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Mothers' Perceptions of Ability in Children with Intellectual Disability and Mother-Child Connectedness

Nikhita Moolayil

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Nikhita Moolayil

Charles Davis, Ph.D.
Faculty Mentor and Chair

Emese Vitalis, Ph.D.
Committee Member

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This is to certify that the Clinical Research Project of

Nikhita Moolayil

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Examining Committee:

Charles Davis (by ZA)

Committee Chair

Emma Vitelis (by ZA)

Reader

Reader

Dedication

I would like to dedicate this to my family for their unwavering support. Thank you for allowing me the opportunities in my life and encouraging me to follow my passions. To my parents, thank you for all of the love and support throughout my life. You have never failed to provide me with everything I have needed.

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Abstract

The mother-child relationship is important in the development of children, especially for children with intellectual disabilities who may have specific needs. Understanding the nuances, such as the closeness of the mother-child relationship for children with intellectual disabilities, is often overlooked even though more than 3 million children under 18 were reported to have an intellectual disability in 2019. Still, very few studies have focused on the relationship between mothers with children with an intellectual disability. With the rise in services provided due to developmental disabilities in children, there was a need to examine mothers' perceptions of the ability level in their children with an intellectual disability and how these perceptions affect the mother-child relationship. A quantitative nonexperimental methodology using a purposive sample of mothers with children aged 8–12 who were previously diagnosed with intellectual disability (N = 34) was used for this investigation. The NIH Toolbox Parent Report Self-Efficacy Scale (NIH Toolbox) and the Child-Parent Relationship Scale (CPRS) were the instruments used to collect data for the independent variable, mothers' perception, and the outcome variable, mother-child connectedness, respectively. Data were collected on the Survey Monkey platform. A one-way analysis of variance (ANOVA) was used to analyze the differences between two groups of mothers' perceptions and mother-child connectedness. The one-way Welsh ANOVA, a modified version of the ANOVA, reported no statistical significance between the two groups of mothers, Welsh's $F(1, 3.126) = 6.166$, $p = .086$. This result suggests that there is no association between how connected a mother feels toward her child with an intellectual disability and the number of functional impairments that she endorses for that child. Recommendations for future research are indicated.

CHAPTER 1. INTRODUCTION

A developmental disability is considered to be a severe, long-standing disability that impacts cognitive abilities, physical functioning, or both in conjunction with one another. Specifically, developmental disabilities are categorized as a group of conditions that cause substantial functional impairment in three or more areas, such as self-care, physical mobility, receptive or expressive language, self-direction, capacity for independent living, learning, and economic self-sufficiency (Hauser-Cram et al., 2004). According to Hauser-Cram et al. (2004), many of these impairments occur before age 22 and could potentially have life-long effects on individuals.

The term *developmental disability* is one that encompasses the term *intellectual disability*. Among the most common conditions included under the term developmental disabilities are cerebral palsy, autism, epilepsy, intellectual disability (mental retardation), and other neurological impairments (Hauser-Cram et al., 2004). In 2004, it was estimated that approximately 12% of the current population receive special services due to impairments faced by developmental disabilities (Hauser-Cram et al., 2004). According to the United States Census Bureau, there were about 2.6 million households, representing 7.2% of families, that have at least one individual under the age of 18 with an intellectual disability (Young, 2021).

This concept of childhood disability is one that encompasses various limitations in regard to physical, emotional, or mental conditions (Young, 2021). Young (2021) reported that in 2019, more than 3 million children under the age of 18 had a disability, which represented 4.3% of the population less than 18 years of age. An American Community Survey study reported that from 2008–2019, children with disabilities in the United States increased from 3.9% to 4.3% (Young, 2021). Childhood disabilities were considered due to impairments relating to vision, hearing,

cognitive, ambulatory, self-care, and independent living difficulties (Young, 2021). With the rise in services provided due to developmental disabilities, there was a need to examine intellectual disability, specifically mothers' perceptions of the ability levels for their children with intellectual disability and how each mother's perception affects the closeness of the mother-child relationship.

This study was designed to examine the perceptions of two groups of mothers with children diagnosed with intellectual disabilities and whether those perceptions were associated with the closeness of the mother-child relationship. This first chapter discusses the background and statement of the problem; describes the purpose of the study; provides the research questions, definition of terms, and research design; and identifies the assumptions and limitations of the study.

Background of the Problem

The main focus of this study was to better understand the parent-child relationship, specifically mother-child closeness and how this affects children with intellectual disabilities. The mother-child relationship is one that is individualized and can be influential in the development of a child (Day & Padilla-Walker, 2009; Lezin et al., 2004). Understanding the nuances of the mother-child relationship for children who have intellectual disabilities is an important and often overlooked factor (Perkins et al., 2002). This issue is one of importance as much of the research does not focus on how children with intellectual disabilities are affected (Perkins et al., 2002).

Because there is a paucity of literature on mother-child closeness, mother-child connectedness, and mothers' perceptions of their children with intellectual disabilities, this study added to the literature for regulatory entities, scholar-practitioners, clinicians, mothers of

children with intellectual disabilities, and children with intellectual disabilities. Thus, this study addressed the lapse in research regarding the parent-child relationship and mother-child connectedness for those mothers with children diagnosed with intellectual disabilities.

Only mothers with children between 8–12 years of age were considered for participation in this study. The rationale for using this criterion was based on literature that indicated an overwhelming increase in intellectual disabilities for children under the age of 18 (Young, 2021). Additionally, to collect data from the mothers, the NIH Toolbox Self-Efficacy Parent Rating Scale (NIH Toolbox), which assesses a specific age range of children between the ages of 8–12, was used. As such, the instrument also defined the inclusion of mothers with children between the ages of 8–12 years old.

Statement of the Problem

This dissertation focuses on the limited literature regarding children who have intellectual disabilities. While many resources focus on children born with normal development, the field of psychology appears to lack research representing individuals with various disabilities (Perkins et al., 2002). The literature further lacks information regarding the parent-child relationship and how this may differ or be impacted when a family has a child with an intellectual disability. This research focused on better understanding the intricacies of the parent-child relationship, specifically mother-child connectedness, and how this may be impacted by the functional impairments that a child may face due to an intellectual disability. The research problem was mother-child connectedness, which is based on a mother's perception of her child's disability and how that affects the closeness of their relationship.

Purpose of the Study

The purpose of the present study was to explore links between the severity with which a mother rates her child's abilities and the connection that she feels with that child. In order to assess how severely a mother rates the abilities of her child with an intellectual disability, mothers were asked to rate how self-efficacious they view their child. After endorsing the functional impairments faced by their child, mothers were asked questions related to the sense of connection that they feel with their child. Thus, this study aimed to address the research question such that gaps in the literature could be addressed and new data and scholarship could be added to the field of psychology.

Significance of the Study

This topic is important as past research has shown that when parents hold negative perceptions regarding their children, adverse consequences can occur (Ferrer et al., 2016; Hastings et al., 2002; Pomerantz & Dong, 2006). This study contributed to the field of psychology with the current topic. Further, the study could potentially help support the importance of the mother-child relationship. As this sense of connection fosters a healthy bond between the mother and child, this research served to establish this relationship as vital and one which can further the development of a child.

With regard to stakeholders, this body of work could be beneficial to multiple parties, including policymakers, medical personnel, scholar-practitioners, clinical psychologists, mothers of children who have intellectual disabilities, and children with intellectual disabilities. This research can help add new data to the existing literature of scholar-practitioners, and could assist future scholars in their research. Clinical psychologists could gain from this research by better understanding the mother-child relationship and how this may differ for children who have

intellectual disabilities. Clinical psychologists could also implement these findings into their individual treatment plans with their clients, thus allowing for more diversity considerations to be taken into account. Mothers and children with intellectual disabilities may also benefit from this study as this research gives them access to additional sources of information and resources.

Research Questions

Primary Research Question: Among mothers who have children with intellectual disabilities, are there significant differences in levels of mother-child connectedness based on mothers' perceptions of the ability levels for two groups of mothers?

H_{10}: Levels of mother-child connectedness based on perceptions of abilities will not report statistically significant differences by two groups of mothers.

H_{1a}: Levels of mother-child connectedness based on perceptions of abilities will report statistically significant differences by two groups of mothers, thus warranting post hoc analysis.

Definition of Terms

Adaptive functioning. Adaptive functioning defined by the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed., *DSM-5,* American Psychiatric Association [APA], 2013) indicates a failure to meet sociocultural and developmental standards for one's social responsibility and personal independence (p. 33).

Chronic sorrow. Chronic sorrow defined by Craft-Rosenberg and Pehler (2011) is ongoing sadness faced by a mother for not giving birth to an ideal child.

Connection. Lezin et al. (2004) characterized connection as a stable, positive emotional bond, measured by the parent's availability to the child, time spent together, acceptance of the child, and enjoyment in being with the child.

Developmental disabilities. Hauser-Cram et al. (2004) defined developmental disabilities as a condition attributable to a mental, physical, or combined impairment that manifests before the age of 22 and likely continues indefinitely.

Externalizing behaviors. Schuringa (2014) defined externalizing behaviors as a group of problematic behaviors manifested in a child's outward display of behavior which reflect how the child is negatively acting on the external environment.

Functional impairment. Üstün and Kennedy (2009) defined functional impairment as limitations individuals face due to illness, as this may impact one's abilities in daily functioning.

Intellectual disability. Intellectual disability defined by the *DSM-5* indicates that this disability originates during the developmental period and includes deficits in both intellectual and adaptive functioning in practical, conceptual, and social domains (APA, 2013, p. 33).

Intellectual functioning. The *DSM-5* indicates that deficits in this area are seen in reasoning, judgment, problem-solving, academic learning, abstract thinking, and learning from experience (APA, 2013, p. 33).

Mother-child connectedness. Keeler (2010) characterized mother-child connectedness as experienced heightened self-esteem, future time perspectives, self-control, social temporal awareness, and lowered levels of impulsivity for adolescents.

Parent-child connectedness. Lezin et al. (2004) characterized parent-child connectedness as the overall quality of the shared relationship and the degree to which this bond is mutual and sustained over time.

Resolved parents. Oppenheim and Goldsmith (2011) described resolved parents as parents who are able to describe noticeable changes since the time of diagnosis, acceptance of

the condition whilst maintaining hope, and lack of preoccupation or suspension of a search for the cause or reason behind the child's developmental disability.

Self-efficacy. Self-efficacy defined by the NIH Toolbox is a person's belief in their capacity to have control over meaningful events and manage functioning (National Institutes of Health [NIH], 2012).

Unresolved parents. Oppenheim and Goldsmith (2011) defined unresolved parents as parents who have more difficulty with revising their respective internal models regarding their child with a developmental disability.

Research Design

The design for this study was a nonexperimental quantitative methodology. Because the study sought to examine mothers' perceptions of intellectual disability in their children and how that relates to mother-child connectedness, a quantitative methodology was most appropriate (Field, 2013). Therefore, this study was a correlational nonexperimental design using mothers' perceptions as the independent variable and mother-child connectedness as the outcome variable. Hence, this design was appropriate to address the research question.

Quantitative research methodology has been used to study the parent-child relationship with children who have intellectual disabilities in previous literature (Purnamawati & Pradipta, 2020). One study specifically looked at the effects of positive perceptions in mothers of children with intellectual disabilities (Hastings et al., 2002). The results of this study indicated that a mother's positive perception of her child serves as a source of happiness, fulfillment, and strength (Hastings et al., 2002).

In order to assess whether mothers who describe their children as having more impairments in functioning perceived a closer or less close sense of connection with their children, two survey instruments were used to collect mothers' responses via the secure Survey Monkey platform. Participants completed the CPRS (Pianta, 1992) and the NIH Toolbox (NIH, 2012).

Assumptions and Limitations

Assumptions

In order to measure the construct for this study, operational variables were used, suggesting quantitative methodology. Objective measures were used in this study, qualifying this research as a quantitative study. The research paradigm used for this study is the positivist paradigm, which is quantitative. This paradigm emerged in the 19th century as a rejection of the assertion that solely scientific knowledge can unearth the truth regarding reality (Kaboub, 2008).

The positivist paradigm was formally recognized as the "dominant scientific method" in the early 20th century (Kaboub, 2008, p. 343). This paradigm established that actual events can be explained with logical analysis and observed empirically (Kaboub, 2008). One study revealed that the positivist paradigm is rooted in the "doctrine that the truth and reality are free and independent of the viewer and observer" (Aliyu et al., 2014, p. 81). The positivist paradigm is considered to yield results that uphold internal validity because positivist research methodology places emphasis on microlevel experimentation that allows for the elimination of the complexities caused by the external environment (Kaboub, 2008).

Limitations

Limitations for this study include the small sample size and the self-reported surveys used for data collection. This study took place during the Covid-19 pandemic, eliminating the

opportunity for research to be conducted through various school districts. Because of this limitation, the sample size was disrupted as data collection took place via various social media platforms, including Facebook and Reddit, as well as email. Furthermore, the self-reported measures included in this study may have produced bias.

Delimitatons

Delimitations for this study included the NIH survey, which only focused on addressing the needs of children with intellectual disabilities between the ages of 8–12. This served as a delimiter for the study as this reduces the generalizability of the results to those between the ages of 8–12. In addition, this study solely focused on the mother-child relationship rather than the parent-child or father-child relationship, and as such, served as an additional delimiter as the responses collected by fathers of children with intellectual disabilities were not included.

Organization of the Remainder of the Study

Chapter 1 consisted of an introduction to the problem background, a statement of the problem, the purpose and significance of the study, the research questions, terms and definitions, the research design, and the assumptions and limitations. The remainder of the study is organized by a literature review in Chapter 2, methodology in Chapter 3, a discussion of the results in Chapter 4, and the discussion, implications, and recommendations in Chapter 5.

CHAPTER 2. LITERATURE REVIEW

This literature review describes the specific methods used to obtain literature and the theoretical framework used for this study. This chapter further includes the history of terms used to describe individuals who have intellectual disabilities, as well as a literature review conducted by analyzing previous work in the field of psychology. This study investigated mothers' perceptions of intellectual disability in their children and their association with mother-child connectedness.

Methods of Searching

Scholarly research articles were located and analyzed in order to provide a foundation for the topic. The primary method of searching was through National Louis University's library databases, including Google Scholar, APA PsycNet, SocINDEX with Full Text, SAGE Journals Online, and ProQuest. The search terms that were utilized to locate the research articles were *intellectual disability, developmental disability, parent-child relationship, mother-child relationship, mother-child connection,* and *attachment theory*.

These terms were often combined using the word effects. Quotation marks were also placed around the words during some searches to search terms in a particular order or together. The search process included a search of the keywords in article abstracts as well. Other procedures for searching for academic scholarly journal articles were reviewing the reference sections of articles and Google Scholar as a tool to forward search particular articles and review articles that cited one another.

Theoretical Orientation for the Study

Attachment Theory

Attachment theory is considered to be the joint work of psychologists John Bowlby and Mary Ainsworth (Bretherton, 1992). The basic tenets of attachment theory were formulated by John Bowlby (Bretherton, 1992). According to Bretherton (1992), Bowlby revolutionized the understanding of attachment theory regarding a child's connection to the mother and the disruption of this relationship through deprivation, bereavement, and separation (Bretherton, 1992). Ainsworth's contributions to attachment theory revolved expanding the theory itself and introducing innovative methodology to the field that allowed Bowlby's theories to be empirically tested (Bretherton, 1992). Ainsworth contributed to the field by introducing the notion of an attachment figure serving as a secure base that has the power to allow an infant the ability to explore the world (Bretherton, 1992).

Attachment theory is described as a model that is used to analyze the dynamics of interpersonal relationships between humans. According to Cassidy and Shaver (2002), Bowlby originally developed the concept of attachment theory when attempting to understand the intense distress experienced by infants after separation from their parents (Cassidy & Shaver, 2002). Asserted by Cassidy and Shaver, Bowlby concluded that disruptions in the mother-child relationship served as a precursor for psychopathology later on in life (Cassidy & Shaver, 2002).

According to Cassidy and Shaver (2002), through his research, Bowlby observed that infants would go to extraordinary lengths to prevent separation or reestablish proximity to the attachment figure. As reported by Cassidy and Shaver, Bowlby described this as the biological basis of attachment. He asserted that all attachment behaviors fall under two categories, signaling

behaviors and aversive behaviors (Cassidy & Shaver, 2002). Signaling is described as attachment behaviors that alert the attachment figure to the child's interest in interaction and serve to bring the figure to the child as a result (Cassidy & Shaver, 2002). Signaling behaviors are seen through actions such as a child's smile or vocalizations (Cassidy & Shaver, 2002). In turn, aversive behaviors are actions such as crying that lure a mother towards the child in order to terminate the behavior (Cassidy & Shaver, 2002).

In addition to the biological bases of attachment behavior observed by Bowlby, he formulated the concept of an evolutional perspective of attachment (Cassidy & Shaver, 2002). Bowlby proposed that genetic factors promoted attachment behaviors as these actions increased the likelihood of the proximity of a mother and child (Cassidy & Shaver, 2002). This in turn positively affected the probability of protection and offered a child an advantage in survival as a result (Cassidy & Shaver, 2002).

Furthermore, Bowlby concluded that a disruption with the attachment figure not only caused implications in the later functioning of a child but also asserted that the mother-child relationship is of immediate and critical importance (Cassidy & Shaver, 2002). According to Cassidy and Shaver (2002), Bowlby proposed that while there are normative dynamics toward an attachment figure, there are also individual differences regarding how children regulate attachment behavior and appraise their accessibility to their mothers (Cassidy & Shaver, 2002). However, a proper understanding of these individual differences was not articulated until Mary Ainsworth systematically conducted studies analyzing infant-parent separations (Cassidy & Shaver, 2002).

In order to test the parent-child attachment, Ainsworth created a laboratory procedure called the Strange Situation in which a mother and child would be systematically separated and

reunited. The purpose of this study was to identify the reaction of a child when separated from their maternal figure at the age of 12 months. The first type of attachment observed through this procedure was classified as a secure mother-child attachment. Children who exhibited a secure attachment were noticed to trust in their mothers' availability for comfort and protection (Cassidy & Shaver, 2002). These infants cooperated with their mothers' requests, communicated using means other than crying, and exhibited behaviors consistent with those who were eager to explore the physical environment when placed in the Strange Situation experiment (Cassidy & Shaver, 2002).

After these children were reunited with their mothers during the Strange Situation procedure, these infants were observed to greet their mother with a full approach, return to play in a relatively quick manner, and if in distress, be calmed in response to being held (Cassidy & Shaver, 2002). During naturalistic observations conducted by Ainsworth and colleagues, mothers of children who exhibited these behaviors were able to respond promptly and appropriately to the needs of their child during the first 3 months of the child's life (Cassidy & Shaver, 2002). This allowed for a more harmonious relationship during the last quarter of the infant's first year of life (Cassidy & Shaver, 2002).

Ainsworth classified the next group of infants as ambivalent or resistant. These infants were those who displayed clingy behaviors, intense crying in the absence of the maternal figure, and a desire to be held upon the mothers' return (Cassidy & Shaver, 2002). When picked up, however, these children failed to gain the expected comfort from their mothers and became fussy (Cassidy & Shaver, 2002). One subgroup of this category was comprised of infants who were more passive while the others categorized as more angry (Cassidy & Shaver, 2002). During the home observation study, mothers of this category of children displayed inconsistent sensitivity

towards their child's needs (Cassidy & Shaver, 2002). While sometimes responsive, these mothers also frequently rejected or ignored social cues from the infant (Cassidy & Shaver, 2002).

The next classification for children in the Strange Situation procedure exhibited an avoidant attachment style (Cassidy & Shaver, 2002). Upon reunification with mothers during the Strange Situation, children displayed little to no attachment behavior (Cassidy & Shaver, 2002). The children characterized as avoidant were observed to turn away when the mother reentered or ignored the mother's attempts to engage in social interactions (Cassidy & Shaver, 2002). Ainsworth attributes this avoidant attachment style to a defensive adaption of a child as a result of maternal rejection during stressful situations (Cassidy & Shaver, 2002). When mothers of children with avoidant attachment styles were observed in a longitudinal study, results indicated that these mothers were relatively unresponsive to their infant's cry and rarely engaged in affectionate holding and physical body contact (Cassidy & Shaver, 2002).

This study further supported the importance of secure mother-child relationships and the long-standing affects that this has on the positive development of a child. As a result of this study, it has been reasoned that there is a strong link between parental representational strategies and infant behavioral attachment (Cassidy & Shaver, 2002). It is further understood that the classifications from the Strange Situation experiment "predict the quality of observed parent-child communication patterns beyond infancy" (Cassidy & Shaver, 2002, p. 101). This in turn reinforces the importance of obtaining a strong connection between a mother and child at an early age.

The disorganized attachment style asserts that infants who display this attachment style face significant difficulty when bonding with their parents (Shorey & Snyder, 2006). Infants with this attachment style were reported to not obtain the sense that they are being cared for (Shorey

& Snyder, 2006). This classification was most commonly evidenced in children who were subject to maltreatment (Soloman & George, 2011). Mothers of children with a disorganized attachment style were described as helpless in regard to their child, their own emotions, and the relationship that they share with their child (Soloman & George, 2011).

Based upon these patterns of interaction, when observed under stressful situations in a laboratory, infants between 18–24 months old preferred their mother to their father in attachment behaviors (Collins & Russell, 1991). When observed during a less constrained context, infants preferred being in the presence of a father figure during play and social interactions (Collins & Russell, 1991). Researchers further concluded that analyses indicate that infants' attachment security to fathers is independent of the security of infants' attachment toward mothers (Collins & Russell, 1991).

Erikson's Psychosocial Model of Development

Erikson's psychosocial model of development delineates the stages in the development of the ego from infancy through death (Hauser-Cram et al., 2004). It is assumed that Erikson's model relates to all youth and is applicable to individuals with developmental disabilities. The developmental stages for the age group included in this study are Industry vs. Inferiority and Identity vs. Role Confusion. Researchers have proposed that it is during the time of adolescence, when individuals are expected to create their own identity, that most struggle (Hauser-Cram et al., 2004).

The Industry vs. Inferiority stage is characterized by a child having interest in skills, motivation to persist at tasks, and an increase in self-regulation (Syed & McLean, 2017). A sense of industry is achieved when a child is successfully able to accomplish practical skills and is

praised for their efforts (Elkind, 1970). Children in this developmental stage were further described as independent and not solely reliant on their parents (Elkind, 1970). This stage of industry was further detailed by a child's ability to engage in abstract thinking and marked by a desire to build, imagine, and acquire knowledge (Batra, 2013). This in turn helps a child create a sense of competency and purpose (Batra, 2013).

Hauser-Cram et al. (2004) posited that it is during the Identity vs. Role Confusion stage that adolescents are believed to be met with a time of discord when attempting to construct an identity developed by the formation of belief systems and personal ideals. This is thought to be formed while the adolescent is developing an orientation toward their respective future role that is deemed appropriate by society (Hauser-Cram et al., 2004). While this period of strife is acknowledged, it is believed that difficulties faced are more significant for those with developmental disabilities due to a further limitation in skills and fewer opportunities for those with disabilities (Hauser-Cram et al., 2004). This may be exemplified through limitations in knowledge regarding how to complete tasks that necessitate a set of skills outside the range of those possessed by an individual with a disability or fewer opportunities offered in the domains of employment, independent living, or postsecondary education (Hauser-Cram et al., 2004).

Adolescents with disabilities may also face differences regarding to the timing at which developmental milestones are reached, leading these individuals to confront identity issues at a later chronological age compared to their typically developing peers (Hauser-Cram et al., 2004). Furthermore, it is reasoned that due to limitations faced by severe cognitive impairments, the depth of identity formation may be constrained by those who face developmental disabilities (Hauser-Cram et al., 2004).

This theory of psychosocial development is important to the present study due to the difficulties that are placed upon children with intellectual disabilities. This model asserts that due to the limitations placed upon those who have developmental disabilities, one's sense of identity may be compromised. The current study aimed to rectify this by analyzing a mother's perception of her child's intellectual disability and how this may relate to her sense of closeness with her child.

Review of the Literature

This literature review provides the foundation for the present study, which examined mothers' perceptions of intellectual disability in their children and mother-child connectedness due to their perceptions. The review includes a description of terminology used to describe developmental disability, an overview of how gender impacts parenting, an analysis of three parent-child relationship areas of research related to the topic, factors relevant to this literature review that potentially contribute to the research topic, and finally, a discussion of the findings.

Intellectual Disability

The American Association on Intellectual and Developmental Disabilities defined intellectual disability as a disability which is characterized by significant impairments in the realms of intellectual functioning and adaptive behaviors (Schalock et al., 2021). More specifically, this includes implications in reasoning, learning, and problem solving and complications covering a range of everyday social and practical skills (Wehmeyer, 2013). This term is used to refer to an individual who evidences limitations in what is considered to be typical human functioning (Wehmeyer, 2013). Thus, intellectual disabilities are characterized by two or more limitations, before age 18, in the following functional adaption skills: self-care, household management, communication, self-guidance, social skills, community orientation,

health and safety, academic skills, utilization of leisure time, and occupational competence (Rubin & Schreiber-Divon, 2014).

The number of children aged 8–12 or under 18 diagnosed annually with an intellectual disability increases (Young, 2021), but studies on the reasons why are not present in the literature. Hence, the construct intellectual disability warrants an investigation, particularly for children between the ages of 8–12, as these are essential years for a child's development of their identity (Hauser-Cram et al., 2004). It is important to understand how a mother views her child's abilities, as holding negative perceptions about children has proven consequential (Ferrer et al., 2016; Hastings et al., 2002; Pomerantz & Dong, 2006).

Terminology

The terminology used to categorize individuals who have an intellectual disability has been challenged over the years. Throughout history, various terminology has been used to denote individuals who experience a limitation in intellectual functioning and adaptive behaviors (Wehmeyer, 2013). Terms commonly used throughout history include mental retardation, mental deficiency, feeble-mindedness, moron, imbecile, idiot, and natural fool (Wehmeyer, 2017). One of the most common expressions used in history to describe individuals with an intellectual impairments was *mental retardation*. This term was used to refer to a condition considered internal to an individual (Wehmeyer, 2013).

On the contrary, the phrase *intellectual disability* refers to a state of functioning rather than a condition (Wehmeyer, 2013). As time progressed, the term intellectual disability has become one that is used internationally (Wehmeyer, 2013). This terminology has become widely accepted as it reflects a change in the construct of disability, aligns with current professional practices that have a focus on contextual factors and functional behaviors, and is less offensive

compared to expressions previously used (Wehmeyer, 2013). While the terminology and acceptance for members in this group progress, society is still not fully accepting of all individuals who comprise this group. Throughout this study, the term intellectual disability will be used as the construct.

Mothers' Perceptions of Mother-Child Connection

The parent-child connection is a relationship that has been studied and found to be influential a child's development (Day & Padilla-Walker, 2009; Lezin et al., 2004). In research, the parent-child connection has been considered to be a "super-protector feature of family life that may buffer young people from challenges and risks they face in today's world" (Lezin et al., 2004, p. 12). It was asserted that there are eight different components that create this parent-child connection: attachment/bonding, warmth/caring, cohesion (closeness and conflict), support/involvement, communication, monitoring/controlling, autonomy granting, and maternal/paternal characteristics (Lezin et al., 2004). The concept of a parent-child connection is commonly operationalized as the closeness and satisfaction of the parent and child, the child's perceived sense of being cared for by their parent, and the feeling of being wanted and loved by their parent (Keeler, 2010; Resnick et al., 1997).

Further, it was determined that these eight components might collectively serve as an early construct or possible determinants of the parent-child connection (Lezin et al., 2004). Runyan et al. (1998) and Lezin et al. (2004) found that the combination of five measures was strongly associated with the overall well-being of children. The five combined factors that predicted child well-being are a two-parent household, two or fewer children, maternal social support, and ties to the church and the neighborhood (Lezin et al., 2004; Runyan et al., 1998). Runyan et al. (1998) concluded there was an amplifier effect when there was more than one

indicator present. On average, one indicator was associated with child well-being increase by 29% while two factors by 66% (Lezin et al., 2004). These results were found consistent regardless of what factors were combined (Lezin et al., 2004; Runyan et al., 1998).

The mother-child connection was also found to be consistently related to prosocial behaviors in adolescents (Day & Padilla-Walker, 2009). According to Day and Padilla-Walker (2009), prosocial behaviors could occur due to the focus on relationship-building skills that mothers emphasize in their parenting. On the other hand, the father-child connection was negatively correlated to internalizing and externalizing behaviors in children (Day & Padilla-Walker, 2009). However, it was beyond the scope of this study to analyze how this sense of connection would be affected when a parent has a child with an intellectual disability.

The theme of hope was one that was specifically related to mother-child connectedness (Day & Padilla-Walker, 2009). It was determined that a mother's involvement with her child was positively related to the child's sense of hope, as well as prosocial behaviors (Day & Padilla-Walker, 2009). However, having a child with an intellectual disability invoked a grieving process during which a parent must let go of the hopes and dreams previously held for that child (Crnic et al., 2009). This in turn may affect the sense of connection that a mother feels with her child who has an intellectual disability. The current study focused on addressing this gap and better understanding a mother's perception of her connection with her child.

Parenting Children with Intellectual Disabilities

Parenting presents many challenges when trying to parent children with intellectual disabilities due to the cognitive impairments faced by this population (Schuringa, 2014). This is evidenced through a parent's need to repeatedly instruct or redirect children, which calls for the

parent's patience to be put to the test (Schuringa, 2014). In turn, parenting a child with an intellectual disability has frequently been associated with less positive parenting, less positive affect toward children, more negative affect, and less involvement by the mother (Schuringa, 2014).

Parents were also found to display patterns of inconsistency, and angry parenting, which in turn was found to predict the persistence of the child's problematic behaviors (Schuringa, 2014). Past research conducted on this topic has also focused on the gender of children being a factor that may affect a mother's sense of connection towards her child. One study measured this concept by looking at the sense of self an individual felt regarding to functioning autonomously (Olver et al., 1989). In general, researchers found that a separate sense of self is more easily achieved for men than for women (Olver et al., 1989).

Role of Gender

While not an absolute difference between genders, researchers further concluded that on average, women have more difficulty than men in terms of experiencing an autonomous sense of self (Olver et al., 1989). Reciprocally, this would relate that in general, women are able to create a greater sense of connection with others. Researchers have established that self-definition for women is created when being embedded in relationships and the emotional responses of others (Olver et al., 1989).

On the contrary, a man's self-definition is characterized as having boundaries between the self and others, which are distinct (Olver et al., 1989). Furthermore, it has been established that a woman's sense of self-identity is deeply anchored in relationships and her personhood is grounded in enchaining this relationship with others (Olver et al., 1989). It is reasonable to

conclude that a mother may naturally feel a closer connection toward her daughter, as daughters are generally those seeking this sense of connection from others. Olver et al. (1989) theorized that this difference seen between genders might be dependent on the mother-infant relationship. The literature suggests that this may be due to a mother experiencing her daughter as an extension and continuous form of herself (Olver et al., 1989).

However, researchers believe that a mother may perceive her son as an opposite which is different and a separate form from herself (Olver et al., 1989). As there is more of a barrier to be bridged between the mother and son relationship, males are "pushed out" and encouraged to form more firm boundaries (Olver et al., 1989, p. 312). Due to this separation from the mother and assertion of difference, boys develop "a basic relational stance of disconnection and disidentification" (Olver et al., 1989, p. 312; Surrey, 1985, p. 4). On the contrary, it is hypothesized that girls do not lose their primary attachment with their mothers and remain "involved with issues of merging and relational connection in a matrix of emotional connectedness" (Olver et al., 1989, p. 312; Surrey, 1985, p. 4). It is further posited that emotional openness, communication, and identification are more coherent between mothers and daughters than mother-son relationship (Olver et al., 1989). Based upon these theories, a mother may feel a closer sense of connection with her daughter compared to the connection she may feel towards her son.

Paternal Effect

Researchers have concluded that fathers are as significant and competent in regard to caregiving ability as their female counterparts (Collins & Russell, 1991). However, in comparison to mothers, fathers have been found to interact less frequently with their children, initiate different types of interactions, and be less involved with the caregiving of children

(Collins & Russell, 1991). This is further supported by an alternative study which proposed that fathers show less emotion during the birth of a child with a disability because they are preoccupied with the potential long-term effects of the disability (Craft-Rosenberg & Pehler, 2011).

One study reported that in comparison to the 54.7 hours per week a mother spends with her child, fathers spent about 34.6 hours per week (Collins & Russell, 1991). Mothers in this study were also noted to spend a more substantial amount of alone time with children at a rate of 22.6 hours per week compared to 2.4 hours of alone time reported by fathers (Collins & Russell, 1991). Fathers tend to engage in play more frequently and with a higher intensity and physicality compared to mothers (Collins & Russell, 1991). On the other hand, mothers tend to engage in more verbal and didactic play techniques with the incorporation of more toys and objects during play (Crnic et al., 2009).

Overall, fathers tend to display less affect towards children despite whether the affection is positive or negative (Collins & Russell, 1991). Fathers were also found to be more disappointed if they had a son with a disability (Craft-Rosenberg & Pehler, 2011). In general, mothers were considered significantly more emotional and tend to be concerned with whether they can care for a child with a disability (Craft-Rosenberg & Pehler, 2011).

The parenting styles exhibited by mothers and fathers are also perceived in a manner that is dissimilar (Crnic et al., 2009). Fathers reported that their spouses were more permissive, authoritative, and less authoritarian than themselves as fathers (Crnic et al., 2009). Mothers perceived that they were only more authoritative than their male counterparts (Crnic et al., 2009). The three types of parent-child relationships discussed are normative development,

developmental disabilities, and intellectual disabilities. These three parent-child relationships have unique characteristics and are discussed at length for this study.

Normative Development and Parent-Child Relationship

For mothers of children who progress along what is commonly known as a normative developmental process, there is a growing recognition that the relationship with others serves as a central influence on development (Collins & Russel, 1991; Day & Padilla-Walker, 2009). Compared to the preschool period, during both adolescence and middle childhood, children and parents spend less time together (Collins & Russell, 1991). This is reflected in the general amount of interaction time spent together, the relative time spent in recreational or play activities compared to caregiving, and the amount of time spent in achievement-oriented and goal-directed activities (Collins & Russell, 1991).

Researchers have reported that, in general, the cohesion and closeness of the parent-child bond are rarely assessed in middle childhood (Collins & Russell, 1991). This relationship is more commonly studied in the parent-adolescent relationship (Collins & Russell, 1991; Day & Padilla-Walker, 2009). These studies suggest that adolescents retroactively report the relationship shared with their mother as closer than the relationship with their father (Collins & Russell, 1991). Both daughters and sons describe a larger proportion of enjoyable activities done while engaging with their mother compared to their father (Collins & Russell, 1991).

When assessed on a series of questions derived from the attachment theory, both male and female participants alike rated the attachment to mothers as higher than that of the father (Collins & Russell, 1991). Researchers further reported that data indicated strong predictive effects resulting from a detachment in the parent-adolescent relationship (Collins & Russell,

1991). This included a decrease in life satisfaction, increase in identity appraisal, and increase in psychological symptoms (Collins & Russell, 1991).

This study is important as it helps to fill in gaps in the previous literature. Understanding how the mother-child relationship is impacted when a child has an intellectual disability is an area that has been overlooked for many years. This study aimed to address this issue and provide a deeper understanding of this relationship. By further understanding this relationship, mothers who have children with intellectual disabilities, children who have intellectual disabilities, and the field of psychology can be better supported.

Developmental Disability and Parent-Child Relationship

While there is limited research in this field, one study focused on the relationship quality of mothers who had children diagnosed with autism. It was concluded that 90% of mothers included in their study reported having a high level of affection for their child (Orsmond et al., 2006). In addition, mothers reported feeling as though they displayed significantly more positive affection toward their children than the amount perceived as reciprocated by the children (Orsmond et al., 2006). Mothers reported having moderate to high levels of warmth and relatively low levels of overinvolvement and criticism directed toward their child with autism (Orsmond et al., 2006).

Oppenheim and Goldsmith (2011) asserted that there is a difference between parents who have feelings that are resolved and unresolved regarding their child's diagnostic classification (2011). A resolved classification is characterized by a parent's ability to describe noticeable changes since the time of diagnosis, acceptance of the condition while maintaining hope, and lack of preoccupation or suspension of a search for the cause or reason behind the child's

developmental disability (Oppenheim & Goldsmith, 2011). Resolved parents were reported to see positive aspects in their child and be more optimistic and resourceful (Oppenheim & Goldsmith, 2011).

Unresolved parents were reported to have more difficulty with revising their respective internal models regarding their child with a developmental disability (Oppenheim & Goldsmith, 2011). The impression given by these parents lacks acceptance, is unrealistic, and is often one-sided (Oppenheim & Goldsmith, 2011). There are several subclassifications for unresolved parents, including emotionally overwhelmed, neutralizing, angrily, depressed, preoccupied, cognitively distorted, or confused (Oppenheim & Goldsmith, 2011).

Intellectual Disabilities and Parent-Child Relationship

The parent-child relationship is one which researchers have found to be stressed based upon the challenges of parenting a child with an intellectual disability (Narmada & Pushpa, 2012; Schuringa, 2014). After giving birth to a child with an intellectual disability, parents endorse feeling loneliness, guilt, denial, anger, and chronic sorrow (Craft-Rosenberg & Pehler, 2011; Crnic et al., 2009). Craft-Rosenberg and Pehler (2011) defined chronic sorrow as ongoing sadness faced by a mother for giving birth to a child with an intellectual disability (p. 2). This was also characterized by an invoked grieving process during which a parent must let go of the hopes and dreams they once had for their child (Crnic et al., 2009).

It was reported that chronic sorrow resurfaces during each developmental milestone as parents are reminded that their child is different from others (Crnic et al., 2009). Parents also endorsed novelty shock crisis, defined as a mother's initial sense of shock experienced with the birth of a child with a disability (Craft-Rosenberg & Pehler, 2011; Crnic et al., 2009). This is followed by a real crisis during which the family faces daily stresses associated with raising the

child and causes strain on the family (Crnic et al., 2009). Finally, there is an emergence of a value crisis defined as a period when a parent realizes that their child is similar to other typically developing children (Crnic et al., 2009).

Parents who have children diagnosed with an intellectual disability typically perceive their parenting behaviors as flawed (Schuringa, 2014). This in turn suggests that the parental sense of competence among parents who have children with intellectual disabilities is lower than that of parents who have children of average intelligence (Schuringa, 2014). Researchers have emphasized the importance of accepting a child's disability to preserve this parent-child relationship (Schuringa, 2014).

Accepting that a child may have special needs and that displays of deviant or inappropriate behaviors may occur plays a crucial role in preventing a parent's inadequate response due to the child's misbehavior (Schuringa, 2014). This research asserted the importance of the acceptance of a child and how this relates to the way parents respond. The theme of acceptance highlighted in this research may be similar to the sense of connectedness that a mother shares with her child. The present study sought to understand how a parent views the functional impairments faced by their child compared to how they view their relationship with the child.

Parents' Positive Perspectives

The discrimination that individuals who have an intellectual disability face is an injustice that often occurs (O'Hara et al., 2010). This act of discrimination is seen cross-culturally and across a variety of environments (O'Hara et al., 2010). While it is unreasonable to preserve the

notion that everyone in the general population would accept all individuals, the idea of one unwaveringly loving their child is a concept that may not be as foreign.

Research has found that a parent's positive perception of their child is considered to be a critical aspect in the successful growth and development of the child (Jess et al., 2017). In other words, when a parent can hold a positive outlook regarding their child and maintain this frame of mind, there are benefits to the progression of the child (Jess et al., 2017). Crnic et al. (2009) indicated that positive parent beliefs and family perceptions can potentially buffer the adversity associated with the family stress a child who has an intellectual disability brings to the family. However, if unable to do so, there is a risk imposed on the child that may compromise their well-being (Crnic et al., 2009). This further reinforces the concept that it is vital for parents to positively perceive of their children.

Family Dynamics as an Influencing Factor

The role of a family system as a whole is considered one of the most important factors that contribute to the overall success of a child diagnosed with an intellectual disability (Ferrer et al., 2016). The family system is considered to be one of the most supportive and influential factors that foster the positive development of a child (Ferrer et al., 2016). Regarding the facilitation of development for a child, researchers have theorized that the family plays a vital role in their ability to offer supportive care in a natural setting and opportunities for learning (Ferrer et al., 2016). Without familial support, it becomes increasingly more challenging for an individual to prosper as they attempt to navigate the world independently.

Research has supported that a parent's perception of their child is a factor that can delineate a family's structure (Hein et al., 2018). More specifically, researchers have concluded

that factors such as a parent's attitudes, cognitions, and practices could promote or inhibit the development of a child (Bornstein et al., 2011; Hein et al., 2018). In addition, research has shown that a parent's perception of their child's abilities plays a meaningful role in the academic functioning of a child (Pomerantz & Dong, 2006).

Researchers have determined that when parents perceive their child's competence negatively, the child's academic performance becomes compromised (Pomerantz & Dong, 2006). Researchers have further concluded that parents' perceptions of their child's academic competence are a better predictor of the child's perception of their own academic performance than the child's actual achievement (Pomerantz & Dong, 2006).

Mother-Child Connectedness

A parent's positive perception of their child's abilities has a significant impact on the child's achievements. If a mother were to hold a negative view about her child's academic skills, the child, in turn, could believe that they are incapable of performing well. This can influence the individual to perform more poorly in school and allow the mother to preserve further the notion that her child's intellectual disabilities are debilitating to their academic performance.

Just as important, a child's behavior can affect the parenting to which they are subjected (Hein et al., 2018; Lansford et al., 2010). While the nuances of the bidirectional relationship are not wholly understood, there has been a consensus among literature which states that parenting and the behavior of a child influence one another concurrently and over time (Bornstein, 2015; Hein et al., 2018; Korelitz & Garber, 2016; Pardini, 2008; Patterson & Fisher, 2002; Pettit & Arsiwalla, 2008). A child's behavior, in turn, serves as an aspect that may affect a mother's perception of her child, which could subsequently affect the mother-child connectedness.

Researchers have found that children who have intellectual disabilities display more behavioral problems when compared to children who do not have any intellectual disabilities; it is easily understood that these disturbances in a child's behavior can cause a mother to feel an added sense of stress (Jess et al., 2017). One study reported clinically significant levels of stress among parents of "mentally challenged" children (73.4%) compared to the stress levels of parents whose children were of "normal" development (Narmada & Pushpa, 2012, p. 256). With this added stress, a mother may feel a lack of connection with her child. In addition, a mother may attribute her child's behavior problems to the severity of her child's disability.

Therefore, when a child misbehaves, a parent may become more distant from and view the child more harshly overall. This negative perception can inhibit the progress of a child and hinder their overall development. Furthermore, upon experiencing these negative behaviors from a child, a mother may feel disconnected from her child as a result.

Birth Order Effect as an Influencing Factor

Birth order is another factor that affects the sense of connectedness of children. Researchers found that there is a less formed sense of a separate self for first-born children (Olver et al., 1989). This trend was most strongly supported when looking at first-born daughters. This indicates a heightened sense of connection between a mother and her first-born child (Olver et al., 1989).

It is theorized that this may be the case due to the more interactive and highly involved role which a mother may take towards providing care for her first-born child (Olver et al., 1989). This involvement that a mother has towards her first-born child has been found to have both positive and negative consequences in a child's upbringing (Olver et al., 1989). While the positive outcomes are described as the high achievement evidenced by first-born children, the

negative consequences seen are through the mother interfering with the task performance of children (Olver et al., 1989). Consequently, this more active role, which a mother takes towards her first-born child, may further translate into a sense of connection which she feels with her child. However, she must be careful not to overstep in certain instances and overcompensate for children in areas that they may prove capable.

Siblings of Individuals with Intellectual Disabilities

Overall, researchers have concluded that the relationship between siblings when one has been diagnosed with an intellectual disability is positive (Craft-Rosenberg & Pehler, 2011). These relationships are characterized as more harmonious and as involving less conflict than siblingships where both individuals were considered healthy (Craft-Rosenberg & Pehler, 2011). Siblings without the disability were also noticed to play a supportive role in their siblings' lives and were often influential in assisting socialization outside of the home (Craft-Rosenberg & Pehler, 2011).

The healthy sibling often falls into the role of a caretaker, more so evidenced when the healthy sibling is a sister (Craft-Rosenberg & Pehler, 2011). Healthy sisters were found to be more supportive overall, and healthy brothers were found to display a closer sense of connection with their sibling who had a disability when he was of the male gender (Craft-Rosenberg & Pehler, 2011). However, when the healthy sibling was a sister, the individual with the disability showed more aggression and was found to be less assertive (Craft-Rosenberg & Pehler, 2011). Researchers reported that when a younger sibling has an older brother or sister with an intellectual disability, the younger sibling will become the dominant sibling (Craft-Rosenberg & Pehler, 2011).

This relationship was deemed to be atypical from other sibling relationships (Seltzer et al., 2005). This was due to the possibility of a shorter life span for individuals with developmental disabilities, less experiential and genetic similarities between siblings, and decreased reciprocal exchange and egalitarianism due to unequal abilities (Seltzer et al., 2005). Additionally, feelings of grief and loss were commonly seen among siblings of those with intellectual disabilities (Seltzer et al., 2005).

Environment as an Influencing Factor

Providing a child with a supportive and secure environment is believed to be beneficial to overall well-being (Adler-Tapia, 2012; Hein et al., 2018). According to the stages of psychosocial development model by Erik Erikson, it is suggested that the amount of trust that is derived from the earliest infantile experience is directly correlated with the quality of the maternal relationship (Adler-Tapia, 2012). In addition, according to John B. Watson, it is believed that children can display conditioned emotional responses based on previous experiences in their environment (Adler-Tapia, 2012).

It is further theorized that a child's environment may reinforce the child's behaviors and emotions (Adler-Tapia, 2012). Therefore, one's environment may foster or prevent a child from developing healthy emotions and behaviors (Adler-Tapia, 2012). Furthermore, when nurturing aspects are lacking from the child's environment, it becomes significantly more challenging for a child to succeed under adverse circumstances.

One of the main environmental factors that influence a child's progression is their relationship with their mother (Adler-Tapia, 2012). This supportive relationship may provide enough strength to help a child overcome many adverse situations in which they may find

themselves. However, when this supportive environment is not provided for the child, it becomes significantly more difficult for an individual to be able to strive and advance in a given society (Adler-Tapia, 2012). An additional challenge is met when the child has been diagnosed with an intellectual disability. This diagnosis often can affect many realms of a child's life. This study aimed to better understand possible functional impairments that children diagnosed with intellectual disabilities might face in their environment. By better understanding, the difficulties children may face in their environments, practitioners and parents may be better equipped and prepared to face these complications when they arise.

Findings

Regarding past research on the influence of children with intellectual disabilities, most studies have focused on the more negative effects a child brings upon the family (Hastings et al., 2002). Jenero et al. (2020) primarily focused on the stress and burden which a child with an intellectual disability may add to the family dynamic. These results indicated that 49% of overall parental stress was predicted by difficult behaviors, dysfunctional interactions, low-income family interactions, low emotional well-being, and the severity of the child's medical needs and intellectual disability (Jenero et al., 2020). The researchers argued that based upon the negative perception held regarding a child's disability, a parent may feel overwhelmed by this relationship (Ferrer et al., 2016; Hastings et al., 2002).

Further, parents of children with intellectual disabilities could potentially face situations of stress more intensely over a sustained period when compared to families with children of normative development (Baker et al., 2010; Eisenhower et al., 2005; Ferrer et al., 2016; Hayes & Watson, 2013; Oelofsen & Richardson, 2006). In addition, it is supported that these parents

experience greater mental health challenges such as depression and anxiety (Ferrer et al., 2016; Olsson & Hwang, 2001; Singer, 2006). Researchers have hypothesized that additional stress is faced among these families as they must cope, adapt, and confront this diagnosis of a disability that is a lifelong situation (Ferrer et al., 2016).

Researchers indicated that it might not be a child's status as disabled that causes stress on families, but rather the behavior problems associated with an intellectual disability (Crnic et al., 2009). Children diagnosed with mild to borderline intellectual disabilities are 3–4 times more likely than peers with average intelligence to develop externalizing behavior problems (Schuringa, 2014). These behavioral differences are noticed to persist over time for children with intellectual disabilities (Schuringa, 2014). A child may evidence externalizing behaviors due to their inability to perform in society appropriately. This study aimed to seek if the endorsement of functional impairments is related to a mother's sense of connection with her child.

Therefore, researchers concluded that the societal costs such as care, educational provisions, and crime are at large for children who display externalizing behaviors (Schuringa, 2014). In addition, children with an intellectual disability in conjunction with externalizing behavior problems are often part of families considered to have multiple problems (Schuringa, 2014). According to Schuringa (2014), financial problems, familial dysfunction, parents facing addiction or psychiatric problems, divorced parents, low socioeconomic status, and limited autonomy could potentially increase the risk for a child's outward display of externalizing behaviors.

Children diagnosed with mild to borderline intellectual disability in conjunction with externalizing behavior problems evidenced more impaired performance on tasks requiring working memory abilities (Schuringa, 2014). Differences in processing speed and inhibition performance were also evident when analyzing this population (Schuringa, 2014). Researchers concluded that there were no significant differences in cognitive flexibility when comparing children with a comorbid diagnosis of intellectual disability accompanied by externalizing behavior problems compared to children only diagnosed with an intellectual disability (Schuringa, 2014). Children with an intellectual disability and externalizing behavior problems also evidenced impairments in social information processing. Researchers indicated that in comparison to children with only an intellectual disability, children with both an intellectual disability and externalizing behavior problems generate more aggressive and fewer assertive responses (Schuringa, 2014).

In regard to a child's relationship with their family, families of a child with intellectual disability in conjunction with externalizing behavior problems endorsed the use of more positive discipline and physical punishment (Schuringa, 2014). However, these families also reported less involvement, less positive parenting, less acceptance of the child, less monitoring, less closeness to the child, and a lower sense of competence regarding their parenting abilities (Schuringa, 2014). Researchers also found that the parent-child relationship was influenced more heavily by the child's externalized behavior problems than parenting behaviors (Schuringa, 2014). However, alternative research found that parents who perceive their child's disability as potentially providing a positive impact on the family were less stressed, even when they displayed behavior problems (Crnic et al., 2009).

Overall, when a mother views her children more harshly based on the fact that the child has been diagnosed with an intellectual disability, it becomes harder for them to succeed. This may affect how the mother perceives the relationship she has with her child as the disability may become a deciding factor that influences how a mother treats her child. When this serves as a barrier to the mother-child relationship, the connection which a mother shares with her child is compromised. As a result, a mother may perceive that she does not have a close sense of connection with her child, which could cause complications to the relationship, as it is beneficial to the progression of a child to have this mother-child relationship to serve as a pillar of support.

This study aimed to better understand the connection that the mother shares with her child regarding the number of functional impairments that she endorses for her child. The current study sought to determine how a mother's sense of connection with her child is implicated by the amount of behavioral concerns that the mother holds regarding her child's abilities. Therefore this study was poised to investigate the mother-child relationship. This study is important as it will add to the literature on mother-child connectedness.

This study tested the attachment theory by psychologists John Bowlby and Mary Ainsworth (Bretherton, 1992). According to Bretherton (1992), Bowlby revolutionized attachment theory regarding a child's connection to the mother and the disruption of this relationship (Bretherton, 1992). Ainsworth contributed to the field by introducing the notion of an attachment figure serving as a secure base (Bretherton, 1992). The current study aimed to assert the importance and influence of the mother-child relationship and considered how this may be impacted when a child has an intellectual disability. The study also added more context

to attachment theory by assessing whether a mother's perception of her child's abilities influenced her sense of connection with her child.

This study was also designed in regard to Erikson's psychosocial model of development. This theory of psychosocial development is important to the present study due to the difficulties that are placed upon children with intellectual disabilities. As this stage in life is important for children's identity development, it was important to expand on this time frame to better understand children with intellectual disabilities. Furthermore, it is reasoned that due to limitations faced by severe cognitive impairments, the depth of identity formation may be constrained by those who face developmental disabilities (Hauser-Cram et al., 2004). This model asserts that due to the limitations of individuals with developmental disabilities, self-identity could be compromised as a result.

Summary

This literature review discussed research and studies that fit within the context of the present study, which investigated mothers' perceptions of the abilities of their children with intellectual disabilities and mother-child connectedness. Gaps identified in this review and the exploration of the theoretical tenets of attachment theory (Bretherton, 1992) and Erikson's psychosocial model of development (Hauser-Cram et al., 2004) related to the constructs of this study were evaluated. Additionally, parent-child relationships and influencing factors were presented. The chapter concluded with a synthesis of the findings. Chapter 3 begins the discussion of the methodology, including the methodological design, processes, and procedures that guided this quantitative study.

CHAPTER 3. METHODOLOGY

This chapter discusses the research methodology for the present research study that investigated mothers' perceptions of their children's disability and mother-child connectedness. The purpose of the study is briefly described along with the research questions and hypotheses, research design, population and sample, procedures and instruments used, and the ethical considerations.

Purpose of the Study

The purpose of the present study was to explore links between the severity with which a mother rates the abilities of her child with an intellectual disability and the connection that she feels with that child. In order to assess how severely a mother rates the abilities of her child with an intellectual disability, mothers were asked to rate how self-efficacious they view their child. Then, after endorsing the functional impairments faced by their child, mothers were asked questions related to the sense of connection that they feel with their children. Thus, the aim of this study was to address the research question such that gaps in the literature could be addressed and new data and scholarship could be added to the field of psychology.

Hence, the purpose of the current study was to address the gaps in the literature and examine whether a mother whose child has an intellectual disability, which she perceives as severe, identifies having a close sense of connection with this child. Thus, this study sought to investigate whether there were differences between two groups of mothers based on the data collected from mothers (perceptions) and mother-child connectedness.

This research is of importance as this is an area that is not well understood or studied. By better understanding this mother-child relationship and how this relates to children who have intellectual disabilities, mothers could better support their children, and the field of psychology

will be better educated regarding the nuances of this relationship. In general, there is insufficient research conducted regarding the adolescent population and those with disabilities. This research aimed to address this gap and add to the literature to support these individuals better.

Research Questions and Hypotheses

For the present study, the primary research question sought to determine whether there were significant differences or changes in levels of mother-child connectedness based on mothers' perceptions of their children aged 8–12 with an intellectual disability. The following corresponding null and alternative hypotheses guided the analysis.

Primary Research Question: Among mothers who have children with intellectual disabilities, are there significant differences in levels of mother-child connectedness based on mothers' perceptions of the disabilities for two groups of mothers?

H_{10}: Levels of mother-child connectedness based on perceptions of abilities will not report statistically significant differences by two groups of mothers.

H_{1a}: Levels of mother-child connectedness based on perceptions of abilities will report statistically significant differences by two groups of mothers, thus warranting post hoc analysis.

Research Design

This study used a quantitative nonexperimental design to test the hypotheses for the primary research question. Data for the dependent variable, mother-child connectedness, were collected from the CPRS (Pianta, 1992) from mothers with children with an intellectual disability within a specified age group (8–12). The CPRS is an instrument that has been used to measure parental perceptions regarding the quality of parent-child relationships in the domains of conflict and closeness (Simkiss et al., 2013). This is important because this measure will allow for a deeper understanding of the relationship between a mother and her child with an intellectual

disability. Stakeholders such as practitioners, program directors, and clinicians may further benefit from this research, as they will be able to implement the results from the study's findings into their practice.

Because the construct mothers' perception was the two-level categorical independent variable, two groups of mothers were identified. Mothers' perceptions, the independent variable, were measured with the NIH Toolbox, a well-known instrument developed and used previously by researchers (Kuspt et al., 2015; Olson-Kennedy et al., 2019). Demographic variables were also collected to ensure that only mothers with children aged 8–12 diagnosed with an intellectual disability were included in the study.

The quantitative paradigm and a nonexperimental design were appropriate to evaluate the primary research question. Quantitative methods allow for objectivity using statistical analyses, and a nonexperimental design allows the researcher to describe groups and examine relationships (Salkind, 2010). Hence, this research design is rooted in the positivist paradigm that supports objectivity by using statistical measures (Mertens, 2010) such as an analysis of variance (ANOVA; Field, 2013).

In the current study that sought to examine the group means of mothers' perceptions of children with disabilities and mother-child connectedness, a one-way ANOVA was appropriate to test the continuous dependent variable (mother-child connectedness), and the categorical variable (mothers' perception; George & Mallery, 2014). The ANOVA is a statistical measure used to determine whether there is sufficient evidence to "infer that the means of the corresponding population distribution also differs" (George & Mallery, 2014, p. 164; O'Gilvie, 2020, p. 68). Therefore, the one-way ANOVA was an appropriate statistical test for this study.

Target Population and Sample

Population

The population for this study was mothers with children between the ages of 8–12 years old who have an intellectual disability. Therefore, the present study included mothers who have experience with at least one child with an intellectual disability. Excluded from the study were fathers. The sample from the population was recruited from social media platforms and support groups.

Sample

The study used a purposive sampling strategy. Purposive sampling is generally used for samples with specific characteristics (Etikan et al., 2016). Specifically for this study, only mothers with children diagnosed with an intellectual disability between 8–12 years were sampled. Also included in the sample were mothers with children within the requisite age group with difficulties in behavioral functioning.

Because the NIH Toolbox was the instrument used to measure mothers' perceptions, and this scale is largely targeted for children aged 8–12, the sample was recruited accordingly with this inclusion criterion. This sampling plan yielded 67 participants with 65 mothers and two fathers. The two fathers were removed from the dataset with 65 remaining subjects. Of the remaining 65 participants, 31 had missing values or zero values; as a result, these were dropped. Thus, the final sample size ($N = 34$) was used for the statistical analysis.

Power Analysis

The estimated sample size for this study was determined using G*Power analysis (Faul et al., 2007). For a one-tailed hypothesis, a minimum sample size of 64 is recommended (Onwuegbuzie & Collins, 2007), with a power of .80 and a significance level of .05. G*Power

calculation indicated that a total sample of 64 would be needed to detect small to medium effects (f = .25) with a power level of .80 using an ANOVA between means with alpha at .05.

To examine whether there were any statistical significant differences between the two groups of mothers' perceptions and mother-child connectedness, a confidence interval (*CI*) of 5 with a 95% confidence level were used and a p-value < .05 was considered significant (Fields, 2013). The sample size for the present study met the power analysis (N = 65) of mothers with children with intellectual disabilities between the ages 8–12. However, the final sample size was reduced (N = 34) due to missing data.

Instruments

Data collected on the Survey Monkey platform included demographic information. Questions 1–13 of the survey collected the demographic data, while Questions 14–23 collected data relevant to the NIH Toolbox measuring the mothers' perceptions. In order to measure the closeness, the CPRS Questions 24–38 addressed the variable mother-child connectedness.

Both the CPRS and NIH Toolbox were available for free for academic research purposes. The CPRS was retrieved from the ProQuest Database from the Annenberg Institute of Brown University, while the NIH Toolbox was retrieved from the NIH website.

NIH Toolbox

Mothers' perception, a two-level categorical independent variable, was measured using the NIH Toolbox. In order to test the severity of functioning, mothers who rated their children with scores that indicated impairments on the NIH Toolbox with scores less than 20 were included in one group (Group A), while mothers with scores 21 and higher were included in another (Group B). Group B represented mothers who rated the functioning of their children as more impaired.

The NIH Toolbox is an established instrument whose blueprint was designed in 2004 and has published for assessment use since 2013 (Khilari & Narayan, 2014). The NIH Toolbox has been commended for its parameters that have been assessed by the traditional classic test theory (Khilari & Narayan, 2014). These traditional psychometric properties rely on validity, reliability, and responsiveness of tests and postulate the observed score as the result of the true score and error score integration (Khilari & Narayan, 2014). This measure is a 10-question parent-reported tool that was used to assess the belief in one's capacity to have control and manage meaningful events in one's life. This measure uses a 5-point Likert scale in order for parents to measure how self-efficacious they view their child.

CPRS

The CPRS, a 15-question self-reported tool, was used to measure the closeness or connectedness that a mother feels toward her child. Thus, the CPRS was used to measure the outcome variable, mother-child connectedness. Data collected represented how a mother assessed the closeness or connected relationship with a child (Simkiss et al., 2013). Because the CPRS uses a 5-point Likert scale evaluation system, this survey allowed parents to detail their relationship with their child (Simkiss et al., 2013).

A score of 37 and above indicates maternal closeness, while scores between 15–16 indicate conflict (Simkiss et al., 2013). The ratings of items were summed into groups corresponding to scores for closeness, conflict, and dependence subscales (Driscoll & Pianta, 2011). The closeness subscale is a measure that assesses the extent to which the parent of a child feels that the relationship is characterized by the concepts of affection, warmth, and open communication (Driscoll & Pianta, 2011).

According to Driscoll and Pianta (2011), maternal closeness psychometrics produced a Cronbach's alpha rate of .69. The conflict subscale has been used to measure the degree to which a parent perceives their relationship with their child as characterized negatively (Driscoll & Pianta, 2011). The Cronbach alpha's for maternal conflict was measured to be .84 in this category (Driscoll & Pianta, 2011).

The CPRS has been used in previous research that analyzed the relationship between a mother and her child after participating in a mother and child education program (Ulutas & Kanak, 2016). The scale was also used when predicting children's emotional understanding regulation skills (Dereli, 2016). The CPRS was further used when assessing reciprocal influences between a parent's perception of mother-child and father-child relationships (Zhang & Chen, 2010).

Procedures

Participant Selection

Participants were recruited from various social media outlets, including Facebook and Reddit, as well as email. These participants were recruited from various support groups and mental health pages such as parenting groups for children with intellectual disabilities. Participants' inclusion criteria for this study were mothers with children, ages 8–12, with an intellectual disability. The purposive sampling strategy provided the knowledge required to address the research questions. The selection included consenting participants over 17 years of age, with United States residency status.

Exclusion criteria for this study were mothers whose children were not diagnosed with an intellectual disability, mothers with children outside the age range of 8–12, women without any

children, individuals under the age of 18 without a consenting adult, and mothers residing outside of the United States. Additionally, males and fathers were not included in this study.

Protection of Participants

Participants were given the opportunity to withdraw from the study at any time prior to submitting a completed survey. I obtained IRB approval for this study prior to data collection. This study was conducted via various social media platforms, including Facebook and Reddit, as well as email. Once participants read the information regarding the purposes of the study, they were asked to provide informed consent for their participation (U.S. Department of Health & Human Services, 2016).

Participants were asked to read preliminary information that would either include or exclude them from participating in this study. Responses to questions were collected via Survey Monkey. In order to protect participant confidentiality, the IP addresses and names of participants were not included in data collection. Data were stored on an encrypted server, on a locked device, in a locked and secure facility. Once the survey was completed, the raw data were compiled onto a Microsoft Excel file without any identifiers included. In addition, Survey Monkey deleted all collected data once all data were recorded and transferred to Excel files. Data and files were stored on a password-protected computer and will be maintained for 7 years.

Data Collection

Data were collected on the Survey Monkey platform using the CPRS and the NIH Toolbox. Respondents in the study voluntarily consented to participate, and informed consent was electronically received prior to completing the surveys. The anonymity of participants was assured on the Survey Monkey platform by disconnection of IP addresses and SSL encryption. Surveys did not require a signature and there were no identifiers. The preceding measures

ensured the protection of participants (Remler & Van Ryzin, 2015). Participants were provided information on how to seek therapeutic services and various mobile crisis lines prior to starting and ending the survey.

This data were collected via Survey Monkey. After data collection was complete, the results were exported to Microsoft Excel. The demographic information was decoded in order to identify the frequency among the participants' characteristics easily. The information for the surveys used in this study was recoded in regard to the Likert Scale order to run the statistical analyses necessary for this study. Following verification of the data to address missing data or incomplete data, a *csv file was created in Microsoft Excel and imported into the statistical software SPSS, version 27 (IBM Corp., 2020).

Data Analysis

The data analysis consisted of descriptive statistics and inferential statistics. Descriptive statistics provided the summaries for each variable and demographic data, which are typically included in quantitative methods. The inferential statistics (Seaman, 2018), which test the hypotheses, specifically the one-way ANOVA conducted in this study, was the statistical test used (Laerd Statistics, 2017). Because the present study sought to investigate differences between two groups of mothers' perceptions and mother-child connectedness, a one-way ANOVA was appropriate for this analysis.

The variables were mothers' perceptions, mother-child connectedness, and demographic variables. Data collected from the surveys, specifically data on mothers with children diagnosed with an intellectual disability, were categorical. The outcome variable, mother-child connectedness was continuous; both met the initial assumptions for the one-way ANOVA (Laerd Statistics, 2017).

Data were analyzed, and incorrect data and missing values were dropped before the recoding of the data for analysis. Of the 67 respondents in the dataset, two were excluded since they identified as males, and an additional 31 were removed due to missing values or zero values. Missing values were eliminated from this study due to the significant effect incomplete data could have on the conclusions that are able to be drawn from the data (Kang, 2013). Missing data have been known to produce biased estimates, reduce statistical power, and lead to invalid conclusions (Kang, 2013). The resulting 34 subjects were used to test the hypotheses. In order to proceed with the one-way ANOVA, this study examined for outliers and the assumptions of normality and equality of variances (Laerd Statistics, 2017).

Descriptive Statistics

Descriptive statistics were analyzed using frequencies and proportions, means (*M*), and the standard deviation (*SD*), as appropriate, of the demographic variables, mothers' perceptions, and mother-child connectedness. The means calculates the average score for each variable and provides a stable result (Field, 2013).

The initial assumptions for running the one-way ANOVA, which included one continuous dependent variable (mother-child connectedness), and one independent variable that consists of two or more groups (mothers 'perceptions) measured categorically, were met for this study (Laerd Statistics, 2017). Additionally, the one-way ANOVA also required evaluating the assumptions normality and equality of variances. A boxplot was examined to check for outliers.

Hypothesis Testing

Once the data were cleaned and all missing values were removed, the data were recoded and exported from Microsoft Excel into SPSS. Using the General Linear Model (GLM) procedure in SPSS, the one-way ANOVA analysis was performed to determine the differences

between two groups of mothers' perception of their children's intellectual disability and mother-child connectedness.

Expected Findings

The severity of impairment was determined by how many items a mother endorsed related to the number of difficulties her child faces with regard to functioning. For this study, the expected finding was that a statistically significant difference between perceived connection scores from mothers who have a child with severe impairments and mother-child connectedness would exist. Hence, the null hypothesis ($p > .05$) would not be accepted, and the alternate hypothesis would not be rejected.

Ethical Considerations

This research study received Institutional Review Board (IRB) approval for National Louis University prior to the collection of data. The principles of *The Belmont Report* (U.S. Department of Health & Human Services, 2016) were adhered to for this study. All instruments were approved for use on the Survey Monkey platform with strict guidelines for participants' privacy and confidentiality.

Data were recoded according to data type, and datasets were created to answer the research question. All data were downloaded and stored on a password-protected USB drive, which will remain locked in my office for 7 years. As there were no expected uses for the collected data, all hard copies were destroyed. Finally, researcher integrity was maintained, and there was no conflict of interests or competing interests in this study.

Summary

Chapter 3 described the methods and procedures used to conduct the analysis for the present study. Chapter 3 also presented the research questions, hypotheses, research design,

purpose of the current study, instruments used, and the ethical considerations to be taken into account. Methods of data collection and analysis were also discussed. Chapter 4 will report the findings of the statistical procedures used to analyze the data for the research question and hypotheses in this study.

CHAPTER 4. RESULTS

This chapter provides the results of the statistical analyses performed to address the research question, which sought to examine the differences between two groups of mothers' perceptions with children aged 8–12 with intellectual disabilities and mother-child connectedness. The sample of mothers' responses was analyzed by examining the mean statistics, which follows the analyses of the hypotheses testing through a one-way ANOVA with mother-child connectedness as the continuous dependent variable and the two groups of mothers' perceptions, measured categorically as the independent variables. The chapter concludes with a summary of the results, which are further delineated in Chapter 5.

Description of the Sample

Purposive sampling was used for the present study because purposive sampling is generally used for samples with specific characteristics (Etikan et al., 2016). Specifically for this study, only mothers with children diagnosed with an intellectual disability between 8–12 years were sampled. Also included in the sample were mothers with children within the requisite age group with difficulties in behavioral functioning. The final sample size (N = 34) after removing missing values was sufficient for the G*Power analysis (Faul et al., 2007). This study used a power of .80 for a one-way ANOVA with two independent variables with alpha at .05 to detect small to medium effects (f = .25).

Data from the participants were collected on the Survey Monkey platform using a 13-item survey that collected demographic data from Questions 1–13. Questions 14–23 included the NIH Toolbox that were used to measure mothers' perceptions. The CPRS (Driscoll & Pianta, 2011) was the second survey used to collect data on mother-child connectedness (the outcome

variable). The CPRS is a 15-question self-reported 5-point Likert scale tool. Questions 24–38 were answered using the CPRS.

Descriptive Statistics

For this study, there were a total of 65 participants. Analyses of the self-reported demographics information are detailed and represented (see Table 1). During the completion of the cultural/ethnical background, 30 individuals identified as White/Caucasian, 10 as Black/African American, three as Hispanic/Latino, six as Asian/Asian American, one as Native American/other Pacific Islander, two as "another race," and 13 preferred not to answer. Nine respondents endorsed that they were between the ages of 18–24; 11 participants were between the ages of 25–34; 12 participants were between the ages of 35–44; 11 participants were between the ages of 45–54; four participants were between ages of 55–64; two participants were over 65 years of age; and 16 participants preferred not to answer. Of the sample, 22 participants reported their marital status as single, 18 reported being married, six reported being divorced, three reported being separated, and 16 preferred not to answer. In regard to employment status, 25 participants reported being employed full-time, 11 reported being employed part-time, nine reported being students, six reported being unemployed, and 14 preferred not to answer.

With regard to birth order for the child with an intellectual disability, 18 parents indicated that this was their first-born child, 10 reported that this was their second-born child, six reported that this was their third-born child, two reported that this was their fourth-born child, two reported that this was their fifth-born child, and 27 preferred not to answer. Twenty of the children for whom this survey was filled out were reported to identify as male, 17 were reported to identify as female, and 28 mothers preferred not to specify the gender of their child. Nine of the children whose responses were collected for this survey were reported to be 8 years old, six

were 9 years old, five were 10 years old, four were 11 years old, 15 were 12 years old, and 26 mothers preferred not to answer.

Table 1

Demographic Information

	Factor	**Total sample**
Race		
	White/Caucasian	46%
	Black/African American	15%
	Hispanic/Latino	5 %
	Asian/Asian American	9%
	Native American/Other Pacific Islander	2%
	Another Race	3%
	Prefer not to answer	20%
Age		
	18-24	14%
	25-34	17%
	35-44	18%
	45-54	17%
	55-64	6%
	65+	3%
	Prefer not to answer	25%
Marital Status		
	Single	34%
	Married	28%
	Divorced	9%
	Separated	5%
	Prefer not to answer	24%
Employment Status		
	Full-time	39%
	Part-time	17%
	Student	14%
	Unemployed	10%
	Prefer not to answer	20%

Hypothesis Testing

The initial assumptions for conducting a one-way ANOVA were met for the present study that used one continuous outcome variable (mother-child connectedness) and two groups of mothers' perceptions (Laerd Statistics, 2017). Independence of observations for the two groups of mothers was also met. The decoded data set was exported to SPSS for hypotheses testing.

Three additional assumptions for the one-way ANOVA were conducted including the inspection of a boxplot, indicating no outliers. The assumption of normality was assessed with the Shapiro-Wilk's test that reported $p > .05$ for group A and $p < .05$ for group B. For normal distribution, each group must report a *p*-value > than .05. Thus, only group A met this assumption, group A, $p = .104$, while group B, $p = .012$, violated the assumption of normality. Because the ANOVA is robust to handle nonnormality, the ANOVA procedure continued.

The final assumption, homogeneity of variances, was assessed with Levene's test of homogeneity of variances, and reported statistical significance, $p = .006$ ($p < .05$), indicating no equality of variance and heterogeneous variances. When Levene's test of homogeneity of variances reports a *p*-value < .05, the Welsh ANOVA, a modified version of the ANOVA is used (Laerd Statistics, 2017). Using the Robust Tests of Equality of Means *sig*. value, the Welsh ANOVA is not statistically significant, $p = .086$, so there is no statistically significance difference between Group A and Group B, Welsh's $F(1, 3.126) = 6.166$, $p = .086$ (see Table 2). Because the Welsh ANOVA reported no statistical significance, post hoc testing was not required. Thus, the null hypothesis was not rejected and the alternative hypothesis was not accepted.

Table 2

Robust Test of Equality of Means

	Statistic[a]	df1	df2	*Sig.*
Welsh	6.166	1	3.126	.086

a. Asymptomatically F distributed.

Summary

A one-way Welsh ANOVA was conducted to determine if the mother-child connectedness score was different for groups of mothers with children with intellectual disabilities. Participants were classified into two groups: Group A (n = 4) and Group B (n = 31). There were no outliers as assessed by boxplot; data for Group A were normally distributed, but data for Group B were not normally distributed, as assessed by the Shapiro-Wilk's test (Group A, $p > .05$, Group B, $p < .05$). However, the ANOVA is robust to handle the nonnormality. There was no homogeneity of variances as assessed by Levene's test of homogeneity of variances (p = .006), indicating heterogeneity of variances, but the differences between the groups was not statistically significant, Welsh's $F(1, 3.126) = 6.166$, p = .086.

The results of the data analyses from the one-way Welsh ANOVA revealed that there was no statistically significant difference between the perceptions of two groups of mothers with children with intellectual and mother-child connectedness. This result suggests that there is not a correlation between how connected a mother feels toward her child with an intellectual disability and the number of functional impairments that she endorses for that child. Thus, the mother-child relationship seems to be independent of the number of functional impairments that a mother

endorses for her child. One reason for this may be due to the heightened personal growth and maturity that mothers with higher levels of caregiving demand for their child with an intellectual disability possess (Hastings et al., 2002). This increased sense of self may allow mothers to compensate for any impairment that their child may face.

Chapter 4 provided the statistical results for the one-way ANOVA procedure for the primary research question and related hypotheses. Chapter 5 will present the results interpreted in a discussion within the context of existing literature. The limitations of the study, implications for practice, and recommendations for future research will also be addressed in Chapter 5.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Chapter 4 provided the statistical results for the one-way ANOVA procedure for the primary research question, which investigated the perceptions between two groups of mothers who had children with intellectual disabilities and mother-child connectedness. This chapter presents an interpretation of the results interpreted in a discussion based on existing literature. Limitations for the study, implications for practice, and recommendations for further research are also discussed.

Summary of the Results

This study investigated the mother-child relationship and how this may be influenced when a child has an intellectual disability. The study assessed a mother's perception of her child's capabilities and compared that to the sense of connection that she feels towards her child. The purpose was to see whether mothers who viewed their child as having more or less behavioral problems held a closer or less close sense of connection with their child. The aim of this study was to address the gap in the literature pertaining to the nuances of the mother-child relationship for children who have intellectual disabilities.

This study further expanded the literature to improve the knowledge of stakeholders such as clinical psychologists and scholar-practitioners. This research allows the clinician to practice in a more informed manner when working with families composed of individuals with intellectual disabilities. This research further supports the importance of holding a positive perception for child empowerment.

This study was underpinned with the perspectives of attachment theory by John Bowbly and Mary Ainsworth. This study aimed to emphasize the importance of the parent-child relationship, specifically, the mother-child relationship, and expand on how this may be

impacted based upon the capabilities of a child with an intellectual disability. Although researchers have studied attachment theory previously, this study considered the different ability levels for children with intellectual disabilities (Schuengel et al., 2003). Further, this study adds to the literature by focusing on the adolescent age range, as much of the current research has focused on the adult population (Larson et al., 2011; Penketh et al., 2014).

This study was also underpinned with Erikson's psychosocial model of development in mind. This theory of psychosocial development is important to the present study due to the difficulties that are placed upon children with intellectual disabilities. Although this is a topic that has been previously studied in research, the present study aimed to add to this theory by better understanding children with intellectual disabilities and their capabilities (Pickar, 1986).

Because children's identity is an important factor during early development, it was important to expand on children within the 8–12 age group so that a fuller understanding of children with intellectual disabilities could be explored. The individual child's capabilities could affect their sense of self due to the number of functional impairments, which could also cause a child to hold a lower sense of self. Furthermore, it is reasoned that due to limitations faced by severe cognitive impairments, the depth of identity formation may be constrained by those who face developmental disabilities (Hauser-Cram et al., 2004). This model asserts that due to the limitations placed upon those who have developmental disabilities, an individual's sense of identity may be compromised as a result.

Thus, the current study added to the literature on the mother-child relationship and how this pertains to children with disabilities. This study was essential due to the increase in intellectual disabilities for children under the age of 18 and the implications that children face when mothers hold negative perceptions (Ferrer et al., 2016; Hastings et al., 2002; Pomerantz &

Dong, 2006; Young, 2021) Further, the dearth of studies on the mother-child relationship have provided new scholarship to the field of psychology, specifically, adolescent psychology.

This study used a quantitative nonexperimental design with two groups of mothers' perception as the independent variables and mother-child connectedness as the outcome variable. Responses were collected from the mothers with children aged 8–12 who were previously diagnosed with an intellectual disability; thus, purposive sampling was appropriate (Etikan et al., 2016). Data analyses were conducted in SPSS where a one-way ANOVA procedure was performed on the variables.

Because the two groups of mothers did not report homogeneity of variances, and this was statistically significant as reported by Levene's test of homogeneity of variances, the Welsh ANOVA was conducted and did not report statistical significance between the groups. Therefore, the null hypothesis was not rejected, and the alternative hypothesis was not accepted.

Discussion of the Results

The present study was designed to examine the differences in perception of mothers who had children aged 8–12 with intellectual disabilities and those mothers' closeness to their children. Closeness was operationalized from the construct of mother-child connectedness as the outcome variable. In previous studies that examined parent-child connectedness, results indicated that this relationship is influential a child's development (Day & Padilla-Walker, 2009; Lezin et al., 2004). However, the construct of mother-child connectedness had not been thoroughly investigated in current literature with regard to children who have intellectual disabilities. Thus, mother-child connectedness was an important construct to evaluate in two groups of mothers as it expanded the literature.

Conclusions Based on the Results

The expected findings based on the design of the present study were not met. It was expected that a statistically significant difference between perceived connection scores from mothers who have a child with severe impairments and mother-child connectedness would exist. However, the results indicated that no statistically significant differences existed between the two groups of mothers.

This may be due to the limited number of participants in Group A (n = 4). For this analysis, there were only four participants who endorsed that their child experienced minimal functional impairments. Because of this, most respondents were included in Group B, which made it more difficult to obtain statistically significant results as there were a limited number of participants qualified for Group A. This may be due to the methods used to collect data, which included all self-reported surveys. Also, support groups were used as a primary source of participant recruitment; therefore, it is reasoned that perhaps mothers who are a part of these online forums are mothers who have children who face more functional impairments in general. In addition, it is reasoned that some individuals who participated in this study spent an increased amount of time with their children during the Covid-19 pandemic. This may have allowed parents to be confronted by the difficulties that their children face on a daily basis and in a more consistent manner than before. Because of this, parents may have rated the difficulties that their child faces as more heightened, as they may have constantly been made aware of hardships that their children were going through. As a result, mothers may have rated the functional impairments that their child faces as higher, placing many more individuals in Group B.

In addition, the overall sample size for the study was limited due to Covid-19 restrictions. The original goal for this study was for data to be collected through various school districts.

However, as there were limitations and shutdowns implemented with the schools during data collection, this made it impossible to conduct research in coordination with schools. As a result, the sample was collected from an online platform, but this negatively affected the overall sample size.

Limitations

Several limitations were present in this study. The study utilized data from self-reporting sources, which could lead to potential personal bias of participants not answering questions with complete transparency. For example, participants could have answered questions based on what they think would be most influential to the study and not based on the actual survey questions. Another limitation that compromised this study was the method of data collection due to Covid-19 pandemic restrictions. Due to data collection that was conducted during the Covid-19 pandemic, the original method of going into schools and working with various school districts was compromised. As a result, data collection happened solely via an online platform.

In addition, the generalizability of results is limited because one measure focuses on the adolescent age group for individuals between the ages of 8–12. Further, there were several incomplete surveys that provided missing data that caused the analysis to be underpowered and likely biased as a result. Finally, the current study was focused on the mother-child relationship and did not consider the relationship that a father may share with his child. The study was also limited to the United States only.

Implications for Practice

This study influences clinical psychology as clinicians can provide their patients with psycho-education regarding the importance of the mother-child relationships. Previous research has asserted that the mother-child relationship is of utmost importance. This study adds to the

literature by further highlighting that a child's capabilities may not influence a mother's sense of connection with her child. By understanding that her child's functional impairments do not necessarily hinder or impact the mother-child relationship, it is the hope that mothers work towards establishing this foundational framework with their child. It is important that mothers value their relationship with their children and how meaningful it truly is to the child's development and sense of hope for their future.

Recommendations for Further Research

This study provided data and knowledge applicable to the field of child psychology and broadened the perspectives of attachment theory and Erickson's psychosocial model of development. However, the limitations of small sample size and demographics used could have contributed to the result. Nevertheless, it is recommended that post-Coronavirus, the study should be conducted using additional demographic variables such as fathers and other caregivers. Another focus for future research could examine the parent-child relationship as a whole. In addition, it is recommended that future research allow for greater generalizability regarding various ages of children. This study was limited to adolescents between the ages of 8–12, so expanding the age range could add value to the overall field of psychology and the theoretical frameworks that could potentially focus such future studies.

Conclusion

This study investigated the association between mothers' perceptions of children with intellectual disabilities and mother-child connectedness to determine whether there were differences between two groups of mothers' closeness. The sample size consisted of 34 mothers who stated that their children with an intellectual disability were between the ages of 8–12. The construct of mother-child connectedness is referred to as the overall quality of the shared

relationship and the degree to which this bond is mutual and sustained over time (Lezin et al., 2004). No statistically significant relationship was found; hence, no significant differences were identified between the two groups of mothers. Despite the paucity of literature on the mother-child relationship and how this relates to children with intellectual disabilities, this study contributed scholarship and knowledge to the science of psychology by adding to the literature. However, there is still an overwhelming need to understand the mother-child relationship concerning the nuances that children with intellectual disabilities may display.

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APPENDIX A. [Child-Parent Relationship Scale]

1. I share an affectionate, warm relationship with my child.
2. My child and I always seem to be struggling with each other.
3. If upset, my child will seek comfort from me.
4. My child is uncomfortable with physical affection or touch from me.
5. My child values his/her relationship with me.
6. When I praise my child, he/she beams with pride.
7. My child spontaneously shares information about himself/herself.
8. My child easily becomes angry at me.
9. It is easy to be in tune with what my child is feeling.
10. My child remains angry or is resistant after being disciplined.
11. Dealing with my child drains my energy.
12. When my child is in a bad mood, I know we're in for a long and difficult day.
13. My child's feelings toward me can be unpredictable or can change suddenly.
14. My child is sneaky or manipulative with me.
15. My child openly shares his/her feelings and experiences with me.

APPENDIX B. [NIH Toolbox Self-Efficacy]

1. Your child seems to believe that he/she can manage to solve difficult problems if he/she tries hard enough.
2. If someone opposes your child, he/she can find the means and ways to get what he/she wants.
3. It is easy for your child to stick to his/her goals and reach them.
4. Your child appears confident that he/she could do a good job dealing with unexpected events Thanks to your child's talents and skills, he/she knows how to handle unexpected situations.
5. Your child believes he/she can solve most problems if he/she tries hard enough.
6. Your child can remain calm when facing difficulties because he/she can rely on his/her coping abilities.
7. When your child is confronted with a problem, he/she can find several solutions.
8. If your child is in trouble, he/she can think of a solution.
9. Your child can handle whatever comes his/her way.