groups. There was also a significant difference between the non-ASD group and the ASD or PDD-NOS groups when it came to expressive and receptive language patterns. The non-ASD group had better understanding and responsiveness to language than the individuals in the other groups (Chawarska, Klin, Paul, Macari, & Volkmar, 2009). Chawarska, Klin, Paul, Macari, and Volkmar (2009), noted that the proper initial identification of children with ASD versus children with developmental delays and non-ASD difficulties is crucial for stability of the child's diagnosis. The results of this study also expressed the importance of communication with parents during the initial diagnosis stage to reassure them that the social and cognitive delays during initial diagnosis are not definitive predictors of later function. As proven through this research study, the natural progression of skills and development can lead to milder social symptoms and higher cognitive skills throughout the second year of life for children with ASD (Chawarska, Klin, Paul, Macari, & Volkmar, 2009).

During the preschool years, typically developing children undergo many developmental changes including the positive progression of global developmental skills. Preschool children with ASD often experience similar developmental improvements during this same period. Since preschool children with ASD are continuing to grow, mature, and develop new skills, the need for reevaluation prior to their start in school is essential for the most accurate educational plans to be developed to meet the needs of each individual child. Hedvall et al., (2014) conducted a research study to monitor the stability and possible changes of preschool children with an ASD diagnosis. The study confirmed that all participants had a clinical diagnosis of ASD or a subtype during initial testing. The researchers followed the participants involved in this study for two years, at which point they reevaluated the children for ASD, tested their cognitive abilities,

adaptive behavior skills, and expressive communication skills. Overall, the majority of children diagnosed with an ASD subtype maintained their respective subtype during the two-year follow evaluation, but there was one subtype, PDD-NOS/atypical autism, that displayed significant changes from the initial diagnosis to the two-year follow-up. Since the time when this research was conducted there have been new developments in the diagnostic criteria for ASD with the new edition of the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5), which has eliminated the subtypes of ASD. Nevertheless, this study was conducted prior to the DSM-5 and revealed that nine children that initially met the criteria for the PDD-NOS/atypical autism subgroup no longer met the criteria for ASD during the two –year follow-up evaluation. Hedvall et al., (2014) stated,

Changes in developmental profiles during preschool years are common in children with ASD. This implies that reassessments, covering different developmental areas, are needed. Such follow-up assessments prior to the start of school will yield a more valid estimation of the child's general cognitive level and a more accurate ASD diagnosis and thus form a better basis for realistic educational planning and intervention (p. 1).

Hedvall et al., (2014) are proposing a reevaluation of the children with ASD prior to their start to school to ensure that each child will receive the most appropriate and individualized education that meets their educational needs.

Another study that supports the recommendation for reevaluation of children with ASD as Hedvall et al., (2014) does is the research study conducted by Moulton, Barton, Robins, Abrams, and Fein (2016). In their study the researchers look to find early characteristics that may indicate optimal outcomes for young children diagnosed with ASD. The term optimal outcome refers to children who were initially and correctly diagnosed with ASD but over a period of time

no longer qualify for criteria of ASD and are demonstrating skills within the average range. The research of Moulton, Barton, Robins, Abrams, and Fein (2016), followed two year olds diagnosed with ASD for two years and reevaluate them at the age of four years old. During the initial and reevaluation periods the children were evaluated using several standardized testing tools; the Autism Diagnostic Observation Schedule (ADOS), the Vineland Adaptive Behavior Scales, Interview Edition (VABS), the Mullen Scales of Early Learning (Mullen), and the Childhood Autism Rating Scale (CARS). One of the early predictors of optimal outcome during the initial evaluations was the severity of ASD symptoms, specifically in relation to social communication, stereotypies, and sensory abnormalities. The group that presented with optimal outcomes during the reevaluation process presented with milder symptoms in these areas during the initial evaluation process. The children that presented with optimal outcomes also displayed stronger overall adaptive abilities during the initial evaluation process. The Moulton, Barton, Robins, Abrams, and Fein (2016), findings are in agreement with the Hedvall et al., (2014) findings that children initially diagnosed with PDD-NOS were most likely to have improved outcomes and changed diagnoses over time. Moulton, Barton, Robins, Abrams, and Fein (2016), took it one-step further and stated that children initially diagnosed with PDD-NOS were most likely to have optimal outcomes and move off the autism spectrum. This study further supports the need for reevaluations of children with ASD during the early years of preschool aged children and highlighted possible early predictors of optimal outcomes for children initially diagnosed with ASD.

Turner and Stone (2007) conducted a study very similar to the study of Moulton, Barton, Robins, Abrams, and Fein (2016), but they completed their study almost ten years prior to Moulton, Barton, Robins, Abrams, and Fein, and they found results that were in agreement with

the more recent study. Turner and Stone (2007) followed forty-eight children diagnosed with ASD at the age of 2 until they were 4-years old at which point they reevaluated the children using the ADOS-G, ADI-R, and clinical assessment. As a result, of their study Turner and Stone (2007) suggested that children who no longer met the criteria for ASD during their follow-up evaluation were more likely to have three similar characteristics. First, there appeared to be an increase in the number of children who were initially diagnosed with ASD at or prior to the age of 30-months, second these children displayed milder symptoms of ASD specifically in the area of the social domain, and third had higher cognitive scores during their initial evaluation. According to Turner and Stone (2007) they attribute the decrease in diagnostic stability to the increased number of children diagnosed with ASD at or prior to being 30-months old. As a result, of these findings Turner and Stone (2007) encourage the reevaluation of young children diagnosed with ASD to ensure that educational programming remains consistent with a child's diagnosis and skill level.

In a study conducted in 2011 by Daniels et al., similar findings emerged as those found in the study conducted by Turner and Stone (2007), in relation to the diagnostic instability of initial diagnoses of PDD-NOS. Daniels et al., (2011) gained their data from the Interactive Autism Network (IAN) Research database, which included 7,106 children diagnosed with ASD ranging in age from 6-months to 18-years old. The researchers also found that the majority of children, whose diagnoses changed from their initial diagnosis to their reevaluation, were initially diagnosed prior to the age of 4-years old. Daniels et al. (2011), also suggested the possibility that a diagnosis of PDD-NOS may have been used as a "placeholder" for children who had mild or atypical ASD. This suggestion appears similar to the recommendations made by Charman

and Baird, (2002) that a child's diagnosis may change overtime and warrants close monitoring and possible reevaluation for more accurate diagnoses.

The risk of younger siblings of children diagnosed with ASD to be diagnosed with ASD has been a concern for many individuals in the medical and education fields. A research study conducted by Ozonoff et al., (2015) looked at the stability of routine ASD screenings at the ages of 18-months and 24-months. The research revealed to have a high diagnostic stability rate when a diagnosis of ASD was assigned at the age of 18-months and confirmed at the age of 24-months. This study is valuable to the early detection and correct identification of young children with ASD as it produced a high diagnostic stability rate for children diagnosed with ASD at the ages of 18 and 24 months. Ozonoff et al., (2015) noted that one of the limitations of this study includes a bias toward the increased prevalence of sibling reoccurrence rates, given the restrictive inclusion criteria of the study. The earlier a diagnosis of ASD is confirmed the sooner the child can begin receiving intervention and services to address their needs.

Optimal Outcomes of Children with a History of ASD

A study conducted by Fein et al., (2013) compared the overall functioning abilities of children who previously met the criteria for ASD, have since achieved optimal outcomes, and no longer meet the criteria for ASD, with children of similar age, sex, and nonverbal IQ with high functioning autism (HFA) or typically developing. The researchers focused on the areas of socialization, language, face recognition, communication, and autism symptoms. As a result, of their study, Fein et al., (2013) found that those who achieved optimal outcomes did not differ significantly in overall functioning when compared to typically developing peers. Both, those who achieved optimal outcomes and the typically developing peers demonstrated improved functioning when compared to the skills of individuals with HFA. These results suggest that it is

possible for children to receive an accurate initial diagnosis of ASD and no longer meet the criteria for ASD later in life.

As a follow-up to the study conducted by Fein et al., (2013), regarding the possibility for children previously diagnosed with ASD to achieve optimal outcomes, Orinstein et al., (2015) used the same participants from Fein et al.'s study to determine the social functioning and communication skills of children who achieved optimal outcomes. Orinstein et al., (2015) also compared the social functioning and communication skills of the optimal outcome group with children with high functioning ASD (HFASD) and children who are typically developing. The results of this study revealed that individuals who achieved optimal outcome are functioning within average range in the areas of social and communication skills, but there were some marginal differences when compared to typically developing individuals. Some of the areas that Orinstein et al., (2015) reported the optimal outcome group scored poorer than the typically developing individuals included description of friendships, giggles too much, lapses in attention, easily distracted by external stimuli, frequently off task, and laughs inappropriately. These findings suggest that the optimal outcome group appears to be more socially immature than those in the typically developing group, but still within average social functioning range.

High ability youth is not often discussed in research studies especially when comparing the abilities of high ability youth with ASD and without ASD. Research by Doobay, Foley-Nicpon, Ali, and Assouline (2014) sought to compare the cognitive, adaptive, and psychosocial functioning of high ability youth with and without ASD diagnoses. The participants in this study ranged in age from 5-17 years old which limits the amount of information that can be generalized for younger children. The results of the study revealed that an area of weakness for high ability youth with ASD was processing speed as their overall scores fell within average range. Scores

of high ability youth without ASD fell within high average range. In the area of adaptive functioning the group of high ability youth with ASD demonstrated significant areas of deficit when compared to the high ability youth without ASD. The area of socialization presented the largest difference among the two groups with the high ability youth with ASD scoring in the moderately low range. Both the areas of communication and activities for daily living for high ability youth with ASD scored within the adequate range. The high ability youth with ASD were placed in the clinically significant range or the at-risk range for all of the area of psychosocial functioning as compared to their non-ASD high ability peers who were placed within the average range on all areas. While the results of this study may not have a direct impact on the diagnostic stability of ASD it demonstrates how the characteristics of ASD affect the daily lives of children regardless of cognitive functioning abilities.

A study conducted by Sutera, Pandey, and Esser (2007), focused on young children given an ASD diagnosis who achieved optimal outcomes by the age of four. The study by Sutera, Pandey, and Esser (2007) sought to examine potential predictors of optimal outcomes for children with ASD. The researchers examined communication skills, daily living skills, social skills, motor skills, cognitive ability, symptom severity of children at age two to determine if they were predictors of losing an ASD diagnosis at age four. Researchers used a screening tool called the Modified Checklist for Autism in Toddlers (M-CHAT) and those children who scored positive on the M-CHAT were further evaluated for ASD. The initial evaluation of the toddlers took place between 16 and 30 months at which point ASD was either confirmed or ruled out. At the follow up evaluation 13 of the 73 children initially diagnosed with ASD no longer met the criteria for an ASD diagnosis. The results of this study support the findings of several previous studies that have been conducted and revealed a significant difference in the diagnostic outcomes

of the different ASD subtypes. There is a statistically significant number of individuals initially diagnosed with PDD-NOS who no longer met ASD criteria at the time of the follow up evaluations. The results of this study did not reveal any significant predictors of optimal outcomes for children initially diagnosed with ASD. Further research of this topic, including larger samples of children is necessary to obtain more significant predictors of optimal outcome of ASD.

Diagnostic Stability of Diagnostic Tools

A study conducted by Kleinman et al., (2008), researched the diagnostic stability of the Diagnostic Statistical Manual of Mental Disorders 4th Edition (DSM-IV) in relation to early identification and diagnosis of ASD and compared the stability to three other diagnostic tools. The results of the research study revealed a diagnostic stability rate similar to those of past research studies and indicates that the DSM-IV has stable diagnostic rates over time. While Kleinman et al., (2008) revealed that the diagnostic rates for the DSM-IV are stable, there were still a portion of children initially diagnosed at age 2 with ASD whose diagnosis changed upon their reevaluation at age 4. The majority of these diagnostic changes were children initially diagnosed with PDD-NOS. Although, 80% of the initial diagnoses remained the same, there were 15 children who no longer met the criteria for ASD at the age of 4. These findings support the need for reevaluations to identify these children whose ASD diagnoses have changed in severity or no longer meet the criteria for ASD.

A study conducted by Moss, Magiati, Charman, and Howlin (2008), focused on the diagnostic stability of the ADI-R on preschool children compared to elementary school children. The study compared the results of initial ASD diagnoses of 35 children that took place around the age of 3 years old and their follow-up evaluation that took place 6-8 years later. The research

study revealed that the majority of children (28/35) continued to meet the criteria for ASD at the time of their follow-up evaluation, but 7 children no longer met the ADI-R criteria for ASD. Moss, Magiati, Charman, and Howlin (2008), also shared that at the time of the initial ASD diagnosis 30% of the participants in the study had an $IQ \leq 50$, which may have impacted the outcome of this study. Another limitation that may have impacted the results of this study, is the young age at which researchers required the initial diagnosis of ASD to have taken place, due to the limited number of ASD diagnoses that take place at this age in the UK. The researchers believe that their participants may represent more of the population with more severe difficulties versus the general ASD population. This study demonstrated that all individuals showed improved skills from the time of initial diagnosis to the time of their follow-up evaluation. Those who no longer met the criteria for an ASD diagnosis according to the ADI-R benefitted from the reevaluation of their diagnosis.

A study conducted by Beighley and Matson (2014), compared individuals who met diagnostic criteria for the DSM-IV but not the DSM-5. There were 126 participants who met the diagnostic criteria for the DSM-IV, but only 73 of those participants met the criteria for an ASD diagnosis according to the DSM-5. Beighley and Matson (2014) discuss the concern of their results and the impact the changes to the DSM-5 could have on individuals who previously would have met the criteria for ASD according to the DSM-IV. Individuals in both groups displayed inappropriate social behaviors in regards to the increased hostility and inappropriate assertiveness, this means that individuals who would have previously received support for these inappropriate social behaviors according to the DSM-IV criteria may no longer be receiving the supports they need due to the changes to the DSM-5. Individuals that meet the diagnostic criteria for ASD according to the DSM-5 have more severe characteristics of ASD versus those

who no longer meet the new criteria. Beighley and Matson (2014) question whether or not individuals who met the DSM-IV criteria and no longer meet the DSM-5 criteria, will qualify for a diagnosis of another disorder under the DSM-5 or if these individuals will no longer meet any disorder criteria. When compared to other research studies that evaluated the diagnostic stability of diagnostic tools for ASD prior to the DSM-5, those who fell into the subtypes of ASD would most likely no longer meet the criteria for ASD.

As early clinical diagnostic stability of ASD continues to be debated a study conducted by Guthrie, Swineford, Nottke, and Wetherby (2013) sought to determine the stability of early ASD diagnoses of children. Similar to the research study conducted by Ozonoff et al. to determine earlier ASD diagnoses of young children, Guthrie, Swineford, Nottke, and Wetherby (2013), utilized the Autism Diagnosis Observation Schedule- Toddler Module (ADOS-T) to evaluate toddlers and confirm or rule out an ASD diagnosis. The participants in the study were first evaluated between 15 and 24 months old at which time they were given a diagnosis of ASD or ASD was ruled out. The individuals who did not receive an ASD diagnosis included typically developing children, children with developmental delays, and children whose diagnosis was deferred. Individuals whose diagnosis was deferred during the initial evaluation were done so due to the unstable presentation of symptoms in children at this young age. Diagnostic stability in this study was confirmed for all children that were provided with a clinical diagnosis at the initial evaluation and again during the reevaluation one to two years later. Guthrie, Swineford, Nottke, and Wetherby (2013) suggest that 100% diagnostic stability is possible when clinicians are not required to make an official diagnosis until further information and possible symptoms present themselves making a more clear diagnosis. While a clinical diagnosis was not determined during the initial evaluation, Guthrie, Swineford, Nottke, and Wetherby (2013)

encourage further monitoring of children that display mild to moderate social communication deficits. While this research study utilized the ADOS-T during their evaluation of children, the researchers express the importance of using the ADOS-T as a part of the comprehensive evaluation of symptoms across all settings for the individual being evaluated.

A literature review was conducted by Woolfenden, Sarkozy, Ridley, and Williams (2012) to determine the diagnostic stability of ASD. The literature review included 23 research studies, nine of these studies were for diagnosing Autism Disorder (AD) only and the remaining fourteen studies had children with diagnoses of AD and other ASD. In the studies that had initial diagnosis of AD prior to the age of 3, 0-30% of children moved off the ASD spectrum at follow-up evaluations, when initial diagnosis of AD was between the ages of 3-5 years old, 0-20% of children moved off the ASD spectrum, and when initial diagnosis of AD was over the age of 5, 0-16% of children moved off the ASD spectrum. When compared to the results of studies that researched the outcome of children diagnosed with other ASD subtypes the diagnostic stability of initial AD diagnoses are much higher. In the studies that had initial diagnosis of ASD prior to the age of 3, 0-53% of children moved off the ASD spectrum at follow-up evaluations, when initial diagnosis of ASD was between the ages of 3-5 years old, 0-5% of children moved off the ASD spectrum, and when initial diagnosis of ASD was over the age of 5, 0-23% of children moved off the ASD spectrum. Of the other ASD subtypes PDD-NOS was most commonly associated with children who moved off the ASD spectrum, which is consistent with the findings of past studies and supports the move toward the DSM-V criteria for ASD. Woolfenden, Sarkozy, Ridley, and Williams (2012) suggest that one must be careful when discussing the permanence of an ASD diagnosis for preschool aged children and that continued monitoring and assessment of preschool children diagnosed with ASD is recommended.

Exploring Protocols for Reevaluation

There is not one universal protocol for pursuing a reevaluation for a child with ASD, however communication is essential in making a reevaluation happen. In a 2009 article written by Cheatham and Ostrosky, they revealed effective communication strategies when interacting with parents of children with special needs. When educators are able to positively communicate and collaborate with the families of their students, a positive parent-professional relationship can be built on trust and respect (Cheatham & Ostrosky, 2009). Four communication techniques were reviewed in Cheatham and Ostrosky's (2009) article: wait time, overlapping talk, topic changes, and technical terms. When communicating with parents, Cheatham and Ostrosky (2009) advise educators to provide parents with ample response time, which allows parents to formulate an answer and increases their participation in conversations. When educators provide parents with the ability to control the conversation parents are more likely to speak up and engage in conversation with the educators. During a conversation when speakers begin to overlap one another's speech, educators tend to overpower the parents speech this results in decreased participation by the parents (Cheatham & Ostrosky, 2009). It is important for educators to be cognizant of topic changes throughout their conversations with parents. Educators need to be sure that the parents are satisfied with the discussion of a topic prior to moving forward in the conversation with a new topic, this ensures that the parents have shared all information and asked all their questions regarding each topic. When educators allow the parents to dictate when a topic changes throughout the conversation they increase the likelihood that the parents will continue to participate in the conversation (Cheatham & Ostrosky, 2009). The final communication strategy that educators need to be aware of is the use of technical terms during conversations with parents. There are many acronyms that are used throughout the

special education profession but many parents are unfamiliar with these acronyms and technical terms that are used on a daily basis. It is essential for educators to make these unfamiliar terms seem less complicated to parents by providing brief and simple definitions or explanations of the terms during conversations. This not only increases a parents' knowledge about terms and acronyms that are used with their child, but it also encourages parents to participate in conversation by making the terms more parent-friendly.

While Cheatham and Ostrosky (2009) described ways to increase parental interaction in conversations regarding students' development, Powell and McCauley (2012) describe a way to keep an open line of communication available to parents. Powell and McCauley (2012) welcome the technological changes of today's society by inviting parents to be active participants in their child's learning experience by communicating via blogging. The use of a blog to encourage consistent communication from parents and educators allows all educational team members to gain easy access into a running record of a child's progress. A blog provides educators with the opportunity to enter text information, upload pictures or videos of the child at school, and upload visual graphics that are useful to the child's development. The blogging program from Powell and McCauley's (2012) article started as a way to increase the use of technology in the classroom setting and has increased parental communication and helped to create strong professional-parent relationships through constant communication using a blog.

Chapter 3

Methodology

This threefold research study is being conducted to add to the current information regarding the reevaluation of preschool children diagnosed with ASD. This study seeks, first, to differentiate the characteristics of preschool children with and without ASD. Secondly, the study identifies indicators of ASD that warrant reevaluation, and, lastly, explores protocols for when the need of a reevaluation is suspected. Thus, the purpose of this research is to explore the need for ASD reevaluations in preschool children and to equip stakeholders in making those requests appropriately.

This chapter will begin by highlighting and describing the research methodology approach chosen to conduct this study. Next, the researcher will walk the reader through the specific methodology used to carry out this research study. The researcher will then explain how the methodology chosen for this study aided in the researcher's efforts to explore patterns in the data to determine possible solutions to this problem. Finally, the researcher will provide readers with some background in to the researcher's past and end with limitations of this research study.

The researcher used a criterion-based analysis grid to identify four prominent variables found throughout past research studies. The variables are four common developmental domains that are tested during the evaluation process of preschool children for ASD: communication, socialization, cognition, and adaptation. The use of the criterion-based analysis grid provided a clear picture of which developmental domains were used for each individual research study. Upon the completion of the criterion-based analysis grid, the researcher found that many research studies utilized more than one developmental domain to conduct their research.

Variables Impacting Autism Spectrum Disorder: Developmental Domains

Communication

High function communication predicts optimal outcome. The first developmental domain that was analyzed using the criterion-based analysis grid was communication. According to Charman and Baird (2002), decreased communication skills are often characteristics of young children with ASD. There were numerous research studies that evaluated the communication skills of young children diagnosed with ASD. Some of the studies compared the communication skills of children with ASD with the communication skills of their typically developing peers. Researchers Itzchak and Zachor (2009), suggested that higher function communication skills may be early predictors of more optimal outcomes for young children with ASD. The study conducted by Itzchak and Zachor (2009) provides educators with an indicator to be aware of, as it may warrant a reevaluation for children with ASD. If a child has higher functioning communication skills during their initial ASD evaluation and diagnosis, then this child should continue to be monitored as this could be an early predictor of optimal outcomes for the child. Moulton, Barton, Robins, Abrams, and Fein (2016) also support the idea that less impaired communication skills during the initial evaluation could be early predictors of optimal outcomes for young children diagnosed with ASD.

Connections can be made between higher functioning communication skills in young children previously diagnosed with PDD-NOS, as many children who qualified for this diagnosis had less severe ASD symptoms and were most likely to achieve optimal outcomes (Charman & Baird, 2002; Itzchak & Zachor, 2009; Moulton, Barton, Robins, Abrams, & Fein, 2016). The children that have this diagnosis should be closely monitored to determine if their communication skills continue to develop at a high level as further evaluation may be warranted to adjust their diagnosis and prognosis to better meet their educational needs. Another study, conducted by Orinstein et al., (2015), also suggests that children who achieved optimal outcome

from their study were functioning within the normal range for communication. These findings support the idea of children diagnosed with ASD that have higher function communication skills may be more likely to achieve optimal outcome which warrants continued monitoring and reevaluation due to the child's communication skills.

Communication and maturation. As young children grow and mature their ways of communicating with others continues to evolve to meet their growing needs and allow them to interact with others. Young children with ASD also have evolving communication skills that should be monitored as they continue to grow. A study conducted by Woolfenden, Sarkozy, Ridley, and Williams (2012), resulted in data stating that children initially diagnosed with ASD prior to the age of 3 years old, 0-30% of the children moved off of the spectrum by the time of the reevaluation, as compared to children initially diagnosed with ASD after the age of 5, 0-16% moved off of the spectrum by the time of their reevaluation. This data demonstrates that as children grow and mature their symptoms, skills, and behaviors change as well. This also includes children's communication skills. According to the American Speech-Language-Hearing Association (ASHA) a typically developing 3-year-old child can understand and follow simple 2-step directions as compared to a typically developing 5-year-old child who can understand more complex directions that include 3-step directions (2016). According to Hedvall et al., (2014), it is common for there to be changes to the developmental profile of young children with ASD during their preschool years, these changes support the need for reevaluation of preschool children with ASD prior to their enrollment in school-aged programming.

Social Development

The significance of friendship. Social development was the second variable identified using the criterion-based analysis grid as it is commonly known that this area of development is

greatly affected by ASD. The studies that researched the social development of children with ASD revealed several important findings that educators of students with ASD should recognize. According to Charman and Baird (2002), many common social characteristics of children with ASD are apparent at a young age of less than 2-years old. Typical social development in preschool children involves a lot of social interactions with peers and familiar adults, but this area of development is impacted by the ASD diagnosis which leaves children with ASD displaying atypical social behaviors (Center for Disease Control and Prevention, 2016). Research conducted by Bauminger-Zviely and Agam-Ben-Artzi (2014), revealed that preschool children with High Functioning Autism Spectrum Disorder (HFASD) are capable of having friends. Their friendships exhibited similar qualities as their typically developing peers' friendships. Children with HFASD score high in the cognitive developmental domain and exhibit high cognitive functioning skills this enables them to understand the concepts of friends and friendships.

Social maturity of children with ASD. Young children diagnosed with ASD often lack the ability to engage in appropriate social interactions with others. According to the Center for Disease Control and Prevention (CDC), typically developing children between the ages of 3-5 years old demonstrated skills such as: engaging in cooperative play with others, prefer social interactions with peers versus solitary play, and engage in pretend play (2016, May 10). A study conducted by Chawarska, Klin, Paul, Macari, and Volkmar (2009), compared the social functioning skills of young children diagnosed with ASD, PDD-NOS, and non-ASD diagnoses. The results of their study revealed that children in the non-ASD group had significantly improved social functioning skills than their peers with ASD or PDD-NOS (Chawarska, Klin, Paul, Macari, & Volkmar, 2009). While the data from this study demonstrates the impacts ASD

has a young child's social functioning skills, Chawarska, Klin, Paul, Macari, and Volkmar (2009), also found that overall social functioning skills of children with ASD can improve as a result of the natural progression and development of skills resulting in milder social symptoms.

Research conducted by Orinstein et al., (2015) studied the social functioning and communication skills of children whom achieved optimal outcomes. Orinstein et al., (2015) compared the participants who achieved optimal outcomes with their typically developing peers and peers with high functioning ASD (HFASD). As a result of their study, Orinstein et al., (2015) found that children who achieved optimal outcomes scored in the average range for both social and communication development. While the children that achieved optimal outcomes did not differ much from their typically developing peers there were some areas that they scored poorer than their typically developing peers. Some of those areas included: description of friendships, giggles too much, lapses in attention, easily distracted by external stimuli, frequently off task, and laughs inappropriately (Orinstein et al., 2015). These discrepancies were associated with the children achieving optimal outcomes being more socially immature than their typically developing peers (Orinstein et al., 2015).

Cognitive

High cognitive functioning predicts positive outcomes. Preschool children with ASD have varying cognitive levels depending on the severity of their ASD diagnosis. Children with high cognitive functioning are more likely to achieve optimal outcomes than children with lower cognitive functioning (Turner & Stone, 2007). According to a study by Turner and Stone (2007), children who demonstrated higher cognitive functioning at their initial diagnosis had an increased probability of achieving optimal outcomes. Turner and Stone (2007), followed forty-eight children diagnosed with ASD at the age of two until they were four years old and they

reevaluated the children. One of the key factors of a child achieving optimal outcomes according to Turner and Stone's (2007) research study was high functioning cognitive skills during the initial diagnose of ASD.

There is also a strong overlap of research supporting the achievement of positive outcomes for children with high functioning cognitive and social skills. The study conducted by Bauminger-Zviely and Agam-Ben-Artzi (2014), revealed that children with ASD that had higher functioning cognitive skills had increased numbers of friends than children with ASD that had lower cognitive functioning skills. A study conducted by Chawarska, Klin, Paul, Macari, and Volkmar (2009), linked high functioning cognitive skills with social skills and emphasized the importance of positive communication with parents when their children are initially diagnosed with ASD. The results of Chawarska, Klin, Paul, Macari, and Volkmar's (2009) study revealed that there is a natural progress of skills and development for young children diagnosed with ASD. As these children continued to grow and progress, their social symptoms can become milder and their cognitive functioning will continue to improve (Chawarska, Klin, Paul, Macari, & Volkmar, 2009).

Finding significance in a juxtapose of ASD and cognition. While conducting the research on preschool children with ASD, there was a limited amount of information regarding cognitive development. In a study conducted by Doobay, Foley-Nicpon, Ali, and Assouline (2014), they sought to compare the cognitive functioning of high ability youth, with and without ASD. Their study revealed that high ability youth with ASD demonstrated a delay in processing speeds than their high ability peers without ASD (Doobay, Foley-Nicpon, Ali, & Assouline, 2014). While the study expressed that there was not a significant cognitive difference between the two groups of high ability youth, there were results that highlighted how ASD impacts the

daily lives of youth with ASD, regardless of their cognitive functioning level (Doobay, Foley-Nicpon, Ali, & Assouline, 2014).

Adaptive

Evaluation of adaptive skills provides more reliable ASD diagnoses. Many children with ASD have restrictive or repetitive behaviors that impede their daily lives. These behaviors fall under the adaptive domain for development. According to the Learning Disabilities Association of America (1999), some of the typical adaptive development skills for children between the ages of 3-5 include: independence in hand washing, using that bathroom, serving and feeding oneself, blowing ones nose, and working toward complete independence of dressing oneself. These skills are necessary for one to become completely independent in their environment, but these skills are not always assessed during the initial evaluation for children who qualify for an ASD diagnose. According to Tomanik, Pearson, and Loveland (2007), the inclusion of adaptive development during initial evaluations produce more reliable diagnoses for children with ASD. During their research Tomanik, Pearson, and Loveland (2007), used a standardized test known as VABS (The Vineland Adaptive Behavior Scales, Interview Edition: Survey Form) in conjunction with the Autism Diagnostic Interview-Revised (ADI-R) or the Autism Diagnostic Observation Schedule (ADOS). When the VABS was included in the evaluation process, the reliability of children's initial diagnoses improved and revealed more consistent true positives (ASD diagnosis) and true negatives (non-ASD diagnosis).

Adaptive skills predicts outcome of ASD diagnosis. Moulton, Barton, Robins, Abrams, and Fein (2016), also used the VABS (The Vineland Adaptive Behavior Scales, Interview Edition: Survey Form) during their research study. The study by Moulton, Barton, Robins, Abrams, and Fein (2016), also revealed the importance of assessing a child's adaptive

development during their initial evaluation. Moulton, Barton, Robins, Abrams, and Fein (2016), found that children that achieved optimal outcomes also demonstrated stronger overall adaptability skills during their initial evaluation. These findings also revealed that children that received an ASD diagnosis during their initial evaluation and had milder stereotypies and sensory abnormalities, were more likely to achieve optimal outcomes.

Doobay, Foley-Nicpon, Ali, and Assouline (2014) compared the adaptive skills of high ability youth with and without ASD. The results of their study revealed that there was a significant difference among the two groups in regards to overall adaptive skills (Doobay, Foley-Nicpon, Ali, & Assouline, 2014). This demonstrates that although a child with ASD may be high functioning there are still areas of development that they have difficulties with, such as adaptive development skills. The delay in this developmental domain influences the child's ability to be independent in their environment.

Background of the Researcher

The researcher is currently an early intervention preschool teacher for the local intermediate unit. The researcher has first-hand experience with preschool children diagnosed with ASD and has witnessed several children who warranted a reevaluation for ASD but never received one. The researcher is passionate about supporting children with ASD and their families in order to make them more successful in all environments. Since the researcher is emotionally invested in the children and families in her current environment, her perception of the research data may be bias towards a more positive outcome for the children with ASD and their families. This potential bias is not meant to change the results of the studies researched, but it may affect how the research results are depicted in the researcher's writing.

Limitations

The research for this study was conducted solely using past research studies due to the limited amount of time available to conduct the research. This research study could have been better supported with the inclusion of human participants. Many of the studies used for this research were completed prior to the implementation of the DSM-5, which impacts its relativity to the current evaluation process for ASD and special education practices currently in use for children with ASD. There was limited information available regarding the proper protocols for educators to follow when a reevaluation is warranted for a young child with ASD. There was also a limited amount of information regarding how the cognitive development of a young child with ASD is affected by the disorder. These limitations impact the quality of the research and demonstrate the need for further research regarding the reevaluation of young children with ASD.

Chapter 4

Discussion

The purpose of this criterion-based analytical research is to add to the current research regarding the reevaluation of preschool students with an ASD diagnosis. This threefold research study explores the characteristics of preschool children with and without ASD, identifies indicators of ASD that warrant reevaluation, and examines protocols for when the need for reevaluation is suspected. Thus, the purpose of this research is to explore the need for ASD reevaluations in preschool children and to equip stakeholders in making those requests appropriately.

This final chapter explores the themes and theories that evolved as a result of this research study. The chapter begins with the criterion-based analysis data that is presented in light of a thematic summary. Secondly, the theories that emerged throughout this research study are highlighted along with ideas for practice. Thirdly, there is discussion of limitations and suggestions for future research. Lastly, a personal reflection on the motivation for completing this research study and the lasting impressions it has made on my life.

Thematic Summary: Early Childhood Reevaluation for Those Diagnosed with Autism

The criterion-based analysis of the data is presented in light of a thematic summary. This criterion-based analysis yielded one significant theme relating to the importance of understanding reevaluation: the cultivation of learning through four developmental domains. Upon conducting the criterion-based analysis it was evident that the evaluation process is grounded in the four developmental domains: cognitive, social, communication and adaptive. When children are initially evaluated for autism, each of the developmental domains are assessed and examined to determine the prognosis for the young child. These four domains play an integral part in the education of a young child diagnosed with ASD.

A child's placement on the autism spectrum is dependent upon their abilities and challenges in the developmental domains. Once placed on the spectrum their level of severity is taken into consideration when deciding the best educational placement and level of supports necessary to meet their educational needs. Ultimately, the developmental domains determine the entire educational support plan and placement for a young child with ASD.

Upon the placement and determination of a child's educational support plan, it is the responsibility of the stakeholders in the child's life to cultivate their learning and help them grow. This cultivation of a child's education is much like the process of cultivating a farm. The teachers, therapists, and support staff need to work together to make the child more successful. They need to start by "tilling each individual field" and assessing a student's abilities within each developmental domain. Once the ground is prepared they can move forward with the planting of seeds and teaching of new concepts and ideas. The teachers need to be cognizant of the child's specific learning abilities and challenges as they work to nurture the child's learning. The teachers feed the crops and help them grow by using their knowledge of the child's abilities in each developmental domain to make them more successful. When a child has advanced communication abilities the teacher can use these skills to the child's advantage and create specially designed instructions to allow the student to utilize their communication strengths to learn new information.

As the teacher and other stakeholders are working to educate the children, they need to constantly monitor the child's progress in each developmental domain. After two years of a child growing, learning, being nurtured and supported by his teachers and other stakeholders it is important to reassess the child's abilities. Much like a farmers do when assessing the quality of their crops to determine if they are ready to be harvested or if they need more time to grow and

develop in order to achieve their optimal potential. When the child's skills and abilities are being reevaluated, it is important to keep in mind the potential for them to achieve optimal outcomes, which could lead to them being harvested. If a child achieves optimal outcomes, they may no longer qualify for an ASD diagnosis, are ready to be "harvested," and move off the autism spectrum. Upon harvest, a child may still need to be nurtured and supported in some of the developmental domains but are typically developing in other areas. Thus, reevaluations are necessary ensuring the physician's prognosis continually supports educational needs and secures a more credible educational placement in the child's future.

Theory and Practice

The Seesaw Theory

While researching the characteristics of children with and without ASD a theory emerged from the studies. There is a strong correlation between a child's communication skills and their level of severity on the autism spectrum. When a young child is initially evaluated for ASD their communication development is a strong indicator of their overall development. If a child has high functioning communication skills then they will be found lower on the autism spectrum, but if a child has low functioning communication skills they will be found higher on the autism spectrum. This correlation creates the image of a seesaw based on a child's communication development. Some children have such high functioning communication skills that there is a potential for them to "fall off of the seesaw" and no longer qualify for ASD during a reevaluation at a later date.

The seesaw theory is evident in research conducted by, Itzchak and Zachor (2009) who studied the effects of high functioning communication skills with the potential for optimal outcomes for children with ASD. Moulton, Barton, Robins, Abrams, and Fein (2016) also

support the notion that high functioning communication skills during initial evaluations are early predictors of optimal outcome. Another research study conducted by Orinstein et al., (2015) evaluated children who had already achieved optimal outcomes and no longer qualified for an ASD diagnosis. Throughout their research Orinstein et al., (2015) found that children who achieved optimal outcome were functioning within the normal range for communication development. These findings also indicate the theory of children with high functioning communication skills are found to be lower on the autism spectrum, which could eventually lead to their achievement of optimal outcomes.

As a result of this theory there is crucial information for practicing teachers to be aware of when educating and observing their students with ASD diagnoses. Teachers need to be cognizant of when the child was first diagnosed with ASD and how the child scored on their communication development at that time. The teacher should also be closely monitoring the child's communication development from the time they enter their classroom. If the teacher suspects that the child's communication skills are high functioning they may want to suggest a reevaluation to determine if any changes need to be made to the child's prognosis.

The Theory of Developmental Metamorphism

As a child grows up their body goes through a natural progression and maturation process, the same also goes for their developmental domains. During the early years of life a young child is rapidly developing and maturing as they are exposed to new information, new experiences, and new environments. As the child grows their behaviors change, they interact differently with the world and other people, and they begin to develop a sense of self. Many children diagnosed with ASD are initially diagnosed at a young age around 3-years-old. It is

important for one to understand the developmental changes that this young child will endure prior to their start of school-aged programming.

As the natural progression of development is occurring within a young child with ASD, their symptoms and behaviors of ASD are changing and evolving as well. Research conducted by Hedvall et al., (2014) revealed the importance of understanding that it is common for changes to occur in the developmental profile of preschool children with ASD. These changes that Hedvall et al., (2014) are referring to warrant the reevaluation of children prior to their start of school-aged programming to ensure their prognosis meets their evolving needs. These changes to the developmental profile appear like the life-cycle changes from a caterpillar to a butterfly. The needs of a caterpillar are not the same as the needs of a butterfly, the same goes for a three-year old with ASD and a five-year old with ASD. A study conducted by, Chawarska, Klin, Paul, Macari, and Volkmar (2009), focused on the social functioning of young children with ASD. They also revealed that as a child grows and matures, their overall social development could improve as a part of natural developmental progression and result in milder social symptoms.

The natural developmental progression that occurs in children is something that many practicing teachers are aware of as they watch their students grow and mature from the first day of school to the last day of school. Since this natural progression can affect a child's symptoms and behaviors, resulting from ASD it is necessary for teachers to be aware of significant changes in young children. As a teacher works to build a positive rapport with all of their students at the start of the school year it is important for them to take extra time to build their rapport with any students with ASD. This building process provides the teacher with the opportunity to get to know the child and learn their likes, dislikes, repetitive behaviors, and other interests that are

important to them. The teachers can then monitor the child's development and maturation throughout the school year and take note of any unusual or drastic changes in their development. These changes may be a result of the natural developmental progression and they could warrant an ASD reevaluation for the young child to better assess their overall development and adjust their prognosis as needed.

Limitations and Suggestions for Further Research

This research study brought insight into the need for reevaluations of preschool children with ASD, but some limitations throughout the research were uncovered as the study unfolded. There was limited research regarding the protocol to follow when a teacher suspects the need for a reevaluation for a young child. There has also been a recent change regarding the qualification criteria for autism when the new Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) was implemented in 2013. The research is also lacking in the area of positive outcomes as a result of reevaluations.

Due to the limited amount of research regarding the protocols to follow when a teacher suspects the need for a reevaluation for a young child, teachers are left using their best judgement as to what steps to take in conversations with stakeholders. Without having a standard protocol in place it makes it difficult for stakeholders to follow the correct procedures. There may not be a standard protocol that will fit for everyone but there needs to be some basic steps for teachers and other stakeholders to help guide them toward getting the help their students need. There may be students with ASD whose current skills and development warrant a reevaluation but if the teachers and other stakeholders are unaware of the proper protocol to follow they may not pursue a reevaluation for the student.

Another limitation to this study is that much of this research is based on the use of the old version of the DSM-IV. The Diagnostic and Statistical Manual of Mental Disorders (DSM) provides a standard criterion for the diagnosis of mental disorders, including autism. The unveiling of the new DSM-5 affects the criteria an individual must meet in order to qualify for autism. Since most of the research used in this study were based on the DSM-IV diagnostic criteria for autism, it is not as current as it could be and may affect how the data is interpreted using the new DSM-5. Some of the significant changes that have occurred regarding the qualification of an autism diagnosis include the removal of all subtypes for autism in the DSM-5. This change affects whether or not an individual will qualify for autism or if their symptoms will qualify them for an alternative diagnosis. Since the DSM-5 greatly impacts how individuals are diagnosed with autism it is crucial for future studies to take place that include individuals diagnosed with ASD using the new DSM-5 criteria. The use of research studies with participants diagnosed with ASD using the DSM-5 criteria may have varying results as the changes may impact the outcome of the research study.

While conducting the research for this paper there appeared to be a lacking presence of positive outcomes following reevaluations of young children with ASD. There were studies that demonstrated what could occur if a child achieves optimal outcomes and no longer qualifies for ASD, but there was limited information regarding the positive impacts of reevaluations. There is a great opportunity for future research to follow-up with children that received a reevaluation to learn how it has impacted their lives. The reevaluation could change more than just the child's educational prognosis, potentially impacting their social interactions with others and improving their lives both in and outside of school.

Epilogue

This educational journey started with the personal interaction I had with one student and this single interaction inspired me to dive into the world of educational research so that I could help to improve the lives of my future students. This one child showed me the importance of pushing oneself to the limits and exceeding the expectations that others have set for you. This child changed my perspective on the “life-long” label of Autism Spectrum Disorder and pushed me to better educate myself on ASD.

Once I began my researching of ASD, I quickly learned that I knew much less about the disorder than I had originally perceived. I quickly learned how ASD not only affects the child with the diagnosis but also their families that support them. I began to realize that my role and responsibility as a teacher is so much more than just educating my students, I need to be a voice for my students and their families when they cannot speak for themselves. It is vital to a student’s success for all stakeholders involved in the child’s life to be united as a team and work together with the child’s best interest as their priority.

I learned that while growth and maturation of a child is a natural process, it can also change the appearance of a disorder and alter the prognosis needed by a child. There are children being diagnosed with ASD that may no longer qualify for an ASD diagnosis in the future but without the opportunity for a reevaluation no one may ever know. I began to understand how I can continue to educate myself to improve the lives of my students and work to advocate for them whenever necessary.

While I have learned that it is not very common for someone with a history of ASD to no longer qualify for ASD, I have also learned that their prognosis can change even though their label remains. I, as a teacher, owe it to my students to constantly observe and assess their

abilities so that I can help to create the best educational plan and supports for each individual student. As I observe changes in my students, I need to be aware of how these changes are impacting their ability to learn and participate in their education process.

I understand that all children with ASD do not look, act, think, or behave the same way, which means I should not teach them all the same way. This research process has brought light to my life and helped me see how personalized each relationship with my students must be, so that I can bring out the very best in each of them. God has helped guide me toward a career in special education, but it is my students and personal learning experiences that have made me absolutely passionate about improving the lives of my students and their families.

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