

Syracuse University

SURFACE

Dissertations - ALL

SURFACE

August 2016

Challenging Behaviors of Children with and without Developmental Disabilities in Early Childhood and Parent Management Behaviors

Ellen Gottuso
Syracuse University

Follow this and additional works at: <https://surface.syr.edu/etd>



Part of the [Social and Behavioral Sciences Commons](#)

Recommended Citation

Gottuso, Ellen, "Challenging Behaviors of Children with and without Developmental Disabilities in Early Childhood and Parent Management Behaviors" (2016). *Dissertations - ALL*. 619.

<https://surface.syr.edu/etd/619>

This Thesis is brought to you for free and open access by the SURFACE at SURFACE. It has been accepted for inclusion in Dissertations - ALL by an authorized administrator of SURFACE. For more information, please contact surface@syr.edu.

Abstract

The purpose of this research was to examine the association between challenging behaviors in preschool children with and without developmental disabilities or delays and parent management behaviors. It was hypothesized that a lower incidence of challenging behaviors in preschool children with and without developmental disabilities would be associated with high use of parent management behaviors. The Early Child Behavior Screen as well as the Parenting Young Children (PARYC): Self-Report Parenting Measure were used to capture children's challenging behaviors and parents' management behaviors, respectively. The current study surveyed 56 total parents. Out of the parents that responded, 46 were female, 48 identified themselves as white, and the average age was 36.8 years old. The children in the study were 31 males and 25 females with a mean age of 4 years and 3 months, and 19 children were identified as children with special needs. The results indicated that children with developmental disabilities have lower levels of prosocial behaviors than children without developmental disabilities. There was no difference between parents of children with special needs and parents of children developing typically in terms of parent management behaviors. The parent management behaviors of limit setting, proactive parenting, and positive parenting were associated with challenging behaviors in children without a developmental disability or delay, but these parent behaviors were not associated with challenging behaviors in children with special needs. The implications of the study are that parent management behaviors are not associated with challenging behaviors in children with special needs, but these same parent management behaviors are effective in children without developmental disabilities or delays. Because children with developmental disabilities or delays had lower levels of prosocial behaviors in this study, alternative parenting behaviors need to be researched in order to make recommendations for this population.

CHALLENGING BEHAVIORS OF CHILDREN WITH AND WITHOUT
DEVELOPMENTAL DISABILITIES IN
EARLY CHILDHOOD AND PARENT MANAGEMENT BEHAVIORS

by

Ellen Gottuso

B.S., Elmira College, 2014

Thesis

Submitted in partial fulfillment of the requirements for the degree of
Master's of Science in Child and Family Studies.

Syracuse University

August 2016

Copyright © Ellen Gottuso 2016
All Rights Reserved

Table of Contents

Abstract.....	I
Introduction.....	1
Literature Review.....	4
Challenging Behaviors In Preschool Children without Developmental Disability.....	4
Challenging Behaviors In Preschool Children with a Developmental Disability.....	6
Comparing Challenging Behaviors In Preschool Children.....	7
Prosocial Behaviors.....	12
Parent Behaviors Impact on Child Behaviors.....	13
Parent Management Behaviors.....	15
Methods.....	19
Participants.....	19
Procedure.....	26
Measures.....	27
Results.....	30
Preliminary Analysis.....	30
Results.....	32
Discussion.....	39
Challenging Behaviors.....	40
Parent Management Behaviors.....	42
Limitations and Future Research.....	47
Conclusion.....	48
Appendices.....	51
References.....	61
Vita.....	68

Challenging Behaviors of Children with and without Developmental Disabilities in

Early Childhood and Parent Management Behaviors

Introduction

Children can often exhibit challenging behaviors at home as well as in the classroom (Einfeld, Tonge, Turner, Parmenter, & Smith, 1999; Keenan & Wakschlag, 2000). Challenging behaviors are behaviors that adversely impact children's development, academic success, social interactions, or functioning (Doubet & Ostrosky, 2015; Keenan & Wakschlag, 2000). An operational definition of specific challenging behaviors, according to Williams, Armstrong, Agazzi, and Bradley-Klug (2010) includes "sleeping difficulties, mealtime and feeding issues, toilet training, temper tantrums, aggression, sibling rivalry and non compliance" (p. 1). When these challenging behaviors are not redirected into successful everyday behaviors, children's behavior problems could develop further and become stable and intense throughout life (Green, O'Reilly, Itchon, & Sigafos, 2004; Williams et al., 2010). As reported by Dishion, French and Patterson (1995), early behavior problems exhibited in a typically developing preschooler are the strong predictors of delinquency, gang involvement, and imprisonment in later life (as cited by Williams et al., 2010). Children with early onset conduct problems are more likely to develop along a pathway to more intense aggressive and oppositional behaviors in adolescence and then to serious violent behaviors in adulthood (Burbach, Fox, & Nicholson, 2004; Fox, Dunlap, & Powell, 2002).

Children with developmental disabilities can also exhibit the challenging behaviors described by Williams et al. (2010) and these behaviors are also persistent throughout the child's life course. Einfeld et al. (1999) measured the problem behaviors of young males that have been diagnosed with Down Syndrome, Fragile X, Prader-Willi Syndrome or Williams Syndrome in

1991 and then again in 1995 with The Developmental Behavior Checklist which includes a subscale of disruptive behaviors including aggression, irritability, manipulative behaviors, and antisocial behaviors. Einfeld et al. (1999) found that the disruptive behaviors of these boys, with an average age of 13 at second testing, were unchanged over the four years. Green et al. (2004) found that aberrant behaviors, tested every 6 months over a three-year span, in 13 children with developmental disabilities were highly prevalent and persisted over the three year study. The children studied by Green et al. that had developmental disabilities were enrolled in a school with certified special education teachers, a teacher to child ratio of 1:3/4, therapy services including speech, occupational and physical therapy, and developmentally appropriate curriculum over three years, yet these particular children's challenging behaviors did not improve between pre and post measures of challenging behaviors. Green and colleagues (2004) recommended that reducing challenging and aberrant behaviors begin with parents in the home instead of focusing on the school setting because children that enrolled in school and participated in all the services provided therein did not have improved aberrant behaviors after three years in their sample.

The trajectory of children with challenging behaviors is not positive and there can be an aversive impact of children's challenging behaviors on parents and the family unit (Doubet & Ostrosky, 2015). It is imperative that research further investigates what parent behaviors are associated with lower prevalence of challenging behaviors in both children with special needs as well as children that are developing typically. It was therefore the main purpose of this study to investigate challenging behaviors in preschool children with and without developmental disabilities as well as the parental strategies that can be associated with those behaviors. Parent management behaviors have been effective parent behaviors in promoting children's success as

they are associated with lower levels of child challenging behaviors in preschool children which are then associated with more positive futures for these children as adolescents and adults (McEachern, Dishion, Weaver, Shaw, Wilson, & Gardner, 2012; Skotarczak & Lee, 2015).

When typically developing children and children with diagnoses of developmental disabilities or delays are exhibiting challenging behaviors, parents implement management behaviors in order to impact these behaviors and detour their children from the trajectory associated with these behaviors. The broad term of parent management, as defined by McEachern et al. (2012), includes three behaviors of limit setting, supporting positive behaviors, and proactive parenting. Parent management behaviors can naturally occur as parents navigate how they respond to children's behaviors, and these parenting behaviors have also been instructed to parents during interventions to decrease the frequency and intensity of children's challenging behaviors (Smith, Groen, & Wynn, 2000; Williams et al., 2010; Webster-Stratton, 1998).

Parent and children's behaviors can be viewed with a bioecological theory of development as a bidirectional process of interactions with the environment (Bornstein & Lamb, 2011). Darling (2007) illustrates that a main construct in Bronfenbrenner's theory includes the ability of the individual to be active in influencing the context around them, as children can evoke responses from their various environments as well as react to them. Also, according to Bornstein and Lamb (2011), Bronfenbrenner's bioecological theory of development takes into consideration the specific characteristics of the individual person, including their behavioral, emotional, biological, and cognitive abilities. Children's behaviors can be seen as them taking action to interact with their environment and inducing responses from that environment, specifically their parents. Therefore, Bronfenbrenner's theory takes into consideration the

abilities and behaviors of the child and how these characteristics conjure responses from various systems to influence development. When a child exhibits challenging behaviors, they often evoke a response from parents in the context of the home. In this context, parent management behaviors can have an influence on the developing child and the child's characteristics and the child characteristics and behaviors influence parents' behaviors in a bidirectional process of interactions over time.

The present study therefore investigated children's challenging behaviors in a preschool population of children that have developmental disabilities or delays as well as children that are developing typically. This study also examined parental management strategies that were implemented among the parents of those children. Furthermore, this study investigated the relationship between children's challenging behaviors and parent management strategies. In the following section, previous research on children's challenging behaviors and parent's parental management behaviors are presented.

Literature Review

Challenging Behaviors In Preschool Children without Developmental Disability

Challenging behaviors in children during the preschool developmental stage have to be separated from behaviors of independence that are developmentally appropriate at this age (Shaw, Bell & Gilliom, 2000). It is normal development for a child from age two to three and a half years old to be more independent as well as capable of non-compliance and aggression towards parents, siblings, and peers and do so willfully due to increases in mobility and language (Dishion, Shaw, Connell, Garnder, Weaver, & Wilson, 2008; Shaw et al., 2000). The difference between typical behaviors of developing preschoolers and challenging behaviors is the adverse impact on the child's functioning, learning, development, and social interactions (Doubet &

Ostrosky, 2015; Keenan & Wakschlag, 2000). For example, if a peer will continually not interact with a child due to their aggression or temper tantrums, this is consistently impacting the child's social development (Keenan & Wakschlag, 2000). Within this frame of thinking, the challenging behaviors included in the operational definition of challenging behaviors provided by Williams et al. (2010) can be seen to be impeding development or function. Sleeping difficulties, temper tantrums, aggression and non-compliance may adversely impact children's success in school. Mealtime issues, feeding issues, toilet training, and sibling rivalry may impact a child's functioning in a family system and further impact child-family relationships. These specific behaviors are determined to be challenging behaviors because they impact children's functioning and development adversely, above and beyond developmentally expected behaviors of exerting independence but below the intensity and frequency of pathological behaviors that meet criteria for diagnoses such as oppositional defiant disorder or conduct disorder.

There are different influences on challenging behaviors that have been found in typically developing children. According to Holtz, Fox, and Meurer (2015), in a population of 167 girls and 190 boys between the ages of 1 and 5 years old that do not have a developmental, physical, or health disability, challenging behaviors of "temper tantrums, bothers others, hits others, takes toys away from others, and refuses to go to bed" are the most commonly reported challenging behaviors and are present in 60% of the population (p. 170). The population represented low income and minority children and found that the frequency of challenging behaviors was quite high, with younger children and boys scoring higher rates of challenging behaviors compared to older children and girls (Burbach et al., 2004; Holtz et al., 2015). Qi and Kaiser (2003) report that factors associated with higher problems behaviors are more likely in low income populations, including parent characteristics such as an absent father, harsh discipline, low parental education

level, family instability, and exposure to poverty. Hence typically developing children are more likely to exhibit challenging behaviors if they are younger, boys, and are from a low-income population (Holtz et al., 2015; Qi & Kaiser, 2003). This demographic information will be gathered in the current study and will be controlled for in regression analyses.

Challenging Behaviors In Preschool Children with a Developmental Disability

Children that have a developmental disability or delay can exhibit challenging behaviors in the toddler and preschool years (Durand, Hieneman, Clark, Wang, & Rinaldi, 2012; Rzepecka, McKenzie, McClure, & Murphy, 2011). Green et al. (2004) found a high prevalence of aberrant behaviors, which includes aggression, self-injurious behaviors, destructive behaviors toward property, and extreme temper tantrums, in preschool children with developmental disabilities. Keller and Fox (2009) found that in 58 toddlers that had been referred to mental health establishments for extreme behavior problems of aggression, temper tantrums, noncompliance and hyperactivity, “77% met the criteria for a developmental disability” (p. 88). Furthermore, Rzepecka et al. (2011) found that most children diagnosed with intellectual disability or autism spectrum disorder had levels of behavior problems and sleep problems that were clinically significant.

Other researchers compared challenging behaviors exhibited from children with different diagnoses of various disabilities. Hattier, Matson, Belva, and Kozlowski (2012) analyzed children’s challenging behaviors, measured by the tantrum and conduct behavior subscale of the baby and infant screen for children with autism traits-part 2, among children with three different diagnoses. Children with a history of seizures or diagnosed with a seizure disorder scored the highest on challenging behaviors, especially in problems of mood, aggression and behaviors that are destructive (Hattier et al., 2012). There was no difference between challenging behaviors of

children with cerebral palsy or trisomy twenty-one (down syndrome), but these two diagnoses were significantly lower than children with a seizure disorder or a history of seizures.

Furthermore, there also was no gender difference between any of the diagnoses on the scale of challenging behaviors (Hattier et al., 2012). Einfeld et al. (1999) found that young men with an average age of 13 with Prader-Willi and Williams Syndrome had significantly higher levels of antisocial and disruptive behaviors compared to a control group, males diagnosed with Fragile X Syndrome, and men diagnosed with Down syndrome. The current study intended to expand on this research and describe the differences, if any, between the various developmental disability diagnoses that were surveyed in the population. The current study hypothesized that there will be a difference between various developmental disabilities represented in the sample (Einfeld et al., 1999; Hattier, 2012).

Comparing Challenging Behaviors In Preschool Children

There is a difference in the frequency of challenging behaviors between preschool children with and without developmental disabilities. According to Feldman, Hancock, Rielly, Minnes, and Cairns (2000), children two years of age that had previously been diagnosed with developmental delay or are at risk of developmental delays have an increased risk of behavior problems, including internalizing and externalizing behaviors, compared to their typically developing peers. Compared to parents of typically developing children, parents of preschool children under age five that have been diagnosed with down syndrome reported more problems with everyday handling and feeding (Roach, Orsmond, & Barratt, 1999). In a literature review, McClintock, Hall, and Oliver (2003) found that studies reported children diagnosed with Autism were more likely to show challenging behaviors, including self-injurious behaviors, aggression, and destruction of property, compared to children without a diagnosis of Autism. Furthermore,

Roberts, Mazzucchelli, Taylor, and Reid (2003) report in a review of articles that children with developmental disabilities are more likely to have challenging behaviors, exhibit challenging behaviors at an earlier age, and have challenging behaviors last longer in development compared to their typically developing peers. Keller and Fox (2009), assigned DSM IV diagnoses to 45 out of 58 two year old children referred to a mental health clinic for behavior problems and children with a diagnoses were reported to have significantly more intense and frequent problem behaviors, including problems with mealtimes or food, temper tantrums, non compliance, sibling problems, and aggression, compared to the children that did not meet the criteria for a diagnosis. Therefore, the current study hypothesized that children that have a developmental disability will have a higher level of challenging behaviors reported by parents, compared to children without developmental disabilities (Feldman et al., 2000; Keller & Fox, 2009; Roach et al., 1999).

There are certain factors, including sensory processing and language development, involved with the population of children with special needs that may contribute to the higher level of challenging behaviors found in the literature. Although the current study is not investigating sensory processing or language development and skills in children with developmental disabilities, it is important to note the current research that points to characteristics about the special needs population that may be influencing children's challenging behaviors. Sensory processing refers to the internal process of the central and peripheral nervous systems management of incoming sensory information and the reception, modulation, integration, organization and behavioral reaction to that sensory information (Baker, Lane, Angley & Young, 2008; Miller & Lane, 2000). The behavioral reaction to the sensory information from the seven senses allows for appropriate reactions to the environment as well as meaningful daily activities (Baker et al., 2008). In sensory processing disorder, children and adults have poor sensory

processing such that they fall into one or more of the four sensory processing disorder categories, low registration, sensory sensitivity, sensory seeking, or sensory avoiding (Baker et al., 2008). In sensory processing disorder, the behavioral reaction to the incoming sensory information from the seven sensory receptors can be inappropriate and impede meaningful or functional daily activities.

Preschool children with developmental disabilities, specifically Autism Spectrum Disorder, have been found to have poor sensory processing (Baker et al., 2008; O'Donnell, Deitz, Kartin, Nalty, & Dawson, 2012). Baker et al. (2008) found that 82% of their sample of children diagnosed with Autism Spectrum Disorder from 2 years and 9 months to 8 years and 5 months old had either probable or definite problems in sensory processing. Furthermore, O'Donnell et al. (2012) demonstrated that the majority of preschool children with Autism Spectrum Disorder in their sample had sensory processing challenges. Therefore sensory processing challenges are significantly prominent for children with developmental disabilities, specifically preschool children with Autism Spectrum Disorder.

Problems with sensory processing have been found to be associated with problem behaviors. Baker et al. (2008) demonstrated that in their sample of children with Autism Spectrum Disorder, children with poor sensory processing were associated with higher levels of behavioral problems as well as decreased functioning and impaired daily living skills. Challenging behaviors in the current study refer to many daily living skills, such as toilet training, meal times, and sleep routines, and therefore could be impacted by sensory processing problems. Furthermore, O'Donnell et al. (2012) consistently found that children with Autism Spectrum Disorder as well as Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS), which had higher levels of sensory processing challenges, were associated with more behavioral

problems. Specifically, children with a higher level of problems in sensory processing were associated with higher levels of behavior problems in all categories measured, including irritability and agitation, lethargy and withdrawal, stereotypic behaviors, hyperactivity and noncompliance, and inappropriate speech. Therefore, sensory processing is an underlying condition that may be present in children with developmental disabilities or delays, specifically Autism Spectrum Disorder or PDD-NOS, that may impact challenging behaviors. Future research should include a measure of children's sensory processing profile in order to determine if the child has probable or definite sensory processing problems that could impact their daily living skills or challenging behavior problems.

Another possible explanation for the higher levels of challenging behaviors in children with developmental disabilities could be speech and language development, specifically receptive and expressive language. According to Otto (2010), receptive language is the ability to comprehend language, such as reading or listening, and expressive language is the skill to produce language, such as writing or talking. Children with developmental disabilities have been found to have difficulties with language development, as Hoff (2014) reported that children with Down syndrome have significant impairments in language production and their comprehension of language is on a level consistent with the child's mental age instead of their physical age.

Receptive and expressive language development in preschool children with developmental disabilities has been found to be associated with challenging behaviors. In terms of receptive language, 20% of children with poor receptive language skills were found to have behavior symptoms in the abnormal range compared to 7% of their peers that were developing typically (Bretherton, Prior, Bavin, Cini, Eadie, & Reilly, 2014). Bretherton et al., (2014) stated that these children with low receptive language skills are at a higher risk of receiving a clinical

diagnosis of behavioral problems than their typically developing peers at 4 years of age.

According to Botting and Conti-Ramsden (2000), children with both expressive and receptive language problems are at a higher risk of behavioral difficulties and the behavior problems increased from age 7 to 8. More than half of the children with complex language problems such that they do not understand the social use of language, were found to have clinically significant levels of behavioral problems (Botting & Conti-Ramsden, 2000). Therefore, children with problems in reading or listening have more abnormal behaviors and are at a higher risk of clinical diagnosis for behavior problems than children that are linguistically developing typically (Bretherton et al., 2014). Children with speech and language impairment that have delays or problems with receptive or expressive language are at risk of higher challenging behaviors, problems with peers, and clinical diagnosis of behavior problems compared to their typically developing peers

Language development delays or problems in children have also been associated with prosocial behaviors. Bretherton et al., (2014) researched the association between receptive and expressive language and behavior problems in preschool children at 2 and then again at 4 years of age. According to Bretherton et al. (2014), children with delayed expressive language at age 2 were associated with significant problems with peers at age 4, including playing alone, bullied by other children, not well liked, and few friends, after controlling for child gender, non-verbal IQ, maternal education, vocabulary, and distress, as well as socioeconomic status. Furthermore, children with low expressive language at age four were associated with lower prosocial behaviors when controlling for the previously mentioned factors. Therefore children in preschool that have challenges in expressive language also have been found to have significant problems with peers and prosocial behaviors.

Prosocial Behaviors

Prosocial behaviors have also been found in preschool populations (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). The presence of prosocial behaviors is not the absence of challenging behavior, however. Prosocial behaviors are defined as voluntary actions intended to help others (Garner, 2006; Pastorelli, Lansford, Luengo Kanacri, Malone, Di Giunta, Bacchini, Bombi, Zelli, Miranda, Bornstein, Tapanya, Uribe Tirado, Alampay, Al-Hassan, Chang, Deater-Deckard, Dodge, Oburu, Skinner, & Sorbring, 2016). Examples of prosocial behaviors include helping, sharing, comforting others, and cooperation (Zahn-Waxler et al., 1992).

Prosocial behaviors are, as the word indicates, skills that are social in nature. To help, cooperate, share, and comfort others, a child needs to interact with, interpret, and socialize with another peer or individual. It has been demonstrated that peers have a strong influence on children's prosocial and challenging behaviors, as Eivers, Brendgen, Vitaro, and Borge (2012) found that preschool children with friends that are antisocial with low prosocial behaviors are significantly more antisocial than students with friends that are high prosocial. Furthermore, children with friends that were scored by teachers to be high in prosocial behaviors were significantly more prosocial than all other students measured (Eivers et al., 2012). Because it has also been found that children with developmental disabilities do not have the social skills similar to their same aged peers (Botting & Conti-Ramsden, 2000; Bretherton et al., 2014; Fenning, Baker, & Juvonen, 2011), then it can be deduced that special needs children, facing challenges with social skills, may have fewer opportunities to develop their prosocial behaviors. If children with special needs face obstacles when interacting with their peers, as research suggest, it would be logical that this population would have lower prosocial behaviors. Fenning, Baker, and Juvonen (2011) found that children with developmental disabilities used less prosocial problem solving strategies compared to their same age peers without developmental disabilities.

Therefore, the current study hypothesizes that children with developmental disabilities will have a lower level of prosocial behaviors compared to children without developmental disabilities.

Certain parent behaviors have been found to be associated with prosocial behaviors. Pastorelli et al. (2016) determined that positive parenting practices, such as warmth, support, affection, and explanation, were associated with increased prosocial behaviors of youth in eight countries. Furthermore, Garner (2006) found that maternal praise was associated with preschool children's prosocial behavior in African American communities. Although not specifically the parent management behaviors described in the next section, the research completed by Pastorelli et al. (2016) and Garner (2006) indicates that parenting behaviors are associated with children's behavior and vice versa in a bidirectional process. Children's prosocial behaviors and parent management behaviors are also supported in Bronfenbrenner's bioecological theory, as children's prosocial behaviors elicit positive parenting behaviors, such as praise, and parent management behaviors impact the development of children's prosocial behaviors (Pastorelli et al., 2016).

Parent Behaviors Impact on Child Behaviors

The presence of children's challenging behaviors can have a significant impact on parents and parent's behavior impacts children's development and future behaviors. According to Dishion and colleagues (2008), how parents respond to children's developmental increases in independence and noncompliance formulates subsequent development. Parent's parenting practices at this developmental stage of noncompliance and independence can influence children's problem behaviors and later development and success. For example, Gershoff (2002) found in a meta-analysis of the literature that corporal punishment used by parents, including

physical punishment, was associated with children's increased aggression, delinquency, and antisocial behaviors, as well as with a decrease in child's mental health. Furthermore, corporal punishment in childhood by parents was associated with higher levels of adult aggression, adult criminal activity, and risk of abusing children and spouses in the future. On the other hand, Kazdin (1997) states that parent management behaviors have been associated with decreasing child non-compliance, tantrums, eating disorders, hyperactivity, juvenile delinquency, and conduct disorder. Parent's reaction to children's developmental stage as well as the children's challenging behaviors has a large impact on children's future success and behaviors.

Parenting behaviors can differ based upon children's characteristics and behaviors. Further aligned with Bronfenbrenner's theory, children's abilities and behaviors can evoke different responses from parents in the environment (Bornstein & Lamb, 2011). Parents of children who are exhibiting challenging behaviors interact differently with their children compared to parents whose children are not exhibiting such behaviors (Nicholson, Fox, & Johnson, 2005). Nicholson et al. (2005) compared parents of children that had and had not developed externalizing behaviors, and found that parents of children with externalizing behaviors used significantly more verbal and corporal punishments. However, the researchers found that parents of children with externalizing problems reported using the same amount of positive parenting levels as parents of children without externalizing problems. Shaw et al. (2000) stated that parents that use high levels of coercive parenting have higher levels of child mistrust and noncompliance. Keller and Fox (2009) found that children's frequent and intense parent-reported problem behaviors were associated with higher levels of parent corporal and verbal discipline, similar to the findings of Nicholson et al. (2005). Therefore parents can differ in their parenting behaviors dependent upon their children's behaviors.

Parents of children with special needs may behave differently than parents of children that are typically developing. Sperling and Mowder (2006) reported that parents of preschool children with special needs considered children's general welfare and protection as well as sensitivity as significantly more important parenting behaviors than children with typical needs. Furthermore, parents of children developing typically mentioned that educating their children was the most important parent behavior. According to Rees, Strom, Wurster, and Golman (1984), parents of children with intellectual disability, down syndrome, or seizure disorder were significantly more likely to want to control their children's behavior and less likely to encourage creative play compared to parents of children without disabilities. Roach, Orsmond, and Barratt (1999) report that parents of children under five that have been diagnosed with down syndrome reported more stress due to child characteristics of distractibility and demandingness as well as parental characteristics of health, depression, and perceived parental competence when compared to socioeconomic status matched parents of preschool children developing typically. The current study, therefore, hypothesized that parents of children with developmental disabilities will differ from parents of children that are typically developing in terms of parent management behaviors (Rees et al., 1984).

Parent Management Behaviors

Parent behaviors, especially parent management behaviors, can be seen with a bioecological model and supports a bidirectional relationship between children and parent's behaviors. Children's behaviors evoke a response from parents, such as positive parenting, or parents can preemptively behave to reduce the likelihood of children's negative behaviors by using strategies such as limit setting or proactive parenting. Children's behaviors evoke responses from parents and parents' behaviors impacts child development and future behaviors.

Furthermore, Burbach et al. (2004) concludes that parents significantly impact their children's environment and therefore contribute to the maintenance or extinction of challenging behaviors. A collection of parent behaviors that have been implemented by parents in reaction to or to prevent the likelihood of children's challenging behaviors includes parent management behaviors. As defined by McEachern et al. (2012), parent management includes three behaviors; limit setting, supporting positive behaviors, and proactive parenting, which will be described in detail in the following sections.

The first parent management behavior is limit setting. Limit setting involves letting children know of clear rules and acceptable behaviors. If children do not adhere to limits established and participate in defiant behaviors, than parents can add discipline or consequences due to the child's noncompliance. When parents follow through and make sure their child follows the rules they have set most of the time, then parents are demonstrating limit setting. According to Lengua, Honorado, and Bush (2007), high levels of limit setting in mothers were associated with higher levels of effortful control and social competence in children aged 33 to 40 months. LeCuyer (2014) found that teaching-based maternal limit setting, making clear limits and directives for children while using reasoning or distractions and teaching children about appropriate social behaviors, was the most commonly utilized parent behavior in both African American and European American mothers of children with 36 month old children. Therefore, limit setting is a commonly implemented parenting behavior that is associated with more positive children's behaviors.

The second parent management behavior is supporting positive behaviors, also called positive parenting in the following study. This behavior uses positive reinforcement, often as praise, when children act in a desired and appropriate way to change and shape future behaviors

to reinforce desired behaviors (Farmer, Reinke, & Brooks, 2014; Williams et al., 2010). Henderlong Corpus and Lepper (2007) used person, process, product, and neutral praise on groups of four and five year old children as they attempted to complete an impossible puzzle. After several weeks, the puzzle was placed in the child's classroom and researchers observed which children approached the puzzle and how long the child was motivated to finish the puzzle. The results indicated that children from all three types of praise conditions, including person, process, and product, were highly motivated to finish the puzzle compared to children in the neutral praise condition (Henderlong Corpus & Lepper, 2007). Therefore praise, in all forms, can be effective in promoting successful and positive behaviors in preschool children.

The third parent management behavior is proactive parenting. Proactive parenting is when "caregivers preemptively anticipate problem behaviors and work to structure up situations to avoid problematic behaviors" (McEachern et al., 2012, p. 4). Parents that provide their children with clear choices to decrease the likelihood of temper tantrums or parents who prepare their children to be capable to handle obstacles and adversity are practicing proactive parenting. The intervention, *Helping Our Toddlers, Developing Our Children's Skill*, implemented by Williams et al. (2010) found that parents that reinforce children's positive behaviors and parents that prevent problem behaviors have children with less frequent challenging behaviors. Williams et al. (2010) shows that positive and preemptive parenting are effecting in reducing problem behaviors in a typically developing toddler population.

The three behaviors described previously, limit setting, supporting positive behaviors, and proactive parenting will be employed as indicators of parent management behaviors throughout the study. Parent management behaviors have been associated with problem behaviors in children with and without developmental disabilities. As a result of the study

completed by McEachern et al. (2012), parents that reported higher frequency of using parent management strategies, including supporting positive behaviors, setting limits, and proactive parenting, reported their typically developing children to have lower frequency of problem behaviors. According to Roberts et al. (2003), parents of children with developmental disabilities that are exhibiting challenging behaviors, including aggression and tantrums, have lower levels of behavior problems and non-compliance after parent management behaviors are introduced. The current study therefore hypothesized that parent management behaviors will be associated with less frequent challenging behaviors for children with and without special needs (McEachern et al., 2012; Roberts et al., 2003; Williams et al., 2010).

The current study investigated the association between challenging behaviors in preschool children with and without developmental disabilities and parent management strategies, including limit setting, supporting positive behaviors, and proactive parenting. The questions of the current research study are as follows:

1. Is there a difference in frequency of challenging behaviors or prosocial behaviors of preschool children with a developmental disability or delay, based on the disability or delay category identified by their parent?
2. Is there a difference of frequency of challenging behaviors or prosocial behaviors between children with a developmental disability or delay compared to children without a development disability or delay?
3. Is there a relationship between parent management behaviors and challenging behaviors of children without developmental disabilities or delays?
4. Is there a relationship between parent management behaviors and challenging behaviors of children with developmental disabilities or delays?

5. Is there a difference in frequency of parent management behaviors between children with and without developmental disabilities?

Based upon the relevant literature, the hypotheses for the current study are:

1. There will be a difference of frequency of challenging behavior as well as prosocial behaviors between children's developmental disability or delay categorization.
2. It is hypothesized that children with a developmental disability or delay will have higher levels of challenging behaviors. It is also hypothesized that children with a developmental disability or delay will have lower levels of prosocial behaviors.
3. There will be an inverse relationship between parent management behaviors and children's challenging behaviors for preschool children developing typically.
4. There will be an inverse relationship between parent management behaviors and children's challenging behaviors in a population of preschool children with a developmental disability or delay.
5. Parents of children with developmental disabilities will differ from parents of children that are typically developing in terms of parent management behaviors.

Methods

Participants

The participants were recruited from a large preschool in Upstate New York that specializes in special education and a smaller laboratory preschool associated with a local university. The larger preschool is a not-for-profit preschool that began in 1969 and was founded by a group of parents that were looking for more individualized education. This preschool has been serving children with special needs since 1975 and continues its philosophy of acceptance

of all abilities still today. Currently, the preschool has 166 children enrolled onsite with twelve children enrolled but attending at a different location through collaboration.

Of the 166 enrolled onsite, 60 of these children have special needs and all 12 of the children enrolled through the collaboration have special needs. On site, there are 76 boys and 90 girls and the population is 66% Caucasian and the other percentage are made up of various diverse cultures. There are 27 students on site that are English Language Learners, however it is not reported how many of these children have special needs. Furthermore, the tuition of the preschool is based on a sliding scale and length of day, however children with special needs receive therapy services at the school at no cost. There are 64 full time and 35 part time staff members made up of teachers, paraprofessionals, therapists, social workers, a psychologist, support teachers and administrative personnel.

The second preschool that was contacted by the researcher is a laboratory preschool associated with a local university. The laboratory preschool has four classrooms for children ages two to five. Currently, there are 60 children enrolled, 6 with Individualized Education Plans and 4 with Individualized Family Service Plans. The children that are included in these classrooms that have special needs are placed in this laboratory school through collaboration with the first preschool mentioned. The staff at the location includes 4 full time teachers, 3 graduate assistants, 1 teaching assistant, 2 student teachers per classroom, 2 special education teachers, 4 special education aides, 1 occupational therapist, 1 physical therapist, and 2 speech therapists. There are six various cultures also represented in the students enrolled in this laboratory preschool that make up 20% of the population, as there are two Chinese children, two Turkish children, one Indonesian child, three Hispanic children, four Korean children, and one Indian child. There are 37 male students that make up 61.6% of the population, and 23 female students enrolled.

The current study reached out the parents of all of the children enrolled in both schools, 226 parents, and utilizes non-probabilistic sampling technique of convenience sample such that there is no systematic way of selecting the participants. Mailed survey return rate typically falls below 50% and online survey return rate is even lower, therefore with an expected return rate of 40% for the current survey, the expected sample size for this research was about 70 parents (Fraenkel & Wallen, 1996; Leedy & Ormrod, 2013). The return rate for the current study was 27%, as 62 parents out of the 226 that received the survey responded.

The 56 parents surveyed reported on their child's disability status and if their child met one of the three criteria, then that child was considered to be a child with a developmental disability or delay. Children's disability status was determined by parent report of the presence of an individualized family service plan (IFSP) for children below three years of age and an individualized education plan (IEP) for children three years and older. Furthermore, children were considered to have special needs if their parents reported that they do not have an IFSP or an IEP but were receiving services, such as occupational, physical, or speech therapy as well as teacher services, classroom aide, or assistive technology. Also, parents were given the option to choose from an expansive list of specific disabilities to classify their child as a child with a developmental disability or delay. If children's parents did not report their children to meet any of the previously stated criteria to be considered a child with special needs, the child was considered a typically developing child with no special needs.

The data collected by Qualtrics was downloaded as an SPSS compatible file. The original data set included 62 participants. One parent did not consent to the survey and therefore did not have any data. That individual was therefore deleted and not used in the analysis. Four other participants consented to the survey but did not complete any of the following questions and

therefore these participants were deleted and not included in the analysis. One parent filled out the parental demographic information but then did not complete any of the rest of the questions about the child demographics or the survey, and therefore was deleted and not included in analysis. No parents chose to fill out the survey with a paper and pencil format. Therefore, there were 56 total participants in the sample that were included in the following analysis.

The survey included a parent demographic information section as well as a parent reported child demographic section. A majority of the parent demographic information is demonstrated in the table below (Table 1). For the sample as a whole, the most commonly reported annual family income reported made up 27% of the sample at \$100,001 to \$150,000. 9 parents reported an annual family income above \$150,001, 12 parents reported \$80,001 to \$100,000, 9 parents reported \$60,001 to \$80,000, 4 parents reported \$40,001-\$60,001, 4 parents reported \$20,001-\$40,000, and 2 parents reported an annual family income less than \$20,000. The highest level of education reported by parents was a Master's degree, as 24 parents reported having this level of education. There were 15 parents reported to have attained a Bachelor's degree and 8 parents that reported attaining a doctoral degree such as a PhD or EdD.

<i>Parent Demographic Information</i>			
Factor	Total Sample (n =56)	Parents of Children with Disabilities (n= 19)	Parents of Children without Disabilities (n= 37)
Age	36.8 years	37.3 years	35.4 years
Gender			
Male	9 (16%)	2 (11%)	7 (19%)
Female	46 (84%)	16 (89%)	30 (81%)
Parent-Child Relationship			
Biological Father	9 (16%)	2 (10.5%)	7 (19%)
Biological Mother	46 (82%)	16 (84%)	30 (81%)
Adoptive Mother	1 (2%)	1 (5%)	0 (0%)

Marital Status			
Married, first time	51 (91%)	16 (84%)	35 (94%)
Separated	1 (2%)	1 (5%)	0 (0%)
Living with partner	3 (5%)	2 (11%)	1 (3%)
Steady Relationship	1 (2%)	0 (0%)	1 (3%)
Race/Ethnicity			
White	48 (86%)	16 (84%)	32 (86%)
African American	1 (2%)	0 (0%)	1 (3%)
Hispanic	3 (5%)	2 (10.5%)	1 (3%)
Turkish	1 (2%)	0 (0%)	1 (3%)
Asian American	3 (5%)	2 (10.5%)	1 (3%)
International/Non American	1 (2%)	0 (0%)	1 (3%)
Employment Status			
Full Time	30 (54%)	9 (48%)	21 (57%)
Part Time	14 (25%)	3 (16%)	11 (29%)
Student	4 (7%)	1 (5%)	3 (8%)
Out of work	1 (2%)	1 (5%)	0 (0%)
Stay at home caregiver	9 (16%)	5 (26%)	6 (16%)

Parents of children with special needs and parents of children without developmental disabilities or delays were then analyzed separately and the demographic statistics are reported in the table above (Table 1). An independent samples t-test was conducted comparing the demographic information of parents of children with and without developmental disabilities. There was a significant difference in terms of highest education attained for parents of children with developmental disabilities ($M = 5.32$, $SD = 1.25$) and parents of children without developmental disabilities ($M = 6.05$, $SD = 1.20$; $t(54) = -2.149$, $p = .03$, two-tailed). Parents of children with special needs reported 6 parents achieving bachelor's degrees and 7 parents achieving master's degrees. Comparatively, parents of children without developmental disabilities or delays reported 9 parents with bachelor's degrees and 17 parents with master's degrees. Furthermore, parents of children with disabilities only reported 1 parent that received a professional degree such as a medical degree and 1 parent that received a PhD, however parents of children without disabilities reported 2 parents with professional degrees and 7 parents with a

PhD. There were no other significant differences in terms of demographic information between parents of children with and without developmental disabilities.

Parents also reported demographic information on their children. Parents reported 31 males and 25 female students enrolled in preschool, and one parent preferred not to answer about their child's gender. Parents reported child age in terms of years and months, and the researcher converted the data to months for consistency in format when running statistics. Two parents did not report their child's age. The minimum age for children enrolled in preschool was 22 months, or one year and 10 months, and the maximum age was 66 months, or 5 years and 6 months. The mean age of the child was 51 months, or 4 years and 3 months old with a standard deviation of 10 months. Independent samples t-tests were used to determine if there was any significant differences in age or gender of children with and without developmental disabilities, however there were no significant differences in demographic information for children. Demographic information about both populations as well as the population altogether is included in Table 2.

<i>Child Demographic Information</i>			
Factor	Total Sample (n =56)	Children with Disabilities (n= 19)	Children without Disabilities (n= 37)
Age	51 months	52 months	51 months
Gender			
Male	31	13 (68%)	18 (49%)
Female	25	6 (32%)	19 (51%)

Of the 56 children that parents reported on, 19 children met the conditions to be considered children with a developmental disability or delay by fulfilling one of three criteria. In the first category, 18 children receive services from the preschool or another agency. Specifically, parents reported that their children participate in the following services: 17 occupational therapy,

15 physical therapy, 16 speech or language therapy, 3 assistive technology supports in the classroom, 9 special education teacher services, 5 one on one aide and 1 music therapy. For the second criteria, 15 children were reported to have an Individualized Education Plan, 4 children were reported to have an Individualized Family Service Plan, and 2 parents were unsure if their children had a plan in place. In terms of specific disorders, the final criteria, parents identified 15 children as having a single or multiple developmental disability or delay. Seven of those 15 children were reported to have more than one developmental disability or delay. These children have the following combinations: speech or language impaired and sensory processing disorder; Attention Deficit Disorder and/or Attention Deficit Hyperactivity disorder and sensory processing disorder; trisomy 21 or down syndrome and intellectual disability; hearing and visually impaired; sensory processing disorder and autism; autism and speech or language impaired; and visually impaired, traumatic brain injury, speech or language impaired, seizure disorder, hearing impaired, and cerebral palsy. There were also 2 children reported to have been premature births, 1 child reported as speech or language impaired only, 2 children reported as having only Autism Spectrum Disorder, 1 child identified with hearing impairments, 1 child with delayed fine motor skills, and 1 child whose disability status was to be determined. The most common differing ability that was represented in the sample is speech or language impaired and the second most common was Autism Spectrum Disorder. Children were considered children with special needs if they met the following criteria, received services from the preschool, obtained an IEP or IFSP, or were reported by the parents to have a developmental disability. Therefore, there were 19 total children that met the criteria to be considered special needs children and 37 children are considered children that do not have a developmental disability or delay.

Factor	Present	Absent
IEP	15 (27%)	41 (73%)
IFSP	4 (7%)	52 (93%)
Attends Therapy	18 (32%)	38 (68%)
Developmental Disability Identified	15 (27%)	42 (75%)
Single Disability	8 (14%)	49 (87.5%)
Multiple Disabilities	7 (12.5%)	49 (87.5%)

Note. 19 total children were considered to be children with a developmental disability and 37 children were considered to be children without a developmental disability.

Procedure

The current study was carried out using both an online survey and paper and pencil format, distributed to families enrolled in two preschools in upstate New York that have toddler and preschool classrooms and specializes in special education. The survey was created using Qualtrics software and a link given to the parents of children through e-mail. The first school sent out the email to parents on April 27, 2016 with a reminder email sent out on May 16. The second school was on spring break at the time and therefore parents received the email on May 3 and a reminder email was sent out to parents on May 16. The survey was closed on May 20. Therefore the survey was available to possible participants at the first school for 3 and a half weeks and the second school for three weeks due to the school being closed for spring break. The administration at the preschools sent out an e-mail to all of the parents at the schools. The cover letter, a message from the school, and the link to the survey was included in the e-mail. The administration of both schools also sent out the email to the teachers to make teachers aware of the study as well as ask teachers for assistance in encouraging families to participate. Pencil and paper copies of the cover letter, message from the school, consent form, demographic form and

survey questions were made available for parents who did not have e-mail address or wished to fill out the survey in this manner. Both methods were used to increase the sample size given the low expected return rate of the survey methods (Fraenkel & Wallen, 1996; Leedy & Ormrod, 2013). To prevent duplication of submissions, where parents could potentially complete the pencil and paper survey as well as the online survey, there was an announcement cover page added to both forms to remind parents that only one response was allowed per family. The survey was kept entirely anonymous and confidential by the researcher and those involved in the research process. The names of parents and children were not recorded and the information was not used to trace responses back to particular students or their families. Administration for the schools also requested a short email about the results of the study, which was sent out to parents on June 5 describing some statistical results of the study and thanking parents for their participation. An email will also be sent out to parents with the final draft of the entire project sent to parents who wish to read about the paper in more detail when completed and approved.

Raffle. After parents filled out the questionnaire, parents were redirected to a new survey to enter their email address into a raffle. The raffle contained a family fun pack of tickets to the local zoo. If parents filled out the survey in the pencil and paper format, then parents tore off the last page with their email address written in and handed this paper in to the front desk of the school. All emails were included in a large bowl together, those recorded electronically then printed and those collected at the front desk, and one family was drawn at random to win the raffle.

Measures

Demographic variables. Parents were asked to fill out a survey of demographic information upon signing the consent form. The demographic information asked parents for

information about their children that are attending the preschools. First, the age and gender of the child attending the school was collected. In addition, parents were asked about the status of the child's disability with the previously mentioned criteria. Second, the parent was asked for demographic information about themselves as well as their family. Parents were asked for their sex, employment status, annual family income, degree attained, race, age, relationship status and relationship to the child. These confounding and extraneous variables were measured in the demographic section because these variables may affect the dependent variable and must be controlled for. The parent's race (Gross, Sambrook & Fogg, 1999), socioeconomic status, marital status, education, employment and child's gender and age (Burbach et al., 2004; Holtz, Fox & Meurer, 2015) were controlled for in the analysis because these have been found to specifically influence children's challenging behaviors.

Children's challenging behaviors. The Early Childhood Behavior Screen (see Appendix B), developed by Holtz and Fox (2012), asked parents to evaluate their child's behaviors from the past week. The scale was created with parents rating how often they witnessed their children's behaviors on a three-point scale of often, sometimes, and almost never, however the researcher changed the scale to a frequency Likert scale of 1 to 5, from never to always, to be consistent with the PARYC. The researcher also expanded the time of reference from a week to a month to also be consistent with the PARYC. There are twenty behaviors listed and upon exploratory factor analysis completed by Holtz and Fox (2012), the scale was divided into two sub-scales, challenging behaviors and prosocial behaviors. Examples of challenging behaviors measured include temper tantrums, hitting others, and refusing to go to bed at night. Listening to parents, plays well with others, and cooperates in getting dressed are examples of prosocial behaviors. The researcher added five items to the scale, which included goes to sleep easily, eats

various foods, potty trained well, listens to others, and plays well with siblings. Any primary caregiver or parent could have filled out this scale. The original reported reliability of the Early Childhood Behavior Screen was .87 and .92 for challenging and prosocial behavior subscales, respectively (Holtz & Fox, 2012). For the current study, the Cronbach's Alpha for the challenging behavior scale as a total scale was .78, which is above .7 and considered acceptable (Pallant, 2013). The Cronbach's Alpha for the prosocial scale with the five items added by the researcher was .73 and also considered acceptable.

Parent management behaviors. The Parenting Young Children (PARYC): Self-Report Parenting Measure (see Appendix C) was developed by McEachern et al. (2012) to measure parenting behaviors over the last month in parents of young children. The PARYC was divided into three sections, supporting good behavior, setting limits, and proactive parenting. Each section had seven questions each for a total of twenty-one questions. Each question asked parents to rate how often they engaged in specific examples of each management behavior with their children in the last month. The original scale used a Likert scale of 1 to 7, however the researcher changed the scale to a frequency Likert scale of 1 to 5, from never to always, to be consistent with the Early Childhood Behavior Screen. This self-report measure should have taken parents less than 5 minutes to fill out online.

The sample size of the current study did not meet the recommended number of 150 participants, according to Pallant (2013), and therefore exploratory factor analysis was not completed on the Parenting Young Children (PARYC): Self-Report Parenting Measure in order to confirm that the items all load onto the three factors described in this study for the population of children with developmental disabilities or delays as this measure was validated with typically developing children. For this parent management scale, the seven items corresponding to limit

setting, positive parenting, and proactive parenting were summed together to create total scores for each of the individual parent management strategies. The three total scores were then summed together to create a total parent management score for each parent. These scores were divided by the number of items summed to create the scale so that the output was similar to the original Likert scale. The three scales, proactive parenting, positive parenting, and limit setting, were used independently for multiple regression analysis but were summed together into a total parent management behavior score for t-tests described in the upcoming sections.

For the Parenting Young Children (PARYC): Self-Report Parenting Measure, the original author's reported the Cronbach's alphas as .78, .79, and .85 for positive behavior items, setting limits, and proactive parenting, respectively (McEachern et al., 2012). In the current study, the Cronbach's alphas were .703, .626, .699, and .843 for positive parenting, limit setting, proactive parenting, and total parent management scales, respectively. In regard to limit setting, the question, stick to your rules and not change your mind, would increase the Cronbach's alpha from .626 to .652 if removed. Furthermore, the item about preparing your child for a challenging situation (such as going to a toy store or starting a new toy) would increase the Cronbach's alpha of the proactive parenting scale from .699 to .705 if removed. Due to the removal of this item bringing the scale into acceptable range for Cronbach's alpha, this item was removed from the total proactive parenting scale. The updated total proactive parenting scale with this one item removed was included in the following analyses.

Results

Preliminary Analysis

Descriptive statistics were completed for the total challenging behaviors, total prosocial behaviors as well as the total parent management behaviors individually and as one total score. The mean scores for the total sample as well as separately for children with developmental

disabilities and children without developmental disabilities are included in Table 3 below.

Independent sample t-tests were used to determine the significant differences between the means reported for children with and without developmental disabilities and these differences are noted as well in Table 3. As recommended by Pallant (2013), the data was also tested for normality of the distribution of scores, using histogram graphs to determine kurtosis and skewness as well as a Kolmogorov-Smirnov test for each group. Normality is indicated by a non-significant Kolmogorov-Smirnov value (p-value that is more than 0.05) as well as the similarity of the shape of the distribution of scores on the histogram compared to a bell curve (Pallant, 2013). The Kolmogorov-Smirnov statistic for the total challenging behavior score was .090 and .200 for the total prosocial scale, indicating a normal distribution of scores. For the parent management behaviors, the Kolmogorov-Smirnov statistic was .001, .001, and .041 for limit setting, positive parenting, and proactive parenting respectively. The scales violate the assumption of normality, however closer analysis of the normal Q-Q Plots and histograms indicate that the data included in these scales are distributed normally. The Kolmogorov-Smirnov statistic for the total parent management scale, which includes all of the previously mentioned scales summed together, was .200, which indicates a normal distribution of scores for this total scale.

Variable	Total Sample (n =56)	Children with Disabilities (n= 19)	Children without Disabilities (n= 37)	p
Total Prosocial Behaviors	4.09	3.95	4.17	.037*
Total Challenging Behaviors	2.10	2.15	2.08	.596
Total Positive Parenting	3.91	3.97	3.88	.419
Total Limit Setting	3.83	3.91	3.79	.308
Total Proactive Parenting	3.91	4.03	3.85	.159
Total Parent Management	3.88	3.96	3.84	.223

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Results

Hypothesis 1. For research question one, determining if there was a difference in the continuous variables of frequency of challenging behaviors as well as prosocial behaviors between two groups of children's developmental disability or delay category identified by their parent in the demographic information, the researcher used an independent samples t-test. The current study did not obtain enough children to represent each listed developmental disability or delay, therefore individual developmental disabilities were not be used in the analysis. Furthermore, the two groups being compared are children with more than one developmental disability or delay and children identified with only one developmental disability or delay. There are seven children with multiple disabilities and eight children with a single disability identified by parents. The results from the Levene's test for equality of variances were used to determine if the data set was appropriate for an independent samples t-test. Levene's test was more than .05 for both challenging behaviors and prosocial behaviors and therefore the equal variances assumed row was used (Pallant, 2013). There was no significant difference in scores for multiple disabilities ($M= 2.21$, $SD= .380$) or single disability ($M= 2.10$, $SD= .378$; $t(13)= .582$, $p= .57$, two-tailed) in terms of challenging behaviors. There was also no significant difference in scores for multiple disabilities ($M= 3.97$, $SD= .384$) or single disability ($M= 4.06$, $SD= .398$; $t(12)= -.433$, $p= .67$, two-tailed) in terms of prosocial behaviors. Therefore the hypothesis that there would be a difference within the population of special needs children was not supported in the current study.

Hypothesis 2. To investigate research question two comparing children with and without a developmental disability or delay in terms of frequency of challenging behaviors and prosocial

behaviors, the researcher ran an independent samples t-tests. When comparing children with and without developmental disabilities in terms of the challenging behaviors, the Levene's test for equality of variances was more than .05, determining that the data set was appropriate for an independence samples t-test due to equal variances assumed. There was not a significant difference in scores for special needs children ($M= 2.15$, $SD= .385$) and children without a developmental disability or delay ($M= 2.08$, $SD= .474$; $t(51)= .534$, $p= .59$, two-tailed) in terms of challenging behaviors. Therefore the current study rejects the hypothesis that children with a developmental disability or delay have more frequent challenging behaviors compared to children without a developmental disability or delay.

There was, however, a significant difference in scores for special needs children ($M= 3.95$, $SD= .389$) and children without a developmental disability or delay ($M= 4.17$, $SD= .343$; $t(51)= -2.141$, $p= .03$, two-tailed) in terms of prosocial behaviors. The magnitude of the differences in the means (mean difference = $-.223$, 95% CI : $-.433$ to $-.014$) was moderate (eta squared = $.08$). The current study supports the hypothesis that children with developmental delays have significantly less prosocial behaviors than their peers without developmental disabilities.

A one way between groups analysis of variance was conducted to explore the impact of age on levels of challenging behaviors and prosocial behaviors. Participants' children were divided into three groups according to the parent reported age, in months (group 1: 47 months or less; group 2: 48 to 57 months; group 3: 57 months and above). There was not a statistically significant difference at the $p < 0.05$ level in challenging behaviors of children between the three age groups: $F(2, 48) = 1.48$, $p = .237$. There was also not a statistically significant difference at the $p < 0.05$ level in prosocial behaviors of children between the three age groups: $F(2, 48)$

= .408, $p = .667$. Post hoc comparisons using the Tukey HSD test indicated no statistically significant differences between any of the three groups for either challenging or prosocial behaviors.

Hypothesis 3. Multiple regression was used to explore relationships between variables as well as the predictive ability of continuous independent variables on continuous dependent variables (Pallant, 2013). For research question three that examined the association between the continuous independent variable of parent management behaviors including limit setting, proactive parenting and positive parenting and children's challenging behaviors in children without developmental disabilities, the researcher used multiple regression. A standard multiple regression was used and each of the independent continuous variables, proactive parenting, positive parenting, and setting limits, were introduced simultaneously to determine their contribution on the one continuous dependent variable, child total challenging behaviors. The current study did not meet or exceed the sample size needed for running a standard multiple regression with three continuous independent variables, which is 74, however the researcher completed the standard multiple regression with this limitation in mind (Pallant, 2013). First, the correlations between the variables in the Correlations table were above .3 and below .7, which ensures that all variables should be retained in the analysis (Pallant, 2013). The correlations are included in Table 5. Next, Tolerance and Variance inflation factor were determined to be more than 0.1 and lower than 10, respectively, which ensures that there were no problems with multicollinearity (Pallant, 2013). The p-p plot as well as the scatterplot were used to determine that linearity, outliers, and normality were acceptable.

Multiple linear regression was calculated to predict challenging behaviors of preschool children without developmental disabilities based on parent management strategies

independently, including limit setting, proactive parenting, and positive parenting. A significant regression equation was found, $F(3, 29) = 4.088$, $p = .015$ with an R^2 of .297 and Adjusted R^2 of .224, such that the parent management strategies predict 22% of children's challenging behaviors for children without developmental disabilities. Challenging behaviors in preschool children without a developmental disability or delay was primarily predicted by limit setting, as the beta column of the standardized coefficients determined that limit setting had the strongest contribution separately, while controlling for the contribution of the other variables ($beta = .487$, $p = .026$). Limit setting therefore explains 13.32% of the variance in typically developing children's challenging behaviors. Proactive parenting and positive parenting behaviors, on the other hand, are not statistically significant, this could be due to overlap with other the other independent variables because the items may be very similar and therefore are not statistically distinguishable (Pallant, 2013). The current study supports the hypothesis that there would be an inverse relationship between parent management behaviors and children's challenging behaviors for preschool children developing typically. Furthermore, the current study supports that limit setting has an independent, significant impact on children's challenging behaviors.

Table 5			
<i>Standard Multiple Regression Correlations for Challenging Behaviors of Children Developing Typically</i>			
Pearson Correlation			
	<u>Total Challenging Behaviors</u>	<u>Significance</u>	<u>N</u>
Total Challenging Behaviors	1		34
Total Limit Setting	-.541	.001**	33
Total Positive Parenting	-.394	.012*	33
Total Proactive Parenting	-.303	.041*	34

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Hierarchical multiple regression was then conducted for research question three that determined how much parent management behaviors still contributed to typically developing

children's challenging behaviors after controlling for additional variables. Previous research indicated that parent's age, gender, annual socioeconomic status, marital status, education, and employment as well as child's gender and age have influenced the frequency of children's challenging behaviors (Gross et al., 1999; Holtz et al., 2015). When entering variables into blocks to begin the hierarchical multiple regression, the previously mentioned demographic variables were entered first in order to statically control for these variables.

Hierarchical multiple regression was used to assess the ability of the parent management behaviors to predict child challenging behaviors of children developing typically after controlling for the influence of child age, child gender, parent age, parent gender, relationship between parent and child, highest level of education of parent, annual family income, and current relationship status of caregiver. The previously mentioned demographic variables were included in block one and explained 19% of the variance in children's challenging behaviors. After entering the parent management behaviors in block two, the total variance explained by the model as a whole was 37%, $F(10, 22) = 1.311$, $p < .285$. The three measures explained an additional 18% of the variance in children's challenging behaviors, after controlling for parent and child demographic information, R square change = .181, F change (3, 22) = 2.118, $p < .127$. Therefore, when considering the demographic variables included in block one, the equation of limit setting, proactive parenting, and positive parenting predicting children's challenging behaviors for children without special needs is no longer significant. In the final model, limit setting was no longer statistically significant but did record a higher beta value ($beta = -.501$, $p = .072$) than proactive parenting ($beta = .070$, $p = .777$) or positive parenting ($beta = -.036$, $p = .907$), which were not statistically significant. None of the demographic information included in the analysis had an unique, significant contribution to children's challenging behaviors for

children without developmental disabilities. The relationship between total parent management behaviors and total challenging behaviors for children that are developing typically was also investigated with a Pearson product-moment correlation coefficient. There was a strong, negative correlation between the two variables, $r = -.476$, $n = 35$, $p = .006$.

Table 6		
<i>Hierarchical Regression for Challenging Behaviors of Children without Developmental Disabilities</i>		
	β	p
Limit Setting	-.501	.072
Proactive Parenting	.070	.777
Positive Parenting	-.036	.907

Note. R square change = .181, F change (3, 22) = 2.118, $p < .127$
 * $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 4. Multiple and hierarchical regression were then completed for research question four, regarding the parent management behaviors and challenging behaviors of children with special needs. A nonsignificant regression equation was found, $F(3, 14) = .576$, $p = .640$ with an R^2 of .110 and Adjusted R^2 of $-.081$. Challenging behaviors in preschool children with a developmental disability or delay were not primarily predicted by parent management behaviors of limit setting ($beta = -.289$, $p = .403$), proactive parenting ($beta = .151$, $p = .661$), or positive parenting ($beta = -.189$, $p = .529$). The parent management behaviors predict 8% of the variance in children with special needs challenging behaviors. Hierarchical multiple regression was used to assess the ability of the parent management behaviors to predict child challenging behaviors of special needs children after controlling for the same previously mentioned parent and child demographic variables. The demographic variables were included in block one and explained 58% of the variance in children's challenging behaviors. After entering the parent management behaviors in block two, the total variance explained by the model as a whole was 59%, $F(11, 4)$

= .528, $p = .818$. The three measures explained an additional 1.6% of the variance in children's challenging behaviors, after controlling for parent and child demographic information, R square change = .016, F change (3, 4) = .052, $p = .982$. In the final model, none of the parent management behaviors were statistically significant, including limit setting ($beta = .184$, $p = .779$), proactive parenting ($beta = .024$, $p = .965$) or positive parenting ($beta = -.282$, $p = .735$). The relationship between total parent management behaviors and total challenging behaviors for special needs children was also investigated using Pearson product-moment correlation coefficient. There was a non-significant correlation between the two variables, $r = -.246$, $n = 18$, $p = .325$. Therefore the hypothesis of the current study that parent management behaviors are associated with children's challenging behaviors in a population of children with special needs did not find support in the current study.

Table 7

Hierarchical Regression for Challenging Behaviors of Children with Developmental Disabilities

	β	p
Limit Setting	.184	.779
Proactive Parenting	.024	.965
Positive Parenting	-.282	.735

Note. R square change = .211, F change (3, 6) = .735, $p = .568$

* $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 5. To investigate research question five comparing children with and without a developmental disability or delay in terms of the frequency of parent management behaviors, the researcher completed an independent samples t-test. The results from the Levene's test for equality of variances determined the data set was appropriate for an independent samples t-test, as Levene's test was more than .05 and equal variances were assumed (Pallant, 2013). There was no significant difference in scores for special needs children ($M = 3.96$, $SD = .385$) or children

developing typically ($M= 3.84$, $SD= .343$; $t(51)= 1.178$, $p= .244$, two-tailed) in terms of total parent management score. The magnitude of the differences in the means (mean difference = .122, 95% *CI*: -.086 to .331) was small ($\eta^2 = .02$). The current study hypothesized that children with a developmental disability or delay would have a different level of parent management behaviors compared to their peers without developmental disability, however the data in the current study did not support this hypothesis.

Discussion

The current study demonstrates that children who have special needs do not have more challenging behaviors compared to children that are developing typically, inconsistent with the literature (Baker et al., 2003; Feldman et al., 2000; Green et al., 2004; Keller & Fox, 2009; Roberts et al., 2003). However children with developmental disabilities or delays were found to have significantly lower prosocial behaviors compared to their peers without developmental disabilities, which supports the current research available (Fenning, Baker, & Juvonen, 2011). There were not enough children with special needs to statistically represent each disability or developmental delay, however it was found that children with a single disability and children with multiple disabilities do not differ in terms of challenging behaviors or prosocial behaviors. There was no significant difference between how much parents use parent management behaviors for children with special needs or children developing typically. There was a significant influence of parent management behaviors on children's challenging behaviors for children without a developmental disability or delay, but these parent management behaviors did not have an impact for children with special needs. There was a strong negative correlation and significant multiple regression equation for challenging behaviors in typically developing children and the parent management strategies, indicating that parent management strategies are

associated with children's challenging behaviors in a sample of children developing typically. These parent management strategies, however, are not associated with challenging behaviors in children with special needs.

Challenging Behaviors

The first major finding of the current study is that children with developmental disability or delay do not have more significant challenging behaviors, according to parental report, than children developing typically. This finding is inconsistent with the current research available. Green et al. (2004), found a high level of aberrant behaviors in preschoolers with developmental disabilities and Rzepecka et al. (2011) reported that children with both intellectual disability and autism spectrum disorder have clinically significant behavior and sleep problems. Furthermore, parents of preschool children under age five that were diagnosed with down syndrome reported more problems with mealtimes and food as well as everyday handling compared to parents of preschool children under five that did not have a previous diagnosis (Roach et al., 1999). Roberts et al. (2003) also is incongruent with the current result that children with developmental disabilities or delay do not display more challenging behaviors compared to their typically developing peers in a review of articles by stating that children with disabilities not only have more challenging behaviors, but these behaviors are also exhibited earlier and last longer than their peers. Therefore the results from the current study do not support the literature that indicates that children with special needs exhibit more challenging behaviors than children that are developing typically, according to parent report.

Another finding of the study was that children with developmental disabilities or delays have significantly lower levels of prosocial behaviors than their peers developing without developmental disabilities or delays. This finding is consistent with the current research that says

children with developmental disabilities use less prosocial strategies compared to their peers developing typically (Fenning, Baker, & Juvonen, 2011). Further research needs to be conducted on children with developmental disabilities' social skills, language development, and sensory profile when analyzing prosocial behaviors to determine if children's social skills impact the development of these prosocial behaviors.

It is important to consider the disability itself as a factor for children that have developmental disabilities and have lower levels of prosocial behaviors. According to Hoff (2014), children with autism typically have a hard time responding appropriately to indirect questions or request because they interpret the request literally. For example, if you ask a child with Autism Spectrum Disorder to toss another child a toy, he or she may physically pick up the toy and throw it. This example could be interpreted as lack of prosocial or helping behaviors, but this behavior could also come from the literal interpretation of the request by the child. Therefore the literal request interpretation associated with Autism Spectrum Disorder could be one factor in the lower levels of prosocial behaviors for children with developmental disabilities or delays found in the current study, however more research needs to be conducted to determine if literal interpretation as well as other characteristics specific to the diagnosis or disability play a role in challenging and prosocial behaviors.

The current study also contradicts research by Burbach et al. (2004) and Holtz et al. (2015) that state that challenging behaviors are higher in children that are younger. In the current sample, the minimum age was 22 months and the maximum age was 66 months, with a mean age of 51 months. The current study divided the entire sample of children, with children with developmental disabilities or delays and children without disabilities or delays both included, into three groups based on age. There was no significant difference between any of the three age

groups in terms of challenging behaviors. Therefore the current study does not support the current research that states there is a difference in challenging behaviors for children based upon their age. Additionally, there were no differences in prosocial behaviors in terms of age for the current sample.

The current study was unable to gather enough participants to be representative of each individual disability or delay in order to investigate research question one. The current study was able to distinguish between two groups within the population of children identified as having a disability or delay. Children with multiple disabilities, such that parents identified more than one disability or delay on the list available, and children with a single disability, were investigated to determine if these two groups differed in terms of challenging behaviors. The current study found that there were no significant differences between children with multiple disabilities and children with a single disability in terms of challenging behaviors or prosocial behaviors. This conflicts with current research, as Poppes, van der Putten, and Vlaskamp (2010) found that individuals with profound intellectual and multiple disabilities between the ages of 3 and 62 years of age had a higher frequency of challenging behaviors, specifically high levels of self injurious behavior such as refusing food, stereotypical behaviors such as screaming, and aggressive behaviors such as pulling at others. Therefore the current study indicates that children with a single disability can be considered in a group with children with multiple disabilities when running statistical analyses in the current study and the two groups do not need to be considered separately.

Parent Management Behaviors

Comparing parents. The current study found no significant difference between parents of children with developmental disabilities and parents of children without developmental

disabilities or delays in terms of parent management behaviors, which does not support the hypothesis for this study. Previous research indicated that parents of children with special needs would use a different amount of parent management behaviors because these parents have different values and parenting behaviors compared to parents of children without developmental disabilities (Sperling & Mowder, 2006; Rees et al., 1984; Roach et al., 1999). Therefore the current study is not consistent with the available research, as the current study did not find any significant differences in use of parent management behaviors between parents of children with and without developmental disabilities.

Children without developmental disability or delay. The current study found a strong, negative correlation such that more parent management behaviors are associated with lower levels of challenging behaviors for children without a developmental disability or delay. The finding that these parenting behaviors are associated with lower challenging behaviors in typically developing preschool children is consistent with the literature (Kazdin, 1997; McEachern et al., 2012; Williams et al., 2010). The current results support the findings of past literature, such as McEachern et al. (2012) that found that parents who implement higher frequency of parent management strategies reported their typically developing children to have lower frequency of problem behaviors. The current research found that the three parent management strategies, limit setting, proactive parenting, and positive parenting, together explained 18% of the variance in children's challenging behaviors even after demographic information was controlled. Therefore 18% of the frequencies of children's challenging behaviors were explained by parent management behaviors implemented by parents in the current study. The multiple regression analysis and Pearson's correlation in the current sample indicates that a child with low challenging behaviors has a parent with high parent management

behaviors, as the parent management behaviors implemented by parents may be impacting the child's challenging behaviors. It is important to note, however, that the significant regression equation that determined parent management behaviors predicted children's challenging behaviors in this population was no longer significant after demographic variables were introduced in the hierarchical regression analysis.

Furthermore, the current study indicated that the primary parent management strategy that had a unique and independent contribution to challenging behaviors in children developing typically was limit setting. The available research on limit setting indicates that limit setting is a practice used often by mothers of various races (LeCuyer, 2014) and limit setting used by mothers is associated with higher levels of effortful control and social competence in children (Lengua et al., 2007). The current research extends the current literature to support that limit setting is strongly and independently associated with challenging behaviors in children without developmental disabilities. Therefore the current research supports that making clear limits for children as well as using reasoning or distraction while teaching children appropriate social behaviors, is associated with the frequency of challenging behaviors in the population of preschool children developing without developmental disabilities or delays.

The results that parent management behaviors have a strong negative correlation with challenging behaviors in children without developmental disabilities or delays is in alignment with Bronfenbrenner's bioecological model and bidirectional process of interaction between child and parent behaviors. When a child exhibits challenging behaviors, they often evoke a response from parents, such as positive parenting, or parents preemptively act to decrease the likelihood of challenging behaviors, using proactive parenting and limit setting. In this context, parent management behaviors have an influence on the developing child and the child behaviors

influenced the parents' behaviors in a bidirectional process of interactions over time. The current study supports the bidirectional process that children's challenging behaviors evoke parent management behaviors because these behaviors were present in the current sample and parent management behaviors impact children's challenging behaviors as evidence by the strong negative correlation. Therefore the results support the bidirectional process of interaction between child and parent in the environment of the home.

The current study also supports the research by Gross, Sambrook and Fogg (1999) and Holtz, Fox and Meurer (2015) that indicates certain demographic information influences challenging behaviors in children with and without developmental disabilities or delays. The demographic variables controlled, including parent's age, gender, annual income, marital status, relationship with the child, degree attained, and employment as well as child's gender and age, explained 19% of the variance in children's challenging behaviors for children without developmental disabilities and 58% of the variance in children with special needs. Although the current sample is not the same as the previous research studies, the current research is consistent with past research that points to demographic variables influencing children's behaviors and need to be controlled for in analysis.

Children with developmental disability or delay. For the population of children with a developmental disability or delay, there was no association between parent management behaviors and challenging behaviors. The current study finds inconsistent results for the special needs population, as Roberts et al. (2003) found that the introduction of parent management behaviors for parents of children with developmental disabilities resulted in a reduction in aggression, noncompliance, and tantrums. The current study finds no association between parent management behaviors, including limit setting, proactive parenting, and positive parenting, and

challenging behaviors for special needs children, even though there is no significant difference between parents of both populations in regards to frequency of parent management behaviors.

The results that challenging behaviors of children with special needs are not associated with parent management behaviors can be viewed with Bronfenbrenner's bioecological theory of development. According to Bronstein and Lamb (2011), Bronfenbrenner's theory pays attention to the child's characteristics, as the specific behavioral and cognitive abilities of the child can impact their surrounding environments and the individuals within those environments. In the current study, the individual characteristics that determined if a child had a developmental disability or delay were significant in determining the effectiveness of parent management behaviors. Parent management behaviors, in reaction to children's challenging behaviors or in preemptive attempts to decrease challenging behaviors, are not associated with children's challenging behaviors in the current study, when the child characteristics include developmental disabilities or delays.

The bioecological theory of development also includes a bidirectional interaction between children and parent's behaviors over time. The bidirectional process of interactions over time between child and parent behaviors is only slightly supported, however, in the current research. Children with special needs are evoking responses from parents where parents are implementing parent management strategies, however the parent management strategies are not having the same influence on the developing child for the population of children with special needs.

Special needs children may require more frequent or intense parent management strategies in order to be effective. Parents of special needs children in the current study were found to be only slightly higher in the frequency of parent management behaviors compared to

parents of typically developing children, as the mean score for parents of children with special needs was 3.96 and the score for parents of children developing typically was 3.84, but the difference was not significant. However children with special needs were found to have higher frequency of challenging behaviors compared to children developing typically, however the difference was not statistically significant. Therefore, it is plausible that children with special needs require more frequent or intense parent management behaviors compared to children without developmental disability or delay to have an impact on their behavior.

Limitations and Future Research

There are various limitations to the current research. The method for the survey was to distribute a link in an email to an online survey and have the paper and pencil survey available for parents who did not have email, however no parents filled out the survey using the paper and pencil method. Therefore the sample may have not included a representative sample of parents, including parents that do not own personal computers, have access to the internet or email, or do not have the transportation to arrive to the school to pick up a copy of the survey. The current study only requested caregivers to report on children's challenging behaviors in the home but did not request a teacher report of children's challenging behaviors. There could have been differences behaviorally between teacher and parent report that was not captured in the current study but should be explored further in future research.

Another limitation to the current study was the sample of caregivers and children that was obtained. The sample was mostly made up of white, female, biological mothers. Therefore the current study may be missing cultural differences in both challenging behaviors and parent management strategies due to lack of cultural diversity. The sample contained a majority of individuals that were making \$100,001 to \$150,000 annually, attained master's degrees, were

married, and employed full time. Therefore the sample could have included a more diverse array of caregivers, races, and economic status to be representative of the community. The sample was also relatively small, there was only 56 usable participants which is only 25% of the possible population of 226 parents. Furthermore, the sample of children with special needs was very small, with only 19 children classified as having a developmental disability or delay, and these children were not representative of the entire broad spectrum of disabilities and delays that exist in the community. Analysis based on specific disability or delay could not be conducted because of the small numbers associated with each category. For example, only one individual identified as having trisomy 21 and that one individual's challenging behaviors and parent management behaviors could not be considered representative of the entire community of preschool children with trisomy 21.

Another limitation to the research is that the scale used for challenging behaviors. The scale was originally formatted in a three-point Likert scale from one to three, often, sometimes, and almost never, but was changed to a five point scale from never to always to be consistent with the other measure. Due to reformatting the scale, the Cronbach's alpha originally reported by the authors changed from acceptable to moderately acceptable. The change in Cronbach's alpha due to compressing the original scale's Likert scale is a large limitation to the methodology of the current research. Further, there was no insurance to ensure independent observations of children, as the parent email list includes all caregivers contact information. Therefore the current study could not decipher if one caregiver had already reported on a child and there is the possibility that multiple caregivers reported on the same child.

Conclusion

In spite of the limitations, this study provides useful insights in challenging behaviors in preschool children and parent management behaviors. The purpose of the current study was to investigate challenging behaviors in children with and without developmental disabilities or delays as well as parent management strategies of limit setting, proactive parenting, and positive parenting. The current investigation is inconsistent with previous literature, as the study indicated children with developmental disabilities did not have more frequent challenging behaviors than children developing typically. It was also established that children with developmental disabilities or delays had significantly lower levels of prosocial behaviors compared to their peers without developmental disabilities. Furthermore, it was determined that parent management behaviors of limit setting, proactive parenting, and positive parenting have an impact on challenging behaviors for children without developmental disabilities. The results also indicated that these strategies are not associated with challenging behaviors for children with special needs. The research also found no significant difference between parents of children with developmental disabilities and parents of children without developmental disabilities in regards to parent management behavior frequency.

The implications from the current research for the field of parenting, special education, and child and family studies are that parent management strategies are not associated with challenging behaviors in a sample of children with special needs. Therefore future research should examine alternative parenting methods with populations of children with special needs to determine if alternative strategies are correlated with challenging behaviors for this population. Furthermore, the current study supports the available research that the parent management behaviors are associated with challenging behaviors for children without developmental disabilities or delays. Additionally, the current study introduces a different perspective about

children with special needs that exhibit challenging behaviors and prosocial behaviors and that parent management behaviors are not associated with this sample's challenging behaviors.

Appendix A

Parenting Survey

Thank you for consenting to participate in my brief survey. The current study is investigating children's behaviors in preschool and parent management strategies. Please answer the following questions about yourself and your family. Your responses will be anonymous and all information will be kept strictly confidential. Your name and your child's name will not be recorded and your answers cannot be used to identify you. If you do not feel comfortable answering any portion of the survey, please feel free to refrain from responding to those questions.

Caregiver Demographic Information

Instructions: Please complete the following questions about yourself.

What is your sex?

1. Male
2. Female
3. Transgender
4. Prefer not to respond

What is your age? _____ (years at last birthday)

What is your current relationship status?

1. Single
2. In a steady relationship
3. Living with partner
4. Married for the first time
5. Remarried
6. Separated
7. Divorced
8. Widowed

What is your current employment status?

1. Employed Full Time
2. Employed Part Time
3. Full Time Student
4. Out of work and looking for work
5. Unable to work
6. Other _____

Please estimate your current annual family income to the best of your ability.

1. \$20,000 or less
2. \$20,001-\$40,000

3. \$40,001-\$60,000
4. \$60,001-\$80,000
5. \$80,001-\$100,000
6. \$100,001-\$150,000
7. \$150,001-above
8. Not sure

What is the highest level of education that you have attained?

1. High School (grades 9-12, no degree)
2. High School Graduate (or equivalent)
3. Some college (1-4 years, no degree)
4. Associate's Degree (including occupational or academic degrees)
5. Bachelor's Degree (BA, BS, AB, etc.)
6. Master's Degree (MA, MS, MSW, etc.)
7. Professional School Degree (MD, DDC, JD etc.)
8. Doctoral Degree (PhD, EdD etc.)

What Race/Ethnicity do you identify as? Please choose all that apply:

1. Africa American
2. Asian
3. Pacific Islander
4. Hispanic/Latino
5. Multiracial
6. Native American
7. White
8. Not listed (please specify) _____
9. Prefer not to respond

Child Demographic Survey

Instructions: Please answer the following questions about your child that is currently enrolled in preschool. If you have more than one child enrolled, please only refer to one child throughout the rest of the survey.

What is your relationship with your child that is currently enrolled in preschool?

1. Biological Mother
2. Biological Father
3. Grandmother
4. Grandfather
5. Step Mother
6. Step Father
7. Adoptive Mother
8. Adoptive Father
9. Primary Caregiver
10. Other Relative (Aunt, Uncle etc.)
11. Other _____

What is the age of your child that is currently enrolled in preschool? In years and months.

Age: _____ years _____ months

What is the gender of your child?

1. Male
2. Female
3. Prefer not to answer

Does your child currently receive services from the preschool or other agencies? (examples include speech, occupational, and physical therapy or teacher services etc.)

1. Yes
2. No

If Yes above: What service(s) does your child currently receive? (Please select all that apply)

1. Occupational Therapy
2. Physical Therapy
3. Speech or Language Therapy
4. Assistive Technology in the classroom
5. Special Education Teacher services
6. 1:1 Classroom Aide
7. Music Therapy
8. Play Therapy

9. Psychiatric Treatment
10. Vision Training
11. Social Skills Training
12. Other

Does your child currently have an IEP (Individualized Education Plan)?

1. Yes
2. No
3. Don't Know

Does your child currently have an IFSP (Individualized Family Service Plan)?

1. Yes
2. No
3. Don't Know

Please check the following that are associated with your child's differing ability. Please check all that apply.

Agensis of the Corpus Callosum		Hearing Impairment		Fragile X Syndrome	
Cerebral Palsy		Emotional Disturbance		Seizure Disorder	
ADD/ADHD		Traumatic Brain Injury		Sensory Processing Disorder	
Premature Birth		Williams Syndrome		Attachment Delay	
Trisomy 21 (Down Syndrome)		Intellectual Disability		To Be Determined	
Speech or Language Impaired		Developmental Delay (ages 3-5 only)		Don't Know	
Autism Spectrum Disorder		Visual Impairment		Not Listed- Please List	

Appendix B
The Early Childhood Behavior Screen (Holtz & Fox, 2012)

Child Behavior Survey

Instructions: Listed below are common behaviors of toddlers and preschoolers. Think about your child's behavior over the past month *in your home context*, and rate how often you observed each behavior.

Your Child.....

How often does the behavior occur?

1. Hits other	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
2. Eats with a spoon	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
3. Throws things at others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
4. Listens to you	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
5. Has temper tantrums	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
6. Breaks things	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
7. Is angry	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
8. Hurts others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
9. Understands you	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
10. Does what you ask	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
11. Plays well with others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
12. Sleeps through the night	1	2	3	4	5

	Never	Rarely	Sometimes	Often	Always
13. Takes toys away from others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
14. Shares toys	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
15. Helps others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
16. Bothers others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
17. Eats well	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
18. Cooperates in getting dressed	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
19. Refuses to go to bed at night	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
20. Kicks others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
21. Goes to sleep easily	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
22. Eats various foods	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
23. Potty trained well	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
24. Listens to others	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
25. Plays well with siblings	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always

Appendix C
Parenting Young Children (PARYC): Self-Report Parenting Measure (McEachern, Dishion,
Weaver, Shaw, Wilson, & Gardner, 2012)

Parenting Practices Survey

Instructions: During the last month, rate how often you are able to engage in each of the following parenting strategies with your child.

1. Play with your child in a way that was fun for both of you?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
2. Stand back and let your child work through problems s/he might be able to solve?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
3. Invite your child to play a game with you or share an enjoyable activity?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
4. Notice and praise your child's good behavior?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
5. Teach your child new skills?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
6. Involve your child in household chores?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
7. Reward your child when s/he did something well or showed a new skill?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
8. Stick to your rules and not change your mind?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
9. Speak calmly with your child when you were upset with him or her?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
10. Explain what you wanted your child to do in clear and simple ways?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
11. Tell your child what you wanted him or her to do rather than tell him/her to stop doing something?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always

12. Tell your child how you expected him or her to behave?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
13. Set rules on your child's problem behavior that you were willing/able to enforce?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
14. Make sure your child followed the rules you set all or most of the time?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
15. Avoid struggles with your child by giving clear choices?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
16. Warn your child before a change of activity was required?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
17. Plan ways to prevent problem behavior?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
18. Give reasons for your requests?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
19. Make a game out of everyday tasks to your child followed through?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
20. Break a task into small steps?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always
21. Prepare your child for a challenging situation?	1 Never	2 Rarely	3 Sometimes	4 Often	5 Always

Appendix D
Parent Training History

Have you ever received formal parent education such as parenting seminars or parenting classes?

1. Yes
2. No

Have you ever reached out to teachers or resources for training on parenting strategies?

1. Yes
2. No

Would you be interested in parent education or training?

1. Yes
2. No

Please indicate any additional topics or parenting strategies you would like to learn more about, if any.

1. Meal time and feeding difficulties
2. Nightly routine and sleeping difficulties
3. Peer and sibling relationships
4. Child non compliance
5. Child aggression
6. Other: _____

Appendix E
Raffle Entry

Please record your email below to be entered into a chance to win the family raffle. The winner will be contacted through email towards the end of the school year. Please tear or cut your email from the bottom of this page and enter the slip of paper to the front desk at your school.

Your email is kept separate from the survey therefore will not be associated with your answers to the previous survey in any way.

Hand in your email address for a chance to win a family zoo pass, with two adult and two child tickets, for the Rosamond Gifford Zoo in Syracuse NY!

Thank you again for taking the time to complete this survey!

E-mail: _____

References

- Baker, A. E. Z., Lane, A., Angley, M. T., & Young, R. L. (2007). The relationship between sensory processing patterns and behavioural responsiveness in autistic disorder: A pilot study. *Journal of Autism and Developmental Disorders, 38*, 867-875. doi: 10.1007/s10803-007-0459-0
- Bornstein, M. H., & Lamb, M. E. (2011). *Developmental science: An advanced textbook* (6th ed.). New York, NY: Psychology Press.
- Botting, N. & Conti-Ramsden, G. (2000). Social and behavioural difficulties in children with language impairment. *Child Language Teaching and Therapy, 16* (2), 105-120.
- Bretherton, L., Prior, M., Bavin, E., Cini, E., Eadie, P., & Reilly, S. (2014). Developing relationships between language and behaviour in preschool children from the early language in victoria study: Implications for intervention. *Emotional and Behavioural Difficulties, 19* (1), 7-27.
- Burbach, A. D., Fox, R. A., & Nicholson, B. C. (2004). Challenging behaviors in young children: The father's role. *The Journal of Genetic Psychology, 165* (2), 169-183.
- Darling, N. (2007). Ecological systems theory: The person in the center of the circles. *Research in Human Development, 4* (3-4), 203-217. doi: 10.1080/15427600701663023
- DeVore, S., & Bowers, B. (2006). Childcare for children with disabilities: Families search for specialized care and cooperative childcare partnerships. *Infants and Young Children, 19* (3), 203-212.
- Doubet, A. K., & Ostrosky, M. M. (2015). The impact of challenging behavior on families: I don't know what to do. *Topics in Early Childhood Special Education, 34* (4), 223-233. doi: 10.1177/0271121414539019

- Durand, V. M., Hieneman, M., Clarke, S., Wang, M., & Rinaldi, M. L. (2012). Positive family intervention for severe challenging behavior I: A multisite randomized clinical trial. *Journal of Positive Behavior Interventions, 15* (3), 133-143.
- Einfeld, S., Tonge, B., Turner, G., Parmenter, T., & Smith, A. (1999). Longitudinal course of behavioural and emotional problems of young persons with prader-willi, fragile X, Williams, and down syndrome. *Journal of Intellectual and Developmental Disability, 24* (4), 349-354.
- Eivers, A. R., Brendgen, M., Vitaro, F., & Borge, A. I. H. (2012). Concurrent and longitudinal links between children's and their friends' antisocial and prosocial behavior in preschool. *Early Childhood Research Quarterly, 27*, 137-146.
- Farmer, T. W., Reinke, W. M., & Brooks, D. S. (2014). Managing classrooms and challenging behavior: Theoretical considerations and critical issues. *Journal of Emotional and Behavioral Disorders, 22* (2), 67-73. doi: 10.1177/1063426614522693
- Feldman, M. A., Hancock, C. L., Rielly, N., Minnes, P., & Cairns, C. (2000). Behavior problems in young children with or at risk for developmental delay. *Journal of Child and Family Studies, 9* (2), 247-261.
- Fenning, R. M., Baker, B. L., & Juvonen, J. (2011). Emotion discourse, social cognition, and social skills in children with and without developmental delays. *Child Development, 82* (2), 717-731.
- Fine, M. A., & Fincham, F. D. (2013). *Handbook of family theories: A content-based approach*. New York, New York: Routledge.

- Fox, L., Dunlap, G., & Powell, D. (2002). Young children with challenging behavior: Issues and considerations for behavior support. *Journal of Positive Behavior Interventions*, 4 (4), 208-217.
- Franenkel, J. F., & Wallen, N. E. (1996). *How to design and evaluate research in education* (3rd ed.). New York: McGraw-Hill.
- Garner, P. W. (2006). Prediction of prosocial and emotional competence from maternal behavior in African American preschoolers. *Cultural Diversity and Ethnic Minority Psychology*, 12 (2), 179-198.
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*, 128 (4), 539-579. doi: 10.1037//0033-2909.128.4.539
- Green, V. A., O'Reilly, M. O., Itchon, J. & Sigafos, J. (2004). Persistence of early emerging aberrant behavior in children with developmental disabilities. *Research in Developmental Disabilities*, 26, 47-55. doi: 10.1016/j.ridd.2004.07.003
- Gross, D., Sambrook, A., & Fogg, L. (1999). Behavior problems among young children in low-income urban day care centers. *Research in Nursing and Health*, 22, 15-25.
- Hattier, M. A., Matson, J. L., Belva, B., & Kozlowski, A. (2012). The effects of diagnostic group and gender on challenging behaviors in infants and toddlers with cerebral palsy, down syndrome, or seizures. *Research in Developmental Disabilities*, 33, 258-264.
- Henderlong-Corpos, J. & Lepper, M. R. (2007). The effects of person versus performance praise on children's motivation: Gender and age as moderating factors. *Educational Psychology*, 27 (4), 487-508. doi: 10.1080/01443410601159852
- Hoff, E. (2014). *Language development* (5th ed.). Belmont, CA: Wadsworth.

- Holtz, C. A., & Fox, R. A. (2012). Behavior problems in young children from low-income families: The development of a new screening tool. *Infant Mental Health Journal*, Vol 33 (1), 82-94. doi: 10.1002/imhj.20341
- Holtz, C. A., & Fox, R. A. (2012). Early Childhood Behavior Screen [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t24708-000
- Hotlz, C. A., Fox, R. A., & Meurer, J. R. (2015). Incidence of behavior problems in toddlers and preschool children from families living in poverty. *The Journal of Psychology*, 149 (2), 161-174. doi: 10.1080/00223980.2013.853020
- Keenan, K., & Wakschlag, L. S. (2000). More than the terrible twos: The nature and severity of behavior problems in clinic-referred preschool children. *Journal of Abnormal Child Psychology*, 28 (1), 33-46.
- Keller, K. M., & Fox, R. A. (2009). Toddlers with developmental delays and challenging behaviors. *Early Child Development and Care*, 179 (1), 87-92.
- LeCuyer, E. A. (2014). African American and European American mothers' limit-setting with their 36 month-old children. *Journal of Child and Family Studies*, 23, 275-284. doi: 10.1007/s10826-012-9690-1
- Leedy, P. D., & Ormrod, J. E. (2013). *Practical research: Planning and design* (10th ed.). Upper Saddle River, NJ: Pearson.
- Lengua, L. J., Honorado, E., & Bush, N. R. (2007). Contextual risk and parenting as predictors of effortful control and social competence in preschool children. *Journal of Applied Developmental Psychology*, 28, 40-55.

- McClintock, K., Hall, S., & Oliver, C. (2003). Risk markers associated with challenging behaviors in people with intellectual disabilities: A meta-analytic study. *Journal of Intellectual Disability Research, 47* (6), 405-416.
- McEachern, A. D., Dishion, T. J., Weaver, C. M., Shaw, D. S., Wilson, M. N., & Gardner, F. (2012). Parenting Young Children (PARYC) Self-Report Parenting Measure [Database record]. Retrieved from PsycTESTS. doi: 10.1007/s10826-011-9503-y
- McEachern, A. D., Dishion, T. J., Weaver, C. M., Shaw, D. S., Wilson, M. N., & Gardner, F. (2012). Parenting Young Children (PARYC): Validation of a Self-Report Parenting Measure. *Journal of Child and Family Studies, 21*, 498-511. doi: 10.1007/s10826-011-9503-y
- Nicholson, B. C., Fox, R. A., & Johnson, S. D. (2005). Parenting young children with challenging behaviour. *Infant and Child Development, 14*, 425-428. doi: 10.1002/icd.403
- O'Donnell, S., Deitz, J., Kartin, D., Nalty, T., & Dawson, G. (2012). Sensory processing, problem behavior, adaptive behavior, and cognition in preschool children with autism spectrum disorders. *The American Journal of Occupational Therapy, 66* (5), 586-594. doi: 10.5014/ajot.2012.004168
- Otto, B. (2010). *Language development in early childhood* (3rd ed.). Upper Saddle River, NJ: Pearson Education Inc.
- Pallant, J. (2013). *SPSS survival manual* (5th ed.). New York, NY: Open University Press.
- Pastorelli, C., Lansford, J. E., Luengo Kanacri, B. P., Malone, P. S., Di Giunta, L., Bacchini, D., Bombi, A. S., Zelli, A., Miranda, M. C., Bornstein, M. H., Tapanya, S., Uribe Tirado, L. M., Alampay, L. P., Al-Hassan, S. M., Chang, L., Deater-Deckard, K., Dodge, K. A., Oburu, P., Skinner, A. T., & Sorbring, E. (2016). Positive parenting and children's

- prosocial behavior in eight countries. *Journal of Child Psychology and Psychiatry*, 57 (7), 824-834. doi: 10.1111/jcpp.12477
- Poppes, P., van der Putten, A. J. J., & Vlaskamp, C. (2010). Frequency and severity of challenging behaviour in people with profound intellectual and multiple disabilities. *Research in Developmental Disabilities*, 31 (6), 1269-1275. doi: 10.1016/j.ridd.2010.07.017
- Qi, C. H., & Kaiser, A. P. (2003). Behavior problems of preschool children from low-income families: Review of the literature. *Topics in Early Childhood Special Education*, 23 (4), 188-216.
- Roach, M. A., Orsmond, G. I., & Barratt, M. S. (1999). Mother and father of children with down syndrome: Parental stress and involvement in childcare. *American Journal on Mental Retardation*, 104 (5), 422-436.
- Roberts, C., Mazzucchelli, T., Taylor, K., & Reid, R. (2003). Early intervention for behaviour problems in young children with developmental disabilities. *International Journal of Disability, Development, and Education*, 50 (3), 275-292. doi: 10.1080/1034912032000120453
- Rees, R. J., Strom, R. D., Wurster, S., & Goldman, R. (1984). Parental expectations for handicapped and non-handicapped children. *Australia and New Zealand Journal of Developmental Disabilities*, 10 (4), 229-241.
- Rzepecka, H., McKenzie, K., McClure, I., & Murphy, S. (2011). Sleep, anxiety, and challenging behavior in children with intellectual disability and/or autism spectrum disorder. *Research in Developmental Disabilities*, 32, 2758-2766.

- Shaw, D. S., Bell, R. Q., & Gilliom, M. (2000). A truly early starter model of antisocial behavior revisited. *Clinical Child and Family Psychology Review*, 3 (3), 155-172.
- Skotarczak, L., & Lee, G. K. (2015). Effects of parent management training programs on disruptive behavior for children with a developmental disability: A meta-analysis. *Research in Developmental Disabilities*, 38, 272-287.
- Smith, T., Groen, A. D., & Wynn, J. W. (2000). Randomized trial of intensive early intervention for children with pervasive developmental disorder. *American Journal on Mental Retardation*, 105 (4), 269-285.
- Sperling, S. & Mowder, B. A. (2006). Parenting perceptions: Comparing parents of typical and special needs preschoolers. *Psychology in the Schools*, 43 (6), 695-700. doi: 10.1002/pits.20180
- Webster-Stratton, C. (1998). Preventing conduct problems in head start children: Strengthening parenting competencies. *Journal of Consulting and Clinical Psychology*, 66 (5), 715-730.
- Williams, J. L., Armstrong, K. H., Agazzi, H., & Bradley-Klug, K. L. (2010). Helping our toddlers, developing our children's skill (HOT DOCS): A parenting intervention to prevent and address challenging behavior in young children. *Journal of Early Childhood and Infant Psychology*, 6, 1-20.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology*, 28 (1), 126-136.

Vita

SYRACUSE UNIVERSITY**DEPARTMENT OF CHILD AND FAMILY STUDIES
DAVID B FALK COLLEGE
OF SPORT AND HUMAN DYNAMICS****Ellen Gottuso
Current Vitae (August, 2016)****1. Education**

- a. Bachelor's Degree, Elmira College, Psychology and Criminal Justice, 2014
- b. Master's degree, Syracuse University, Child and Family Studies, 2016
 - i. Challenging Behaviors of Children with and without Developmental Disabilities in Early Childhood and Parent Management Behaviors, Dr. Jung
 - ii. GPA 3.963

2. Career Goal

- a. Upon graduation with my degree from Syracuse University, I look forward to working with children and families in an applied setting such as an early education or child development center. I am also interested in entering into state and local government, advocating for children with developmental disabilities.

3. Honors and Awards

- a. Graduate Assistantship, Assistant Teacher Bernice M Wright Child Development Laboratory, Syracuse University, 2014- 2015
- b. Alice Sterling Honig Award, awarded to graduate student who demonstrated outstanding scholarship, May 2016

4. Research Experience

- a. Master's Thesis

5. Teaching Experience

- a. Special Education Teaching Assistant, Jowonio School, 2015-2016
- b. Graduate Assistant Teacher, Bernice M Wright, 2014-2015

6. Coursework**CFS 621 Statistical Concepts I, A**

Fall 2014, Dr. Lianjun Zhang

CFS 637 Theories, Interpretations, and Application in Child Development, A

Fall 2014 Dr. Rachel Razza

CFS 648 Family Theory: Interpretation and Application, A-

Fall 2014 Dr. Matthew Mulvaney

CFS 631 Research Methods in Child and Family Studies I, A

Spring 2015 Dr. Ambika Krishnakumar

CFS 667 Child and Family in Cross Cultural Perspectives, A

Spring 2015 Dr. Matthew Mulvaney

CFS 835 Issues and Problems in Child and Family Development, A

Spring 2015 Dr. Eunjoo Jung

CFS 652 Mindfulness in Children and Youth, A

Summer 2015, Dr. Razza

CFS 690 Independent Study, A

Summer 2015, Director Daria Webber

SPE 613 Developmental Therapies for Children with Disabilities, A

Fall 2015, Laura Jenkins and Mary-Beth Sullivan

CFS 997 Master's Thesis

Fall 2015, Spring 2016, Dr. Jung

7. Professional Service

- a. Recruitment Chair, Student Council on Family Relations, August 2016

8. Plans for Next Year

- a. In the upcoming year, I plan to graduate from Syracuse University and begin a successful career.