

CHILD DISABILITY STATUS AND TEACHER-
CHILD RELATIONSHIP CLOSENESS AND CONFLICT

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CHILD DISABILITY STATUS AND TEACHER-
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Abstract: The interactions that occur between teacher and child during the school day dictate many aspects of the educational experience. The teacher-child relationship is an important factor in the early care and education setting. This study examined the relationship between child disability status and teacher child relationships, which are characterized by closeness and conflict. It further assessed the extent to which the relationship was mediated by child temperament (inhibitory control and frustration) and child behaviors (prosocial and aggression). Analyses used data from the *Child, Family, and School Influences on Developmental Outcomes of Young Children with and without Disabilities* longitudinal study. The sample consisted of parent and teacher reports for 199 children with and without disabilities attending an inclusive child development laboratory school at a Midwestern university. Results indicated that disability status was related to both teacher-child closeness and conflict, specifically that children with disabilities had less reports of closeness and higher reports of conflict in their relationship with teachers. Parent-report of inhibitory control and prosocial behavior were positively related to teacher-report closeness and aggression was negatively related to teacher-report closeness. Parent-report of inhibitory control was negatively related to teacher-report conflict and frustration, and aggression was positively related to teacher-report conflict. There were significant findings for all teacher reported variable on both closeness and conflict. Teacher-report of child frustration and aggression was negatively associated with teacher-child closeness and positively associated with teacher-child conflict. Teacher-report of inhibitory control and prosocial behavior was positively associated with teacher-child closeness and negatively associated with teacher-child conflict. Mediation analyses revealed that parent-report of child inhibitory control and teacher-report of prosocial behavior did mediate the association between disability status and teacher-child conflict.

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CHAPTER I

INTRODUCTION

The teacher-child relationship could arguably be considered the most important social relationship a child will have outside of family relationships (Ahnert et al., 2013). The teacher-child relationship develops when children spend time in a program or classroom outside of the home. An abundance of research can be found on the importance of the teacher-child relationship, but much of this research neglects to explore if the teacher-child relationship differs for children with disabilities, and if so, are there child temperament or behavioral characteristics that mediate this relationship. In this thesis, we use data from an inclusive child care center to examine factors that influence and explain two characteristics of the teacher-child relationship: conflict and closeness. First, we compare teacher-child conflict and closeness for children with and without disabilities. We also examine the associations between child temperament, child behaviors, and teacher-child conflict and closeness. Finally, we test whether child temperament and child behaviors mediate the relationship between disability status and teacher-child relationship conflict and closeness.

Over the past 25 years, the US has seen a three percent increase in the number of students in the public school sector eligible for special education services (National Center for Education Statistics, 2016). Special education varies widely and is not clearly defined aside from acknowledging the rights of individuals with disabilities to receive equal access and equal opportunity. Special education refers to specific teaching programs for individuals with mental or physical disabilities; challenged, disadvantaged or exceptional gifted children who have special educational needs that may not be met by traditional education standards (Poonam, 2006). These programs focus on academic instruction under cooperative learning models that include adaptive curriculum with social, problem solving and communication skills (Bishop, 1995) and teaching methods individualized to the child's capabilities in addition to general education guidelines. Students qualify for special education services for a variety of reasons, the most common being a specific learning disability, speech or language impairment, other health impairment, Autism, intellectual disability or developmental delay (National Center for Education Statistics, 2016). Mild mental retardation (MR/MMR) is a developmental disability that first appears in children under the age of 18. It is defined as an intellectual functioning level that is well below average and significant limitations in daily living skills. An intellectual disability (ID) is a disorder characterized by cognitive delays. Learning disabilities are neurodevelopmental disorders that affect the ability to process information and may impede academic learning (American heritage dictionary of medicine, 2007). Learning disabilities largely affect the areas of language, mathematics, and reasoning. They are identified by significant discrepancies between IQ and academic achievement (Poonam, 2006).

Roughly 95% of students with disabilities attend a general education classroom for at least some part of their school day (National Center for Education Statistics, 2016). Early childhood programs and preschool settings have the highest number of children included in the general classroom for a full day. Students diagnosed with disabilities have the right to receive a free and

appropriate education as mandated by law (National Center for Education Statistics, 2016). The first attempt to secure equal access and equal opportunity inside schools originated with a law passed in 1975, the Education for All Handicapped Children Act. This legislation was revised in 1990, 1997 and 2004, and was renamed the Individuals with Disabilities Education Act (IDEA). The IDEA mandates that children with disabilities receive equal education opportunities in the least restrictive environment. This definition does not clearly support inclusion in a general education classroom nor does it oppose special education classrooms. Currently, 6.5 million public school students ages 3-21 receive special education services (National Center for Education Statistics, 2016). Early diagnosis of disabilities and better assessment procedures in schools has led to the increasing number of students eligible for special education services. As the number of students who qualify for services increases, the need for effective special education curriculum also rises. There are different ways in which schools and districts can provide special education instruction to their students.

Classrooms that include children with and without disabilities are referred to as “inclusion classrooms” (Brantlinger, 2005). Inclusion may be defined as a full day attendance in an age-appropriate general education classroom (Idol, 1997). These programs may also provide a range of learning opportunities both within and outside the general education classroom (Baker & Zigmond, 1995). The inclusion model utilized by many school systems in special education places special learners in general classrooms. Inclusive classrooms typically include all of the features of general classrooms and also tend to provide an array of special education services, such as assignment modification, assistive technology, speech therapy, physical therapy, environmental and support staff (Hammel, 2004). Students receive as many necessary supplementary aids and services as possible in the general classroom. Students are then pulled out as needed from the general classroom to receive any adaptations and accommodations that cannot be provided in that setting. Inclusive schooling assists individuals with disabilities in preparing

for life within the community (Brantlinger, 2005). Stainback and Stainback (1996) suggest that an inclusive classroom ensures that society operates non-discriminately and consciously aware of equality among all its members. Prior research on inclusive classrooms has found that children gain tremendous benefits from socialization with their peers (Fish, 1989). Children with disabilities gain communication, social and daily life skills in these settings. The teacher-student and student-student interactions that occur provide a model of academic and social skills needed by both students with and without disabilities (Stainback & Stainback, 1996). Still, different outcomes may occur between children within even the same classroom, and it is important to assess whether children with developmental disabilities have similar experiences as their peers without developmental disabilities.

One of the most critical elements of a student's educational experience is the classroom teacher. The teacher has one of the most influential impacts on a child's cognitive performance (Ahnert et al., 2013). In an inclusive classroom, children with and without disabilities may share the same teacher (though not always), but prior research has not determined whether examined differing aspects of teacher-child relationships such as closeness and conflict are similar depending upon child disability status. Further, if there are differences, are they explained by child temperament and behaviors? This study hypothesizes that children with disabilities experience more conflict in their relationships with teachers and have less close relationships with teachers. Examining group differences provides insight into variations in teacher-child relationships based on disability status. Secondly, the study hypothesizes that child temperament and child behaviors mediate the relationship between disability status and the teacher-child relationship.

CHAPTER II

LITERATURE REVIEW

Children are impacted by many outside influences from conception throughout infancy, early childhood, and adolescence. Caregivers during early childhood are crucial to the social, emotional and cognitive development of young children (Karen, 2008). Over the past several decades, children younger than primary school age have increasingly been cared for by someone other than a parent (Ahnert, Milatz, Kappler, & Schneiderwind, 2012). This has led to substantial interest in early childhood programs and preschools due to their importance to children's well-being in early childhood.

Theoretical Foundations

Several theoretical models explain the importance of early childhood education and care for children's well-being. Bronfenbrenner's (1979) ecological model suggests that the process of child development occurs over time and is affected by the environment where development takes course. There are several key environments, which he defines as the microsystem, mesosystem, exosystem, and macrosystem. The environment where children spend their time before age 5 is part of the microsystem. During this time the child is developing their personal characteristics that will influence how the child reacts to the microsystem. The child's genetics biologically influence their personality traits. These traits such as child temperament, behaviors and learning styles directly affect how people treat them (Ahnert et al., 2012). The child is also directly influenced by the variables in microsystem. The variables within the microsystem include the

environment which affects the life, growth, and development of the child. This system is where children personally interact with others who influence the child's world. The microsystem is where the child's first social relationships begin (Bronfenbrenner, 1998). These experiences promote the child's development through personal experiences. These social interactions are characterized as the teacher child-relationship. Further, every function at this stage of a child's development begins as a social interaction (Vygotsky, 1986). Social interaction is a primary component in Vygotsky's theoretical framework of learning and development. This philosophical framework for education is a component of the classroom environment. In this study preschools, inclusion programs for special education and general education programs are part of this system and therefore have a direct effect on the child's development.

Attachment theory begins with social interaction and focuses on the relationships that occur through interactions. It states that humans are innately born with the need to attach to other individuals; the opportunity to form attachments in the first two years affects the nature of new relationships (Maccoby, 1992). It has been substantiated through research that secure attachments are the basis for effective relationships (Karen, 2008). Although attachment theory is often applied to parental caregivers, it is relevant for any caregiver in a young child's life. Hamre and Pianta (2001) further demonstrated how non parental adults, specifically teachers, take on a pertinent role in children's lives once they begin classroom programs outside of the home. Bowlby (1980), for example, applied attachment theory to explain why close teacher-child relationships foster cognitive growth in intellectual performance in classroom environments. This evidence further supports changing aspects of the teacher-child relationships.

The classroom teachers are the people designated in each program to spend the majority of their day in direct contact and interaction with the child. Interactions between teachers and children in their classrooms establish the teacher-child relationship. The teacher-child relationship (TCR) is a key factor in all classroom environments. Positive TCR elicits positive emotions that facilitate successful achievements in intellectual environments (Hamre & Pianta, 2001). Close teacher-child relationships create secure trusting relationships that allow children to feel comfortable, further enhancing and enriching their classroom experience. The effectiveness of these relationships allows children to actively engage in the learning environment with their full attention without insecure and negative emotions prohibiting their participation in classroom activities (Myers & Pianta, 2008). For example, Vygotsky (1978) noted that children are extrinsically motivated to perform activities based on their relationship with the significant adult presenting the activity. The details of these relationships warrant additional investigation into all factors that influence the TCR.

The two most prominent aspects of the TCR are closeness and conflict. Closeness can be defined as warmth and affection (Pianta, 2001.) It is important for teachers and children to develop close relationships effectively communicate in the classroom. When effective communication is present it facilitates student learning. When people like each other relationships progress more smoothly (Yiu, 2011). Research has established that there are many positive gains from close teacher-child relationships. These meaningful relationships provide satisfaction (Miltatz, Luftenegger, & Schober, 2015) impacts children's privileges in the classroom (Newberry & Davis, 2008) and correlate positively with academic behaviors and social outcomes (Yiu, 2011). Conflict can be defined as incompatibility or disagreeableness (Birch & Ladd, 1998). Conflict in the teacher-

child relationship can negative internalize behaviors and lower social competence (Pianta, 1999). Aggression is a prevalent factor in conflictual relationships. When aggressive children engage in relationships they can be more confrontational, which in turn creates a conflictual teacher-child relationship (Birch & Ladd, 1998). Students who lack social skills have also been documented as having more conflictual relationships (Birch & Ladd, 1998). However, Myers and Pianta (2008) found that conflictual teacher-child relationships are reciprocal in nature. The presence of closeness and conflict in the classroom explains its importance and the need for research on factors that affect the relationship.

Most research on teacher-child relationships has been focused on children without disabilities. Conversely, some noteworthy studies have found significant differences in the teacher-child relationship for children with disabilities. Matsushima and Kato (2015), who identified TCR's as positive indicators for academic and behavioral outcomes in children with intellectual disabilities,. In children with intellectual disabilities, the TCR was found to be one of the most effective factors in early intervention. Research conducted by Blacher, Baker and Eisenhower (2009) further looked at teacher-child relationship stability for children ages 6-8 years old with intellectual disabilities and compared to children with typical cognitive development. The findings revealed that the teacher-child relationship was poorer for children with intellectual disabilities, child behavior problems predicted more conflict, and social skills predicted more closeness. Although Cheryl and Walker (2014) found significant correlations between children with special health care needs, child characteristics and child behaviors and the TCR, disabilities were not a primary factor in the sample of young children studied. Still yet the most prevalent research fails to investigate child characteristics and child behaviors in children with disabilities

and their mediation effects for the teacher-child relationship. There are reasons to suspect that children with disabilities might not have the same relationship with teachers as their peers without disabilities.

Child development and disabilities

Children are developing physically, cognitively, socially and emotionally at a rapid pace from conception through early childhood. In typical development, children reach developmental milestones in how they grow, move, speak, play, learn, and behave (National Center on Birth Defects and Developmental Disabilities, Center for Disease Control, 2016). From gestation, birth through age 2, healthcare professionals use tests, assessment tools and developmental screening to follow children's development. A collaborative effort in healthy development includes caregivers and healthcare professionals monitoring children's symptoms and delays that may be indicators of problems that need further follow-up. Early detection allows children to get the help they need before beginning school and can greatly improve a child's development. Disabilities interrupt normal development affecting the manner in which a child interacts with the world. Developmental delays and behavioral disabilities can further influence school readiness (National Center on Birth Defects and Developmental Disabilities, Center for Disease Control, 2016). As children grow and develop their individual characteristics begin to form. The unique development in children with disabilities may attribute to child temperament and behaviors that differ from children who do not have disabilities.

Disabilities and Child behaviors

Intellectual Disabilities (ID), Mental Retardation and Mild Mental Retardation are terms that refer to disabilities that affect one's mental capabilities. Common ID that affect children include Autism, Down syndrome and Fragile X syndrome. Autism is a developmental disability resulting from a neurological disorder that affects the normal functioning of the brain. It is characterized by the abnormal development of communication skills, social skills and reasoning. Down syndrome is a chromosome disorder causing developmental and intellectual delays. Fragile X syndrome is a genetic condition causing intellectual disability (Encyclopedia of Special Education: A Reference for the Education of the Handicapped and Other Exceptional Children and Adults, 2014). There is considerable evidence that children with intellectual disabilities tend to have higher reported levels of behavior problems than other children (Blacher et al., 2009; Witt, Riley, & Coiro, 2003; Dekker, Nunn, Einfield, Tonge, & Koot, 2003). Dekker, Koot, Ende and Verhulst (2002) found in a study conducted with 1041 children with and without ID ages 6-18, that children with ID have more difficulties expressing their feelings, which often results in aggression. Further research is needed to determine if these difficulties or perceptions of behavior problems arise from the delay of social skills wherein adults may have unrealistic expectations for them. Neurological deficits and genetic syndromes have more severe levels of ID which contribute to higher occurrences of behavior problems like aggression, inattention and communication problems. Ruiters, Dekker, Verhulst and Koot (2006) reported a common characteristic of children with developmental disorders is that they often exhibit symptoms of behavior problems. McIntyre, Blacher and Baker (2006) found that teachers reported more problem behaviors in children with ID than in children without a disability. However it is important to note behavior problems in children with disabilities are often identified from completed Child Behavior Checklist which does not take into account the lower levels of intellectual functioning (Vrijmoeth, Monbaliu, Lagast, & Prinzie, 2012). Nonetheless the functioning levels of children with disabilities, both social and intellectual, can factor into child behaviors.

Child development and the TCR

The child's disposition and personality are characteristics that affect the teacher-child relationship. Established research has found that development in typical children is influenced by social relationships (Pianta, 1994). O'Connor, Dearing, and Collins (2011) define the TCR as an attachment relationship. Children's relationships with adults teach children how to interact with the world around them. If children are thought to develop in environmental systems then social interaction is imperative to their development. The classroom is a key component in the child's social environment. Once they enter school children spend a large part of their day in a classroom. Important areas of development emerge in the classroom promoting cognitive, physical and social development. Secure relationships model appropriate interactions and set the basis for their future relationships. Matsushima and Kato (2015) found associations between social and emotional development and the teacher child relationship. Specifically, the study interviewed 23 preschool teachers working with children with disabilities that reported social interactions adversely affected the teacher –child relationship. Rudasill and Rimm-Kaufman (2009) found that child temperament and psychosocial development influence teacher warmth and closeness with a child. Positive social and emotional adjustment in children with disabilities was correlated with greater scores on the positive relationship and bonds scale. These findings solidify the need for further research since temperament characteristics are adversely linked child behaviors.

Disabilities and the TCR

There are a variety of factors that affect the TCR. Some of these include teacher's beliefs, child behaviors, socialization, and communication skills (Gebbie, Ceglowski, Taylor, & Miels, 2012). The receptiveness of teachers to disabilities further influences the TCR. There are two types of beliefs that primarily govern teachers' perception of disabilities in the classroom. Restorative

beliefs rely on diagnosis, citing that the problem is internal, whereas preventive beliefs recognize that the environment and instruction impact the student's difficulties in the classroom (Jordan, Kircaali-iftar, & Diamond, 1993). The adoption of these beliefs in the classroom guide a teacher's interactions and response to students. Restorative beliefs result in a more negative perception of child behaviors in children with disabilities than preventive beliefs. As negative beliefs ensue, a more strained TCR develops. The nature of most disabilities is characterized by some restrictions to normal daily activities. Common barriers to positive relationships with children with disabilities include difficulty with social interactions and other adverse behaviors. These obstacles may inhibit social relationships with others.

Research suggests that children with disabilities commonly have less close relationships with their teachers compared to children without disabilities. Children with disabilities have also been found to have more conflictual relationships with teachers than typical children (Myers & Pianta, 2008). In a study conducted with 289 fifth and sixth graders, Murray and Greenberg (2001) found further evidence supporting child development and the teacher child relationship. The findings revealed significant main effects between disabilities and TCR. Students with disabilities reported greater dissatisfaction with their relationships with teachers. Students with ED and MMR had significantly lower affiliation with teachers. McIntyre et al. (2006) found that students with disabilities had poorer student teacher relationships overall. These relationships lack closeness and trust. Cheryl and Walker (2014) conducted a study of 1577 children ages 2-3 years old and found significant associations between disabilities and the TCR. Students without disabilities had high teacher closeness, disabilities predicted conflict in the TCR, and language and communication delays had adverse effects on the TCR. Based on the findings cited above the present study predicts that children with disabilities will have significant difference in their relationships with teacher when compared to children without disabilities.

Child temperament, child behaviors and the TCR

From conception through birth, children develop as they progress in age. People develop uniquely with specific traits that continue throughout their entire life. In caregiving for the developing child there are characteristics that influence behaviors. Throughout childhood, children exhibit developmentally appropriate or non-developmentally appropriate behaviors. As behavioral characteristics differ among individual children, there is not always a definitive example of normal and abnormal behaviors. In the current study, the child temperament and child behaviors of interest are inhibitory control, frustration, aggression and prosocial behaviors, respectively.

Child temperament refers to the individual differences in emotional reactivity and regulation (O'Connor, Dearing, & Collins, 2011) including motivation, affect, inhibitory control, and attention characteristics (Rothbart & Bates, 2006). The responsiveness to change from the external and internal environments indicated by fear, frustration, approach and pleasure are commonly studied to measure reactivity (Bazinet, Lengua, Trancik, Wilson, & Zalewski, 2011). This determines if one has uncontrolled emotional responses or if they are able to control their emotions when responding to stimuli. Child aggression can be defined as violent behaviors or feelings often overtly harmful in social interactions (Blankemeyer, 2002). Negative developmental outcomes for children both cognitively and socially have been linked to aggression (Meechan, Hughes, & Cavell, 2003). In contrast prosocial behavior predicts positive developmental outcomes in sociability, psychological adjustment and peer relationships.

Behaviors that illicit unfavorable actions are often defined as problem behaviors. Lafreniere and Sroufe (1985) reported that well behaved children are well liked, have better relationships, and secure attachments with their teachers. Consequently children with lower aggression and higher prosocial behaviors may experience less conflict with teachers and have closer relationships.

Children's behaviors are often influenced by external factors. In the classroom, these factors include the child's stage of development and direct and indirect guidance techniques. Using developmentally-appropriate practices with children ensures that teachers have realistic

expectations based on the student's capabilities. Teaching practices govern direct and indirect guidance techniques used by teachers. The environment is designed and arranged conducive to the needs of children to facilitate growth and learning and minimize behavior problems.

Previous studies investigate either teacher factors or the child's role in the teacher-child relationship. The very definition of relationships implies that there are two or more contributing individuals. There is some documented research on the associations of children's characteristics, behaviors, and the teacher child relationship. Notable studies have examined the link between these factors in various analyses. Cheryl and Walker (2014) found associations between child characteristics and the TCR, specifically that child temperament significantly predicted conflict in teacher child relationships among young children. Birch and Ladd (1998) found that aggression and hyperactivity was positively correlated with conflictual TCR. Additionally Blankemeyer, Flannery, and Vazsonyi (2002) conducted a study with 1,432 students, in grades 3rd-5th, that revealed high aggression was related to negative perceived TCR and high social competence with favorable perceived TCR. However, a comprehensive study that includes child temperament and behavior variables, both teacher and parent reports of child characteristics, and two different domains of the TCR is needed to tease out direct and indirect effects of child temperament and behaviors on the relationship between child disability status and TCR closeness and conflict.

Purpose of the Study

In summary, past research demonstrated a relationship between developmental disabilities and the TCR. In addition, the literature examining the TCR found significant associations between disabilities, child behaviors and the teacher child relationship (McIntyre et al., 2006). While this literature has provided important evidence regarding the influence of disabilities on the TCR, there are some gaps in the literature. For instance, most studies neglect to investigate the child's disability as a factor affecting the TCR through individual differences such

as temperament or child behaviors like aggression. It is therefore unclear whether the impact of a child's disability on the TCR is mediated by the child's temperament or behaviors, or if child temperament and aggression are independently associated with teacher-child closeness and conflict.

To address this gap in the literature, there are two main research goals for the present paper. The *first research goal* is to examine the association between child disability status and teacher-child relationship quality, as measured by the teacher's perception of teacher-child closeness and teacher-child conflict. We explore the relationships between disabilities and child temperament and child behaviors. We further explore how the relationships between child temperament and child behaviors affect teacher-child closeness and conflict. It is hypothesized that child temperament will be related to teacher-child closeness and conflict. It is further hypothesized that prosocial behavior and aggression will be related to the teacher-child relationship. Specifically, children who exhibit anti-social behaviors will have less close relationships with teachers and will have higher reports of conflictual relationships with teachers. Additionally, low levels of child aggression will be related to high levels of teacher-child closeness. In contrast, high levels of child aggression will be related to high levels of teacher-child conflict. The *second research goal* is to investigate whether child temperament and behaviors mediate the relationship between disability status and teacher-child closeness and conflict.

CHAPTER III

METHODOLOGY

Participants and Procedure

Data for the current study came from an inclusive child development laboratory school at a Midwestern university. The data is from the original study entitled “Child, Family, and School Influences on Developmental Outcomes of Young Children with and without Disabilities” (Dr. Amy Tate, PI), in which parents and teachers consented to their participation. Participants include parents and teachers at the program that provided reports on children with and without disabilities who currently or previously attended the program. Parents and Teachers completed a survey packet annually that included the Child Behavior Scale (CBS; Ladd & Profilet, 1996) and the Child Behavior Checklist (CBCL/1 ½ -5; Achenbach & Rescorla, 2000). Teachers completed a survey packet annually that included the Student-Teacher Relationship Scale (STRS; Pianta, 2001). Data was collected from year 1 through year 9 from parents and teachers. The current sample includes 199 children from years 2008 to 2016. Only data from the participant’s first year of participation in the study was used. Parents identified 20.6% (41) of the children as having a developmental delay or disability (e.g., Autism Spectrum Disorder, Sensory Disorder, Speech

Delay, Down Syndrome, Williams Syndrome, Fragile X Syndrome, etc.) and 79.4% (158) as having no disability. Parents identified their children as 76% White, 10% Asian, 8% Biracial, 2.5% Hispanic, 2% Native American and 1.5% African American. The samples gender breakdown was 108 females and 91 males.

Measures

Disability status. *Developmental Delay/disability* is measured as a dichotomous variable where the child either had a developmental delay/disability or did not, coded as 1= having a developmental delay/disability and 0= having no delay/disability.

Teacher-child relationship. *The teacher-child relationship* is measured using the Student-Teacher Relationships Scale (STRS; Pianta, 2001). This assessment tool is a self-report measure designed for teachers of children between the ages of 3 and 12. The scale has 28 items that measure a teacher's perception of conflict, closeness, and dependency with a specific child. The STRS is the most widely used measure for the teacher-child relationship. Item scores range from 1 to 5 (1=definitely does not apply; 2=not really; 3=neutral, not sure; 4=applies somewhat; and 5=definitely applies). The two subscales used in the present study include *Conflict* (12 items) and *Closeness* (11 items). In this study, Conflict and Closeness were scored individually. The scoring range for conflict was 12-60 with higher scores indicating more conflict. The scoring range for closeness was 11-55 with higher scores indicating closer relationships.

Child temperament. Two components of child temperament are measured from the Early Childhood Behavior Questionnaire (ECBQ; Putnam, Gartstein, & Rothbart, 2006). This assessment tool is a questionnaire designed to assess temperament in children between the ages of 18 and 36 months. The ECBQ assesses the following dimensions of temperament: Activity level/Energy, Attentional Focusing, Attentional Shifting, Cuddliness, Discomfort, Fear, Frustration, High-intensity Pleasure, Impulsivity, Inhibitory Control, Low-intensity Pleasure,

Motor Activation, Perceptual Sensitivity, Positive Anticipation, Sadness, Shyness, Sociability, and Soothability. The subscales used in the present study were the *Frustration* scales parent report (12 items) and teacher report (12 items) and the *Inhibitory Control* scales parent report (12 items) and teacher report (12 items). Participants responded to items on a 1 (*never*) to 7 (*always*) scale. Example frustration items include rating the following statements about the child: “when told that it is time for bed or a nap, how often did the child react with anger?” and “when told that it is time for bed or a nap, how often did the child get irritable?” Inhibitory control items include rating the following statements about the child: “when asked to do so, how often was the child able to stop an ongoing activity” and “when asked to do so, how often was the child able to lower his or her voice?” The Frustration subscale range was 0-84 with high scores indicating higher frustration. The Inhibitory Control subscale range was 0-84 with higher scores exhibiting more control. On the ECBQ Frustration parent scale, in the full data set spanning a 9-year timeframe, the Cronbach’s alpha for the scale ranged from a low of .78 to a high of .91. On the ECBQ Inhibitory Control parent scale, in the full data set spanning a 9-year timeframe, the Cronbach’s alpha for the scale ranged from a low of .77 to a high of .93. On the ECBQ Frustration teacher scale, in the full data set spanning a 9-year timeframe, the Cronbach’s alpha for the scale ranged from a low of .80 to a high of .96. On the ECBQ Inhibitory Control teacher scale, in the full data set spanning a 9-year timeframe, the Cronbach’s alpha for the scale ranged from a low of .85 to a high of .94.

Child behavior. The first dimension of child behavior is measured using the Child Behavior Scale (CBS; Ladd & Profilet, 1996). The CBS measures *prosocial behaviors* among children is a parent report and teacher report instrument, which is used to assess aggressiveness with peers, prosocial and asocial behavior with peers, and exclusion by peers, hyperactive-distractible behavior, and anxious-fearful behavior. The scales used in the present study include the parent report (7 items) and the teacher report (7 items). The assessor records their responses to the items

as *doesn't apply* (1), *applies sometimes* (2), *certainly applies* (3) concerning the child. Sample items were rated to the extent of which these descriptions apply to the child, particularly in the context of his or her behavior with peers. "kind toward peers and cooperative with peers." The scoring range was 0-21 with higher scores exhibiting more prosocial behaviors. On the CBS parent scale, in the full data set spanning a 9-year timeframe, the Cronbach's alpha for the scale ranged from a low of .86 to a high of .93. On the CBS teacher scale, in the full data set spanning a 9-year timeframe, the Cronbach's alpha for the scale ranged from a low of .91 to a high of .96.

The second dimension of child behavior, *child aggression*, is measured using the Child Behavior Checklist (CBCL/1 ½-5; Achenbach & Rescorla, 2000). This assessment tool includes 99 items that are used to measure behavioral or emotional problems. The assessor records their responses to the items as *not true* (0), *somewhat or sometimes true* (1), or *very true or often true* (2) concerning their child. The CBCL consists of scales related to child problems including Externalizing, Internalizing, and Total Problem scales. The subscale used in the present study was the Aggression scales parent report (19 items) and teacher report (25 items). The scoring range for parents report was 0-38 and teacher report 0-50 with higher scores indicating more aggressive behaviors. On the CBCL Aggression parent scale, in the full data set spanning a 9-year timeframe, the Cronbach's alpha for the scale ranged from a low of .67 to a high of .94. On the CBCL Aggression teacher scale, in the full data set spanning a 9-year timeframe, the Cronbach's alpha for the scale ranged from a low of .89 to a high of .97.

Demographic and control variables. A list of responses was provided for participants to identify race, gender, marital status and socio-economic status. *Gender* was recoded male=1 and female=0. *Income* was coded as 1=under \$10,000, 2=\$10,000-\$20,000, 3=\$20,000-\$30,000, 4=\$30,000-\$40,000, 5=\$40,000-50,000, 6=\$50,000-\$60,000, 7=\$60,000-\$70,000, 8=\$70,000-\$80,000, 9=\$90,000-\$100,000, 10=\$100,000-\$150,000, 11=\$150,000-\$200,000 and 12=\$200,000+. Due to the lack of variation in the sample and small sample size, the remaining

variables were dichotomized. Race was coded such that *white*=0 and *non-white*=1, and Marital/Union Status was coded such that *married*=1 and *non-married*=0.

Analytical Plan

Descriptive statistics and bivariate correlations were computed. A one-way analysis of variance (ANOVA) was utilized to determine whether there were significant differences in the teacher-child relationship for students with disabilities and students without disabilities. Next, to examine Research Goal #1, correlation analyses were conducted to examine the relationship between disability status and the teacher-child relationship. To examine Research Goal #2, regressions were computed for disability status (disability or no disability) and two outcome variables for the teacher-child relationship: closeness and conflict. The three criteria for mediation (via Baron & Kenny, 1986) were tested through a series of regressions in which gender, race, marital status, and family income were entered as covariates. In addition, Sobel's test was used to determine whether the indirect effect was significant.

CHAPTER IV

FINDINGS

Descriptive Analyses

Descriptive statistics are presented in Table 1. There were significant differences in the mean for students with disabilities and students without disabilities on several variables. ANOVA results indicate significant ($p < .05$) mean differences in disability status. Parents with children without a disability report higher scores in child prosocial behaviors and inhibitory control compared to parents with children with a disability. Teachers reported higher prosocial behaviors, inhibitory control and teacher-child closeness for children without disabilities compared to children with disabilities. Teachers reported lower frustration and lower teacher-child conflict for children without disabilities compared to children with disabilities.

The first research goal is to examine the association between child disability status and teacher-child relationship quality. A series of correlations were run to assess the relationships between study variables. Bivariate (Pearson's r) correlations and statistical significance are provided in Table 2. Respectively, disability status is positively related to the TCR- conflict ($r = .208$; $p < .01$) and negatively related to the TCR-closeness ($r = -.448$; $p < .01$). Additionally, teacher reported child aggressive behavior was negatively correlated to TCR-closeness ($r = -.430$, $p < .01$). Teacher-reported child aggressive behavior was positively correlated to the TCR-conflict ($r = .710$, $p < .01$). Teacher-reported child prosocial behavior was positively correlated to TCR-closeness ($r = .645$, $p < .01$). Teacher-reported child prosocial behavior was negatively correlated to TCR-conflict

($r=.508, p<.01$). Teacher-reported conflict was negatively correlated TCR-closeness ($r=-.537, p<.01$). For disability status and child temperament, results indicate that children with disabilities exhibit more frustration compared to children without disabilities (teacher-reported frustration; $r=.232, p<.01$) and are more impulsive (parent-report inhibitory control; $r=-.263, p<.01$; teacher-report inhibitory control; $r=-.258, p<.01$). The results for disability status and child behavior outcomes indicated that children with disabilities showed fewer prosocial behaviors (parent-report prosocial; $r=-.206, p<.01$; teacher-report prosocial; $r=-.414, p<.01$).

Reviewing demographics, (see table 2) we examined and found similarities also noted by other researchers (Birch & Ladd, 1997; Hamre & Pianta, 2001; Ladd et al., 1999). Non-white children had higher reported teacher-aggression than white children. Married families had higher reported income than non-married families. Lower family income was correlated with higher teacher-reported aggression, and non-white students and non-married families had higher teacher reported conflict. Gender differences revealed that male children had significant associations with several variables. Being male was significantly correlated with more aggression and conflict (correlation values). Male children had lower levels of closeness compared to females. O'Connor et al. (2011) found the same relationship for male students on both closeness and conflict.

Regression Analyses

The second research goal was to investigate whether child temperament and child behaviors mediate the link between child disability status and teacher-child relationship quality. To address this goal, eight regression analyses were computed where disability status was entered on step 1 to predict two domains of the teacher child relationship (TCR - closeness or conflict). Step 2 included potential mediators, one per regression analysis, of child prosocial behaviors, child inhibitory control and child frustration, as reported by both parent and teacher, and step 3 included demographic factors (gender, race, marital status, and family income). Tables 3 and 4

show significant mediation found in the regression analysis. In all analyses, disability status was significantly associated with TCR closeness and conflict. In the case of TCR closeness, the child temperament and behavior variables all significantly predicted closeness. Child disability status remained significant, however, suggesting that child prosocial behaviors, inhibitory control and frustration independently matter for teacher-child closeness and no mediation occurred (not shown). When potential mediators were added to the analysis of TCR conflict, all were significantly associated with TCR conflict. However, when two were added to the model (parent reported inhibitory control and teacher reported child prosocial behaviors), the effect of child disability status was no longer significant. Table 3 presents the regression analysis for child disability and TCR conflict, with mediation by parent report inhibitory control. Table 4 presents the regression analysis for child disability and TCR conflict, with mediation by teacher report prosocial behavior. Because disability status was no longer statistically significant in these two regression analyses, this provides evidence of full mediation (Little, Card, Bovaird, Preacher, & Crandall, 2007). The addition of demographic control variables in the final models did not significantly increase the amount of explained variance in our outcome variables.

Further testing of mediation in the model was performed. The first criterion for mediation is that the independent variable must be related to the dependent variable. Having a disability was related to higher TCR-conflict and lower TCR-closeness. Next, the independent variable must be related to the mediator. Disability status was related to several potential mediators. Third, the mediator must be related to the dependent variable. Both parent report inhibitory control and teacher-reported child prosocial behavior were correlated with teacher-reported conflict. Because the three criteria were met, Sobel's statistic for indirect effects (Sobel, 1982) was computed for the mediation, as shown in Table 5. The Sobel's test found full mediation in the model for parent report inhibitory control ($z=2.956, p=.00$) and teacher report prosocial behavior ($z=5.015, p=.000$).

CHAPTER V

DISCUSSION

The purpose of this study was to examine the influence disability status had on the teacher-child relationship and identify child temperament characteristics or behaviors that mediate that relationship. The specific hypothesis was that disability status would predict closeness and conflict in the teacher-child relationship and that child temperament (e.g., frustration and inhibitory control) and behaviors (e.g., prosocial and aggression) would mediate the relationship. Consistent with prior literature, results showed that there were significant differences in the teacher-child relationship for students with a disability compared to students without a disability (Cheryl & Walker, 2014). Specifically, teachers reported more conflict in their relationships in children with disabilities than in relationships with children without disabilities. Conversely, teachers reported less close relationships with children with disabilities than in relationship with children without disabilities. The results further indicated that high levels of child aggression were related to high conflict within the teacher-child relationship and low closeness within the teacher-child relationship. Similar to previous findings that child temperament significantly influenced the teacher-child relationship, significant findings revealed child temperament; specifically both parent-report and teacher report, frustration and inhibitory control are related to

are related to the teacher-child relationship (Pianta & Myers, 2008). Parent-reported inhibitory control and teacher-reported prosocial behavior mediated the relationship between disability status and teacher-child relationship conflict, but disability status remained a significant predictor of teacher-child relationship closeness after variables of child temperament and behaviors were added to the model. These results show that children with disabilities encounter adverse relationships with teachers; however, conflict, but not closeness, is mediated by the child's characteristics. However, children with disabilities continue to have relationships with their teachers that are less close, even after controlling for child characteristics and behaviors.

Research Goal #1

The first research goal was to examine the association between child disability status and the teacher-child relationship quality. Previous research found that children without disabilities had closer relationships with teachers than children with disabilities and that having a disability predicted conflict in the teacher-child relationship (Cheryl & Walker, 2014). The bivariate (i.e., ANOVA and Pearson's correlations) findings of this study further provide evidence that children with disabilities experience higher conflict and lower closeness with their teachers than their peers without disabilities, as reported by teachers.

The findings of this study further explored previous research reported by Eisenhower et al. (2007) where in children with ID had higher reports of behavior problems, social skill deficits and poorer teacher-child relationships than typically developing children. Upon further investigation into the factorings affecting these differences similar trends in child temperament and behaviors were found. Parents reported that children with disabilities had lower inhibitory control and greater antisocial behaviors. Teachers reported that children with disabilities had higher frustration, lower inhibitory control and greater antisocial behaviors. Disability status was negatively and significantly related to TCR-closeness and positively and significantly related to

TCR-conflict. Child aggression was negatively associated with TCR-closeness and positively associated to TCR-conflict. This finding supports prior research demonstrating that children's aggressive behaviors were associated with more negative student-teacher interactions (Myers & Pianta, 2008).

Research Goal #2

The second research goal was to investigate whether child characteristics and child behaviors mediate the link between child disability status and teacher child relationship quality. In particular, this study focused on the child characteristics of temperament, specifically frustration and inhibitory control and prosocial and aggressive behaviors. While parent report of frustration was not related to TCR-closeness, it was positively related to TCR-conflict. Additionally parent report inhibitory control was positively related to TCR-closeness and negatively related to TCR-conflict. While teacher report of child characteristics, frustration, was negatively related to TCR-closeness and positively related to TCR-conflict. Teacher-report inhibitory control was positively related to TCR-closeness and negatively related to TCR-conflict. Teacher-report child prosocial behaviors, was positively related to TCR-closeness and negatively related to TCR-conflict. Teacher-report aggression was negatively related to TCR-closeness and positively related to TCR-conflict. The regression analyses revealed evidence of mediation, at least in the case of teacher-child conflict. This mediation accounts for the relationship between disability status and teacher-child conflict. Parent-report inhibitory control and teacher-report prosocial behavior both mediated the relationships between the independent variable and dependent variable in the present study. These mediation effects tell us disability status is related to teacher-child conflict because of children's lack of inhibitory control as reported by parents and antisocial behaviors as reported by teachers. In the present analyses, parent-report inhibitory control accounted for 16% of the TCR-conflict variance and teacher-report accounted for 29% of the TCR-conflict variance. Several research studies have examined various factors that influence the teacher-child

relationship. Among these factors the two main variables that impact the TCR the most can be narrowed down to the characteristics and behaviors of both teachers and children (Birch & Ladd, 1997; Chung, 2005; Hamre & Pianta, 2001). Thus the present study focused on child characteristics and behaviors it is a reasonable assumption that the teacher factors are also associated with the teacher-child relationship.

Implications

The current findings suggest children with disabilities encounter different classroom experiences when interacting with the teacher. Having a disability directly influences the teacher-child relationship regarding closeness and conflict. If students with disabilities are less likely to have close relationships with teachers and more likely to have conflictual relationships, there can be some adverse effects to the child. Healthy relationships where children feel liked are more likely to have positive learning outcomes than when students feel distanced from their teacher (Hamre & Pianta, 2001). Teachers can help foster healthy relationships in everyday classroom activities. They can incorporate teaching lessons on feelings, social skills, and conflict resolution. Developing these social competencies in the classroom may help children with and without disabilities understand social behavior and form positive relationships.

As the number of students receiving special education services continues to increase, programs are responsible for providing equal education opportunities to students with a disability. One of the first steps is ensuring that the students do not experience differences based on disability status. Educating teachers on factors that influence the teacher-child relationship will promote awareness and encourage accountability in the classroom. Finding different ways to support the classroom teacher may help him/her be more aware of and take steps to buffer the impact of a child's disability status on their relationship with the child. Although parent-report of child inhibitory control and teach-report of child prosocial behaviors explains the association between disability

and relational conflict, it does not alter the negative impact of disability for relational closeness. Providing specialized training may help teachers engage in classroom techniques that enhance teacher-child relationship closeness.

Educational policies that mandate that children with disabilities receive equal education opportunities in the least restrictive environment may not be conducive to meeting the needs of all children with disabilities. The findings of the present study suggest that children could benefit from instruction time that includes strategies not currently included in standard curriculum. While the Individuals with Disabilities Education Act (IDEA) does require schools to make special provisions for students with disabilities it does not set forth specific guidelines on what those provisions must include. Child characteristics and behaviors cannot be excluded when considering the differences that children with disabilities incur compared to children without disabilities in the classroom environment. To address these commonalities policies can be implemented to take steps to reduce educational disparities. This consists of furthering school agendas pass common core standards in English and math to include social and emotional development. Recognizing the associated risk of children lacking social competence and emotion regulation can provide preventative measures and early intervention to negative teacher-child relationships in the classroom. A policy that mandates application of social knowledge can ensure that schools must select a research based approach to buffering the effects of child characteristics and behaviors on classroom experiences.

Limitations

This study uniquely looked at differences between students with and without a disability from a specific child development lab with inclusive classrooms. It should be acknowledged that there were several limitations to the study. First, the sample is relatively small and did not include a diverse population. Additionally, students enter and leave the program at different ages,

complicating data analysis as there might be cohort and age effects that are unable to be captured in the small sample. To account for this, data from the first year of each student's participation in the program were analyzed in this study. Due to the data limitations, this was not an exhaustive examination of all the pathways that could mediate the link between disability status and the teacher-child relationship. Despite limitations, this study contributes to the literature because it 1) includes parent and teacher reports of child temperament (frustration and inhibitory control) and behaviors (prosocial and aggression); and 2) explores factors that can mediate the negative impacts of child disability status for teacher-child closeness and conflict.

Conclusion

The findings of the study are aligned with past research showing that disability status may have a negative impact on the teacher-child relationship. Future research should examine how the differences in relationship quality are expressed in differences of classroom experiences for children with and without disabilities. Yet as the study revealed, the effect of disability status—at least for teacher-child conflict—is mediated by parent report inhibitory control and teacher report prosocial behavior. Understanding aggression displayed by children with disabilities as compared to children without disabilities can promote comprehension and assist in developing appropriate expectations for the teacher-child relationship. With the steady mainstream education and classroom inclusion efforts for students with disabilities, it is important to ensure that all students have appropriate educational experiences. A deeper understanding of the factors that influence the teacher-child relationship will increase the quality of classroom curriculum for all students. Establishing a consensus across all programs that include students with disabilities will lead to higher quality programs that value the teacher-child relationship and non-bias curriculum that is supportive in meeting the needs of all students and teachers in inclusive classrooms.

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APPENDICES

Table 1. Means and Standard Deviations of Study Variables by Disability status (N=199)

Variables	N	No Disability		N	Disability		F-statistic
		M	SD		M	SD	
Parent Report							
ECBQ Frustration	137	3.11	0.94	38	3.12	.94	.00
ECBQ Inhibitory Control	136	4.80	1.01	34	4.03	1.01	12.43**
Prosocial Behavior	147	16.84	4.89	36	14.22	4.89	7.98**
Child Aggression	144	7.35	5.50	37	9.11	5.50	2.57
Teacher Report							
ECBQ Frustration	139	2.67	1.02	37	3.29	1.01	9.88**
ECBQ Inhibitory Control	139	4.79	1.31	37	3.92	1.31	12.36**
Prosocial Behavior	151	15.70	3.46	40	11.73	3.46	39.13***
Child Aggression	152	7.01	8.48	39	9.72	8.48	3.08
Teacher Child Relationship							
Closeness	153	47.24	6.19	40	38.98	6.19	48.05***
Conflict	154	21.21	8.42	40	25.75	8.42	8.69**
Demographic variables							
Male	158	0.42	0.50	41	0.59	.50	3.43
Non-White	158	0.23	0.42	41	0.29	.46	.74
Married	158	0.83	0.38	41	0.76	.43	1.14
Family Income	135	8.60	2.55	34	7.12	3.14	8.32**

†p<.1, * p < .05, **p < .01, *** p < .001.

Table 2. Correlation Matrix of Study Variables (N=199)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Disability Status															
Parent Report Prosocial 2 Behavior (CBS)															
Parent Report Frustration 3 (ECBQ)															
Parent Report Inhibitory 4 Control (ECBQ)															
Parent Report Child 5 Aggression (CBCL)															
Teacher Report Prosocial 6 Behavior (CBS)															
Teacher Report 7 Frustration (ECBQ)															
Teacher Report Inhibitory 8 Control (ECBQ)															
Teacher Report Child 9 Aggression (CBCL)															
10 TCR Closeness															
11 TCR Conflict															
12 Male															
13 Non-White															
14 Married															
15 Family Income															

†p<.1, * p < .05, **p < .01.

Table 3. *Regression examining teacher report child prosocial behaviors as a mediator between disability status and the teacher-child relationship conflict.*

Step	Variables	<i>b</i>	<i>SE</i>	R ²	<i>Sig. (p)</i>
1	Disability	5.307	1.706	.05	.002
2	Disability	.667	1.600	.29	.677
	Teacher Report Prosocial Behavior	-1.209	.163		.000
3	Disability	1.001	1.636	.29	.542
	Teacher Report Prosocial Behavior	-1.164	.171		.000
	Male	.998	1.269		.433
	Non-White	-1.289	1.411		.362
	Married	.026	2.257		.991
	Family Income	.233	.254		.360

†p<.1, * p < .05, **p < .01, *** p < .001.

Table 4. *Regression examining parent report child inhibitory control as a mediator between disability status and the teacher-child relationship conflict.*

Step	Variables	<i>b</i>	<i>SE</i>	R ²	Sig. (<i>p</i>)
1	Disability	4.834	1.862	.04	.010
2	Disability	3.322	1.780	.16	.064
	Parent Report Inhibitory Control	-2.683	.601		.000
3	Disability	3.404	1.813	.17	.063
	Parent Report Inhibitory Control	-2.402	.608		.000
	Male	3.032	1.428		.036
	Non-White	-.593	1.585		.709
	Married	-.611	2.622		.816
	Family Income	.323	.284		.257

†*p*<.1, * *p* < .05, ***p* < .01, *** *p* < .001.

Table 5. Sobel's Mediation Tests on Teacher-Child Relationship Conflict.

IV (Predictor)	<i>Child Disability Status</i>	
DV (Outcome)	Teacher-Child Relationship Conflict	
Mediator	<i>Parent Report Inhibitory Control</i>	<i>Teacher report Prosocial Behavior</i>
A	-2.683	-1.209
SE _A	-2.402	-1.164
B	.601	.163
SE _B	.608	.171
Sobel Test Statistic	2.956**	5.015**
p-value	.001	.000

* p < .05, **p < .01

A=unstandardized B, SE=standard error

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