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Differential Parenting Practices Within Families: Associations With Siblings' Academic And Behavioral Outcomes

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**DIFFERENTIAL PARENTING PRACTICES WITHIN FAMILIES:
ASSOCIATIONS WITH SIBLINGS' ACADEMIC AND BEHAVIORAL OUTCOMES**

by

ASHLEY CERESNIE

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

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DOCTOR OF PHILOSOPHY

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MAJOR: EDUCATIONAL PSYCHOLOGY

Approved By:

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Date

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CHAPTER 1

Introduction

The association between parenting behaviors and the outcomes of children has been widely studied, with the assumption that parents typically are linked to child outcomes (Sigelman & Rider, 2012). There has also been some research to support a child effects model, in which the influence is from the child to his/her parents (Sigelman & Rider, 2012; Holden, 2010). However, the relation may not be best understood as a unidirectional phenomenon; conversely, it may be better understood as a bidirectional, interactional process (Keijers, Loeber, Branje, & Meeus, 2011). The majority of research examines parenting practices and the outcomes of children between families. The current study is designed to examine parenting practice variations within families, or differential parenting of siblings.

Unidirectional Process

Theorists have largely viewed the parent-child relationship as a unilateral process, in which parents had a more active role in impacting their children (Kuczynski, 2003). This has also been viewed as the socialization model, in which the flow of influence is from parents and society to children. Socialization can occur at any point during development; however, childhood is typically the period of life in which social skills, personality attributes, and values are established (Maccoby, 1992). As non-familial children do indeed develop differently, it is clear that mothers and fathers parent differently between families.

Social learning theory. According to Bandura's social learning theory, individuals imitate the behaviors of those models that are most significant to them (Bandura, 1986). This is one important developmental process thought to be directed from parent to child. Social learning

theory posits that children learn behaviors from observing their parents, which varies widely between families. Parents may model positive or negative behaviors, and then their children may observe and imitate them (Dogan, Conger, Kim, & Masyn, 2007). This is through the process of observational or vicarious learning. Although parents are not the only models contributing to the socialization of children, they are viewed as the most influential (Maccoby, 1992).

Parenting style. Parenting styles are also thought to have direct influence from parents to children. These styles vary in amounts of responsiveness (i.e., warmth) and demandingness (i.e., control), both of which are associated with children's academic and behavioral outcomes (McDermott Panetta et al., 2012). Combinations of responsiveness and demandingness have been identified in the literature (McDermott Panetta et al., 2012). Authoritarian parents display high levels of demandingness but low levels of responsiveness. Permissive parents exhibit low levels of demandingness and high levels of responsiveness. Neglectful parents, on the other hand, are low on both demandingness and responsiveness. High levels of demandingness and responsiveness are exhibited by authoritative parenting, which has been associated with many positive outcomes for children (McDermott Panetta et al., 2012).

The research is strong and consistently favors authoritative parenting (i.e., high responsiveness, high demandingness). In fact, many experts have proposed that the findings are so conclusive, that it is no longer in need of studying (Steinberg, 2011; McDermott Panetta et al., 2012). Research has found this style to encourage independence, communicate mutual respect, provide age-appropriate scaffolding, provide loving discipline, and to establish reasonable boundaries (Santrock, 2008). Furthermore, authoritative parents are sensitive to and facilitate their children's changing sense of self, learn from their children, foster social competence, promote independence, instills a value system, balances reasoning and consequences, and clearly

communicates realistic demands (Lamb & Bornstein, 2011). The research consistently indicates that children of authoritative parents have increased academic achievement, use less substances, have lower levels of problem behavior, have greater social competence, and have higher levels of self-esteem (Lamb & Bornstein, 2011; Lee, Daniels, & Kissinger, 2006).

Aunola, Stattin, and Nurmi (2000) were specifically interested in studying parenting styles and adolescents' achievement strategies. Questionnaires were completed to measure the family parenting style and adolescents' achievement strategies. Results indicated that adolescents from authoritative families demonstrated the most adaptive achievement strategies. However, adolescents from neglectful families were found to use more maladaptive strategies academically (Aunola et al., 2000).

Parenting that is neglectful, harsh, or abusive has been consistently shown to have negative effects on children's mental health and development (Steinberg, 2011). Hoeve, Blokland, Dubas, Loeber, Gerris, and van der Laan (2008) examined trajectories of delinquency and parenting styles. Using the Pittsburgh Youth Study, the authors investigated the degree in which dissimilar trajectories are predicted by parenting styles. This study demonstrated that neglectful parenting was associated with child delinquency.

A study examined similarities between maternal and paternal parenting styles as well as links to adolescents' well-being (Milevsky, Schlecter, Klem, & Kehl, 2008). Results indicated that adolescents who were parented authoritatively by both parents scored higher on life satisfaction. Adolescents that were not parented by either parent in an authoritarian way scored higher in life satisfaction than did adolescents with an authoritarian mother. Adolescents with a permissive mother were found to have lower self-esteem than with permissive fathering. Finally,

when both parents were neglectful in their parenting style, adolescents reported higher depression and lower life satisfaction (McDermott Panetta et al., 2012; Milevsky et al., 2008).

Child temperament. The child effects perspective is another unidirectional viewpoint but in this case, the child is conceptualized as an active contributor in parent-child interactions and the influence flows from the child to his/her parents (Sigelman & Rider, 2012; Holden, 2010). In other words, children have an impact on how their mother and father parent through such critical processes as child temperament. Children's temperament may play a role in the way parent's practice. Temperament can be best described as individual differences in behavioral characteristics (Lamb & Bornstein, 2011). Specifically, temperament characteristics include a child's activity level, rhythmicity, approach or withdrawal, adaptability, threshold of responsiveness, intensity of reaction, quality of mood, distractibility, and attention span and persistence (Thomas & Chess, 1977). Different combinations of these characteristics can be placed into child temperament categories of the easy child, the difficult child, and the slow to warm up child (Thomas & Chess, 1977). Temperamental differences of siblings may be a mediating factor in terms of why parents parent differently.

Previous research has supported that children who are responsible, focused, inquisitive, and confident, bring about warmth, guidance, and collaboration from their parents (Steinberg, 2011). On the other hand, children who are more short-tempered, demonstrate problem behaviors, are needy, or immature may elicit parenting that is extremely harsh, unreceptive, or distant (Steinberg, 2011). For example, easy going, pleasant, enjoyable children may pull for warm, affectionate, and authoritative parenting from their parents. Children who are more stubborn, aggressive, and challenging may pull for more negative parenting practices. Parents

may become authoritarian and create strict, rigid rules and requirements, or ignore their child. These parents may become withdrawn and neglectful in defeat (Santrock, 2008; Holden, 2010).

Bidirectional Process

In recent research, the view of parent-child relationships is that of a more bidirectional, equal influence, rather than a unidirectional process, from the parent or the child (Sigelman & Rider, 2012). Researchers such as Bronfenbrenner and other bioecological models have described a dynamic process where children influence his/her environment and are also influenced by his/her environment (Padilla-Walker, Carlo, Christensen, & Yorgason, 2012). In other words, children have biological and behavioral characteristics that shape his or her environment, and in turn, individuals are impacted by the contexts in which they develop (i.e., by his/her parents) (Padilla-Walker et al., 2012).

Recent theoretical models view the development of problem behaviors and parenting practices as influential of one another over time in a bidirectional way (Pardini, Fite, & Burke, 2008). However, historically poor parenting was viewed as the cause of their children's problem behaviors, not the effect (Pardini et al., 2008). The development of children's problem behavior can be more clearly understood through the reciprocal nature of Patterson's coercive family theory (Keijers et al., 2011; Mash & Barkley, 2003).

In Patterson's coercive family theory, harsh and inconsistent parenting of early child misbehaviors are said to shape further more oppositional behaviors. This harsh and inconsistent parenting style creates a struggle between the parent and the noncompliant child to be in control. The parent and the child each react with more harsh responses to offset the other's aversive behaviors. In order to resolve this negative, reciprocal cycle, the parent ultimately gives in, which then reinforces the child's problem behaviors. In order to avoid these aversive discipline

interactions, parents will often become inconsistent in their discipline and monitoring, and the child's negative behavior becomes more prominent (Mash & Barkley, 2003). Additionally, the child receives less positive reinforcement for prosocial behaviors (Pardini et al., 2008).

The reciprocal parent-child relationship is also understood by Bell's control system model of socialization (Pardini et al., 2008; Lamb & Sutton-Smith, 1982). Bell's theory postulates that there are upper and lower limit expectations that are placed by parents and children. When either the parent or child exceeds the expectations of the other person, the other person reacts in an attempt to bring the behavior back to a desired level (Pardini et al., 2008). For example, a parent may take away a privilege in hopes that the child will comply. If the parent cannot change the child's undesired behavior, frustration and overreaction can evolve. This includes poor parenting practices and ultimately increases the child's problem behavior (Pardini et al., 2008)

The bidirectional associations between parenting practices and conduct problems in boys has been documented in previous studies. Poor parent-child relationships influence children's problem behaviors, but also children's problem behavior negatively impact the nature of the parent-child relationship. Previous research supports a bidirectional relationship between conduct problems and parenting practices from childhood to adolescence (Pardini et al., 2008; Keijers et al., 2011). Results also support Patterson's coercion model and Bell's control systems model.

Much of the current literature supports the reciprocal relationship between parent-child relationships and children's undesired or problem behaviors. Padilla-Walker et al., (2012), on the other hand, conducted a study to examine bidirectional relationships between authoritative parenting and adolescent's prosocial behaviors towards his/her family over a period of time.

Results from Padilla-Walker et al., (2012) study demonstrate the bidirectional relations between parents and their adolescent children. Adolescents' prosocial behavior was predictive of parents' authoritative parenting as well as authoritative parenting was predictive of adolescents' prosocial behaviors. Findings from this study continue to emphasize the reciprocal relationship between parents and adolescents.

Developmental psychologists Scarr and Grajek (1982) argue that genetic differences are known and account for some differences between siblings; however, there is not enough research on how environmental differences within the family creates additional differences. Scarr & Grajek (1982) further indicate that sibling's behavioral differences evoke differences from their parents, therefore, producing different rearing environments. One of the reasons siblings have different environments is because they have different genes. As previously discussed, parenting practices have a significant impact on the development of children (Boyle et al., 2004). In research that examined families with one child, it is not possible to examine the degree to which treating each sibling differently has on his or her development (Boyle et al., 2004). To best understand how parents are linked to their children's development, it is necessary to study more than one child in each family in order to include variation within families (Scarr & Grajek, 1982)

Plomin and Daniels (1987) were also among the first researchers to indicate that children in the same family often grow up to be very different and sharing the same environment does not lead to sibling similarity (Atzaba-Poria & Pike, 2008). That is, differences among siblings are due to nonshared environmental forces, and not those that are shared (Boyle et al., 2004). Nonshared environment can be best understood as environmental features that different for children in a family and contribute to different outcomes. This idea began a movement toward researching specific aspects of children in terms of their environment that was linked to different

sibling outcomes. The notion of parental differential treatment (PDT) emerged (Atzaba-Poria & Pike, 2008). PDT can be best defined as how parents treat their children in relation to one another (Feinberg & Hetherington, 2001).

Parental Differential Treatment

Research has supported that there is indeed variation between families. Theoretically, there is reason to expect that parents do respond to children's different personalities and temperament within one family. Research has found that parental differential treatment (PDT) has been linked to poor adjustment of their children. For example, findings indicate that when parenting was low in warmth or high in negativity, PDT was a predictor of adolescent's poorer adjustment (Boyle et al., 2004; Feinberg & Hetherington, 2001). When parenting was not considered poor (high warmth, low negativity), the association between differential parenting and adolescent's adjustment was not strong.

A longitudinal study completed by Richmond, Stocker, and Rienks (2005) was conducted to examine the associations over time between PDT and children's adjustment. When children were disfavored over time, externalizing behaviors increased, whereas more favored children demonstrated a decline in externalizing problems. In a study examining the link between PDT and children's internalizing behaviors, girls and older aged children who received less parental warmth demonstrated stronger depressive symptoms than did their siblings who received more parental warmth (Shanahan et al., 2008).

Limitations of Past Research and Purpose of the Current Study

The effects of parenting on children's development has been frequently studied between families; however, fewer studies have examined and analyzed the link between differential parenting within families and the academic and behavioral outcomes of siblings. This is clearly

important given the aforementioned research. Thus, the main purpose of this study was to identify the relations between differential parenting within families and the academic and general behavioral outcomes of siblings. The literature reflects that varying types of emotional and behavioral outcomes have been studied. In the current study, a general sampling of these various outcomes was of interest. The specific research questions were: 1) Do parents report that they parent their various offspring differently? 2) Does child outcome (grades and behavior) vary by PDT score/parenting consistency levels? , 3) Does child temperament vary by PDT score/parenting consistency levels?, and, 4) Controlling for child temperament, does child outcome (grades and behavior) vary by differential parenting?

Based on theory and prior research, it was expected that parents will differentially parent their children. Additionally, it was predicted that child outcome (grades and behavior) will vary by parental differential treatment. Child temperament was also hypothesized to be different when parents parent their children differently. Finally, it was expected that when temperament is controlled for, child outcome does not vary by PDT.

Chapter 2

Literature Review

The association between parenting behaviors and the outcomes of children has been widely studied, with the assumption that parents typically affect child outcomes (Sigelman & Rider, 2012). There has also been some research to support a child effects model, in which the influence is from the child to his/her parents (Sigelman & Rider, 2012; Holden, 2010). However, the relation may not be best understood as a unidirectional phenomenon; conversely, it may be better understood as a bidirectional, interactional process (Keijers, Loeber, Branje, & Meeus, 2011). The majority of research examines parenting practices and the outcomes of children between families. The current study is designed to examine parenting practice variations within families, or differential parenting of siblings.

Unidirectional Process

Theorists have largely viewed the parent-child relationships a unilateral process, in which parents had a more active role in impacting their children (Kuczynski, 2003). This has also been viewed as the socialization model, in which the flow of influence is from parents and society to children. Socialization can occur at any point during development; however, childhood is typically the period of life in which social skills, personality attributes, and values are established (Maccoby, 1992). Another unidirectional view identifies the child as an active contributor in parent-child interactions. In the child viewpoint, theorists view the influence from the child to his/her parents. (Sigelman & Rider, 2012; Holden, 2010). As non-familial children do indeed develop differently, it is clear that mothers and father parent differently between families.

Social Learning Theory. Social learning theory emphasizes the importance of learning from watching other people in the environment (Miller, 2011). It is crucial for children's

development to be able to learn from others. According to Bandura's social learning theory, individuals imitate the behaviors from observing the behaviors of those models that are most significant to them (Bandura, 1986). Parents may model positive or negative behaviors, and then their children may observe and model their behavior after their parents (Dogan, Conger, Kim & Masyn, 2007). This is through the process of observational or vicarious learning. Parents are not the only models contributing to the socialization of children; however, they are viewed as the most influential (Maccoby, 1992). Many social learning theorists understand that there is also a focus on the behavioral principles of reinforcement and punishment (O'Conner & Scott, 2007). For example, if the child is reinforced for their behavior, such as by getting parental praise, he or she will be more likely to engage in the behavior again. However, if a child is given a punishment for their behavior by their parents, then he or she will be less likely to engage in the behavior again.

Bandura's early research focused on vicarious reinforcement and imitative learning, specifically with aggressive behaviors (Bandura, Ross, & Ross, 1961). In his most well-known Bobo doll experiment, Bandura et al., (1961) assigned preschool children to one of two experimental groups or to a control. In one experimental group, children watched an aggressive adult model hit a large, inflated Bobo doll while saying aggressive comments. The other experimental group children, on the other hand, watched an adult model play with nonaggressive toys. The children in the control group did not have a model to observe (Bandura et al., 1961; Miller, 2011). The children were then to play in a room with aggressive and nonaggressive toys, which included the toys that were used in the observational phase. Bandura et al., (1961) found that the children who observed an aggressive adult play aggressively with the toys were more aggressive than the children without an aggressive model or a model at all (Miller, 2011).

In another observational learning study, Bandura, Ross, and Ross (1963) randomly assigned 40 girls and 40 boys from the Stanford University Nursery School to one of the two experimental or control groups. The children independently watched one of three television programs. In the Aggressive Model-Rewarded condition, which includes Rocky, an aggressive model, and Johnny, a child who is playing with his toys. Rocky asks to play with some of the toys, but when he is denied, he exhibits repeated severe aggression towards Johnny. The scene ends with Johnny sitting in the corner and Rocky playing with the toys and rewardingly eating cookies. In the Aggressive Model-Punished condition, the scene is the same as in the previous condition; however, when Rocky is aggressive towards Johnny, his behavior is punished by Johnny when he spansks Rocky and sends him to sit in the corner. In the third Nonaggressive Model-Control group, Rocky and Johnny play non-aggressively together.

The children then were observed by experimenters through a one-way mirror as they played in a room with toys similar to the model video. Bandura et al., (1963) report their findings in that children who observe being rewarded after aggressive behavior were similarly more likely to engage in aggressive behavior than children who observed aggressive behavior followed by punishment (Bandura et al., 1963).

Social learning approaches to child-rearing has been very significant to the research in describing how children are influenced by the parenting styles that their mother's and father's use (Steinberg, 2011). From this view, a child who strives to do well in school or who engages in risky behaviors is most likely imitating family members and/or peers (Steinberg, 2011).

Parenting styles. Parenting styles vary in amounts of responsiveness (i.e., warmth) and demandingness (i.e., control), both of which are associated with children's academic and behavioral outcomes (McDermott Panetta et al., 2013). Combinations of responsiveness and

demandingness have been identified in the literature (McDermott Panetta et al., 2013). Authoritarian parents display high levels of demandingness but low levels of responsiveness. Permissive parents exhibit low levels of demandingness and high levels of responsiveness. Neglectful parents, on the other hand, are low on both demandingness and responsiveness. High levels of demandingness and responsiveness are exhibited by authoritative parenting, which has been associated with many positive outcomes for children (McDermott Panetta et al., 2013).

The research is strong and consistently favors authoritative parenting (i.e., high responsiveness, high demandingness). In fact, many experts have proposed that the findings are so conclusive, that it is no longer in need of studying (Steinberg, 2011; McDermott Panetta et al., 2013). Research has found this style to encourage independence, communicate mutual respect, provide age-appropriate scaffolding, provide loving discipline, and to establish reasonable boundaries (Santrock, 2008). Furthermore, authoritative parents are sensitive to and facilitate their children's changing sense of self, learn from their children, foster social competence, promote independence, instills a value system, balances reasoning and consequences, and clearly communicates realistic demands (Lamb & Bornstein, 2011).

Research consistently shows that high parental support and monitoring are associated with positive child outcomes (Lee, Daniels, Kissinger, 2006). Lee et al., (2006) conducted a study using data from the National Education Longitudinal study. Parents were given questionnaires that measured five factors: decision making, discussion, involvement, expectation, and family rules. Lee et al., (2006) were interested in three outcome variables pertaining to adolescents: self-concept, locus of control, and academic achievement. The research indicates that children of authoritative parents have increased academic achievement,

use less substances, have lower levels of delinquency, have greater social competence, and have higher levels of self-esteem (Lee et al., 2006; Lamb & Bornstein, 2011).

Aunolla, Stattin, and Nurmi (2000) were specifically interested in studying parenting styles and adolescents' achievement strategies. Questionnaires were completed to measure the family parenting style and adolescents' achievement strategies with three hundred and fifty four 14 year old adolescents. One questionnaire measured family parenting styles (authoritarian, authoritative, permissive, and neglectful) and the other questionnaire measured achievement strategies. Questionnaires were completed by the adolescent's parents and the adolescent. Results indicated that adolescents from authoritative families demonstrated the most adaptive achievement strategies, such as self-enhancing attributions and low levels of failure expectation. However, adolescents from neglectful families were found to use more maladaptive strategies academically, such as high task-irrelevant behavior and poor attributions about the self (Aunolla et al., 2000).

Investigators have long recognized the association between parenting and delinquency (Hoeve, Blokland, Dubas, Loeber, Gerris, and van der Laan, 2008). Hoeve et al., (2008) examined trajectories of delinquency and parenting styles. Using the Pittsburgh Youth Study, a longitudinal study of boys from inner city public school over a period of 14 years, the authors investigated the degree in which dissimilar trajectories are predicted by parenting styles. Using self-report of boys ages 10-19, the researchers were able to identify five delinquency trajectories that differed in level and change in seriousness over time. Parenting variables (relationship, supervision, physical punishment, communication, reinforcement) were measured, as well as demographic variables, and self-reported delinquency.

The five trajectories were: a nondelinquent, a minor persisting, moderate desisting, serious persisting, and serious desisting. Nondelinquent trajectories were found to make up of 27.2 of the sample and consisted of boys engaging in no delinquent behaviors. Minor persisting trajectory was comprised of boys reporting steady non-serious levels of delinquency and was comprised of 27.6% of reporters. Moderate desisting boys (6.8%) were described as showing more serious delinquency in early teens, followed by a steady decline. In the serious persisting trajectory, boys continued to report serious delinquency through the follow up and consisted of 24.2% of the sample. The final trajectory, serious desisting (14.3%) was made up of boys showing high levels of serious delinquency, peaking in mid-teens, but showed desistance from delinquency between ages 14 and 19 (Hoeve et al., 2008).

This study demonstrated that neglectful parenting was associated with child delinquency. Specifically, neglectful parenting was observed more often in more children engaging in serious delinquency than non or minor delinquents (Hoeve et al., 2008). Parenting that is neglectful, harsh, or abusive has been consistently shown to have negative impacts of children's mental health and development (Steinberg, 2011).

A study examined similarities between maternal and paternal parenting styles as well as links to adolescents' well-being (Milevsky, Schlecter, Klem, & Kehl, 2008). The researchers found that mothers were most likely to use authoritative parenting, and fathers were most likely to use the style of neglectful parenting. The authors note the surprising finding that the most common pattern of parenting was that of a neglectful mother and father. The next common combination was that of an authoritative mother and father. Adolescents who were parented authoritatively by both parents were more likely to score higher on life satisfaction. Furthermore, adolescents who were not parented by an authoritarian parent scored higher in life

satisfaction than adolescents with an authoritarian mother. Permissive mothering was related to lower child self-esteem than was permissive fathering. In addition, adolescents reported more depression symptoms and lower life satisfaction when one or both of their parents were neglectful, compared to those without a neglectful parent (Milevsky et al., 2008; McDermott Panetta et al., 2013).

Child Temperament. The child effects perspective is another unidirectional viewpoint but in this case, the child is conceptualized as an active contributor in parent-child interactions and the influence flows from the child to his/her parents (Sigelman & Rider, 2012; Holden, 2010). Children have an impact on how their mother and father parent. Children's temperament may play a role in the way parent's practice. Temperament can be best described as individual differences in behavioral characteristics (Lamb & Bornstein, 2011). Temperament is biologically based and is relatively stable. Temperament also interacts with the environment as an influence on development. In other words, temperament is mediated by environmental characteristics, such as the child's home life, choice of activities in the environment, etc. (Lamb & Bornstein, 2011).

Specifically, nine temperament categories have been developed: 1) *activity level* 2) *rhythmicity* 3) *adaptability* 4) *quality of mood* 5) *intensity of reaction* 6) *distractibility* 7) *approach or withdrawal* 8) *threshold or responsiveness* and 9) *attention span/persistence* (Thomas & Chess, 1977). Different combinations of these characteristics can be placed into child temperament categories of the *easy child* (generally calm, predominately happy with a positive mood, regular in sleeping and eating habits, adapts quickly to new situations, and is not easily upset), the *difficult child* (fussy, irregular in eating and sleeping habits, fearful of new people and situations, easily upset by noise or commotion, high strung and intense in his/her

reactions), and the *slow to warm up child* (withdraw (e.g., clings to me, hides face, does not want to interact) or to react negatively (e.g., becomes upset or shuts down) to new situations, but his/her reactions gradually becomes more positive with time/continuous exposure to the new situation, often described as shy or inhibited) (Thomas & Chess, 1977). Researchers also document the following percentages: the easy child (40%), the difficult child (10%), and the slow to warm up child (20%). Thirty-five percent do not fit in any category and are a combination of the three (Thomas & Chess, 1977).

The goodness of fit framework describes the interaction between the child's temperament and his/her environment (McClowry, Rodriguez, & Koslowitz, 2008). Goodness of fit occurs if there is a balance between the child's temperament and the demands and expectations of his/her parents. Goodness of fit fosters optimal development. However, poorness of fit leads to maladaptive behaviors, such as the development of conduct problems (McClowry et al., 2008). More difficult temperaments may pull for negative styles of parenting, whereas easy going temperaments may pull for more positive styles of parenting. When there is a goodness of fit, there are lower levels of conflict. When there is poor goodness of fit, there is higher levels of conflict. Temperamental differences of siblings may be a mediating factor in terms of why parents parent differently.

Previous research has supported that children who are responsible, focused, inquisitive, and confident, bring about warmth, guidance, and collaboration from their parents (Steinberg, 2011). On the other hand, children who are more short-tempered, demonstrate problem behaviors, are needy, or immature may elicit parenting that is extremely harsh, unreceptive, or distant (Steinberg, 2011). For example, easy going, pleasant, enjoyable children may pull for warm, affectionate, and authoritative parenting from their parents. Children who are more

stubborn, aggressive, and challenging may pull for more negative parenting practices. Parents may become authoritarian and create strict, rigid rules and requirements, or ignore their child. These parents may become withdrawn and neglectful in defeat (Santrock, 2008; Holden, 2010).

Bidirectional Process

In recent research, the view of parent-child relationships is that of a more bidirectional, equal influence, rather than a unidirectional process, from the parent or the child (Sigelman & Rider, 2012). Researchers such as Bronfenbrenner and other bioecological models have described a dynamic process where children influence his/her environment and are also influenced by his/her environment (Padilla-Walker et al., 2012; Lamb & Bornstein, 2011; Santrock, 2008). In other words, children have biological and behavioral characteristics that shape his or her environment, and in turn, individuals are impacted by the contexts in which they develop (i.e., by his/her parents) (Padilla-Walker et al., 2012).

Recent theoretical models view the development of problem behaviors and parenting practices as influential of one another over time in a bidirectional way (Pardini, Fite, & Burke, 2008). However, historically poor parenting was viewed as the cause of their children's problem behaviors, not the effect (Pardini et al., 2008). The development of child delinquency can be more clearly understood through the reciprocal nature of Patterson's coercive family theory (Keijers et al., 2011; Mash & Barkley, 2003).

In Patterson's coercive family theory, harsh and inconsistent parenting of early child misbehaviors are said to shape further more oppositional behaviors. This harsh and inconsistent parenting style creates a struggle between the parent and the noncompliant child to be in control. The parent and the child each react with more harsh responses to offset the other's aversive behaviors. In order to resolve this negative, reciprocal cycle, the parent ultimately gives in,

which then reinforce the child's problem behaviors. In order to avoid these aversive discipline interactions, parents will often become inconsistent in their discipline and monitoring, and the child's negative behavior becomes more prominent (Mash & Barkley, 2003). Additionally, the child receives less positive reinforcement for prosocial behaviors (Pardini et al., 2008).

The reciprocal parent-child relationship is also understood by Bell's control system model of socialization (Pardini et al., 2008; Lamb & Sutton-Smith, 1982). Bell's theory postulates that there are upper and lower limit expectations that are placed by parents and children. When either the parent or child exceeds the expectations of the other person, the other person reacts in an attempt to bring the behavior back to a desired level (Pardini et al., 2008). For example, a parent may take away a privilege in hopes that the child will comply. If the parent cannot change the child's undesired behavior, frustration and overreaction can evolve. This includes poor parenting practices and ultimately increases the child's problem behavior (Pardini et al., 2008)

Pardini et al., (2008) conducted a study that looked at the bidirectional associations between parenting practices and conduct problems in boys over time. This longitudinal study assessed parenting practices and conduct problems every six months across a ten year period. Participants were boys between the ages of 6 and 16 and were from the Pittsburgh Youth Study. This study also was interested in examining differences in the parent-child relationship across African-American and Caucasian families (Pardini et al., 2008). Results indicate evidence to support a bidirectional relationship between conduct problems and parenting practices from childhood to adolescence (Pardini et al., 2008). Results also support Patterson's coercion model and Bell's control systems model. In terms of bidirectionality between parent-child relationship

and conduct disorder, differences were not found between African-American and Caucasian families.

Additionally, Keijers et al., (2011) created a study to measure the bidirectional links and development of parent-child relationships and boys' problem behavior. The authors state that poor parent-child relationships may influence children's problem behaviors, but also children's problem behavior also may negatively impact the nature of the parent-child relationship. This study included the primary caretaker, the boy, and his teacher. Problem behaviors were measured using the Child Behavior Checklist, parent, teacher, and child self-report. The parent-child relationship quality was measured using the relationship with primary caretaker questionnaire. Results indicate bidirectional relationships over time between poor parent-child relationships and their children's problem behavior throughout childhood and into middle adolescence.

Much of the current literature supports the reciprocal relationship between parent-child relationships and children's undesired or problem behaviors. Padilla-Walker et al., (2012), on the other hand, conducted a study to examine bidirectional relationships between authoritative parenting and adolescent's prosocial behaviors towards his/her family over a period of time. The participants of this study included families with an adolescent between the ages of 11 and 15. The researchers indicate that examining the prosocial behaviors of adolescents toward their family is important to study in a bidirectional way in that children who are more helpful with their family may stimulate more positive responses from their parents (Padilla-Walker et al., 2012).

Questionnaires were administered to the mother, fathers, and adolescents in order to measure authoritative parenting. The authoritative parenting questionnaire included questions

regarding their parents, or themselves, engaged in connection, regulation, and autonomy granting behaviors. Prosocial behavior was measured via the generosity subscale of the Values in Action Inventory of Strengths, where adolescents were asked questions such as “I really like doing small favors for my family” on a scale from one through five (Padilla-Walker et al., 2012). Additionally, there was observed interactions between mother and adolescent and father and adolescent. During these semi-structured interactions, the adolescent and his/her mother and father discussed various issues that were presented on discussion cards (i.e., what do you think has been your child’s biggest accomplishment this year? What does your mom/dad do when you do something she/he does not like?) (Padilla-Walker et al., 2012).

Results from Padilla-Walker et al., (2012) study demonstrate the bidirectional relations between parents and their adolescent children. Adolescents’ prosocial behavior was predictive of parents’ authoritative parenting as well as authoritative parenting was predictive of adolescents’ prosocial behaviors. Findings from this study continue to emphasize the reciprocal relationship between parents and adolescents. Although peers are increasingly more important at this time, authoritative parenting of adolescents’ is necessary to their development of prosocial behaviors (Padilla-Walker et al., 2012).

Developmental psychologist Scarr and Grajek (1981) argue that genetic differences are known and account for some differences between siblings; however, there is not enough research on how environmental differences within the family creates additional differences. Scarr & Grajek (1982) further indicate that sibling’s behavioral differences evoke differences from their parents, therefore, producing different rearing environments. One of the reasons siblings have different environments is because they have different genes.

Researchers discuss how an individuals' genes influence their exposure to different environments. Scarr (as cited in Santrock, 2011) describes three heredity-environment correlations that develop from infancy through adolescence: (1) *passive genotype-environment correlations* occur when biological parents to the child provide an environment for the child (2) *evocative genotype-phenotype environmental correlations* occur when a child's characteristics elicit certain types of environment (3) *active (niche-picking) genotype-environment correlations* occur when children search for environments that are compatible and stimulating to them (Santrock, 2011). An example of a passive genotype-environment is when parents who like to read usually have children who like to read and they are likely to provide an environment rich in literature. An example of an evocative genotype-phenotype is a happy, outgoing, smiley child elicits more social stimulation from adults. Children who are musical are likely to select musical environments in which they can be successful, is an example of active (niche-picking) genotype-environment correlations.

As previously discussed, parenting practices have a significant impact on the development of children (Boyle et al., 2004). In research that examined families with one child, it is not possible to examine the degree to which treating each sibling differently has on his or her development (Boyle et al., 2004). To best understand how parents affect their children's development, it is necessary to study more than one child in each family in order to include variation within families (Scarr & Grajek, 1982).

Plomin and Daniels (1987) were also among the first researchers to indicate that children in the same family often grow up to be very different and sharing the same environment does not lead to sibling similarity (Atzaba-Poria & Pike, 2008). That is, differences among siblings are due to nonshared environmental forces, and not those that are shared (Boyle et al., 2004). Shared

environmental influences are defined as “nongenetic influences that make individuals living in the same family similar to each other” (Steinberg, 2011, p. 135). These shared environmental factors are what make siblings similar in personality and behavior. Nonshared environment can be best understood as environmental features that are different for children in a family and contribute to different outcomes. These nonshared environmental influences can occur within the family as well as outside the family, and are what make individuals different from the people that they live with (Steinberg, 2011). An example of nonshared environmental influence is if two siblings are treated very differently by their parents (Steinberg, 2011). This idea began a movement toward researching specific aspects of children in terms of their environment that was linked to different sibling outcomes.

Based on twin and sibling studies, Plomin and Daniels (1987) indicate that parents react to the individual make up of their child, as well as the unique experiences of each child is predictive of the development and adjustment. In other words, the individual differences of the child effects their own development, but also draws out specific parenting practices. Therefore, siblings may be very different, have different experiences, and may be treated differently by their parents (Steinberg, 2011). In fact, Plomin and Daniels (1987) found that even though children may live in the same house with the same parents, their personalities and interest are often very different. That being said, the notion of parental differential treatment (PDT) emerged (Atzabaporia & Pike, 2008). PDT can be best defined as how parents treat their children in relation to one another (Feinberg & Hetherington, 2001).

Parental Differential Treatment

Research has supported that there is indeed variation between families. Theoretically there is reason to expect that parents do respond to children’s different personalities and

temperament within one family. Research has found that PDT has been linked to poor adjustment of their children. Findings indicate when parenting was low in warmth or high in negativity, PDT was a predictor of adolescent's poorer adjustment (Boyle et al., 2004; Feinberg & Hetherington, 2001). When parenting was not considered poor (high warmth, low negativity), the association between differential parenting and adolescent's adjustment was not strong. Researchers indicate results are not clear in terms of the direction of causation. As previously mentioned, there are child effect models that indicate children may bring about certain responses from their parents (Feinberg & Hetherington, 2001).

A longitudinal study completed by Richmond, Stocker, and Rienks (2005) was conducted to examine the associations over time between PDT and children's adjustment. The participants in this study included 133 sibling pairs and their parents. An inclusion criteria were that the participant's parents were married. The families participated in three waves altogether. Wave 1 was baseline, wave 2 took place two years later, and wave three occurred again 4 years later. The sample was made up of 41 brother pairs, 26 sister pairs, 36 older brother-younger sister pairs, and 30 older sister-younger brother pairs (Richmond et al., 2005).

Parents completed questionnaires that looked at family relationships and children's behavior. The children in this study completed questionnaires as well as were interviewed. In order to measure children's externalizing behavior problems, mothers and father independently completed the Child Behavior Checklist. To measure children's depressed mood, siblings were interviewed using the Child Depression Interview. The Sibling Relationship Questionnaire was administered to children to measure sibling relationship quality. Parental differential treatment to siblings was measured using the Sibling Inventory of Differential Experiences.

Overall, results from Richmond et al., (2005) demonstrate that parental differential treatment is more closely associated to children's externalizing problems than to internalizing characteristics. This study showed that when children were more disfavored over time than their sibling, externalizing behaviors increased. On the other hand, the more favored child demonstrated a decline in externalizing problems (Richmond et al., 2005). This research discussed the important nature of how children are sensitive to changes in how their parents treat them compared with their siblings, and as a result behavioral problems are more prevalent. Parental differential treatment was also associated with depressed mood for younger siblings, but not for older siblings. Researchers discuss that when children act out behaviorally, they may receive more harsh treatment than their siblings, which in turn exacerbates externalizing behavior, and creates a negative reciprocal cycle. The authors conclude that their findings support PDT to be more closely linked to children's externalizing behaviors than internalizing (Richmond et al., 2005).

Shanahan, McHale, Crouter and Osgood (2008) examined the linkage between PDT and children's depressive symptoms overtime from middle childhood to late adolescence in 201 families. Recruitment of families was through a letter home to parents of 4th and 5th graders in a northeastern state. The criteria for participation was a firstborn child in 4th or 5th grade with a sibling 1 to 4 years younger. Parents also had to have an intact marriage (Shanahan et al., 2008). Siblings rated parental warmth, parent-youth conflict, fairness of PDT, depressive symptoms, and sibling warmth. Findings indicate that less parental warmth was linked to stronger depressive symptoms for girls and for older ages (Shanahan et al., 2008).

Parental and contextual risk factors were measured by Atzaba-Poria and Pike (2008). The researchers looked at the parental anger and malaise in terms of parental factors. The

contextual factors examined were marital relationship, household chaos, and socio economic status. The authors indicate that parental and contextual factors contribute to PDT. Specifically, it was found that father differentiated treatment was consistently predicted by household chaos. In terms of mother differentiated treatment, high maternal anger was a predictor when combined with single mother status (Atzaba-Poria, 2008).

A study conducted by Kowal, Krull, and Kramer (2004) examined the relationship between PDT and parent-child relationship quality. The magnitude of perceived PDT, perception of the fairness of differential treatment, and parent-child relationship quality was measured from both the adolescent and their parent's perspective. Results indicate that when differential treatment was perceived by the adolescent to be unfair, it was associated with negative parent-child relationship status. However, when the adolescent perceived differential treatment to be fair, it was not associated with a negative parent-child relationship. PDT in and of itself was not a predictor of the parent-child relationship; it was the perception of fairness of the PDT that was associated with the parent-child relationship quality (Kowal et al., 2004).

Limitations of Past Research and Purpose of the Current Study

The impact of parenting on children's development has been frequently studied between families; however, studies had not examined and analyzed the link between why parents parent differently within families and the academic and behavioral outcomes of these children. This is clearly important given the aforementioned research. Thus, the main purpose of this study was to identify the impacts of differential parenting within families, and the academic and behavioral outcomes of siblings. The specific research questions were: The specific research questions were: 1) Do parents report that they parent their various offspring differently? 2) Does child outcome (grades and behavior) vary by Parental Differential Treatment (PDT) score/parenting

consistency levels? , 3) Does child temperament vary by PDT score/parenting consistency levels?, and, 4) Controlling for child temperament, does child outcome (grades and behavior) vary by differential parenting?

Based on theory and prior research, it was expected that parents will differentially parent their children. Additionally, it was predicted that child outcome (grades and behavior) will vary by parental differential treatment. Child temperament was also hypothesized to be different when parents parent their children differently. Finally, it was expected that when temperament is controlled for, child outcome does not vary by PDT.

CHAPTER 3

Method

Participants

The participants in this study were 70 individual parents who reported having two or more elementary age children at the time of participation. Of the 70 parents that participated, the majority were female ($n=60$, 85.7%). Parental age ranged from 27-51 ($M=39.60$, $SD=4.60$). The majority of parents had attended graduate school ($n=40$, 57.1%) and reported income to be \$125,000 and above ($n=40$, 57.1%). The majority of children were reported to be Caucasian (younger child $n=62$, 88.6%, older child $n=61$, 88.6%). All participants were from a major metropolitan area in the Midwestern United States. They were recruited through several mechanisms and the final sample were: 1) patients or parents of patients receiving services at a behavioral mental health center in a suburban area, 2) adult students/parents who were taking classes at a large urban university, the majority of whom commute from the suburbs, and 3) parents of children from an elementary school and parent-teacher organization in a suburban area. A study requirement was that there are two or more elementary aged children in the family. The youngest child was required to be in kindergarten or above. The sample of 70 families ended up primarily responding regarding two children. Only five families completed surveys for three or more children, despite that there were more families who indeed had more than two children (as indicated in their self-report of how many children they have). Therefore, the study was limited to two children per family for data analysis. For those five parents who did respond about more than two elementary aged children, only the youngest two were included in the final sample. See Table 1 for the frequency distributions of demographic characteristics of parents and their children.

Table 1
Frequency Distributions-Demographic Characteristics of the Parents and their Children

Demographic Characteristics (n=70)	Frequency	Percent
<u>Parent Sex</u>		
Male	8	11.4
Female	60	85.7
<u>Total Number of Children</u>		
2	33	47.1
3	24	34.3
4	11	15.7
5	2	2.9
<u>Parent Age</u>		
27	1	1.4
29	1	1.4
32	1	1.4
33	2	2.9
34	4	5.7
35	6	8.6
36	5	7.1
37	4	5.7
38	5	7.1
39	4	5.7
50	6	8.6
41	3	4.3
42	5	7.1
43	7	10.0
44	7	10.0
45	6	8.6
46	1	1.4
49	1	1.4
51	1	1.4
<u>Parent Education</u>		
Finished High School	1	1.4
Some College	6	8.6
Finished College	23	32.9
Attended Graduate School	40	57.1

<u>Parent Income</u>		
Less than \$50,000	2	2.9
\$50,000-\$69,000	6	8.6
\$70,000-\$89,999	3	4.3
\$90,000-\$124,999	19	27.1
\$125,000 and above	40	57.1
<u>Total Number of Elementary Age Children</u>		
2	65	92.9
3 or More	5	7.1
<u>Child 1 (Younger Child) Sex</u>		
Male	39	55.7
Female	30	42.9
<u>Child 1 Grade</u>		
Kindergarten	22	31.4
1	17	24.3
2	17	24.3
3	4	5.7
4	6	8.6
5	5.7	5.7
<u>Child 1 Age</u>		
5	17	24.3
6	18	25.7
7	17	24.3
8	6	8.6
9	6	8.6
10	4	5.7
11	1	1.4
<u>Child 1 Race</u>		
Hispanic/Latino	1	1.4
African-American/Black	1	1.4
Caucasian/White	62	88.6
Multi-Racial	5	7.1
<u>Child 1 Special Education</u>		
Yes	8	11.4
No	61	87.1
<u>Child 1 Special Education Disability</u>		
Emotional Impairment	1	1.4
Other Health Impairment	1	1.4
Speech and Language Impairment	2	2.9
Early Childhood Developmental Delay	1	1.4
Specific Learning Disability	2	2.9
Autism Spectrum Disorder	1	1.4
<u>Child 1 Experienced Parental Divorce</u>		
Yes	4	5.7
No	65	92.9

<u>Child 1 Change in Parental Income</u>		
Yes	17	24.3
No	53	75.7
<u>Child 1 Experience a Trauma</u>		
Yes	4	5.7
No	66	94.3
<u>Child 2 (Older Child) Sex</u>		
Male	41	58.6
Female	29	41.4
<u>Child 4 Grade</u>		
Kindergarten	1	1.4
1	6	8.6
2	10	14.3
3	13	18.6
4	20	28.6
5	20	28.6
<u>Child 2 Age</u>		
5	1	1.4
6	5	7.1
7	7	10
8	15	21.4
9	21	30.0
10	15	21.4
11	1	1.4
12	5	7.1
<u>Child 2 Race</u>		
Hispanic/Latino	2	2.9
African-American/Black	1	1.4
Caucasian/White	61	88.6
Multi-Racial	3	4.3
<u>Child 2 Special Education</u>		
Yes	6	8.6
No	64	91.4
<u>Child 2 Special Education Disability</u>		
Emotional Impairment	3	4.3
Speech and Language Impairment	1	1.4
Specific Learning Disability	2	2.9
<u>Child 2 Experienced Parental Divorce</u>		
Yes	5	7.1
No	64	91.4
<u>Child 2 Experience a Trauma</u>		
Yes	6	8.6
No	63	90.0

Measures

Demographics. A demographic questionnaire was developed specifically for this study. Questions about parent variables such as age, sex, education, and household income were included. Questions about each child's age, sex, racial or ethnic background, special education classification and services/diagnosis received (if applicable), as well as if they experienced a parental divorce or a major crisis or trauma were included. For the purposes of this study, "child one" refers to the youngest elementary-aged child (as that was the child about which the parent responded first in the surveys), and then "child two" is the next oldest.

Parenting style. The dimension of both parental demandingness and responsiveness, which are two dimensions of parenting style (Maccoby & Martin, 1983), was measured via Paulson's (1994) instruments. Two instruments with 15 items each assessed parents' perception of their levels of demandingness and responsiveness separately. A 5-point Likert-type scale, ranging from Very Unlikely (1) to Very Likely (5) is used. Sample demandingness questions include "I would describe myself as a strict parent" and "it is okay with me if my child does not follow certain rules". Samples responsiveness questions include "I expect my child to tell me when I think a rule is unfair" and "I encourage my child to look at both sides of an issue". The scales are scored by summing the responses for the items on each scale, with higher scores indicative of high demandingness or responsiveness, respectively.

Paulson (1994) used a principal components factor analysis with a varimax rotation to confirm the existence of two independent factors among the 30 items measuring demandingness and responsiveness. Fifteen items loaded on the demandingness scale, while the remaining 15 items comprised the responsiveness scale. Construct validity was determined by correlating the scores from the parenting scales with existing parenting dimensions. Statistically significant

correlations were obtained between the parenting scales and scales from similar instruments, including the Children's Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965), and the Family Environment Scales (FES; Moos & Moos, 1981).

Paulson (1994) reported that predictive validity was assessed by examining the relationship between achievement outcomes and high levels of demandingness and responsiveness. Achievement outcomes could be predicted in a positive direction from high levels of demandingness and responsiveness. Paulson (1994) further discussed the validity of the two scales (demandingness and responsiveness) when correlated with other scales. Statistically significant correlations were obtained between the extreme autonomy scale and demandingness for both fathers, $r = -.60, p < .01$ and mothers, $r = -.58, p < .01$. Similar results were obtained when demandingness was correlated with enforcement of discipline for fathers, $r = .60, p < .01$ and mother, $r = .64, p < .01$. The correlations between control and demandingness produced statistically significant results for both fathers, $r = .54, p < .01$ and mothers, $r = .49, p < .01$. When scores on the expressiveness scale were correlated with responsiveness, the resultant correlations were statistically significant for fathers, $r = .43, p < .01$ and mothers, $r = .38, p < .01$.

According to Paulson (1994), the internal consistency of the parenting scales was determined using Cronbach alpha coefficients. Alpha coefficients for adolescent reports of maternal and paternal demandingness were, $\alpha = .78$ and $.84$, respectively. Maternal and paternal responsiveness had similar outcomes with alpha coefficients of $\alpha = .84$ and $.87$. Internal consistency reliability coefficients for the current sample: 1) child one responsiveness $\alpha = .75$, 2) child two responsiveness $\alpha = .75$, 3) child one demandingness $\alpha = .69$, and 4) child two demandingness $\alpha = .64$.

Temperament. Temperament was assessed using the Emotionality, Activity, and Sociability (EAS) Temperament Survey for Children: Parental Ratings (Buss & Plomin, 1984). The EAS examines parents' perceptions of their children's emotionality, activity level, and sociability (Porter et al., 2005). The Emotionality subscale reflects a child's level of distress or negative affect. Level of motor activity is measured using the Activity subscale. Finally, Sociability is measured by items that reflect responsiveness and interest in others as well as shyness (Porter et al., 2005).

The EAS Temperament Survey has 20 items corresponding to each of the dimensions of temperament (Mathiesen & Tambs, 1999). A 5-point Likert-type scale, ranging from not characteristic or typical of your child (1) to very characteristic or typical of your child (5) is used. Sample questions include "my child tends to be shy", "my child cries easily" (Buss & Plomin, 1984).

Researchers have found the EAS to be reliable in terms of internal consistency with alpha coefficients ranging from $\alpha = .62$ to $.78$ (Mathiesen & Tambs, 1999; Boer & Westenberg, 1994). Inter-rater reliability between parents has been found to be reliable: Emotionality (.58), Activity (.72), Shyness (.74)/Sociability (.67). The internal consistencies for the current study were as follows: 1) child one (younger child) emotionality $\alpha = .85$, 2) child one activity $\alpha = .80$, 3) child one sociability $\alpha = .84$, 4) child two (older child) emotionality $\alpha = .88$, 5) child two activity $\alpha = .83$, 6) child two sociability $\alpha = .89$.

In the current study, a briefer measure than what is available in current literature was also created and included as an exploratory instrument. Parents were asked to consciously identify their perception of their child's temperament. In order to develop this instrument, the original temperament literature was consulted. Thomas and Chess (1977) identified nine categories of

temperament: activity level, rhythmicity, approach or withdrawal, adaptability, threshold of responsiveness, intensity of reaction, quality of mood, distractibility, attention span and persistence. Three temperamental constellations were derived from combinations of the nine temperament categories: the easy child (40% of children), the difficult child (10% of children), and the slow-to-warm-up child (15% of children) (Thomas & Chess, 1977). Parents were asked to carefully read the following statements about their children's temperament and to pick a primary temperament, and if applicable, a secondary temperament. The three temperament descriptions were as follows: (1) My child is generally calm, predominately happy with a positive mood, regular in sleeping and eating habits, adapts quickly to new situations, and is not easily upset. My child is described as easy going. (2) My child tends to withdraw or to react negatively to new situations, but his/her reactions gradually becomes more positive with time/continuous exposure to the new situation. My child is often described as shy or inhibited. (3) My child is often fussy, irregular in eating and sleeping habits, fearful of new people and situations, easily upset by noise or commotion. My child is often described as high strung and intense in his/her reactions. Parents were instructed to indicate which choice primarily described each child. Data were coded by assigning one of the three categories to each child in a variable that was labeled "primary temperament".

Academic achievement. Academic achievement was assessed by answering the question, "What grades do your child most often receive?", with the following response options: Mostly As, Mostly As and Bs, Mostly Bs, Mostly Bs and Cs, Mostly Cs, Mostly Cs and Ds, Mostly Ds, Mostly Ds and Es, or Mostly Es. The letter grades were coded as 1 (mostly A's) through 9 (mostly E's). Parents were instructed that if their child does not receive letter grades

to loosely translate A=extremely above average, B=above average, C=average, D=below average, E=extremely below average.

Behavior. Behavior was assessed using the Pediatric Symptom Checklist (PSC). The PSC is made up of 35 questions that are rated as Never=0, Sometimes=1, Often=2. Sample questions include “less interested in school”, “spends more time alone”, and “distracted easily”.

The PSC has been found to have sound psychometric properties. Test-re-test reliability scores for the PSC range from $r = .84 - .91$. (Jellinek et al., 1988; Murphy et al., 1992). Additionally, strong internal consistency for the PSC has been found with a Chronbach alpha score of .91 (Murphy & Jellinek, 1988; Murphy et al., 1996). Concurrent validity for the PSC was found to range from .79-.92 (Jellinek et al., 1988; Murphy et al., 1992). The internal consistencies for the current study were as follows: 1) child one behavior $\alpha = .86$, 2) child two behavior $\alpha = .92$.

Procedure

Participants were emailed and asked if they would like to volunteer their time and participate in a survey. Participants were parents of two or more elementary age children (Grades Kindergarten through Fifth). The youngest child needed to be in kindergarten or above. The subjects were informed that the research project was being conducted through Wayne State University and that the topic of the study was parents’ perception of their children. Parents were informed that their participation is strictly voluntary and would not in any way impact their relationship with the mental health center or the university. Those that chose to participate in the study had the option of being entered into a raffle to win a gift card for their participation. Participants who participated first clicked on the link in the e-mail to Survey Monkey and were shown an information sheet, as no identifiers were collected during this study. Those who did

not wish to participate were free to decline. Paper copies of the survey were also available for completion in the waiting room of the behavioral mental health center.

Participants were then asked to fill out several questionnaires in order to collect relevant data about the variables being measured. Parents first responded demographic questions and then completed the questionnaire about their youngest child. Following that, they responded to the questionnaire for each additional older elementary child. Parents were asked to think back at how he/she parented their older children when they were the same approximate age as the youngest child. Parents were informed to complete the questionnaires based on how they parented each older elementary aged child when he/she was the age of the youngest child. The majority of surveys were administered online. Paper copies of the survey were also available in the waiting room of the behavioral mental health center. The approximate amount of time to complete the survey was 10 minutes per child.

Statistical Analyses

The questionnaire data was analyzed using IBM SPSS Statistics (SPSS). See Table 2 for descriptions of the types of analyses that were conducted for each research question.

Table 2

Statistical Analyses

	Variables	Statistical Analysis
RQ#1: Do parents report that they parent their various offspring differently?		
Hypotheses: H1: Parents will differentially parent their children.	Independent Variable: Child (Paired Variables: Child 1 vs. Child 2) Dependent Variables: responsiveness, demandingness	Paired-Samples T Test – one analysis per DV
Preliminary Preparation for RQ2: Calculate a PDT difference score between child 1 and child 2 scores on each variable (e.g., responsiveness, demandingness). Then conduct a median split to determine where to judge size of that difference and then classify each family as I or C (inconsistent/consistent). Assign 1=inconsistent, 0=consistent.		
RQ#2: Does child outcome (grades and behavior) vary by PDT score/parenting consistency levels?		
H2: Child outcome (grades and behavior) will vary by PDT.	Independent variable: PDT score for responsiveness and demandingness, respectively Dependent variables: grades, behavior	One way Analysis of Variance (ANOVA)—one analysis per DV.
RQ#3: Does child temperament vary by PDT score/parenting consistency?		
H3: Child temperament will be different when parents are I versus C.	Independent Variable: PDT score (Inconsistent or Consistent/1 or 0) Dependent Variable: temperament	Two One-way Analyses of Variance (ANOVA) , one for responsiveness consistency (PDT responsiveness) and one for demandingness consistency (PDT

		demandingness) levels
RQ#4: Controlling for child temperament, does child outcome (grades and behavior) vary by differential parenting?		
H4: When temperament is controlled for, child outcome does not vary by PDT.	Covariate: temperament Independent variable: PDT score (Inconsistent or Consistent/ 1 or 0) Dependent variables: grades, behavior	Analysis of Covariance (ANCOVA).

CHAPTER 4

Results

The purpose of this study was to identify whether children's academic and behavioral functioning varied by differential parenting within families. Means and standard deviations for all continuous variables are in Table 3. A correlation matrix among these variables is in Table 4 for child 1 (younger child) and Table 5 for child 2 (older child).

Table 3

Descriptive Statistics for Continuous Variables

Child 1 (Younger Child)	Mean	SD
Temperament		
<i>Emotionality</i>	2.72	.93
<i>Activity</i>	3.82	.83
<i>Sociability</i>	3.66	.66
Behavior	.45	.24
Grades	2.39	1.41
Demandingness	3.93	.41
Responsiveness	4.09	.43
Child 2 (Older Child)	Mean	SD
Temperament		
<i>Emotionality</i>	2.80	.97
<i>Activity</i>	3.66	.92
<i>Sociability</i>	3.43	.86

Behavior	.52	.31
Grades	2.13	1.36
Demandingness	3.91	.37
Responsiveness	4.11	.45

Table 4

Intercorrelation Matrix for Child 1

	Child 1 Grades	Child 1 Emotionality	Child 1 Activity	Child Sociability	Child 1 Demand	Child 1 Responsive	Child 1 Behavior
Child 1 Grades	---						
Child 1 Emotionality	.15	---					
Child 1 Activity	.19	-.14	---				
Child 1 Sociability	.15	-.10	.52**	---			
Child 1 Demand	.07	.11	.08	.11	---		
Child 1 Responsive	.00	-.10	.12	.13	.22	---	
Child 1 Behavior	.21	.47**	.08	-.14	-.15	-.32**	---

Note: **p<.01, *p<.05

Table 5

Intercorrelation Matrix for Child 2

	Child 2 Emotionality	Child 2 Sociability	Child 2 Activity	Child 2Demand	Child 2Responsive	Child 2Behavior	Child 2Grades
Child 2 Emotionality	---						
Child 2 Sociability	-.21	---					
Child 2 Activity	-.02	.59**	---				
Child 2 Demand	.12	.11	.18	---			
Child 2 Responsive	-.21	.08	.16	.07	---		
Child 2 Behavior	.55**	-.41**	-.27	-.05	-.27*	---	
Child 2 Grades	.17	-.01	-.07	-.13	-.05	.51**	---

Note: **p<.01, *p<.05

Research Question 1: Do parents report that they parent their various offspring differently?

First, in order to establish that parents do indeed parent their older and younger children differently, a paired-samples t-test was run for the demandingness scale and responsiveness scale, respectively. Results indicated that there were no significant differences for the full scales (Demandingness $t=.41$; $df=69$; $p=.68$) (Responsiveness $t=-.62$; $df=69$; $p=.54$). Parents did not report parenting their children differently. However, at the individual item level, there were

several differences. Two demandingness items and one responsiveness item were different, all focused on rules and decisions (see Table 6). Specifically, younger children were told to a greater degree the reasons for rules and that decisions should not be questioned. Also, parents had more strict expectations for after school or evening curfew for the older child. Thus, in order to analyze the remainder of the research questions posed in the current study, individual items were used to represent the broader constructs (i.e., responsiveness and demandingness).

The parents in this sample also did not report significant differences between child 1 (younger child) and child 2 (older child) for the behavior and temperament subscales. However, as with demandingness and responsiveness, at the individual item level there were several differences, which were also used for subsequent analyses in an attempt to answer the research questions. The items that were different for each subscale for child 1 and child 2 are listed in Table 6. Specifically, for the three temperament items, the younger child (child 1) was significantly more shy, but likes to be with people more and is more energetic. For the behavior subscale, seven items were different. Specifically, the younger child was reportedly less afraid of new situations, had less academic problems, was less psychosomatic, had less worries, had more unnecessary risk behaviors, and seemed to be having less fun. See Table 6 for the means and standard deviations for all of the individual items that were significantly different between child 1 (younger child) and child 2 (older child).

Table 6

Descriptive Statistics for Individual Items Significantly Different Between Children

	Child 1 (Younger)		Child 2 (Older)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Temperament				
1-My child tends to be shy	3.96	1.06	3.44	1.32
3-My child likes to be with people	4.33	0.83	3.91	1.10
13-My child is very energetic	4.09	0.99	3.70	1.13
Behavior				
8- Daydreams too much	.44	.58	.71	.73
10-Is afraid of new situations	.59	.50	.84	.75
18-School grades dropping	.04	.20	.20	.44
20- Visits doctor with nothing wrong	.10	.42	.27	.51
22-Worries a lot	.33	.53	.93	.79
25-Takes unnecessary risks	.51	.68	.33	.56
27-Seems to be having less fun	.13	.38	.31	.53
Responsiveness				
14-Usually tell reasons for rules	4.47	.78	4.29	.80
Demandingness				
13-Expect child to be home at certain times	4.39	1.08	4.63	.77
15- Decisions should not be questioned	3.53	1.16	3.17	1.22

Based on these differences at the item level, for the remainder of the analyses, individual items were used to represent the constructs of interest in this study. “Parent tells child that his/her decisions should not be questioned” was used in analyses to represent the demandingness construct and “parent usually tells child the reason for rules” was used to represent the responsiveness construct. In order to analyze the remainder of the research questions, two difference scores were first computed, one for responsiveness and one for demandingness, subtracting the older child’s score from the younger child’s score (child 2 minus child 1).

Next, a new variable, Parental Differential Treatment (PDT score) was computed each for responsiveness and demandingness to reflect whether parents were consistent or inconsistent in the ways that they parented their two children. If the difference score was 0, the PDT score was coded as a 0 (consistent), and if the difference score was anything but 0, the PDT score was coded as a 1 (inconsistent). See Table 7 for a frequency count of this coding. These consistency scores were used to analyze the remainder of the research questions. Because of the sample size, a distinction could not be made between the directionality of difference between child 1 and child 2. Child 1 was predominately rated higher than child 2 on the responsiveness and demandingness measures, but there were a few cases where child 2 received higher scores. For coding purposes, both were coded as “inconsistent”.

Table 7

Calculation of parenting consistency and inconsistency scores

	Responsiveness	Demandingness
Consistent	51	32
Inconsistent	19	38
<i>Child 2 > Child 1</i>	3	10
<i>Child 1 > Child 2</i>	16	28

Research Question 2: Does child outcome (grades and behavior) vary by PDT score/parenting consistency levels?

A series of One-Way ANOVAs (Analysis of Variance) were conducted, one set for demandingness and one for responsiveness, only for those individual items that were found statistically significantly different between child 1 and child 2 in the above analyses. Children's school grades and the eight significantly different behaviors between child 1 and child 2 were entered as dependent variables in individual analyses. The PDT scores for demandingness and responsiveness, respectively, were entered as the independent variable/factor in their individual analyses. For demandingness, neither grades nor behaviors varied by level of consistency (see Table 8). For responsiveness, however, "takes unnecessary risks" did vary by level of consistency for child 1 (younger child). Specifically, inconsistent parents' child 1 (younger child) scores ($M=.79$, $SD=.79$) were significantly higher than those of consistent parents ($M=.41$, $SD=.67$). See Table 9.

Table 8

Analyses of Variance for Behavior and Grades by PDT Demandingness (Level of Consistency)

		Sum of Squares	df	Mean Square	F
Child 1 grades	Between Groups	.77	1	.77	.40
	Within Groups	135.8	68	2.00	
	Total	136.59	69		
Child 2 grades	Between Groups	.97	1	.97	.52
	Within Groups	126.87	68	1.87	
	Total	127.84	69		
Child 1- Beh 8 Daydreams too much	Between Groups	.46	1	.46	1.37
	Within Groups	22.81	68	.34	
	Total	23.27	69		
Child 1- Beh 10 Afraid of new situations	Between Groups	.29	1	.30	1.20
	Within Groups	16.69	68	.25	
	Total	16.99	69		
Child 1- Beh 18 Grades dropping	Between Groups	.01	1	.008	.19
	Within Groups	2.86	68	.04	
	Total	2.87	69		

Child 1- Beh 20 Visits Dr. with nothing wrong	Between Groups	.59	1	.589	3.42
	Within Groups	11.71	68	.17	
	Total	12.30	69		
Child 1- Beh 22 Worries a lot	Between Groups	.02	1	.015	.05
	Within Groups	19.43	68	.29	
	Total	19.44	69		
Child 1- Beh 25 Takes risks	Between Groups	.01	1	.012	.02
	Within Groups	31.47	68	.46	
	Total	31.49	69		
Child 1- Beh 27 Has less fun	Between Groups	.07	1	.07	.50
	Within Groups	9.77	68	.14	
	Total	9.84	69		
Child 2- Beh 8 Daydreams too much	Between Groups	.08	1	.08	.14
	Within Groups	36.21	68	.53	
	Total	36.28	69		
Child 2- Beh 10 Afraid of new situations	Between Groups	1.46	1	1.46	2.61
	Within Groups	37.82	68	.56	
	Total	39.27	69		

Child 2- Beh 18 Grades dropping	Between Groups	.33	1	.33	1.75
	Within Groups	12.87	68	.20	
	Total	13.20	69		
Child 2- Beh 20 Visits Dr. and finds nothing wrong	Between Groups	.01	1	.01	.022
	Within Groups	17.84	68	.26	
	Total	17.84	69		
Child 2- Beh 22 Worries a lot	Between Groups	.01	1	.01	.01
	Within Groups	42.64	68	.63	
	Total	42.64	69		
Child 2- Beh 25 Takes risks	Between Groups	.01	1	.01	.04
	Within Groups	21.43	68	.32	
	Total	21.44	69		
Child 2- Beh 27 Has less fun	Between Groups	.22	1	.22	.78
	Within Groups	18.87	68	.28	
	Total	19.09	69		

Note. **p<.01, *p<.05 None of the above analyses were found to be significant.

Table 9

Analyses of Variance for Behavior and Grades by PDT Responsiveness (Level of Consistency)

		Sum of Squares	df	Mean Square	F
Child 1 Grades	Between Groups	.01	1	.01	.00
	Within Groups	136.58	68	2.01	
	Total	136.59	69		
Child 2 Grades	Between Groups	2.23	1	2.23	1.21
	Within Groups	125.61	68	1.85	
	Total	127.84	69		
Child 1- Beh 8 Daydreams	Between Groups	.93	1	.93	2.83
	Within Groups	22.34	68	.33	
	Total	23.27	69		
Child 1- Beh 10 Afraid of New Situations	Between Groups	.00	1	.00	.01
	Within Groups	16.99	68	.25	
	Total	16.99	69		
Child 1- Beh 18 School Grades Drop	Between Groups	.10	1	.10	2.49
	Within Groups	2.77	68	.04	
	Total	2.87	69		

Child 1- Beh 20 Visits Dr with nothing wrong	Between Groups	.00	1	.00	.00
	Within Groups	12.30	68	.18	
	Total	12.30	69		
Child 1- Beh 22 Worries A lot	Between Groups	.36	1	.36	1.30
	Within Groups	19.08	68	.28	
	Total	19.44	69		
Child 1- Beh 25 Takes Risks	Between Groups	1.98	1	1.98	4.55*
	Within Groups	29.51	68	.43	
	Total	31.49	69		
Child 1 - Beh 27 Has Less Fun	Between Groups	.02	1	.02	.16
	Within Groups	9.82	68	.14	
	Total	9.84	69		
Child 2 - Beh 8 Daydreams	Between Groups	.43	1	.43	.81
	Within Groups	35.86	68	.53	
	Total	36.29	69		
Child 2 - Beh 10 Afraid of New Situations	Between Groups	.66	1	.66	1.16
	Within Groups	38.62	68	.57	
	Total	39.27	69		

Child 2- Beh 18 School Grades Drop	Between Groups	.10	1	.10	.54
	Within Groups	13.10	68	.19	
	Total	13.20	69		
Child 2- Beh 20 Visits Dr with Nothing Wrong	Between Groups	.34	1	.34	1.31
	Within Groups	17.51	68	.26	
	Total	17.84	69		
Child 2 - Beh 22 Worries A lot	Between Groups	.03	1	.03	.05
	Within Groups	42.61	68	.63	
	Total	42.64	69		
Child 2 - Beh 25 Takes Risks	Between Groups	.00	1	.00	.01
	Within Groups	21.44	68	.32	
	Total	21.44	69		
Child 2 – Beh 27 Has Less Fun	Between Groups	.07	1	.07	.24
	Within Groups	19.02	68	.29	
	Total	19.09	69		

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

Research Question 3: Does child temperament vary by PDT score/parenting consistency levels?

A series of One-Way ANOVAs (Analysis of Variance) were conducted, one set for demandingness and one for responsiveness. The three significantly different individual temperament items between child 1 (younger child) and child 2 (older child) were entered as dependent variables in individual analyses. The PDT scores for demandingness and responsiveness, respectively, were entered as the independent variable/factor in each respective analysis. For responsiveness, temperament did not vary by level of consistency (see Table 10). For demandingness, however, “likes to be with people” did vary by level of consistency for child 2 (older child) (see Table 11). Specifically, inconsistent parents’ child 2 scores ($M=4.16$, $SD=1.18$) were significantly higher than those of consistent parents’ child 2 scores ($M=3.63$, $SD=.94$). In other words, inconsistent parents’ children received stronger endorsement of them liking to be with people than did the children of consistent parents.

Table 10

Analyses of Variance for Temperament by PDT Responsiveness (Level of Consistency)

		Sum of Squares	df	Mean Square	F
Child 1 Temp 1 Shy	Between Groups	.00	1	.00	.00
	Within Groups	76.87	68	1.13	
	Total	76.87	69		
Child 1 Temp 3 likes to be with	Between Groups	.00	1	.00	.01
	Within Groups	47.44	68	.70	

people	Total	47.44	69		
Child 1 Temp 13 Energetic	Between Groups	.01	1	.01	.01
	Within Groups	67.48	68	.99	
	Total	67.49	69		
Child 2 Temp 1 Shy	Between Groups	.03	1	.03	.01
	Within Groups	119.25	68	1.76	
	Total	119.28	69		
Child 2 Temp 3 Likes to be with people	Between Groups	.14	1	.13	.11
	Within Groups	83.35	68	1.23	
	Total	83.49	69		
Child 2 Temp 13 Energetic	Between Groups	2.87	1	2.87	2.27
	Within Groups	85.83	68	1.26	
	Total	88.70	69		

Note. ** $p < .01$, * $p < .05$ None of the above analyses were found to be significant

Table 11

Analyses of Variance for Temperament by PDT Demandingness (Level of Consistency)

		Sum of Squares	df	Mean Square	F
Child 1 Shy	Between Groups	.65	1	.65	.58
	Within Groups	76.22	68	1.12	
	Total	76.87	69		
Child 1 Likes to be with people	Between Groups	.02	1	.02	.02
	Within Groups	47.43	68	.70	
	Total	47.44	69		
Child 1 Energetic	Between Groups	.18	1	.18	.18
	Within Groups	67.31	68	.99	
	Total	67.49	69		
Child 2 Shy	Between Groups	2.96	1	2.96	1.73
	Within Groups	116.31	68	1.71	
	Total	119.271	69		
Child 2 Likes to be with people	Between Groups	4.93	1	4.93	4.27*

	Within Groups	78.55	68	1.16	
	Total	83.49	69		
Child 2 Energetic	Between Groups	1.68	1	1.68	1.31
	Within Groups	87.02	68	1.28	
	Total	88.70	69		

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

Next, the alternative measure of temperament that was developed for exploratory use in this study was analyzed for differences for each child by the responsiveness and demandingness consistency variables (PDT responsiveness and PDT demandingness). A Chi Squared Test of Independence of Categorical Variables using cross tabulation was run between the demandingness PDT variable and this alternative temperament variable for child 1 and child 2, respectfully. The same analyses were also run between the responsiveness PDT variable for each child. In all, there were four sets of analyses, resulting in eight tables (see Tables 12-19). For each of the four analyses, there are two tables containing results. None of the four sets of analyses could be interpreted because there were too few cases in several of the cells.

Table 12

Child 1 Primary Temperament by PDT Demandingness Cross tabulation

Child 1 Primary Temperament	PDT Demand		Total
	Consistent	Inconsistent	
1	27	30	57
2	0	5	5
3	5	3	8

Table 13

Child 1 Chi-Square Test for PDT Demandingness and Primary Temperament

	Value	df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	5.18	2	.08
Likelihood Ratio	7.08	2	.03
Linear-by-Linear Association	.02	1	.87
N of Valid Cases	70		

Note. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 2.29.

Table 14

Child 1 primary temperament by PDT Responsiveness Cross tabulation

Child 1 Primary Temperament	PDT Responsiveness		Total
	Consistent	Inconsistent	
1	42	15	57
2	4	1	5
3	5	3	8

Table 15

Child 1 Chi-Square Test for PDT Responsiveness and Primary Temperament

	Value	df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	.58	2	.75
Likelihood Ratio	.56	2	.76
Linear-by-Linear Association	.27	1	.60
N of Valid Cases	70		

Note. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.36.

Table 16

Child 2 primary temperament by PDT Demandingness Cross tabulation

Child 2 Primary Temperament	PDT Demandingness		Total
	Consistent	Inconsistent	
1	20	30	50
2	7	7	14
3	5	1	6

Table 17

Child 2 Chi-Square Test for PDT Demandingness and Primary Temperament

	Value	df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	4.18	2	.12
Likelihood Ratio	4.4	2	.11
Linear-by-Linear Association	3.67	1	.056
N of Valid Cases	70		

Note. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.74.

Table 18

Child 2 primary temperament by PDT Responsiveness Cross tabulation

Child 1 Primary Temperament	PDT Responsiveness		Total
	Consistent	Inconsistent	
1	36	14	50
2	12	2	14
3	3	3	6

Table 19

Child 2 Chi-Square Test for PDT Responsiveness and Primary Temperament

	Value	df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	2.77	2	.25
Likelihood Ratio	2.76	2	.25
Linear-by-Linear Association	.16	1	.69
N of Valid Cases	70		

Note. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.63.

Research Question 4: Controlling for child temperament, does child outcome (grades and behavior) vary by differential parenting?

Analyses of Covariance (ANCOVA) were conducted to determine whether child outcomes (grades and behavior) varied by parental differential treatment when controlling for child temperament. The PDT scores for demandingness and responsiveness were entered as the independent variable in respective analyses. In each analysis the significantly different

temperament item between child 1 (younger child) and child 2 (older child), “my child likes to be with people”, was entered as the covariate. Child grades and the significantly different behavior item between child 1 and child 2, “takes unnecessary risks”, was entered, respectively, as the dependent variable.

For PDT demandingness, grades or behavior did not vary by level of consistency, when controlling for temperament in both child 1 and child 2 (see Tables 20, 22, 24, and 26). For PDT responsiveness, grades or behavior did not vary by level of consistency, when controlling for temperament for child 1 and child 2 grades (Tables 21 and 23) or for child 2 behavior (see Table 27). For child 1, however, when controlling for temperament (via item three, “likes to be with people”), unnecessary risk taking behavior varied by PDT responsiveness. Specifically, it was found that there was more unnecessary risk taking behavior in the children of inconsistent parents ($M=.79, SD=.79$) than the children of consistent parents ($M=.41, SD=.61$) (see Table 25).

Table 20

ANCOVA for child 1 grades by PDT Demandingness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	4.27	1	4.27	2.18	.15
PDTDemand	.84	1	.84	.43	.516
Error	131.54	67	1.96		
Total	535.00	70			

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

Table 21

ANCOVA results of child 1 grades and PDT Responsiveness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	4.2	1	4.20	2.13	.15
PDTResponsive	.01	1	.01	.00	.96
Error	132.37	67	1.98		
Total	535.00	70			

Note: **p<.01, *p<.05

Table 22

ANCOVA results of child 2 grades and PDT Demandingness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	3.03	1	3.03	1.64	.21
PDTDemand	1.91	1	1.91	1.03	.31
Error	123.84	67	1.85		
Total	445.00	70			

Note: **p<.01, *p<.05

Table 23

ANCOVA results of child 2 grades and PDT Responsiveness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	1.93	1	1.93	1.05	.31
PDTResponsive	2.06	1	2.06	1.12	.29
Error	123.68	67	1.85		
Total	445.00	70			

Note: **p<.01, *p<.05

Table 24

ANCOVA results of child 1 behavior and PDT Demandingness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	.00	1	.00	.001	.97
PDTDemand	.01	1	.01	.03	.86
Error	31.47	67	.47		
Total	50.00	70			

Note: **p<.01, *p<.05

Table 25

ANCOVA results of child 1 behavior and PDT Responsiveness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	.00	1	.00	.001	.95
PDTResponsive	1.98	1	1.98	4.49	.04*
Error	29.51	67	.44		
Total	50.00	70			

Note: **p<.01, *p<.05

Table 26

ANCOVA results of child 2 behavior and PDT Demandingness

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	.58	1	.58	1.88	.18
PDTDemand	.01	1	.01	.02	.90
Error	20.85	67	.31		
Total	29.00	70			

Note: **p<.01, *p<.05

Table 27

ANCOVA results of child 2 behavior and PDT Responsive

<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig</i>
Temperament					
“likes to be with people”	.60	1	.60	1.92	.17
PDTResponsive	.01	1	.01	.03	.86
Error	20.84	67	.31		
Total	29.00	70			

Note: **p<.01, *p<.05

CHAPTER 5

Discussion

The purpose of this research study was to examine parents' perspectives of what it is like to raise multiple children in the same family and children's different levels of functioning in terms of their temperaments, academics, and behaviors. While a number of studies have researched the impact of parenting on children's development, previous studies had not examined or analyzed the link between why parents differentially parent within families and the academic and behavioral outcomes of siblings. As mentioned in previous chapters, parenting styles differ in the amounts of demandingness (i.e., control) and responsiveness (i.e., warmth). High responsiveness and high demandingness have been consistently found to be associated with many positive academic and behavioral outcomes for children (McDermott-Panetta et al., 2013; Steinberg, 2011).

Based on previous research, parents have been found to respond differently to their children's unique personalities and temperaments (Steinberg, 2011). This link between parents and their children has been best understood as a bidirectional process (Sigelman & Rider, 2012). Prior researchers have found the children have genetic and behavioral characteristics that help form his/her environments, in addition to being impacted by the environments in which they develop (i.e., by his/her parents) (Padilla-Walker et al., 2012).

Parental differential treatment (PDT) has been defined as the way parents parent their children in relation to one another (Feinberg & Hetherington, 2001). PDT, as described in previous literature, has been found to be linked to negative outcomes such as poorer adjustment as well as increased internalizing and externalizing behaviors (Boyle et al., 2004; Feinberg & Hetherington, 2001; Shanahan et al., 2008). However, as previously mentioned, prior studies

had not examined why parents differentially parent their children. It is noted that in previous studies, when children perceived differential treatment to be fair, it was not associated with a negative parent-child relationship outcome (Kowal et al., 2004).

Included in this study were variables that represent parenting factors (demandingness and responsiveness) and child outcomes (academic grades and behaviors). Unique to this study was the computation of a new variable (PDT score) for responsiveness and demandingness separately to reflect whether parents were consistent or inconsistent in the ways that they parented their two children. The role in which temperament has in parents differentially parenting their children was also measured. Finally, this study also examined the relation between parental differential treatment and child outcomes when controlling for child temperament.

Key Limitations

In general, results of the current study did not occur as hypothesized. Typically, study limitations are included at the end of a discussion section, but in order to provide context for the remainder of this discussion section, they will be discussed first. Although there were some significant findings, which will be discussed next, a primary limitation of the study was sample size. Due to the importance of the children's developmental stage, researchers limited inclusionary criteria to include parents of two or more elementary age children. This posed an unexpected challenge as many families in the sample sites consisted of an elementary and a middle and/or preschool sibling. Future research in this area may consider extending the inclusion criteria to allow the older child to be in middle school.

Another key limitation was that many of the parent participants started the survey, but the completion rate was low. This problem was not detected in the pilot study. It is noted that the

approximate time to complete the survey was 10 minutes per child. Future research in this area could offer an individual incentive for completing each survey, as opposed to entering their name into a drawing for a prize.

A main reason for administering the survey using a predominately online methodology was to reach parents remotely and allow them the flexibility to complete the survey at a convenient time. However, an online survey does not allow for direct researcher-participant contact like a paper and pencil method, which may have been a primary disadvantage in the current study. Primary investigators are not able to explain the purpose of the study in person.

Despite that the data collected did not permit the research questions to be answered as originally conceptualized, the study was pressed forward using individual items as proxies for complete scales. Thus, the remainder of this interpretive analysis is done with those conditions. While there are inherent limitations to that method in and of itself, clearly recognized by this author, the discussion below is based on information gleaned from that method.

Research Question 1: Do parents report that they parent their various offspring differently?-

It was hypothesized that parents differentially parent their children. Again, significant differences were not found when analyzing the full scales (i.e., responsiveness, demandingness, grades, behavior, temperament). Importantly, parents in the current study did not report differentially parenting their children. However, there were several differences at the individual item level that were analyzed further and are interpreted with caution here.

Parenting factors on the responsiveness and demandingness measures that were different between children emphasized rules and decisions. Specifically, the younger child was told the reasons for rules more and decisions should not be questioned. Telling the younger child reasons

for rules suggests that parents may become more democratic/authoritative as they mature, develop, and gain experience as parents. Parents of younger children were also found to be more likely to tell children that decisions should not be questioned. It is possible that when parents have more than one child, in order to maintain the already established rules, parents have the expectations for children to comply and not argue. Perhaps patterns of parenting may become more pronounced by the time the second child grows and develops.

Furthermore, for the older child, parents reported having more strict expectations for after school and evening curfews. As previously stated, parents may become less firm with their younger children as they as parents mature, develop, and gain experience. This may explain why parents were found to be more firm with the older child with limitations such as curfews and after school expectations than with their younger children.

Parents in the current study also did not report overall significant differences in temperament or behavioral outcomes between their different children. As with the parenting factors, there were individual item differences. Specifically, the younger child was found to be significantly more shy than the older child. The younger child was also found to like to be with people more and be more energetic. Interestingly, the younger child is shyer yet likes to be with people more, which seems counterintuitive. Perhaps the younger children may cling to their parents as they are more shy than the older child was at that age. However, the item does not tease out whether children genuinely like to be around people or they are clinging for security. It is also possible that younger children like to be around people (i.e., his/her siblings) than an older child who may have had to play independently at that age because his/her sibling was not born yet.

For behavior, the younger child in the current study was found to be less afraid of new situations, had less academic problems, was less psychosomatic, had less worries, had more risk taking behaviors, and seemed to having less fun. Higher ratings on these behavioral items for the younger child may be best understood due to the fact that they have an older sibling that has paved the way for them to experience new situations. The older child in this study may not have had a sibling to act as a guide. Specifically related to risk taking behaviors, younger children that have older siblings may be more likely to want to engage in less developmentally appropriate activities for their age and spend time with older siblings and his/her friends. This would have to be tested in future research, as this is only a possible explanation.

RQ#2: Does child outcome (grades and behavior) vary by PDT score/parenting consistency levels?

It was expected that child outcome (grades and behavior) would vary by PDT. Results indicate that grades or behaviors did not vary by level of consistency for demandingness. However, for responsiveness, child 1/younger child “takes unnecessary risks” was higher for inconsistent parents than consistent parents. In other words, parents that differentially parent their children as related to responsiveness (“parent usually tells child the reason for rules”) had younger children that took more unnecessary risks. However, because of the study design, directionality cannot be determined. As previously mentioned, child 1 (younger child) was mostly rated higher than child 2 (older child) on the responsiveness measure; however, there were a few items that were higher for child 2. It is possible that these children that are differentially parented as related to this responsiveness item are more likely to take unnecessary risks to test parents’ rationale for rules. This possibility would have to be tested in future research.

RQ #3: Does child temperament vary by PDT score/parenting consistency levels?

Child temperament was hypothesized to be different when parents are inconsistent or consistent (as reflected in the PDT score). However, temperament was not found to vary by level of consistency for responsiveness. It is noted that the temperament item “likes to be with people” did vary by level of consistency for child 2 (older child) as related to demandingness. Specifically, inconsistent parents’ child 2 scores were significantly higher than those of consistent parents. In other words, parents that differentially parent their children as related to demandingness (“parent decisions should not be questioned”) had older children that liked to be with people. Given the limitations of the study, however, future research is needed to tease out what dynamic might be happening with these variables.

The current study also created a temperament measurement using the following categories: “easy”, “slow to warm up”, and “difficult”, and analyses were conducted with that variable as well. However, results from these analyses may not be meaningful because the analyses could not be interpreted due to few cases in several of the cells. Additionally, there was lack of variance in parent temperament assignments to their children. Specifically, parents identified the vast majority of their children as primarily falling in the “easy” temperament category. With a larger sample size, there is potential for this type of more simplified and direct measure of temperament and there may even be the possibility of considering combinations of temperament styles, as children may exhibit traits of more than one style simultaneously.

RQ#4: Controlling for child temperament, does child outcome (grades and behavior) vary by differential parenting?

It was predicted that when temperament was controlled for, child outcome would not vary by differential parenting. However, when controlling for temperament the results were the same as including temperament in the analyses. It was hypothesized that controlling for child temperament would free up some variance in behavior that was suspected to be accounted for by temperament. However, when controlling for temperament, the results were the same. Thus, it may be interpreted as if temperament does not function in the way that was hypothesized in this study. It is also possible that because there was a lack of variance/difference in parent reported child temperaments, that may be why parents did not report overall differentially parenting their children. It is noted; however, that these interpretation may be premature due to some of the limitations in this study.

Other Limitations

In addition to the most noteworthy limitation being sample size, as stated at the beginning of this chapter, there were also additional limitations. One limitation is that researchers used individual items to represent the broader concept versus whole scales (e.g., behavior, demandingness, responsiveness) which could bring into question reliability and validity of the measurement. A greater sample size might have allowed for more significance.

Results indicated that there were no significant differences for the full scales (i.e., responsiveness, demandingness, grades, behavior, and temperament). In other words, parents did not report differentially parenting their children. Parents' ratings were not significantly different for both of their children on most variables. Results also demonstrated a lack of

variability in the temperament ratings used in the current study. As previously mentioned, the vast majority of parents report their children to fall in the “easy” temperament category. It is possible that the sample was somewhat biased in that it may contain primarily those that took the time to fill it out and thus there is something unique about these participants as a group.

Another limitation of the current study was that the vast majority of participants were all from a suburb of a major metropolitan area in the Midwestern United States. This makes it difficult to generalize the results from this study. Future studies should also be conducted in more urban and rural areas. The population of the current study was primarily Caucasian (88.6% for both child 1 and 2) and with children that had not experienced a family divorce (child 1=92.9%, child 2=90%). Additionally, the majority of parent responders had a predominately higher income and education level. Future studies should be conducted with a more heterogeneous racial and socioeconomic group in order to generalize results.

Conclusions

Results of the current study did not occur as expected. Temperament differences between siblings was hypothesized to be a contributing factor in terms of why parents differentially parent their children. However, parents in the current study did not report temperament differences between siblings, and overall did not report differentially parenting their children. Due to the fact that there was a lack of variance or differences in child 1 and child 2 temperaments, it is possible as to why parents did not report overall differentially parenting their children. A larger scaled study ensuring broader participation is necessary to better explore the link between why parents parent differently within families.

Despite these limitations, there are some noteworthy findings that could be explored in future research in more detail. As parents gain more experience and become more mature in

their parenting, results demonstrated that they become more democratic in their parenting practices (i.e., tell their children reasons for rules). This is an important finding based on the prior research that authoritative parenting encourages many adaptive outcomes in children, such as increased academic achievement and lower levels of problem behaviors (Lee et al., 2006; Lamb & Bornstein, 2011).

Based on the individual item level response, there may be implications for application or intervention in the schools or in clinical settings. As previous studies have found, high responsiveness is one of the most optimal factors in parenting practices. When parents explain the reasons for rules to children it will help them to better understand and follow the rules. Children will be able to better understand parents' expectations in that parents want children to be safe and secure. This same rationale can be best used in school settings as related to classroom/school rules as well. It will be important for parents and teachers to be aware that rules and expectations will need to be adjusted as children grow and develop.

Another important finding was that parents reported having more firm expectations as related to curfews for the older child than with the younger child. Additionally, when looking at behavior, the younger child was found to be more likely to take risks than the older child. Clinical and school psychologists are knowledgeable about assessment and implementation of interventions, and this knowledge could be used to reduce or prevent risk taking behaviors in children. It will also be beneficial for parent management training to focus on maintaining consistent parenting techniques, as results indicate parents became less strict with their expectations as related to their younger child. Psychologists and other service providers have the expertise to provide early parenting interventions and supports to ensure the most adaptive child outcomes.

In conclusion, future research with a larger sample size will be needed in order to better understand why parents differentially parent their children and the associated outcomes. This information will continue to provide important knowledge for parents and teachers regarding how best to tailor to individual children's varying characteristics and needs.

APPENDIX A

HIC Approval

WAYNE STATE
UNIVERSITY

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
<http://irb.wayne.edu>

NOTICE OF EXPEDITED APPROVAL

To: Ashley Ceresnie
College of Education

From: Dr. Deborah Ellis or designee K. Campbell-Voghtal
-for Chairperson, Behavioral Institutional Review Board (B3)

Date: February 18, 2014

RE: IRB #: 012114B3E
Protocol Title: Parents' Perception of their Children
Funding Source:
Protocol #: 1401012896

Expiration Date: February 17, 2015

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Expedited Review* Category (#7)* by the Chairperson/designee for the Wayne State University Institutional Review Board (B3) for the period of 02/18/2014 through 02/17/2015. This approval does not replace any departmental or other approvals that may be required.

- Revised Protocol Summary Form (received in the IRB Office 2/18/2014)
 - Protocol (received in the IRB Office 1/8/2014)
 - A waiver of requirement for written documentation of informed consent has been granted according to 45 CFR 46 116(d). This waiver satisfies: 1) the research involves no more than minimal risk to the participants. The risk level is not greater than that experienced in daily life; 2) the research involves no procedures for which written consent is normally required outside of the research context. The risk level is not greater than that experienced in daily life; 3) the consent process is appropriate and 4) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants.
 - Research Information Sheet (dated 2/18/2014)
 - Recruitment Email for RCBM Patients
 - Recruitment Email for WSU Students
 - Data Collection Tool: Questionnaire
-

* Federal regulations require that all research be reviewed at least annually. You may receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.

- All changes or amendments to the above-referenced protocol require review and approval by the IRB **BEFORE** implementation.
- Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (<http://www.irb.wayne.edu/policies-human-research.php>).

NOTE:

1. Upon notification of an impending regulatory site visit, hold notification, and/or external audit the IRB Administration Office must be contacted immediately.
2. Forms should be downloaded from the IRB website at each use.

*Based on the Expedited Review List, revised November 1998

NOTICE OF EXPEDITED AMENDMENT APPROVAL

To: Ashley Ceresnie
College of Education

From: Dr. Deborah Ellis or designee C. Zolondek/BB.
for Chairperson, Behavioral Institutional Review Board (B3)

Date: May 05, 2014

RE: IRB #: 012114B3E
Protocol Title: Parents' Perception of their Children
Funding Source:
Protocol #: 1401012696

Expiration Date: February 17, 2015

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Participant Information - Receipt of revised (I) Recruitment Email for RCBM Patients and (II) Recruitment Email for WSU Students to be distributed through e-mail.
- Protocol - Enrollment criteria modified to reflect change inclusion criteria to two or more elementary age children (grades K-5).
- Protocol - Data collection method revised to reflect the addition of the following items: (I) demographic questions for the parent, (II) more demographic information for the child, (III) use of valid and reliable measures to collect data on temperament and behavior outcomes, and (IV) an optional narrative question.
- Information Sheet - Research Information Sheet (dated 4/18/2014) - Information Sheet modified to reflect new inclusion criteria and increased time spent completing surveys.
- Receipt of following data collection tools: Questionnaire (revised); Emotionality, Activity, and Sociability Temperament Survey for Children (new), Pediatrics Symptom Checklist (new) and Optional Question (new)



IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
<http://irb.wayne.edu>

NOTICE OF EXPEDITED AMENDMENT APPROVAL

To: Ashley Ceresnie
College of Education

From: Dr. Deborah Ellis or designee C. Zolondak / PB.
~~for~~ Chairperson, Behavioral Institutional Review Board (B3)

Date: September 23, 2014

RE: IRB #: 012114B3E
Protocol Title: Parents' Perception of their Children
Funding Source:
Protocol #: 1401012696

Expiration Date: February 17, 2015

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Notice/Flyer - Receipt of new flyer to be posted in Rochester Center for Behavioral Medicine's waiting room.
- Protocol - Change in Site - Addition of Burton Elementary School for recruitment of participants.
- Protocol - Other - Receipt of new Invitation Letter to be sent to Burton Elementary School families.
- Information Sheet - Research Information Sheet (revisions dated 9/14/2014) - Information Sheet modified to reflect additional site of Burton Elementary School.

NOTICE OF EXPEDITED AMENDMENT APPROVAL

To: Ashley Ceresnie
College of Education

From: Dr. Deborah Ellis or designee C. Zolondet/AB
for Chairperson, Behavioral Institutional Review Board (B3)

Date: January 20, 2015

RE: IRB #: 012114B3E
Protocol Title: Parents' Perception of their Children
Funding Source:
Protocol #: 1401012696

Expiration Date: February 17, 2015

Risk Level / Category: Research not involving greater than minimal risk

The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Protocol - Data Collection methods modified to reflect the use of online methodology for the Angell Elementary School PTA.
- Protocol - Change in Site - Addition of Angell Elementary School PTA for recruitment of participants.
- Protocol - Other: Receipt of new invitation to be used to recruit Angell Elementary school families.
- Information Sheet - Research Information Sheet (revisions dated 11/30/2014) - Information Sheet modified to reflect addition of Angell Elementary School site.

APPENDIX B

Letters of Support

WAYNE STATE
UNIVERSITY

Educational Psychology
Division of Theoretical and
Behavioral Foundations
College of Education
Detroit, MI 48202
Phone: (313) 577-1614
Fax: (313) 577-5235

November 21, 2013

To Whom It May Concern:

Ashley Ceresnie is a doctoral student in our Ph.D. program in Educational Psychology. I am her advisor. She is conducting her doctoral dissertation research on parenting styles and child outcomes. I am permitting her to approach adult students in my WSU classes to see if, for those who have children, they might be interested in participating in her research study.

Please contact me if you have additional questions. Thank you.

Sincerely,



Cheryl L. Somers, Ph.D.
Associate Professor, Educational Psychology Dept.
Director, School & Community Psychology Program
345 College of Education, 5425 Gullen Mall
Wayne State University
Detroit, MI 48202
tel: 313-577-1670
fax: 313-577-5235
c.somers@wayne.edu
<http://tbf.coe.wayne.edu/>



ROCHESTER CENTER FOR BEHAVIORAL MEDICINE

Joel L. Young, MD, PC
 Medical Director
 Diplomate, American Board of Psychiatry and Neurology
 Added Qualifications in Geriatric & Forensic Psychiatry
 Diplomate, American Board of Adolescent Psychiatry

441 South Livernois, Suite 205
 Rochester Hills, MI 48307
 Phone 248.608.8800 • Fax 248.608.2490 • www.rcbm.net

November 4, 2013

To Whom It May Concern at the Wayne State Institutional Review Board:

Please be advised that we have approved Ashley Ceresnie, MA, tLLP to conduct her proposed survey research entitled *Patients' Perceptions of their Children*, at the Rochester Center for Behavioral Medicine. All survey respondents would be current RCBM patients.

Please feel free to contact me if you have any questions or concerns.

Sincerely,

Jaime Saal, MA, LPC
 Executive Director
 Rochester Center for Behavioral Medicine
 jsaal@rcbm.net



BERKLEY SCHOOLS

BURTON ELEMENTARY SCHOOL
WWW.BERKLEYSCHOOLS.ORG

September 2014

To Whom it May Concern,

I am happy to support and give permission to Ashley Ceresnie to survey our parents with multiple children in grades kindergarten through fifth grade. She is completing her doctoral dissertation and needs further data for her research. We are anxiously awaiting your confirmation to begin our data collection.

Sincerely,

Maribeth Krehbiel

Principal



MARIBETH KREHBIEL, PRINCIPAL
26315 SCOTIA
HUNTINGTON WOODS, MI 48070
P: 248-837-8600 F: 248-546-0279





November 24, 2014

To Whom it May Concern:

I am writing to give my support and permission for Ashley Ceresnie to conduct a survey among our PTA member parents. I understand she will be surveying parents who have multiple children in grades kindergarten through fifth in order to collect data for her research. I will wait to receive your confirmation to proceed and work with Ms. Ceresnie to distribute the survey electronically to our parent members.

Please contact me with any questions.

Sincerely,

Kelley Smith

Angell PTA President

(248) 410-2265

kelpavsmith@gmail.com

APPENDIX C**Information Sheet****Research Information Sheet**

Title of Study: *Parents' Perception of their Children*

Principal Investigator (PI): Ashley Ceresnie
Educational Psychology
248-608-8800 ext. 239

Purpose:

You are being asked to be in a research study about parents' perception of their children because you are a parent of 2 or more elementary school children (grades K-5). This study is being conducted at Wayne State University, Rochester Center for Behavioral Medicine, Burton and Angell Elementary School.

Study Procedures:

If you agree to take part in this research study, you will be asked to complete a brief survey that can be completed at your convenience. The survey includes questions about demographics (e.g., age, gender, etc.), questions about each of your children's personal characteristics, academic achievement, behavior, and questions about your own beliefs and choices with your children. The approximate amount of time to complete the survey is 10 minutes per child.

Benefits

- As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

Risks

There are no known risks at this time to participation in this study

Costs

- There will be no costs to you for participation in this research study.

Compensation

- You will not be paid for taking part in this study. However, you will have the option of being entered into a drawing to win a \$25 gift card after completion of the questionnaires.

Confidentiality:

- All information collected about you during the course of this study will be kept without any identifiers. You will not be asked for your name or any other identifying information on the survey.

Voluntary Participation /Withdrawal:

Taking part in this study is voluntary. You are free to not answer any question or to withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates.

Questions:

If you have any questions about this study now or in the future, you may contact Ashley Ceresnie at the following phone number 248-608-8800 ext. 239. If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:

By completing the questionnaire you are agreeing to participate in this study.

APPENDIX D

Instruments

DIRECTIONS: Please respond to the questionnaire about your youngest elementary age child (grades K-5) first. Following that, please respond to the questionnaires for your other elementary aged children (grades K-5). Think back at how you parented your older children when they were the same approximate age as your youngest child. Complete the questionnaires based on how you parented each older elementary aged child when he/she was the age of the youngest child.

Background Information about Parent

1. Do you have 2 or more children in elementary school (grades K-5)? ___Yes ___No

- If no, please do not complete the survey

2. What is the total number of children in your house? _____

3. What are the ages and gender/sex of each of your children?

4. What is your gender/sex? ___male ___female

5. What is your age (in years)? _____

6. Check the highest amount of education you have completed?

_____ Some grade school

_____ Finished grade school

_____ Some high school

_____ Finished high school

_____ Some college

_____ Finished college

_____ Attended graduate school or professional school after college

7. What is your current household income?

_____ Less than \$50,000

_____ \$50,000 - \$69,999

_____ \$70,000 - \$89,999

_____ \$90,000 - \$124,999

_____ \$125,000 and above

Background Information about Child 1 (youngest elementary school aged child)

1. Gender/Sex of child: _____ male _____ female
2. School Grade of child: _____
3. Age of child: _____
4. What is your child's primary racial or ethnic background?
 - _____ Hispanic or Latino
 - _____ African-American/Black
 - _____ Caucasian/White
 - _____ Middle-Eastern
 - _____ Native American (Indian)
 - _____ Asian
 - _____ Indian, Pakistani, Afghani, or other Indian subcontinent origin
 - _____ Multi-racial (list both): _____
 - _____ Other: _____
5. Does this child receive special education services at school? _____ yes _____ no
6. If yes, what is your child's disability or disabilities (check all that apply)?
 - _____ Cognitive Impairment
 - _____ Emotional Impairment
 - _____ Hearing Impairment
 - _____ Visual Impairment
 - _____ Physical Impairment
 - _____ Other Health Impairment
 - _____ Speech and Language Impairment
 - _____ Early Childhood Developmental Delay
 - _____ Specific Learning Disability
 - _____ Severe Multiple Impairment
 - _____ Autism Spectrum Disorder
 - _____ Traumatic Brain Injury
 - _____ Deaf-Blindness
7. Does your child have a diagnosis from a pediatrician, psychiatrist, or psychologist? If yes, please list: _____
8. Has this child experienced a parental divorce? _____ yes _____ no
9. Has there been a change in family income level since the older child was this age? _____ yes _____ no

10. Has there been a major crisis or trauma in this child's life? _____yes _____no

Please rate each of the items below for your child on a scale from 1 (not characteristic or not typical of your child) to 5 (very characteristic or very typical of your child).

	Not Typical		Very Typical		
1. My child tends to be shy.	1	2	3	4	5
2. My child cries easily.	1	2	3	4	5
3. My child likes to be with people.	1	2	3	4	5
4. My child is always on the go.	1	2	3	4	5
5. My child prefers playing with others rather than alone.	1	2	3	4	5
6. My child tends to be somewhat emotional.	1	2	3	4	5
7. When my child moves about, s/he usually moves slowly.	1	2	3	4	5
8. My child makes friends easily.	1	2	3	4	5
9. My child is "off and running" as soon as s/he wakes up in the morning.	1	2	3	4	5
10. My child finds people more stimulating than anything else.	1	2	3	4	5
11. My child often fusses and cries.	1	2	3	4	5
12. My child is very sociable.	1	2	3	4	5
13. My child is very energetic.	1	2	3	4	5
14. My child takes a long time to warm up to strangers.	1	2	3	4	5
15. My child gets upset easily.	1	2	3	4	5
16. My child is something of a loner.	1	2	3	4	5
17. My child prefers quiet, inactive games to more active ones.	1	2	3	4	5
18. When alone, my child feels isolated.	1	2	3	4	5
19. My child reacts intensely when upset.	1	2	3	4	5

20. My child is very friendly with strangers. 1 2 3 4 5

Please carefully read the following statements about children's temperament. Although all of the characteristics in any one option may not perfectly describe your child, please pick a primary temperament (mark #1 on the appropriate line), and if applicable, a secondary temperament (mark as #2). You may only have one that fits your child, but you may also have two.

_____ My child is generally calm predominately happy with a positive mood, regular in sleeping and eating habits, adapts quickly to new situations, and is not easily upset. My child is described as easy going.

_____ My child tends to withdraw (e.g., clings to me, hides face, does not want to interact) or to react negatively (e.g., becomes upset or shuts down) to new situations, but his/her reactions gradually becomes more positive with time/continuous exposure to the new situation. My child is often described as shy or inhibited.

_____ My child is often fussy, irregular in eating and sleeping habits, fearful of new people and situations, easily upset by noise or commotion. My child is often described as high strung and intense in his/her reactions

What grades do your child most often receive? Choose the response that most accurately describes your child's grades overall.

NOTE: If your child does not receive letter grades, loosely translate the following.....

A=extremely above average, B=above average, C=average, D=below average, E=extremely below average

- € Mostly As
- € Mostly As and Bs
- € Mostly Bs
- € Mostly Bs and Cs
- € Mostly Cs
- € Mostly Cs and Ds
- € Mostly Ds
- € Mostly Ds and Es.
- € Mostly Es

Please mark under the heading that best fits your child.

	Never (0)	Sometimes (1)	Often (2)
1. Complains of aches/pains			
2. Spends more time alone			
3. Tires easily, has little energy			
4. Fidgety, unable to sit still			
5. Has trouble with a teacher			
6. Less interested in school			
7. Acts as if driven by a motor			
8. Daydreams too much			
9. Distracted easily			
10. Is afraid of new situations			
11. Feels sad, unhappy			
12. Is irritable, angry			
13. Feels hopeless			
14. Has trouble concentrating			
15. Less interest in friends			
16. Fights with others			
17. Absent from school			
18. School grades dropping			
19. Is down on him or herself			
20. Visits doctor with doctor finding nothing wrong			
21. Has trouble sleeping			
22. Worries a lot			
23. Wants to be with you more than before			
24. Feels he or she is bad			
25. Takes unnecessary risks			
26. Gets hurt frequently			
27. Seems to be having less fun			
28. Acts younger than children his or her age			
29. Does not listen to rules			
30. Does not show feelings			
31. Does not understand other people's feelings			
32. Teases others			
33. Blames others for his or her troubles			
34. Takes things that do not belong to him or her			
35. Refuses to share			

Background Information about Child 2+ (next oldest elementary school aged child)

1. Gender/Sex of child: _____ male _____ female
2. School Grade of child: _____
3. Age of child: _____
4. What is your child's primary racial or ethnic background?
 - _____ Hispanic or Latino
 - _____ African-American/Black
 - _____ Caucasian/White
 - _____ Middle-Eastern
 - _____ Native American (Indian)
 - _____ Asian
 - _____ Indian, Pakistani, Afghani, or other Indian subcontinent origin
 - _____ Multi-racial (list both): _____
 - _____ Other: _____
5. Does this child receive special education services at school? _____ yes _____ no
6. If yes, what is your child's disability or disabilities (check all that apply)?
 - _____ Cognitive Impairment
 - _____ Emotional Impairment
 - _____ Hearing Impairment
 - _____ Visual Impairment
 - _____ Physical Impairment
 - _____ Other Health Impairment
 - _____ Speech and Language Impairment
 - _____ Early Childhood Developmental Delay
 - _____ Specific Learning Disability
 - _____ Severe Multiple Impairment
 - _____ Autism Spectrum Disorder
 - _____ Traumatic Brain Injury
 - _____ Deaf-Blindness
7. Does your child have a diagnosis from a pediatrician, psychiatrist, or psychologist? If yes, please list: _____
8. Has this child experienced a parental divorce? _____ yes _____ no
9. Has there been a major crisis or trauma in this child's life? _____ yes _____ no

Please rate each of the items below for your child on a scale from 1 (not characteristic or not typical of your child) to 5 (very characteristic or very typical of your child).

	Not Typical		Very Typical		
1. My child tends to be shy.	1	2	3	4	5
2. My child cries easily.	1	2	3	4	5
3. My child likes to be with people.	1	2	3	4	5
4. My child is always on the go.	1	2	3	4	5
5. My child prefers playing with others rather than alone.	1	2	3	4	5
6. My child tends to be somewhat emotional.	1	2	3	4	5
7. When my child moves about, s/he usually moves slowly.	1	2	3	4	5
8. My child makes friends easily.	1	2	3	4	5
9. My child is "off and running" as soon as s/he wakes up in the morning.	1	2	3	4	5
10. My child finds people more stimulating than anything else.	1	2	3	4	5
11. My child often fusses and cries.	1	2	3	4	5
12. My child is very sociable.	1	2	3	4	5
13. My child is very energetic.	1	2	3	4	5
14. My child takes a long time to warm up to strangers.	1	2	3	4	5
15. My child gets upset easily.	1	2	3	4	5
16. My child is something of a loner.	1	2	3	4	5
17. My child prefers quiet, inactive games to more active ones.	1	2	3	4	5
18. When alone, my child feels isolated.	1	2	3	4	5
19. My child reacts intensely when upset.	1	2	3	4	5
20. My child is very friendly with strangers.	1	2	3	4	5

Please carefully read the following statements about children's temperament. Although all of the characteristics in any one option may not perfectly describe your child, please pick a primary temperament (mark #1 on the appropriate line), and if applicable, a secondary temperament (mark as #2). You may only have one that fits your child, but you may also have two.

_____ My child is generally calm predominately happy with a positive mood, regular in sleeping and eating habits, adapts quickly to new situations, and is not easily upset. My child is described as easy going.

_____ My child tends to withdraw (e.g., clings to me, hides face, does not want to interact) or to react negatively (e.g., becomes upset or shuts down) to new situations, but his/her reactions gradually becomes more positive with time/continuous exposure to the new situation. My child is often described as shy or inhibited.

_____ My child is often fussy, irregular in eating and sleeping habits, fearful of new people and situations, easily upset by noise or commotion. My child is often described as high strung and intense in his/her reactions

What grades do your child most often receive? Choose the response that most accurately describes your child's grades overall.

NOTE: If your child does not receive letter grades, loosely translate the following.....

A=extremely above average, B=above average, C=average, D=below average, E=extremely below average

- € Mostly As
- € Mostly As and Bs
- € Mostly Bs
- € Mostly Bs and Cs
- € Mostly Cs
- € Mostly Cs and Ds
- € Mostly Ds
- € Mostly Ds and Es.
- € Mostly Es

Please mark under the heading that best fits your child.

	Never (0)	Sometimes (1)	Often (2)
1. Complains of aches/pains			
2. Spends more time alone			
3. Tires easily, has little energy			
4. Fidgety, unable to sit still			
5. Has trouble with a teacher			
6. Less interested in school			
7. Acts as if driven by a motor			
8. Daydreams too much			
9. Distracted easily			
10. Is afraid of new situations			
11. Feels sad, unhappy			
12. Is irritable, angry			
13. Feels hopeless			
14. Has trouble concentrating			
15. Less interest in friends			
16. Fights with others			
17. Absent from school			
18. School grades dropping			
19. Is down on him or herself			
20. Visits doctor with doctor finding nothing wrong			
21. Has trouble sleeping			
22. Worries a lot			
23. Wants to be with you more than before			
24. Feels he or she is bad			
25. Takes unnecessary risks			
26. Gets hurt frequently			
27. Seems to be having less fun			
28. Acts younger than children his or her age			
29. Does not listen to rules			
30. Does not show feelings			
31. Does not understand other people's feelings			
32. Teases others			
33. Blames others for his or her troubles			
34. Takes things that do not belong to him or her			
35. Refuses to share			

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ABSTRACT**DIFFERENTIAL PARENTING PRACTICES WITHIN FAMILIES:
ASSOCIATIONS WITH SIBLINGS' ACADEMIC AND BEHAVIORAL OUTCOMES**

by

ASHLEY CERESNIE**May 2015****Advisor:** Dr. Cheryl Somers**Major:** Educational Psychology**Degree:** Doctor of Philosophy

The association between parenting behaviors and the outcomes of children has been widely studied, with results commonly linking parents' attitudes and behaviors with child outcomes. Few studies, however, have examined and analyzed the link between differential or inconsistent parenting within families and the academic and behavioral outcomes of siblings. Thus, the main purpose of this study was to explore the relations between differential parenting within families and the academic and general behavioral outcomes of pairs of siblings. Included in this study were variables that represent parenting factors (demandingness and responsiveness) and child outcomes (academic grades and behaviors). Unique to this study was the computation of a new variable, Parental Differential Treatment (PDT score) for responsiveness and demandingness separately, to reflect whether parents were consistent or inconsistent in the ways that they parented their two children. The role of temperament in parents' differentially parenting their children was also measured. Finally, this study also examined the relation between parental differential treatment and child outcomes when controlling for child temperament.

Participants were 70 individual parents who reported having two or more elementary age children at the time of participation. Of the 70 parents that participated, the majority were female (n=60, 85.7%) with ages ranging from 27-51. Additionally, the majority of children were reported to be Caucasian (younger child n=62, 88.6%, older child n=61, 88.6%). All participants were from a major metropolitan area in the Midwestern United States.

Results did not reveal significant differences for the full scales. Based on differences at the item level, individual items were used to represent the responsiveness, demandingness, and temperament constructs. For responsiveness, inconsistent parents' younger child scores were significantly higher for risk taking behaviors than those of consistent parents. For demandingness, inconsistent parents' older children received stronger endorsement of them liking to be with people than did the children of consistent parents. For responsiveness, when controlling for temperament, it was found that there was more unnecessary risk taking behavior in the younger children of inconsistent parents than the children of consistent parents. Results are discussed in the context of potential implications and applications to child development and applied psychology and education fields.

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