COPARENTING QUALITY AND CHILD BEHAVIOR IN FAMILIES OF CHILDREN PREVIOUSLY IDENTIFIED WITH A DEVELOPMENTAL DELAY

by

MARGARET ELEANOR ROSENCRANS

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Student: Margaret Eleanor Rosencrans

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This dissertation has been accepted and approved in partial fulfillment of the requirements for the Doctor of Philosophy degree in the Department of Special Education and Clinical Sciences by:

Laura Lee McIntyre	Chairperson
Nicole Giuliani	Core Member
John Seeley	Core Member
Elizabeth Stormshak	Institutional Representative

and

Sara D. Hodges	Interim Vice Provost and Dean of the Graduate School

Original approval signatures are on file with the University of Oregon Graduate School.

Degree awarded June 2019

DISSERTATION ABSTRACT

Margaret Eleanor Rosencrans

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Young children with developmental delay (DD) are at risk for developing poor mental health and behavioral outcomes compared to their typically developing peers (Baker, McIntyre, Blacher, Crnic, Edelbrock, & Low, 2003). Parents of children with developmental delay (DD) are less likely to use positive parenting strategies (e.g., positive reinforcement), indicating that DD status may serve as a risk factor for the use effective parenting practices (Ellingsen, Baker, Blacher, & Crnic, 2014). Little research has examined the degree to which parents work together in their childrearing endeavors in this population of families (Floyd, Harter, & Costigan, 1998). The current study aimed to further explore the relations between coparenting quality and child problem behaviors, as measured by parent report and direct observation. Both primary caregiver and alternate caregivers' reports of difficulty with coparenting problems predicted child problem behaviors. For primary caregivers, parenting self-efficacy mediated the relation between coparenting quality and problem behaviors. Primary caregivers' reports of coparenting quality were significantly associated with observed undermining behavior. Observed undermining behavior significantly positively predicted child appropriate behavior across specific tasks, and observed partner support behavior significantly negatively predicted

child appropriate behavior across specific tasks. Discussion focuses on the clinical significance of these findings and future research directions.

CURRICULUM VITAE

NAME OF AUTHOR: Margaret Eleanor Rosencrans

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene

DEGREES AWARDED:

Doctor of Philosophy, School Psychology, 2019, University of Oregon
Master of Science, Special Education, 2017, University of Oregon
Bachelor of Science, Psychology, 2011, Tulane University

AREAS OF SPECIAL INTEREST:

Family Functioning in Families of Children with Disabilities
Behavioral Consultation
Parent Management Training

PROFESSIONAL EXPERIENCE:

Graduate Employee, HEDCO Autism Research and Training Center, 2017-2018

Supervised College Teacher, University of Oregon, 2017-2018

KITS Implementation Coach, Oregon Social Learning Center, 2016-2017

SWIFT Family Coach, Oregon Social Learning Center, 2015-2018

KITS Parent Coach, Oregon Social Learning Center, 2015

Graduate Employee, Special Education Minor Program, 2014-2017

KITS Lead Teacher, Oregon Social Learning Center, 2014

Research Assistant, Prevention Science Institute, 2014-2017

GRANTS, AWARDS, AND HONORS:

College of Education Dissertation Award, University of Oregon, 2017

3 Minute Thesis People's Choice Award, University of Oregon, 2015

College of Education Travel Grant, University of Oregon, 2015

School Psychology Travel Grant, University of Oregon, 2014, 2015, 2016

Mollie Wallick Scholarship Award, Louisiana PFLAG Chapter, 2013

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CHAPTER I

INTRODUCTION

The Role of Parenting in Child Outcomes

It is well documented that many problem behaviors in early childhood can be traced to ineffective, inconsistent parenting practices (e.g., delivery of ineffective commands, reinforcement of inappropriate behaviors; Patterson, DeBaryshe, & Ramsey, 1990). Parenting behaviors, particularly coercive and harsh parenting, have continued to uniquely contribute to later conduct issues in middle childhood, which can lead to increased risk-taking in adolescence (Patterson et al., 1990). Findings regarding parental impact on child outcomes extend to families of children with DD (Chadwick, Kusel, & Cuddy, 2008; Floyd, Harter, & Costigan, 1998; McIntyre, 2008). This dissertation study aimed to further explore the impact of family-level variables on school-aged children previously identified with a developmental delay in one or more domains of development (Individuals with Disabilities Education Act, 2004).

Poor Outcomes of Children with DD

Development. As a group, both parents and teachers of young children with DD have reported lower scores than expected across all domains of development (i.e., physical, cognitive, communication, social or emotional, and adaptive) at three years of age and kindergarten entry (National Center for Education Evaluation, 2010). Beyond the expected developmental concerns, young children with DD are at risk for developing poor mental health and behavioral outcomes compared to their typically developing peers (Baker, McIntyre, Blacher, Crnic, Edelbrock, & Low, 2003; Brown, McIntyre, Crnic, Baker, & Blacher, 2012; Emerson, 2003; Emerson & Einfeld, 2010).

Behavior and mental health. Several prominent large-scale studies have identified correlates between DD status and behavioral concerns (Emerson, 2003; Emerson & Einfield, 2010). Emerson (2003) examined the prevalence of mental health diagnoses in 10,000 children and adolescents with intellectual disability (ID) in Great Britain. In a comparison of children with ID to typically developing children, Emerson (2003) found that children and adolescents with ID were more likely than their typically developing peers to be diagnosed with conduct disorder, attention deficit hyperactivity disorder, anxiety disorder, and pervasive developmental disorder. In addition, children and adolescents with ID were seven times more likely to have a psychiatric disorder than their typically developing peers. Lastly, Emerson (2003) identified that number of adults in the home, parent mental health, and poor family functioning increased the risk of psychiatric disorders. Although children with DD may not have an intellectual disability, per se, their delays in different domains in development present similar risks for challenging behavior (e.g., Baker et al., 2003).

In a similar undertaking, Emerson and Einfield (2010) conducted an investigation of two large, nationally representative cohorts of families of children with DD in Britain and Australia. The authors sought to determine whether DD status increased the risk of internalizing and externalizing problem behaviors. Emerson and Einfeld (2010) used the cut-off point for DD status as the bottom 3% of the School Readiness Composite for the Bracken Preschool Assessment (Bracken, 2002). Children with DD were significantly more likely to exhibit emotional or behavior difficulties compared to their typically developing peers. These findings held true even after controlling for socioeconomic status.

Taken together, these studies contribute to a growing consensus that scholars and practitioners view delay status as a risk factor for emotional and behavioral adjustment. It follows that more attention should be focused on prevention efforts of behavioral and mental health problems when a child has been identified with DD. Consequently, more investigations of familial variables may benefit this population in determining how best to target preventive family-based interventions to promote positive parenting, family cohesion, and reduce the risk for behavioral or mental health problems in children with DD.

Brown et al. (2012) examined the relations between child risk factors, negative parenting behaviors (i.e., negative affect and intrusive behaviors), and child "demandingness" (i.e., rude and/or incessant attention-getting behavior) in a sample of preschool-aged children with and without DD. The authors chose to examine sickliness during infancy, mental health status, and DD status, hypothesizing that they would increase the risk of child demandingness. Sickliness during infancy independently predicted child demandingness. Delay status independently predicted negative parenting behaviors. The authors found that both negative parenting behaviors and child risk factors independently, uniquely, contributed to child demandingness, leading the authors to conclude that the child risk factors may be additive.

Results from the above-mentioned studies provide compelling evidence for increased risk of behavioral concerns within children with DD. Further, it is the problem behaviors not the delay, per se, that are associated with heightened caregiver distress (Baker et al., 2003). Additional investigations are warranted to identify factors that may influence adjustment in children with DD, across home and school environments.

Impact of Problem Behaviors at School

Recent legislation has put pressure on educators to ensure all students meet criteria for academic excellence (e.g., Every Student Succeeds Act, 2015). Achieving this goal has proven to be especially difficult given the disparity in academic and behavioral prerequisite skills with which students come equipped when they first enter elementary school (Walker, Irvin, Noell, & Singer, 1992). Such discrepancies are apparent between children previously identified with DD and typically developing children (National Center for Educational Evaluation, 2010). Children with DD may face more challenges in acquisition of new academic and behavioral skills (e.g., sharing with peers or listening to teachers). Extensive research has documented that academic and behavioral concerns are not mutually exclusive (Kern & Clemens, 2007). Students with a history of problem behaviors may receive less in-depth, easier academic instruction compared to students without problem behaviors (Carr, Taylor, & Robinson, 1991).

Children previously identified with DD may be eligible to receive services under the category of emotional/behavioral disturbance (EBD) or emotional disturbance (ED), given their risk for behavioral and mental health disorders (Emerson, 2003). Students receiving services under the EBD or ED eligibility may experience interruptions with instruction due to behavioral and social concerns (Hagan-Burke, Kwok, Zou, Johnson, Simmons, & Coyne, 2011). Findings regarding academic performance are especially striking for students with EBD. Academic skill deficits worsen over time for this population, relative to both typically developing students and students with learning disabilities (Benner, Kutash, Nelson, & Fisher, 2013).

Given increased risk for behavioral and mental health concerns, these findings establish a need to continue investigating family-level variables related to children with DD that may contribute to a child's early behavioral concerns. That these concerns can persist during the transition from preschool to elementary school (McIntyre, Blacher, & Baker, 2006) and across the lifespan (Tremblay, 2006) further underscores the need to more thoroughly investigate all potential contributions to child risk.

Impact on Parenting

Studies investigating dyadic interactions in families of children with DD have indicated that caregivers are less likely to use positive parenting strategies (e.g., positive reinforcement) at ages three and five, indicating that DD status may diminish use of effective parenting practices (Ellingsen, Baker, Blacher, & Crnic, 2014). Additional findings have shown that parents of young children with DD are more likely to exhibit negative affect during parent-child interactions than parents of typically developing children (Brown et al., 2012). These interactions may be characterized by less positive parenting and more negative affect due to higher occurrences of challenging behavior or difficulty with completing tasks. For instance, a child with a communication delay may become more easily frustrated when they cannot verbally communicate a desire to play with a toy. More research on parenting with other family-level variables may better predict the likelihood of poor child outcomes in children with histories of DD.

Coparenting

Researchers have typically established ties between parenting behavior and child adjustment via observed dyadic interactions between primary caregiver (PC) and child, or by PC self-report (Coplin & Houts, 1991). Research findings suggest that fathers are

more than ever expected to share equal coparenting duties (Pleck & Pleck, 1997). Further, fathers have been identified as equally influential in child outcomes, regardless of primary caregiver status (Pleck & Pleck, 1997). To exclusively focus on one caregiver provides an incomplete picture of factors that contribute to and shape a child's adjustment. That early externalizing behavior concerns can persist throughout development indicates a need to further investigate other malleable factors.

The field has gradually shifted towards an acknowledgement and investigation of the significant role of secondary, or alternate caregivers, in child outcomes (McHale & Lindahl, 2011). In a nod to the impact of both parents, scholars have recently begun to examine the coparenting relationship (Feinberg, 2003). Broadly, the coparenting relationship can be defined as "an enterprise undertaken by two or more adults working together to raise a child for whom they share responsibility" (McHale & Lindahl, 2011, p. 42).

Its beginnings date back to the 1980's when researchers examined the impact of divorce on child outcomes (Emery, 1982). Findings unequivocally supported a direct link between interparental conflict specific to the child and increased child internalizing and externalizing behavior (Emery, 1982). Coparenting does not necessarily connote equal responsibility in parenting tasks. Rather, coparenting describes a relationship, defined through division of tasks, partner support, and agreement, between two individuals who share responsibility in raising one or more children. Thus, two parents may be discrepant in their parenting roles, but continue to maintain a high-quality coparenting relationship wherein each parent feels respected, heard, and in agreement regarding childrearing endeavors.

Examining the coparenting relationship provides information regarding both parents' behaviors toward the child and toward each other in the presence of the child (McHale & Lindahl, 2011). It offers a more complete glimpse of shared parenting strategies, and the degree to which parents support or undermine one another. In addition, gathering both parents' perceptions of the coparenting relationship provides valuable information regarding agreement over childrearing practices (Dadds & Powell, 1991), feelings of satisfaction and support in coparenting (Schoppe-Sullivan, Mangelsdorf, & Frosch, 2001), and a sense of "division of labor" within parenting (e.g., helping with homework or disciplining; Cowan & Cowan, 1990).

Components of the Coparenting Relationship

In a foundational paper that has helped define the field of coparenting, Feinberg (2003) identified several domains of coparenting: agreement or disagreement on childrearing issues, supportive or undermining behavior, division of labor related to childrearing, and joint management of family interactions.

Agreement/disagreement. Agreement/disagreement refers to the extent to which parents agree on topics related to childrearing, such as discipline, morality, and education (Feinberg, 2003). This aspect of coparenting has been linked to a number of poor child outcomes. Dadds and Powell (1991) identified that children were more likely to exhibit externalizing behaviors (i.e., aggressive), when their parents had higher levels of disagreement over discipline practices. Similarly, O'Leary and Vidair (2005) identified direct paths between childrearing conflict and externalizing behaviors for boys and internalizing behaviors for girls.

Supportive coparenting. Supportive coparenting refers to the degree to which parents acknowledge, respect, and affirm the other's decisions, authority, and competency as a parent (Feinberg, 2003). Undermining could involve discouraging the other parent through criticism, blame, or disparagement. Low levels of coparenting support are significantly associated with externalizing behavior, internalizing behavior, and poor inhibition (Schoppe-Sullivan et al., 2001; Schoppe-Sullivan, Weldon, Cook, Davis, & Buckley, 2009).

Division of labor. Division of labor relates to division of duties surrounding childrearing, such as childcare, household tasks, and legal, financial, or medical duties. This domain touches on discrepancies between expectations of parenting roles and reality (Feinberg, 2003). This construct—in particular, the discrepancy between expectations and perceptions of responsibility—is significantly related to both marital quality and depression in both parents (Elliston, McHale, Talbot, Parmley, & Kuerston-Hogan, 2008; Voydanoff & Donnelly, 1999). Thus far, no research has established direct or indirect links between parenting division of labor and child behavioral outcomes.

Joint family management. Joint family management involves specifically managing family interactions, such as interparental behaviors. Management of these interactions involves interparental behaviors, and the degree to which the interparental behaviors blend with interactions with other family members. Children exposed to this poor joint family management are significantly more likely to exhibit externalizing disorders (Buehler et al., 1998).

Coparenting and Marital Satisfaction

There is some controversy as to how distinct the coparenting relationship is from the romantic relationship, given that conflict over childrearing is sometimes included in the study of interpersonal relations between two partners (Grych & Fincham, 2001). Although coparenting has been linked with relationship satisfaction (Merrifield & Gamble, 2013), researchers have reasoned that the coparenting relationship is triadic: interactions and discussions pertain to both parents and child. Interactions and discussions in the romantic relationship revolve around the two partners (e.g., mutual friends; sex life), and often predate the birth of a child. Further, even if the romantic relationship ultimately dissolves, the coparenting relationship will persist, however altered. Scholars contend that measures of the coparenting relationship are more proximally related to child outcomes than measures of global marital satisfaction (Dadds & Powell, 1991; Konold & Abidin, 2001). Put succinctly, concerns within the coparenting relationship may translate to disagreement or discrepancy in behaviors regarding discipline and child problem behaviors. Consequently, child problem behaviors may be more closely linked to lower-quality coparenting than romantic relationship quality. Findings from studies examining coparenting, marital relationship quality, and child problem behaviors provide empirical support for this connection (Jouriles, Farris, McDonald, Smith, & Richters, 1991).

Conceptual Framework

Study goals are informed by an integrated model of social learning theory and the family systems framework. The family systems framework emphasizes the family as a significant social system through which we can understand behavior (Minuchin, 1985). Central to this theory is the idea of the "family subsystem", which comprises groups of

family members, such as the coparenting subsystem (i.e., both parents). Within this framework, the coparenting subsystem is thought to maintain the structure, hierarchy, and boundaries for that family unit. For instance, two parents may implicitly understand that it would be inappropriate to overtly express dissatisfaction with one another's attempts to discipline in front of their child following a misbehavior. Maintaining this unspoken rule reinforces family boundaries (i.e., discussing "adult" issues in private), and upholds both parents' authority (i.e., no undermining parenting strategies in front of child). In addition, it may prevent a child from "acting out" in response to discomfort regarding interparental conflict, or to inconsistent parenting practices. Within this framework, low-quality (e.g., conflictual, undermining) coparenting may increase the risk of child externalizing behavior concerns due to a breakdown in family structure.

Social cognitive theory posits that individuals learn behaviors by observing others. Bandura (1986) emphasizes three determinants of the theory: personal, behavioral, and environmental. "Personal" refers to one's efficacious beliefs about their ability to perform a task. "Behavioral" refers to the degree to which the behavior is reinforced. "Environmental" refers to aspects in one's environment that increase the individual's likelihood to perform a task. From the perspective of social cognitive theory, an individual's coparenting relationship may influence his or her parenting behaviors and beliefs. Parenting behaviors and beliefs are subsequently reinforced by child behaviors and by the coparent's behaviors. This model is founded on the transactional nature of parenting and child behaviors (Baker et al., 2003). We view the coparenting relationship as a direct predictor of child behavioral outcomes, where parenting (i.e., parenting self-efficacy and parenting behaviors) acts as a mediator.

Parenting Self-Efficacy

Parenting self-efficacy can be defined as parents' beliefs in their ability to effectively manage the varied tasks and situations of parenthood (Gross & Rocissano, 1988). Research has indicated that parenting self-efficacy plays a fundamental role in child externalizing behaviors (Sanders & Woolley, 2005; Weaver, Shaw, Dishion & Wilson, 2008) and coparenting quality (Merrifield & Gamble, 2013).

Parenting self-efficacy and coparenting. Merrifield and Gamble (2013) examined associations between supportive and undermining coparenting and parenting self-efficacy in 175 mothers and fathers of children between 2 and 7 years of age. The authors measured supportive and undermining coparenting via the Family Experiences Questionnaire (Van Egeran & Hawkins, 2004) and included questions about the degree to which parents felt their partners denigrated or respected their parenting. The authors measured parenting self-efficacy via the Berkley Parenting Self-Efficacy Scale (Holloway, Suzuki, Yamamoto, & Behrens, 2005), which included items targeting the degree to which parents felt confident in helping their child accomplish an array of tasks (e.g., communicating clearly, finishing a hard task). High parenting self-efficacy was negatively related to undermining coparenting and positively related to supportive coparenting for both mothers and fathers. Results suggest that caregivers who feel disrespected or unsupported in their parenting endeavors may feel less confident in their ability to effectively handle the many varied tasks of parenthood.

Parenting self-efficacy and child behavioral outcomes. Weaver et al. (2008) conducted a longitudinal (i.e., from ages 2-4) investigation of parenting self-efficacy and child conduct issues in a sample of 652 families of preschool-aged children at risk for

later conduct problems. Parenting self-efficacy was measured through the Parenting Sense of Competence Scale (Johnston & Mash, 1989), and child problem behaviors were measured through the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2012). After controlling for initial conduct problems, Weaver et al. (2008) found that lower parenting self-efficacy during toddlerhood was predictive of increased child conduct problems during preschool years. These findings highlight the impact of parents' efficacious beliefs about childrearing. Parents with less efficacious feelings about their ability to parent may use less effective parenting strategies, which could inadvertently lead to increased conduct issues.

Parenting Behaviors

Very little research has disentangled the mechanisms through which coparenting may impact child behavioral outcomes. In addition to efficacious beliefs about parenting, actual parenting behaviors may be a plausible mediator, as it has proven to be a robust predictor of child behavior outcomes (Patterson et al., 1990). Several studies have provided evidence for a link between coparenting and parenting behaviors (e.g., Feinberg, Kan, & Hetherington, 2007; Margolin, Gordis, & John, 2001).

Coparenting, parenting, and behavioral outcomes. In a sample of 514 families with adolescents, Feinberg et al. (2007) examined coparenting conflict (i.e., disagreement and conflict over childrearing) and parental negativity (i.e., coercive or punitive parenting). Coparenting conflict was measured via the Child Rearing Issues: Self and Spouse Scale (Hetherington & Clingempeel, 1992). Parental negativity was measured via direct dyadic observations and through the Parent Discipline Behavior Inventory (Hetherington & Clingempeel, 1992). Feinberg et al. (2007) sought to determine whether

coparenting conflict predicted parental negativity and adolescent maladjustment (i.e., antisocial behavior). Feinberg et al. (2007) identified that coparenting conflict contributed just as much if not more unique variance to parental negativity and adolescent maladjustment compared to marital quality/disagreements depending on mothers' vs fathers' reports. These results highlight that childrearing conflict played a unique, significant role in both ineffective parenting practices and child well-being.

Parenting and coparenting. Margolin et al. (2001) examined coparenting quality via the Coparenting Questionnaire (Margolin et al., 2001), marital satisfaction via the Dyadic Adjustment Scale (Spanier, 1976), and positive parenting through the Parenting Practices Questionnaire (Strayhorn & Weidman, 1988). Margolin et al. (2001) identified that coparenting quality fully mediated the relation between marital satisfaction and parent-child relations, both for mothers and fathers. Coparenting quality thus fully explained the relation between relationship satisfaction and parenting behaviors. Again, these results corroborate other studies' findings that the nature of the coparenting relationship plays an important role in one's parenting behaviors (Feinberg et al., 2007).

The link between coparenting and parenting has been identified in families of children with DD as well. Floyd et al. (1998) found that parents experiencing lower-quality coparenting were more likely to engage in coercive patterns of behavior with their child during dyadic interactions. These findings evince a potential "spill-over" effect, whereby negativity in the coparenting relationship can infiltrate the relationship between parent and child. The spill-over effect has been documented extensively in the literature on marital satisfaction and child problem behaviors (e.g., Katz & Low, 2004), but

scholars have yet to apply it to the coparenting relationship, even if it is more proximally tied to child outcomes.

Taken together, these findings provide support for parenting as a potential mediating variable in the relation between coparenting quality and child behavioral outcomes. Within the broad domain of parenting, parenting self-efficacy may explain how coparenting is tied to child externalizing behavior. In other words, parents with high quality coparenting (e.g., high levels of agreement and support regarding parenting practices) may feel more efficacious in their parenting, and subsequently may perceive fewer challenging behaviors in their children. Parenting behaviors may also plausibly explain the relation between coparenting quality and child outcomes. Parents who feel supported and respected in their parenting may use more effective parenting strategies, and consequently, prevent challenging behaviors.

The Role of Fathers in Families of Children with DD

As a construct, coparenting shares qualities with other areas of study, notably, investigations of alternate caregivers. The majority of research in the field of DD has examined the perspectives, behaviors, and influences exclusively of primary caregivers, often mothers. The focus on mothers is in part attributed to societal expectations regarding fulfillment of the primary caregiver role (Crnic, Pederson y Arbona, Baker, & Blacher, 2009). That said, current research on fathers in families of children with DD has yielded noteworthy findings with implications about the coparenting relationship. It is worth teasing apart the roles, perspectives, and behaviors of both parents in this population in order to establish a better foundation of knowledge related to the coparenting relationship.

In a sample of couples of children with ID, Simmerman, Blacher, and Baker (2001) examined the extent to which fathers helped with childrearing activities, and both mothers' and fathers' satisfaction with their help, as measured by parent self-report. The authors found that about two-thirds of the fathers in the sample helped with nurturing activities, playing, making decisions regarding services, and discipline. Fathers were less likely to help with feeding, dressing, bathing, and transportation to and from services. Interestingly, mothers were generally satisfied regardless of the extent to which the father helped with childrearing activities. These are preliminary findings in that no other studies have included investigations of involvement in and satisfaction with childrearing tasks in this population.

Simmerman et al. (2001) found that while children's maladaptive behaviors were significantly related to marital satisfaction, they were not predictive of mothers' satisfaction with either the extent to which fathers helped, or to their satisfaction with fathers' help. This finding may have been a function of the measurement tool. Parents reported on fathers' help with general parenting tasks, only one of which (i.e., discipline) related to child behavioral concerns. Additionally, measurement of fathers' help could be perceived as parenting division of labor, which may be more distally related to child outcomes than assessment of specific parenting behavior and discrepancies between behaviors. Direct observations of both parents and child may have provided additional information about relations between parenting variables and child outcomes. Similarly, parents' perceptions of the degree to which they feel supported in the use of parenting strategies (e.g., use of positive reinforcement, discipline) might yield different outcomes compared to general parenting tasks (e.g., making decisions for services).

In another study examining both caregivers, Crnic et al. (2009) explored similarities and differences in parenting behaviors (i.e., negativity, positivity, involvement, and detachment) between and within families with a typically developing child and families with a child with ID. Behaviors were coded using global rating scales. The authors found that in families of children with ID, fathers were less involved at age 3, less positive at age 4 and 6, more detached at age 4, and less negative than mothers across the preschool developmental period. Fathers in families with typically developing children exhibited similar patterns to fathers with a child with ID, with two exceptions: they were less positive and more detached than mothers at all time points. Latent growth curve analyses indicated that fathers gradually decreased involvement over the three-year period compared to mothers. ID status may have contributed to variability in fathers' behaviors across the preschool years. That is to say, complications associated with ID status (e.g., more challenging behavior, difficulty with adaptive skills) may have influenced emotions, involvement and detachment. Overall, Crnic et al. (2009) found few differences between family types. Results from this study indicate that disability status did not necessarily influence father involvement or detachment, given that fathers exhibited similar behaviors in both family types.

Coparenting in Families with Typically Developing Children

The field of coparenting has expanded across different stages of development. Extensive research supports relations between the coparenting relationship and child problem behaviors in families of typically developing children during toddlerhood, preschool years, middle childhood, and adolescence (Schoppe-Sullivan et al., 2001; Johnson, 2010; Feinberg et al., 2007).

An examination of the coparenting relationship in middle childhood is important, as the relationship may change to reflect child changes in development and maturity. As children mature, parents may need to flexibly respond to changing demands of their children. For instance, as children gain more complex understanding of language, social skills, and communication skills, they may advocate more than during their earlier years. They also may theoretically become more attuned to charged interactions between parents, particularly when the interactions relate to the child. In turn, parents may find it more difficult to redirect or placate their child, especially in cases of extremely negative interactions. This may be especially apparent in families of children with DD, if they have required more time and specialized support to reach developmental milestones. Lastly, investigations of coparenting across early childhood and middle childhood are tantamount, given that schools come to play an important role in a child's life. How a child conducts him or herself in a school setting is predictive of both later academic and behavioral outcomes (Hamre & Pianta, 2001).

The following section includes a summary of research on coparenting across early and middle childhood years. These findings offer a strong basis for continued investigations of coparenting in families with more complicated situations (e.g., previous delay status). Further, they detail the myriad ways that coparenting can be measured and conceptualized in this field.

Preschool Years

Coparenting, effortful control, and externalizing behavior. Research on the relations between coparenting and child behavioral outcomes provides evidence for the powerful impact of childrearing agreement and coparenting support. Schoppe-Sullivan et

al. (2009) found that when preschool-aged children were low in effortful control, they were less likely to engage in externalizing behavior one year later if their parents exhibited high levels of supportive coparenting and low levels of undermining coparenting (e.g., telling a child "no" when the other parent has said "yes"). While Schoppe-Sullivan et al. (2009) did not find direct relations between coparenting behavior and effortful control or externalizing behavior, they did find that coparenting played an indirect role, where positive coparenting acts as a kind of buffer against the potentially negative effects of low effortful control.

Coparenting, family climate and cohesion, and externalizing behavior. In another landmark investigation, Schoppe-Sullivan et al. (2001) sought to examine the relation between coparenting quality, family affective climate, family cohesion, and child externalizing behavior in a sample of 57 intact families of preschool-aged children. Coparenting was measured via direct observation by global ratings of "coparenting incidents" (i.e., interactions involving both parents involving the child). Ratings included warmth, support, cooperation (joined to form the support construct) and competition, coldness, and hostility (joined to form the undermining construct). Child externalizing behavior was assessed via parent-reported version of the CBCL (Achenbach & Rescorla, 2012), and parent- and teacher-reported versions of the Conners Scale (Conners, 1973). The authors found that families characterized with lower levels of coparenting support were more likely to exhibit externalizing behavior one year later, as reported by parents. Families with higher levels of undermining coparenting were more likely to exhibit externalizing behavior at age four, as reported by both parents and teacher.

Schoppe-Sullivan et al. (2001) found that in the presence of higher levels of negative affect (i.e., extent to which family members were in conflict and expressed negative feelings towards each other), undermining coparenting was more likely to lead to externalizing behaviors at age four. Alternately, in the presence of lower levels of negative affect, undermining coparenting was no longer likely to lead to externalizing behavior. The authors posited that families characterized by more warmth and happy affect may exhibit undermining behaviors in a joking fashion and that they may be buffered by the positive family climate. That said, Schoppe-Sullivan et al. (2001) found that family affect did not uniquely predict externalizing behavior. Thus, findings lent support to the hypothesis that coparenting is more proximally related to child behavioral outcomes. Further, these findings may give credence to the hypothesis that low quality coparenting may serve as an additional risk factor for externalizing problem behaviors, provided that recent studies have indicated higher levels of negative affect in parents of children with DD (Brown et al., 2012; Simmerman et al. 2001). Lastly, findings from the early childhood years are especially striking given that early coparenting behaviors have been shown to predict later coparenting (Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale 2004), indicating that coparenting may be a relatively stable relationship across time.

Coparenting and school-readiness. Research has unearthed evidence that coparenting quality may contribute to school readiness at kindergarten entry. Cabrera, Scott, Fagan, Stewart-Streng, and Chien (2012) examined coparenting communication, conflict, and shared decision-making as they related to children's school readiness behavior in a sample of 5,000 families belonging to the Early Childhood Longitudinal

Study. Families were assessed at nine months of age, 24 months of age, and 48 months of age. The authors measured shared decision-making by asking parents to rate the extent to which either the primary caregiver or alternate caregiver made decisions about a number of child-rearing tasks (e.g., discipline, academics, etc). To provide a measure of conflict, parents used a likert-type scale to rate the extent to which they argued over childrearing with their coparent. Similarly, for coparenting communication, parents rated the frequency with which they spoke with their coparent about child-related issues.

Cabrera et al. (2012) found that maternal supportiveness (the degree to which the mother provided nurture/care to the child) mediated the relation between coparenting communication and school-readiness skills at approximately 48 months. Coparenting conflict was indirectly linked to fewer social skills through maternal symptoms of depression. Lastly, Cabrera et al. (2012) found that shared-decision making was only associated with child social skills. These findings uphold the hypothesis that coparenting quality may impact the degree to which a child is successful in school settings. The findings of Cabrera et al. (2012) support the notion that interparental behavior may influence children beyond the home setting and deserves more attention in the literature. Interparental dynamics may "spill-over" to child behavioral outcomes in school settings.

Middle Childhood

Research on coparenting during middle childhood years suggests that the relationship remains salient during this developmental period. Even as children spend more time at school with peers and teachers, the coparenting relationship continues to act as a model for interactions with and behavior towards others. Drawing from social learning theory perspectives, scholars have posited that frequent, repeated exposure to

parent modeling of effective problem-solving and communication may allow children to incorporate these prosocial behaviors into their repertoire at school and in the community (Webster-Stratton, 1994).

Coparenting, internalizing, and externalizing behaviors. Feinberg, Jones, Roettger, and Hostetler (2014) examined the long-term effects of a brief couple-focused parenting program for couples transitioning into parenthood, "Family Foundations." The intervention focused on conflict resolution, effective communication, and support strategies to promote effective ways to jointly parent. In a sample of children ages five to seven, the authors found that teachers were less likely to report internalizing behavior for both boys and girls in the intervention condition. Further, teachers were less likely to report externalizing problem behaviors with boys in the intervention condition. In families with couples with higher levels of prebirth negative communication, intervention participation acted as a buffer to school-related adjustment, internalizing behavior, and externalizing behavior, as reported by both parents and teachers. These findings attest to the powerful outcomes for children in middle childhood when their parents have learned ways to decrease childrearing conflict and increase coparenting support. In both home and school settings, children fared more positively when their parents used effective coparenting strategies.

Family cohesion and externalizing behaviors. In another study of influential family-level processes, Johnson (2010) conducted a longitudinal examination of concurrent and prospective links between family cohesion (i.e., emotional connectivity and interest between family members in whole-family interactions), as measured by direct observation, and child academic and behavioral outcomes, as measured by teacher

report, at both kindergarten and high school entry. Results indicated that teachers were more likely to report aggressive, hyperactive behavior, and poor academic competence for 9th graders belonging to less cohesive families at kindergarten entry.

The construct of family cohesion could be viewed as a type of coparenting quality, given its emphasis on connectivity in whole-family interactions, which could be dictated by interparental management (Feinberg, 2003). Katz and Low (2004) examined coparenting behavior (i.e., positive and hostile-withdrawn behavior), marital violence, and family cohesion (i.e., fragmented family interactions and positive family interactions) in families of children ages 4 – 6 years. Positive coparenting was dominated by positive affect, cooperative behavior, and neutral conversation. Hostile-withdrawn behavior was defined as hostile, aggressive interactions between parents, and instances where parents clearly turned or moved away from each other (i.e., withdrawing). Fragmented family interactions were characterized by disengaged family members, or negative interactions between parents that dominated the whole-family interactions. Positive family interactions consisted of flexibility, playfulness, and cohesion. The authors found significant relations between coparenting behavior and positive family interactions (e.g., playful and cohesive), as measured by direct observations. The authors found that marital violence and poor family-level processes (e.g., parent-centered, aggressive behaviors) significantly predicted delinquency. Katz and Low (2004) also found that coparenting processes fully mediated the relationship between marital violence and child symptoms of anxiety and depression. These findings provide support for the spill-over hypothesis (negative interparental conflicts spill over into parent-child interactions).

Katz and Low's (2004) results suggest that parents who exhibit more cooperative, supportive behavior (i.e., high quality coparenting behavior) towards their partner during whole-family interactions may be more likely to create cohesive family dynamics characterized by high-quality parent-child interactions. Further, findings from Johnson's (2010) study—that family cohesion at kindergarten entry significantly predicted adolescent academic and externalizing behavior—lend support to the argument that coparenting quality impacts child outcomes across settings. Interestingly, these findings also highlight that family structure from a young age may continue to predict a child's behavioral outcomes into adolescence. Results establish a need for additional investigations of the impact of coparenting in early childhood years on behavioral outcomes in middle childhood. Taken together, these findings indicate that additional research on the coparenting relationship in families of children with DD may elucidate how and to what extent coparenting impacts this population at various developmental stages.

Coparenting in Families of Children with DD

The documented relationship between coparenting and child outcomes in families of typically developing children give support for a theoretical link between these variables in families of children with DD. Few studies have undertaken an examination of coparenting in families of children with DD (Floyd et al., 1998; Norlin & Broberg, 2011). Parents of children with DD may experience greater difficulty with parenting than parents of typically developing children. Parents of children with DD are more likely to experience parenting stress, depression, and other mental health concerns, compared to parents of children with no history of delays (Lee, 2013; Singer, 2006). Further, the

presence of delays may preclude higher levels of joint, collaborative parenting. In families of children with DD, issues with delays (i.e., communication barriers) may predict poorer-quality coparenting, which in turn may lead to greater levels of challenging behavior.

Floyd et al. (1998) examined the relationship between parenting alliance (i.e., supportive, cooperative coparenting), marital satisfaction, parenting behaviors, and parenting efficacy in families of school-age children with ID. Floyd et al. (1998) found that the parenting alliance did fully mediate the relationship between marital satisfaction and perceived parenting competence. Thus, the degree to which a parent felt they belonged to a supportive team indirectly played a role in the relationship between marital satisfaction and the degree to which he or she felt competent in their parenting skills. Further, Floyd et al. (1998) identified that the parenting alliance fully mediated the relationship between marital satisfaction and parent-child interactions for mothers, such that lower marital satisfaction led to lower scores of the parenting alliance, and more negative exchanges between parent and child during dyadic interactions. These results attest to the powerful role of coparenting support in interactions between parent and child. Exploration of relations between parent reports of coparenting and behavioral observations of coparenting interactions would build on these findings and offer more information about how perceptions of one's coparenting relationship influence behavior in triadic or whole-family interactions.

Floyd et al. (1998) detected significant interaction effects between child age, parenting alliance, and parent-child interactions for mothers, such that lower ratings of the mother-reported parenting alliance significantly predicted more negative exchanges

between older children and mothers (i.e., 11 and older). Results indicate that mothers who perceive less support and cooperation from their partner may be more likely to engage in negative interactions with their children. This study corroborates previous findings regarding links between coparenting and parent-child relations in the typically developing literature.

Although little research has focused on coparenting in families with children with ID or DD, some research has chosen to examine family cohesion, which is an encouraging departure from exclusive examinations of the primary caregiver. Research that has examined family-level variables in families of children with DD has yielded compelling findings. Hauser-Cram et al. (2001) conducted a prospective analysis of parent and child outcomes in families of children with DD. The authors identified that family climate, as measured by the Family Environment Scale (Moos, Insel, & Humphrey, 1974), significantly led to changes in social skill development, as measured by the Vineland Adaptive Behavior Scales (Sparrow, Balla, & Cicchetti, 1984), from age three to ten. Families with more positively evaluated family relations showed greater gains in children's social skills by age ten compared to families with more negative evaluations of family relations. These results highlight a need to obtain additional information about family-level dynamics; specifically, more information is warranted regarding how parents relate to one another in the context of family interactions.

Gaps in Current Research Trends in Coparenting

Research in the field of coparenting often includes parent self-report measures and occasionally includes ratings for direct observations of triadic interactions (i.e., both parents and child) to capture the relationship. Direct observations may deliver additional

clarifying information about coparenting quality and may validate parent-reported perceptions. Further, they offer an objective glimpse of the relationship. Thus far, studies with direct observations have included rating scales to assess coparenting quality (e.g., Katz & Low, 2004; Schoppe-Sullivan et al., 2001). Rating scales provide brief impressions of the relationship but may offer less information about the frequency and occurrence of specific behaviors (e.g., supportive coparenting behavior, or undermining behavior) associated with the relationship.

Investigating triadic observations using event recording (i.e., percentage of occurrences) in families of children with DD will unearth preliminary evidence about the nature and impact of coparenting behaviors in this population While several studies have included observations of whole family interactions, coding has only involved parent-child exchanges (e.g., Floyd et al., 1998; Floyd, Harter, & Costigan, 2004). Thus far, no studies have included data collection for observed coparenting interactions (e.g., supporting partner's limit set towards child) in families of children with DD. In so doing, we lay a foundation of knowledge about this relationship as it relates to child functioning.

Study Goals

The current study, the Oregon Parent Project for Families (OPP-Family), aimed to explore associations between the coparenting relationship and child problem behaviors in a sample of families with 6–9 year old children with history of DD in preschool. We conducted two separate studies for the OPP-Family project. In Study 1, we recruited a subsample of 56 intact (i.e., non-divorced) families (i.e., 56 primary caregivers and 56 alternate caregivers) who previously participated in the Oregon Parent Project (OPP), an NICHD-funded (R01 HD059838; PI, L. L. McIntyre) longitudinal randomized controlled

trial study that examined the efficacy of the Incredible Years Parent Training-Developmental Disabilities modification (McIntyre, 2008) on child and family outcomes in families with three-year old children with DD. For Study 2, we recruited a subsample of 30 families who participated in Study 1 of OPP-Family.

We addressed the following research questions for Study 1:

1) What is the magnitude of the association between primary caregiver (PC) report of coparenting quality and alternate caregiver (AC) report of coparenting quality?
2) Does coparenting quality predict child problem behaviors?
3) If coparenting quality predicts child problem behaviors, then does parenting self-efficacy mediate the relationship between coparenting quality and child problem behaviors?

We addressed the following research questions for Study 2:

1) What is the magnitude of the association between parents' report of coparenting quality and observed coparenting behavior?
2) Do observed coparenting behaviors predict observed child behaviors?
3) If coparenting behaviors predict child problem behaviors, then do parenting behaviors mediate the relationship between coparenting quality and child problem behaviors?

Broadly, we hypothesized that low-quality coparenting, as measured by parent report and direct observations, would predict higher levels of problem behaviors, as measured by parent report and direct observations. We hypothesized that parenting would mediate relations between coparenting and child problem behavior.

CHAPTER II

STUDY 1 METHOD

Participants

We recruited participants who had participated in the original OPP study, a longitudinal study involving six waves of data collection over a 2 ½ year period. Participants from OPP were recruited using a cohort design; some families had recently finished their last wave of assessment, and some families had finished several years earlier, depending on when they entered the study.

To be eligible to participate in Study 1 of OPP-Family, primary caregivers had to have previously participated in the original OPP and been married to or living with the same partner for two or more years. In addition, both caregivers must have lived with the target child with DD for two or more years. Depending on the age at which families first entered OPP, child age for the current study ranged between 6-9 years (i.e., between kindergarten and third grade). See Appendix B for Study 1's phone screening forms.

Procedures

In Study 1, parents answered questions about their demographic information, coparenting quality, childcare duties, perceptions of child problem behaviors, relationship satisfaction, and psychological wellbeing. We sent questionnaires to both parents in separate mail-home packets. Research assistants reviewed the consent forms with both parents over the phone prior to their participation (see Appendix D). Parents were instructed to complete their packets separately to ensure privacy and to minimize potential response bias if parents were to fill out surveys together. Parents were

reimbursed $50 ($25/parent) once they mailed back their packets to the Prevention Science Institute.

Measurement

Parent-reported questionnaires. In Study 1, both independent and dependent variables (i.e., coparenting quality and child behavior) were measured via parent-reported questionnaires. See appendix F for sample items from parent-report questionnaires.

***Parenting division of labor*.** The Who Does What (WDW; Cowan & Cowan, 1990) scale is a self-report measure for caregivers about family tasks (e.g., making dinner, paying bills) and childrearing tasks (e.g., bathing child, disciplining child). Each caregiver rates the extent to which they are involved in each task on a scale of 1-9, and indicates the extent they would like to be involved for each task on a scale of 1-9. To most accurately capture satisfaction with coparenting "division of labor", we utilized the 32-item Childrearing subscale. Role satisfaction with childrearing is scored by computing the average absolute difference between each "how it is now" and "how I'd like it to be" score for each item in the Childrearing section. Scores for this scale can range from 0 to 8. Higher numbers indicate greater discrepancies, indicating lower satisfaction. For this sample, Cronbach's alpha coefficients for primary caregivers and alternate caregivers were .91 and .88, respectively.

***Parenting self-efficacy*.** The Parenting Tasks Checklist (PTC; Sanders & Woolley, 2001) is a 28-item self-report measure for caregivers to rate the extent of their confidence (i.e., 0 = certain I cannot do it and 100 = certain I can do it) in handling child behaviors and tasks (e.g., getting dressed, throwing a tantrum, going shopping with child) across different settings (e.g., at home with friends, at school, at store). The PTC has two

subscales that yield scores for behavior-specific self-efficacy and setting-specific self-efficacy (Sanders & Woolley, 2001). The PTC offers evidence of discriminant validity (Sanders & Woolley, 2001) and high internal consistency for both subscales (i.e., $\alpha = .97$ and $\alpha = .91$; Sanders & Woolley, 2005). For the purposes of this study, only the behavioral self-efficacy subscale was utilized. Scores can range from 0 to 100 for this scale, where higher numbers indicate greater self-efficacy. For this sample, Cronbach's alpha coefficients for both primary caregivers and alternate caregivers were .97.

Coparenting support. The Perceptions of Coparenting Questionnaire (PCPQ; Stright & Bales, 2003) is a 14-item self-report measure for caregivers about their coparenting relationship. Caregivers report the degree to which they feel that they are supported by their partner (e.g., "my partner backs me up when I discipline my child"), and the degree to which they feel undermined by their partner (e.g., "my partner criticizes my parenting in front of the child"). Options for each item include "never", "rarely", "occasionally", "frequently", and "always." Internal consistency is adequate for this scale ($\alpha = .75$ and .83 for mothers and fathers, respectively; Stright & Bales, 2003). Scores can range from 0-70 for this scale. For this sample, Cronbach's alpha coefficients for primary caregivers and alternate caregivers were .93 and .90, respectively.

Difficulty with coparenting problems. The Parent Problem Checklist (PPC; Dadds & Powell, 1991) is a 16-item self-report measure for caregivers about the extent to which problems related to childrearing (e.g., disagreement over discipline, or disagreement over what is "naughty" behavior) have caused difficulties. For identified problems, parents rate the extent of difficulty from 1 to 7, where 1 signifies no difficulty and 7 signifies extensive difficulty. Studies have reported little evidence on validity,

adequate internal consistency (α = .70) and high test-retest reliability (α = .90; Morawska & Thompson, 2009). For the current study, we used the difficulty subscale, which ranges in score from 16 to 112. For this sample, Cronbach's alpha coefficients for primary caregivers were .92 and for alternate caregivers, .90.

Problem behavior. The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2012) was completed by both parents to assess the target child's internalizing and externalizing behaviors. The 6-18 year version was used. It includes 112 specific problems, with parents providing a rating on the same 0-2 scale. The CBCL includes two broadband scales, Internalizing Problems and Externalizing Problems, and a Total Problems scale. The Internalizing Problems scale includes three syndrome types (anxious/depressed, withdrawn/depressed, and somatic complaints) and the Externalizing Problems scale includes two syndrome types (rule-breaking behavior and aggressive behavior). The CBCL has a test-retest reliability of 0.95 for the specific problems items. Additionally, the Total Problems scale test-retest reliabilities range from 0.91 to 0.95 (Achenbach & Rescorla, 2012). We reported t-scores from the Total Problems scale (M = 50; SD = 10). For the current sample, Cronbach's alpha coefficients for primary caregivers were .85 and for alternate caregivers, .83 on the Total Problems scale.

CHAPTER III

STUDY 1 RESULTS

Analytic Approach

This section includes a description of analyses used to address Study 1's research questions. Because the original OPP study included a treatment condition, independent samples t-tests were utilized to test for significant differences in parent-reported challenging behavior for the intervention vs. treatment as usual (TAU) group and to test for differences in demographic variables (i.e., education and income) for families participating in Study 1 versus both studies. Descriptive statistics were used to explore the nature of the independent variables, dependent variables, and sample demographic variables. Bivariate correlations were utilized to explore the magnitude of associations between parents' reports of coparenting quality. Regression analyses were utilized to address whether parent-reported coparenting quality predicted child behaviors. Bias-corrected boot strap analyses were conducted to test for the mediating role of parenting self-efficacy in the relation between coparenting and child problems.

With a sample size of 56, two-tailed alpha at $p < .05$, there is sufficient power (>.80) to detect an $r = .37$.

Preliminary Analyses

Preliminary analyses were conducted to ensure that data met the basic assumptions for linear regression analyses. Skewness, kurtosis, and the Shapiro-Wilk test of normality suggested that normality was a reasonable assumption for PC-reported child challenging behavior and for AC-reported child challenging behavior. To test for linearity, we examined bivariate scatter plots, scatter plots of residuals versus the

predicted values, and matrix scatter plots. The assumption of linearity appeared tenable for all variables. Homoscedasticity was examined visually through scatter plots of all regression analyses. The assumption of homoscedasticity appeared tenable. Lastly, to test for multicollinearity, we examined the tolerance statistic and the variance inflation factors. There were no risks for multicollinearity.

A t-test was conducted to examine parent-reported child problem behaviors in the intervention condition and the TAU condition. For primary caregivers, there was no significant difference in problem behaviors for the intervention condition and the TAU condition, $t(54) = .68$, $p = .50$. Similarly, for alternate caregivers, there was no significant difference in problem behaviors for the intervention condition and the TAU condition, $t(54) = .68$, $p = .50$.

A t-test was also conducted to examine differences in family socio-economic status, as measured by income, for families who participated in only Study 1 versus families who participated in both Study 1 and Study 2. There was no significant difference in income between groups, $t(54) = .84$, $p = .78$.

We conducted descriptive statistics to explore the sample's demographic variables (see Table 1). Mean child age was approximately 6-years old, and a majority of the sample was male (82%) and white (89%). According to parent report, a little under half of the children in the sample received services under a special education eligibility. Average age for PCs was 34-years old; most were white and female. Approximately 50% of PCs had received a college degree or higher. Twenty-three percent were employed full-time. ACs average age was approximately 37-yearas old; they were mostly male and mostly white. Approximately 50% of ACs had received a college or graduate degree, and

about 70% worked full time. Families in this sample reported an average annual income of $64,769.

Descriptive statistics for parent-reported measures were conducted as well. For the Parent Problems Checklist (PPC), PCs and ACs average scores were 28.87 and 27.00, respectively. Scores for the PPC ranged between 16.00 and 76.00 for primary caregivers and between 16.00 and 80.00 for alternate caregivers, where higher numbers indicated more difficulty with reported problems. For the Perceptions of Coparenting Questionnaire (PCPQ), PCs and ACs reported average scores of 58.22 and 59.24, respectively. Scores for the PCPQ ranged between 31.00 and 70.00 for PCs and between 39.00 and 70.00 for ACs, where higher numbers indicated more reported coparenting support by his or her partner. Scores for the Who Does What (WDW) scale revealed average scores of 1.21 for PCs and .74 for ACs, where higher scores indicate less satisfaction with one's parenting role. Scores ranged between .10 and 3.50 for ACs and between 0 and 3.60 for PCs.

Scores for the behavior subscale of the Parenting Tasks Checklist (PTC) averaged 85.70 for PCs and 86.30 for ACs. Both PCs and ACs ranged between 36.00 and 100.00 in their scores, where higher scores indicate higher behavioral self-efficacy. Lastly, child behaviors were reported using the Total Problems score of the CBCL and averaged 52.00 for PCs and 53.00 for ACs. Scores ranged between 29.00 and 71.00 for ACs and 28.00 to 84.00 for PCs. Higher scores indicated more problems. Both PCs and ACs scores were approximated by positively skewed distributions for the PPC and the WDW scales, and by negatively skewed distributions for the PCPQ scale and the PTC scale. Most scores were only minimally skewed with the exception of the PPC and WDW scores for ACs.

CBCL scores were approximated by a normal distribution for both PCs and ACs. See Table 2 for more information.

There was 1 severe outlier on the AC-reported WDW scale, and 1 severe outlier on the AC- and PC-reported PPC scale. Given the small sample size, the mild nature of our skews, and the minimal number of outliers, we ultimately reached the decision not to conduct a log transformation of our variables.

Research Questions

Question 1. We conducted bivariate correlations to examine the association between PC and AC reports of coparenting quality on measures targeting extent of difficulty with coparenting problems (i.e., PPC), coparenting support (i.e., PCPQ), and role satisfaction (i.e., WDW). Parents' ratings of the extent of difficulty with coparenting problems were positively, significantly associated with each other ($r = .49$, $p < .001$). Parents' reports of coparenting support were positively, significantly associated with each other ($r = .55$, $p < .001$). Parents' reports of role satisfaction were positively, significantly associated with each other ($r = .45$, $p = .001$). See Table 3 for additional information regarding associations between PC and AC reports of coparenting quality.

Question 2. After calculating intercorrelations between the three coparenting scales and Total Problems scores as reported by both PCs and ACs, we observed non-significant correlations between coparenting quality and child behavior for two scales. Specifically, the PCPQ measure and the WDW scale had nonsignificant correlations with total behaviors for both PCs and ACs. Thus, we did not create two composite coparenting scores for PC and AC. Instead, we individually ran analyses for each coparenting measure for each caregiver. To examine whether parent-reported coparenting quality

predicted parent-reported problem behaviors, we conducted three hierarchical regression analyses each for primary caregivers and alternate caregivers.

Primary caregivers. The full model of study condition and role satisfaction predicting problem behavior was non-significant, R^2 = .04, F(2, 53) = .96, p = .39. Role satisfaction explained an additional 3% of the variance to the model.

For the relation between primary caregiver perceptions of coparenting support and child problem behaviors, the overall model did not reach significance, R^2 = .08, F(2, 53) = 2.33, p = .11. Coparenting support explained an additional 5% of the variance to the model.

Next, we tested whether primary caregiver reports of difficulty with coparenting problems predicted child problem behaviors after controlling for study condition. The overall model was significant, accounting for 11% of variance in child problems. In step 1, participant study condition accounted for 3% of the variance in child problems but did not contribute significantly to the model. We entered PCs' report of difficulty with coparenting problems in step 2. Difficulty with coparenting explained an additional 8% of variance in child problems, F (2, 53) = 3.42, p = .04. See Table 4 for additional information.

Alternate caregivers. The full model of study condition and role satisfaction predicting problem behavior was non-significant, R^2= .04, F(2, 53) = .93, p = .40. Role satisfaction explained an additional 3% of the variance to the model.

The overall model of coparenting support predicting child behavior trended towards significance, accounting for 10% of variance in child problems. In step 1, participant study condition accounted for 1% of the variance in child problems but did

not contribute significantly to the model. We entered ACs report of coparenting support in step 2. Coparenting support explained an additional 9% of variance in child problems, F (2, 53) = 3.01, p = .06.

Lastly, we examined whether caregiver reports of difficulty with coparenting problems predicted child problem behaviors. The overall model was significant, accounting for 21% of variance in child problems. In step 1, participant study condition accounted for 1% of the variance in child problems but did not contribute significantly to the model. We entered ACs report of difficulty with coparenting problems in step 2. Coparenting problems explained an additional 20% of variance in child problems, F(2, 53) = 6.97, p = .002, suggesting that from the alternate caregivers' perspective, greater magnitude of coparenting disagreements leads to an increase in child behaviors. See Table 5 for more information regarding this finding.

Question 3. As with question 2, we planned to run mediation analyses separately for each caregiver to determine if parenting self-efficacy mediated the relation between coparenting quality and child problem behavior. We conducted bias-corrected boot-strap mediation analyses for both PCs and ACs using the PPC Extent of Difficulty subscale, given that it was the only coparenting measure that significantly predicted problem behaviors and thus met requirements for a mediation analysis.

Primary caregivers. Multiple regression analyses were conducted to assess each component of the proposed mediation model for primary caregivers. First, coparenting problems positively predicted child problems (B = .30, t (53) = 2.32, p = .024). Next, difficulty with coparenting problems negatively predicted parenting self-efficacy (B = -.44, t (53) = -3.51, p = .001). Lastly, results indicated that the mediator (i.e., parenting

self-efficacy) negatively predicted child problems (B = -.51, t (53) = -4.0, p < .001). Both the a-path and b-path were significant, thus, we conducted a mediation analysis using the bootstrapping method with bias-corrected confidence estimates (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004). In the present study, we obtained the 95% confidence interval of the indirect effects with 5000 bootstrap resamples (Preacher & Hayes, 2008). Results of the mediation analysis confirmed the mediating role of parenting self-efficacy in the relationship between coparenting problems and child problems (B = .22; CI = .06 to .46). The direct effect of difficulty with coparenting problems on child problems became non-significant (B = .08, t (53) = .61, p = .54) when controlling for parenting self-efficacy, suggesting a full mediation. See Figures 1 and 2 for more information regarding mediation models for both PCs and ACs.

Alternate caregivers. Multiple regression analyses were conducted to assess each component of the proposed mediation model for alternate caregivers. Difficulty with coparenting problems positively predicted child problems (B = .43, t (53) = 3.66, p = .001). Next, coparenting problems negatively predicted parenting self-efficacy (B = -.44, t (53) = -2.80, p = .007). The mediator (i.e., parenting self-efficacy) did not significantly predict child problems (B = -.14, t (53) = -1.45, p = .15). We did not meet the preconditions to test a mediation (i.e., nonsignificant relations for the b path), thus, parenting self-efficacy did not mediate the relation between coparenting problems and child problems.

CHAPTER IV

STUDY 2 METHOD

Participants

As with Study 1, participants for Study 2 were recruited from the original OPP study. Study 1 eligibility criteria applied to participants in Study 2. Only families who participated in Study 1 were recruited to participate in Study 2. See Appendix C for Study 2's phone screening forms.

Procedures

In Study 2, caregivers were re-contacted via phone and invited to participate in another study with their child, which consisted of four videotaped activities at the Prevention Science Institute or at their home. Following consent and, if applicable, child assent procedures (see Appendix E), both parents and target child participated in a videotaped interaction task involving free play, clean-up, a problem-solving game, and a reading task. For the first seven minutes, parents and target child played with a box of toys. Research assistants instructed them to play like they normally would during this task and provided a 1-minute warning prior to clean-up. Following the free play task, research assistants gave families three minutes to clean-up. Following clean-up, the research assistant provided the family with a problem-solving task (i.e., a puzzle), and instructed parents that they could help verbally (e.g., giving directions or encouragement) but not physically (e.g., handling the puzzle pieces). Following the challenging puzzle task, both parents and child participated in a five-minute book-reading task with their child. The research assistant provided the family with a box of books and told them to look at the books. Research assistants provided a 1-minute warning before the book-

reading task ended. Parents were reimbursed $25 total following the completion of the video-taped tasks. Visits often took between 25-30 minutes.

Measurement

Direct observation assessment. Research assistants collected direct observation data on the following independent variables: positive parenting behavior, partner support behavior, and partner undermining behavior. Direct observation data were collected for the following dependent variables: child inappropriate and appropriate behavior, and child compliance. We utilized a 10-second partial interval data collection to code all parent and child behaviors. The percentage of intervals containing behaviors for each variable was computed. See Appendix G for additional information on behavior definitions and examples.

Positive parenting behaviors. We defined positive parenting as any instance in which the parent provides verbal statements, gestures, or physical behaviors in positive evaluation of the child. Verbal reinforcement includes a praise statement (defined as one or more words used in a positive evaluation of the child). Physical reinforcement includes physical acts used in positive evaluation of the child, such as hugs, high fives. Gestural reinforcement includes behaviors (may or may not be accompanied with verbal statements) by the parent used in positive evaluation of the child, such as a thumbs up, or "A OK" sign.

Partner support behaviors. We defined partner support behavior as any instance in which a) parent provides contingent attention or prompting towards compliance following a partner's command or prompt, b) any instance in which parent provides positive attention to his or her partner, c) partner joins in with positive reinforcement

following partner's delivery of positive reinforcement, or d) partner makes a statement of one or more words in agreement in response to partner's statement within 10 seconds.

***Partner undermining behaviors*.** We defined partner undermining as any instance in which a parent a) provides a command or statement to the parent or to the child that conflicts with or diminishes the partner's command or statement within 10 seconds of the partner's command/statement, b) utters a statement to the partner, which includes one or more words, that is a negative evaluation of the partner, or c) utters a statement to the child, which includes one or more words, that is a negative evaluation of the partner. These statements can be explicit or implicit evaluations of the partner, and may or may not be accompanied by a negative or sarcastic tone. We are looking at wording, not at the tone. Whether they are explicit or implicit, the content of the statement is what conveys the negative evaluation (thus, phrases like "wow", even when spoken derisively and aimed to possibly evaluate, would not count). These statements may also be made in jest (i.e., while laughing or smiling), but would still count as undermining behavior.

***Child compliance*.** We defined child compliance as any instance in which child follows or starts to follow a command delivered by parent(s) within five seconds of the last word of the direction. Compliance may or may not be in response to several parent instructions; if this is the case, compliance has occurred if the child begins to follow one of the commands issued within five seconds. A command was defined as a question or statement either telling the child what to do or what not to do, which may or may not be accompanied with one or more additional commands.

Inappropriate child behaviors. Inappropriate behaviors included any instance in which the child engages in aggression, disruption, or negative vocalizations. Aggression

was defined as any instance in which the child uses parts of his or her body (e.g., hands, elbow, feet) to hit, bite, or kick another person. Disruption was defined as any instance in which the child uses parts of his or her body (e.g., hands, elbow, feet) to hit or throw another object. Negative vocalizations encompassed any instance in which the child cries, screams, swears, whines/yells/growls, uses sarcasm, or says threatening words.

Appropriate child verbal behaviors. Appropriate child verbal behaviors were defined as any instance in which the child engaged in positive or neutral verbalizations. Verbalizations can range from sounds that include a consonant and syllable (e.g., "ba") to single word utterances (e.g., "ball") to fully formed sentences (e.g., "look at that ball").

Videotaped assessments. Assessors from the Oregon Parent Project served as data collectors for the current study. Before beginning data collection, assessors received training on assessment protocol. Trainings included opportunities to practice using the assessment script and other assessment equipment (i.e., toys, video recorder). All assessors are mandatory reporters and were required to participate in mandatory reporting training and CITI research compliance training. Assessors were trained to reach a 95% accuracy criterion on the administration of the assessment protocol to begin assessments. See Appendix H for the videotaped assessment script.

Behavioral coding. Graduate students from the University of Oregon were trained to code the videotaped triadic play interactions. Training included modeling videotaped examples of each behavior, discussion of examples and non-examples of the behavior, and opportunities to practice coding with feedback. Research assistants were provided with written descriptions of the behavior for each session, which included extensive examples, non-examples, and decision rules for coding. When the coding team

was discrepant on certain behaviors, we discussed rationales behind decisions and sometimes created decision rules to clarify the coding manual. The coding team was trained to 80% inter-observer agreement (IOA) mastery on each target behavior coded during the videotaped triadic play interaction.

Inter-observer agreement. Criteria for acceptable IOA percentages was 80% or higher across all behaviors for both parents and children. If IOA fell below 80% agreement for any of the behaviors, the data collection team addressed discrepancies and re-addressed behavioral definitions of concern during the weekly coding meeting. Total IOA (occurrence and non-occurrence) was collected on parent and child behaviors for 20% of the videos. Half of the videos were coded for reliability by another coder, and half were coded by the master coder (i.e., the principal investigator). Coders were blind to which video was used for reliability.

Total reliability ranged from 86% to 96%, with an average reliability of 92%. For partner support behavior, reliability ranged from 83% to 100%, with an average score of 90%. For positive parenting, reliability ranged from 90% to 97%, with an average reliability of 94%. Reliability for undermining behavior ranged from 89% to 98%, and had an average of 95% reliability. Child inappropriate behavior reliability ranged from 79% to 100% with an average of 90%. We met and reviewed clips and discussed this definition when IOA fell one percentage point below in one video. Reliability for child appropriate behavior ranged from 82% to 90% and had an average score of 86%.

CHAPTER V

STUDY 2 RESULTS

Analytic Approach

This section describes analyses used to address Study 2's research questions. Study 2 utilized a subsample of Study 1 and was exploratory in nature. Descriptive statistics were used to explore the nature of the independent variables, dependent variables, and sample demographic variables. Bivariate correlations were utilized to explore the magnitude of associations and between reported and observed coparenting quality, and between observed coparenting behaviors and observed child behaviors. Preconditions were not met for a mediation in Study 2.

With a sample size of 30, two-tailed alpha at $p < .05$, there is sufficient power (>.80) to detect an $r = .49$.

Preliminary Analyses

Descriptive statistics for family demographic variables were similar to those of study 1. Average child age was approximately six, and a majority of the children in the sample were male (86%) and white (93%). About half of the children in the sample received services under a special education eligibility. Average age for PCs was 35; most PCs were white and female. Forty-three percent of PCs had attained a college or graduate degree in this sample, and 30% were employed full time. ACs average age was approximately 38; they were mostly male and mostly white. About half of ACs in this sample had received a college or graduate degree, and about 70% worked full time. Families in this sample reported an average annual income of $70,268. See Table 6 for additional information on family demographics.

We conducted descriptive statistics for observed parent and child behaviors. Supportive coparenting behavior occurred an average of 15% of the time across all tasks and ranged between 9 and 21% of the time depending on the task. Undermining behavior remained consistently low, with an average of 4% occurrence across the tasks. Positive parenting behavior closely resembled percentages for supportive coparenting behaviors; it occurred an average of 13% of the time across all tasks and ranged between 9 and 21% of the time depending on the task. Child appropriate behavior remained relatively, consistently high across all tasks at 58% occurrence, ranging between 52% and 67% depending on the task. Child inappropriate behavior was relatively low; it occurred an average 10% of the time across all tasks and ranged between 6 and 16% depending on the task. See Table 7 for proportion of intervals with observed coparenting and child behaviors for more detailed information.

Positive parenting, partner undermining, and child inappropriate behavior were approximated by positively skewed distributions. Positive parenting and partner undermining behaviors were minimally negatively skewed, while child inappropriate behavior was a little more moderately skewed. Partner support behavior and child appropriate behavior were mildly negatively skewed in their distributions.

Research Questions

Question 1. Because Study 2 was exploratory in nature, we examined bivariate associations between parent-reported measures and total observed coparenting behavior (i.e., summed across all tasks) and between parent-reported measures and observed task-specific coparenting behaviors (i.e., free play, clean-up, challenging puzzle task, and reading task). We found several significant correlations between primary caregivers'

reports of coparenting quality and observed task-specific coparenting behaviors. We did not find significant associations between ACs reports of coparenting with observed coparenting behaviors. PCs reports of difficulty with coparenting problems were significantly, positively associated with observed undermining behavior during the book task (r = .55, p = .002) and with observed undermining behavior during the free play task (r = .40, p = .03), such that increased ratings of difficulty with perceived problems was associated with increased undermining behavior. PCs reports of role satisfaction (where higher scores indicated less satisfaction) were significantly, positively associated with undermining behavior during free play (r = .39, p = .03) and undermining during the book task (r = .44, p = .02), such that greater dissatisfaction with one's role was related to increased undermining behavior.

We detected several nonsignificant associations with small and medium effect sizes, suggesting clinical significance. PCs reports of difficulty with coparenting problems were positively associated with observed undermining behavior across all tasks (r = .27, p = .143). PCs reports of role satisfaction (where higher scores indicated less satisfaction) were positively associated with observed partner undermining behavior across all tasks, (r = .31, p = .094), partner support behavior across all tasks (r = .32, p = .085), partner support during free play (r = .29, p = .119), and partner support during the book task (r = .35, p = .067). See table 8 for additional information regarding associations between reports of coparenting quality and observed coparenting.

Question 2. As with question 1, we chose to examine relations between total observed coparenting behavior, total observed child behavior (i.e., summed across all tasks), and task-specific coparenting and child behaviors (i.e., free play, clean-up,

challenging puzzle task, and reading task). We found several significant correlations between observed coparenting behaviors and observed child behaviors across specific observation tasks. Total partner support behavior significantly, negatively predicted child appropriate behavior during free play (r = -.55, p = .002). Partner support behavior during clean-up significantly, negatively predicted total child appropriate behavior (r = -.47, p = .009), child appropriate behavior during free play (r = -.55, p = .002) and child appropriate behavior during the challenging puzzle task (r = -.38, p = .038). Partner undermining behavior during the clean-up task was significantly, positively associated with child appropriate behavior during the book task (r = .37, p = .048). Partner undermining behavior during the puzzle task was significantly, positively related to child appropriate behavior during the puzzle task (r = .39, p = .035).

In addition to significant findings, we detected nonsignificant associations with small and medium effect sizes. Total partner support behavior was negatively associated with total child appropriate behavior (r = -.30, p = .104), and child appropriate behavior during the puzzle task (r = -.25, p = .183). Total undermining behavior was positively associated with total child appropriate behavior (r = .22, p = .233), child appropriate behavior during the puzzle task (r = .25, p = .186), and child appropriate behavior during the book task (r = .29, p = .121). Partner support behavior during clean-up was negatively associated with child appropriate behavior during the book task (r = .23, p = .24). Undermining behavior during clean-up was positively associated with total child appropriate behavior (r = .29, p = .126), and child appropriate behavior during the puzzle task (r = .23, p = .230). See Table 9 for additional information regarding associations between observed coparenting and observed child behaviors.

Question 3. After controlling for study condition, the relation between total partner support and total child appropriate behavior approached significance, $R^2 = .13$, $F(2, 27)$, $p = .06$. Total partner support did not significantly predict total child inappropriate behavior, $R^2 = .03$, $F(2, 27) = .34$, $p = .71$. After controlling for study condition, total undermining behavior neither significant predicted child appropriate behavior, $R^2 = .07$, $F(2, 27) = 1.00$, $p = .38$, nor child inappropriate behavior, $R^2 = .09$, $F(2, 27) = 1.36$, $p = .27$. Total partner support did not significantly predict positive parenting, $R^2 = .02$, $F(2, 27) = .31$, $p = .74$. Total undermining behavior did not predict positive parenting, $R^2 = .02$, $F(2, 27) = .31$, $p = .74$. Positive parenting (i.e., the mediator) did not significantly predict child appropriate behavior, $R^2 = .029$, $F(2, 27) = .41$, $p = .67$, or child inappropriate behavior, $R^2 = .12$, $F(2, 27) = 1.86$, $p = .18$. Because we did not meet the preconditions to test a mediation (i.e., nonsignificant relations for all paths), we did not conduct a mediation analysis for observed coparenting and child behaviors.

CHAPTER VI

DISCUSSION

The purpose of this investigation was to examine the coparenting relationship in families of children previously identified with a DD. We aimed to examine linkages between reported coparenting quality and problem behaviors; observed coparenting behaviors and child behaviors; and reported coparenting quality with observed coparenting behaviors. Broadly, we hypothesized that coparenting quality would significantly predict child behaviors, as measured by both parent report and direct observation. This study provided significant contributions to the literature on families of children with DD, given that little research has thus far examined the coparenting relationship in this population. Below, we recap findings for each research question.

Study 1 Research Questions

Question 1. For our first question, we asked about the magnitude of the association between PC report of coparenting quality and AC report of coparenting quality. Both parents' measures of perceived coparenting quality were significantly, positively correlated with one another, such that higher-quality PC-reported coparenting was associated higher-quality AC-reported coparenting. Associations for each measure were of moderate strength, suggesting a higher likelihood that one parent's perception of coparenting quality may predict the other parent's, and vice versa. These findings indicate that parents in this sample were moderately reliable with one another for each dimension of coparenting.

Question 2. We asked if coparenting quality predicted child problem behaviors for our second research question. We looked at the relations between coparenting quality

and problem behaviors across three dimensions of coparenting (i.e., role satisfaction, coparenting support, and difficulty with coparenting problems) for both primary caregivers and alternate caregivers. Across both sets of parents, only difficulty with coparenting problems significantly predicted problem behaviors.

As a measure, role satisfaction may be too distally related to child outcomes. We could hypothesize that role satisfaction may be more closely linked to other components of the coparenting relationship that would serve as more salient predictors of child outcomes (e.g., disagreement over childrearing). By middle childhood, parents may have firmly established their individual roles with regards to parenting. By extension, they may have figured out what works and what doesn't in their varied roles and tasks (e.g., how to effectively help with homework, how to play with their child, etc). Sticking with roles and responsibilities that have historically worked may be especially salient in families of children with DD, given potential increased challenges.

It should be noted that descriptive statistics indicated that both primary caregivers' and alternate caregivers' reports of role satisfaction were positively skewed, such that both groups had more scores of greater satisfaction in their roles. Even if one or both parents is not sufficiently satisfied with their "duties", they may have come to accept their responsibilities. Further, at this developmental stage, children are often in a school setting for a significant portion of the day, potentially lessening the "burden" of childrearing duties than when the children were younger and required more care.

Coparenting support approached significance for alternate caregivers, but was not significant for primary caregivers. Further, coparenting support explained a small percentage of variance in child outcomes for both groups. These findings are consistent

with research that has focused on the association between coparenting support, as measured by the PCPQ, and child behavioral outcomes. Stright and Bales (2003) did not find significant relations between parent-reported coparenting support scores and child temperament in two-parent families of preschool-aged children. The authors hypothesized that the truncated range of temperament in the sample (i.e., children neither too difficult nor too easy) may have contributed to these findings. Contrary to findings that have suggested increased problem behaviors in children with DD, children in the current study exhibited a normally distributed range of problem behaviors (i.e., mostly functioning relatively well), which may have precluded significant findings. Regardless, coparenting support explained a minimal amount of variance in total problems for both caregiver groups, suggesting that parents' perceptions of their partner's support may represent attitudes that can be easily contained so as not to negatively impact their children.

It's possible that the PPC Extent of Difficulty scores were predictive of problem behaviors because the measure served as a proxy for the extent to which parents may argue over childrearing issues. This scale determined the extent to which parents perceived coparenting problems as difficult on a scale of 0-7, where 1 indicated they didn't feel like it was problematic, and 7 indicated they did feel like it was highly difficult. The PPC may serve as a more salient predictor of problem behaviors because it identifies both the presence of problems and the extent of its difficulty. Measures of disagreement (e.g., fighting, arguing, active undermining) may be more likely to occasion child behavioral issues compared to internal perceptions of minimal coparenting support, which parents may "contain" better, particularly in the presence of their children.

Question 3. We asked if parenting self-efficacy mediated the relationship between coparenting quality and child problem behaviors for our final research question for Study 1. We conducted bias-corrected boot-strap mediation analyses for primary caregivers and alternate caregivers. For primary caregivers, parenting self-efficacy fully mediated the relation between difficulty with coparenting problems and child problem behaviors. The direct effect of difficulty with coparenting problems on problem behaviors is fully explained by parenting self-efficacy. These findings lend preliminary support for the potentially important link between a parent's beliefs in their ability to handle behaviors and perceived difficulty with coparenting problems in families with children with developmental delays. It's possible that the more often a parent perceives that their partner both endorses and uses their same parenting strategies, the more efficacious they feel about their ability to handle child disruptive behavior. Parents with higher behavior-specific self-efficacy may experience fewer challenging behaviors because they use effective strategies to address those behaviors. For primary caregivers, parenting self-efficacy may play a more important role in their perceptions of child outcomes, given that they may spend more time in the parenting role.

For alternate caregivers, parenting self-efficacy neither partially nor fully mediated the relation between coparenting problems and child problem behavior. Primary caregivers' ability to handle problem behaviors may be more closely associated with their appraisal of child's challenging behavior, which might in part explain why there is an association between parenting self-efficacy and problem behaviors for primary caregivers, but not for alternate caregivers. Alternate caregivers may put less "stock" in their parenting confidence if their role is to support their partner but not take the lead in a

number of parenting responsibilities. In other words, perceptions of one's role may significantly figure into the impact of parenting self-efficacy on child problem behaviors.

Study 2 Research Questions

Question 1. For our first question, we asked about the magnitude of the association between parents' report of coparenting quality and observed coparenting behavior. Only primary caregivers' (i.e., mostly mothers') reports of coparenting quality were significantly associated with observed coparenting behaviors. Reports of difficulty with coparenting problems and role satisfaction were moderately, positively associated with observed undermining behavior during tasks, such that more reported difficulty with coparenting problems was linked with increased undermining behavior, and lower satisfaction with one's parenting responsibilities was linked with undermining behavior during observation tasks.

These findings are consistent with past research (e.g., Stright & Bales, 2003). Stright and Bales (2003) found that only mothers' reports of coparenting support were significantly related to observed coparenting behaviors during a triadic observation task. Primary caregivers may be more likely to set the tone during observation tasks if they more often interact with the child. Thus, we could hypothesize that if primary caregivers are less satisfied with the coparenting relationship, both their and their partners' behaviors might appear less supportive during whole family interactions. Past research has identified that more parent-centered negative behavior during whole family interactions has predicted child problems (Katz & Low, 2004).

Stright and Bales (2003) found that reports of coparenting support, as measured by the Perceptions of Coparenting Questionnaire, were significantly predictive of

observed coparenting behavior. This finding is noteworthy because the scores from the same scale were not significantly associated with either supportive or undermining behaviors in the current study. Primary caregivers' scores on the Parent Problems Checklist and the Who Does What scale were significantly linked to observed undermining coparenting, but not scores on the Perceptions of Coparenting Questionnaire scale. Stright and Bales (2003) looked for observed coparenting behaviors that were similar to those in the current study but provided ratings for supportive behavior and undermining behavior after each task rather than event recording. Ratings, while more subjective, may have served as a more accurate predictor of reported coparenting quality than partial interval recording, which captures every instance of coparenting that falls under the technical definition, even if it may not have felt like an accurate representation. For example, if a parent were to quietly say "yep" but give no other words or gestures of support following their partner's direction to their child, this behavior may not appear consistent with the broader idea of supportive coparenting but would nonetheless count under the current study's definition of supportive behavior.

Lower role satisfaction was positively associated with undermining behavior during the free play task and during the book task. These results indicate that when primary caregivers feel less satisfied with childrearing "division of labor", they may be more likely to undermine their partner. Undermining behavior may serve as subtle, microsocial responses that connote dissatisfaction and may emerge in dyadic interactions and whole-family interactions. Given that primary caregivers typically take on more roles than alternate caregivers, it's possible that the burden of childrearing responsibilities may spill over into negative coparenting interactions. While the spillover effect has been

mostly documented in the marital satisfaction literature (Hartley, Seltzer, Greenburg, & Floyd, 2011), this finding is consistent with research suggesting issues in the parenting role division may impact whole-family interactions.

Increased difficulties with coparenting problems were also positively associated with higher levels of undermining behavior during the free play task and during the book task. We could hypothesize several reasons for the link between PC-reported coparenting quality and undermining behavior during the free play task. First, because free play was at the start of the observation task, parents may have needed to set some limits about where to play (i.e., in front of the camera) or what to play with (i.e., only toys in the box), thus increasing the "risk" to be undermined if the other caregiver suggested something else. PCs who felt less satisfied with their role may have been more likely to undermine during opportunities to limit-set, particularly if they typically discipline. Second, in the context of multiple toy options, parents may have been more likely to inadvertently undermine their partner if they made suggestions that were inconsistent with the target child's preferences (i.e., if the AC suggested doing colors when the PC knew from extensive leisure time that he was not interested in coloring) or if they already struggle with issues like getting on the same page during shared family activities.

Regarding links between undermining behavior during the book task and PC-reported coparenting quality, we could deduce that the nature of this task made it more difficult for both parents and child to seamlessly interact. Parents were instructed to look at the books like they normally would, which led to one parent picking and reading a book to their child while the other looked on. The structure of this task may have more easily orchestrated opportunities to undermine; any deviation from the task may have led

one parent to subtly redirect back to the activity and thus undercut another parent's efforts or suggestions. Parents who fight more or who exhibit inconsistencies with their child may have been just as likely to engage in undermining behavior during a more structured task as during a less structured task, given that one parent was less likely to be actively involved.

Question 2. For our second question, we asked whether observed coparenting behaviors predicted observed child behaviors. Inclusion of observations enables researchers to examine whether links between caregiver-reported parent and child variables hold true with links between observed parent and child variables. We found that total observed coparenting behaviors did not significantly predict total observed child behaviors. We identified significant associations between observed coparenting behaviors and observed child behaviors between tasks (rather than across tasks). Partner support behaviors were significantly, negatively associated with child appropriate verbal behaviors. While these findings appear counterintuitive, we offer several plausible explanations.

First, our coding scheme for child appropriate verbal behavior may have been too limited in scope. Including nonverbal appropriate behaviors (e.g., sharing toys, positive physical affection, etc) may have provided a more holistic representation of appropriate behaviors, and may have yielded findings in the expected direction.

Next, our coding of both partner support behavior and child appropriate behavior included a variety of verbal behaviors. Thus, we could hypothesize that when children were less talkative (but still likely behaving appropriately), their parents were more likely to fill the space with talk, thereby increasing the likelihood of being coded for partner

support. We tried to control for the possibility of inadvertently coding general discussion as partner support by specifying that interactions be limited to the child or the activity, but this may not have been restrictive enough. Relatedly, if children were exhibiting less appropriate behaviors, parents may have increased their supportive behaviors when their partner attempted to make suggestions or direct the child to increase their engagement in the tasks (e.g., PC says "let's play with these toy foods" and AC says "good idea, mom!"). It's possible that partner support may have been a more salient, positive predictor of child behaviors if we had limited its definition to partner "backing" when caregivers had to give directions or set limits if their child wasn't listening or was misbehaving.

These results unearth the possibility that general partner support may not play a salient role in child behaviors. Behavior-specific partner support may serve as a better predictor of child behaviors, in the expected direction. That is, partner support in response to challenging behaviors may be more likely to predict behavioral outcomes than global partner support, which could include agreeing with partners on neutral or positive topics related to the child, reiterating demands, and showing affection towards one another in response to the child. These behaviors, while positive and supportive, may be too negligible to "register", particularly with children previously identified with developmental delays. Further, it's possible that in some instances, support may be less likely to predict positive outcomes if it means potentially diminishing one or both parents' authority when both parents are directing the child to do something and thus potentially overloading them with commands.

Partner undermining behavior significantly, positively predicted child appropriate behavior, such that increased undermining behavior was linked with increased appropriate behavior. We offer several plausible explanations. To ensure our coders were reliable with one another, we limited undermining behavior to include content of parents' verbal interactions, not tone. Thus, if a parent made a derisive remark towards his partner (e.g., "you are so bad at building blocks"), we would have coded it even if he were laughing while he said it. However, if a parent had said something in a tone that suggested negative undertones, we would only have coded it if the content were negative, too. For instance, if a parent said, "wow" in a sarcastic tone, this behavior would not have fit under our coding manual's definition, even if it felt consistent with undermining behavior. Inclusion of clear, operationalized definitions of tone may have made the independent variable a more robust predictor of total child outcomes. Future research might focus on clearly defining what constitutes negative tone, as this may be a more robust predictor of child outcomes. Tone and attitude may be more salient than content of the interactions, especially when negative.

That said, it's possible that partner undermining behavior predicted child appropriate behavior because children may have inadvertently redirected potentially negative conversations away by engaging their parents in the activity in some way (i.e., by imploring their parents to look at something they had built). Older children may be more skilled at successfully redirecting conversations away from negative interparental interactions compared to younger children with delays, who may be less attuned to their parents' behaviors toward each other.

Question 3. For our final research questions, we asked whether parenting behaviors mediate the relationship between coparenting quality and child problem behaviors. No preconditions were met to conduct a mediation analysis. Coparenting behaviors only predicted child behaviors between tasks; further, findings were not in the expected directions. Total positive parenting did not predict total child behaviors, and total coparenting behaviors did not predict positive parenting. As previously discussed, we could hypothesize that total coparenting behaviors did not significantly predict total child behaviors in the expected direction because the definitions were too broad and did not sufficiently target parent-level behaviors that would be most proximally related to child-level behaviors. Coparenting appeared more likely to predict child behaviors based on conditions of different tasks. To address this, future research might consider more narrow definitions of coparenting behaviors for both supportive and undermining behavior and might consider expanding appropriate child behavior beyond positive and/or neutral statements (e.g., using manners, saying compliments, sharing, etc).

Another possibility for the nonsignificant relations for all paths is that children may be less likely to immediately "act out" in response to undermining coparenting behaviors. Instead, we may observe child-related outcomes in other settings, which would be consistent with past research that has examined the links between observed coparenting and child outcomes in school settings (Stright & Niezel, 2003). Stright and Niezel (2003) investigated the impact of child gender, mother-child relationships, father-child relationships, and supportive coparenting on school adjustment in 52 two-parent families of school-aged children ranging in age from 8 to 9.5. School adjustment was measured by teacher report (i.e., the Teacher Report Form of the CBCL) and by direct

observation skills. Supportive coparenting was measured by direct observation, and included behaviors such as partner backing (i.e., reiterating instructions) and joint attention (both making comments on child or activity). The authors found that supportive coparenting explained additional variance above and beyond child demographics and relationship factors in attention problems, passivity/dependence problems, and grades in math and science. We could conclude that low coparenting quality in home settings may lead to internalizing issues that could interfere with school success.

Lastly, it's important to consider these findings within the broader context of the sample's functioning. Families were high-functioning in that they were generally more educated, with higher incomes. In addition, this sample was marked by skewed scores in the positive direction (e.g., more supportive behaviors, fewer childrearing disagreements, etc.) across all measures and observations. Because the distribution was truncated, these independent variables may not have had enough variability to predict total child behaviors.

Implications for Clinical Practice

The Individuals with Disabilities Education Act (IDEA; 2004) mandates that every state have at least one parent training and information center (PTI). Typically, PTIs offer training and access to resources around understanding parental rights under special education law, advocating at individual education program meetings, navigating school transitions, and facilitating effective family-school partnerships. Research establishing ties between coparenting quality and child behavioral outcomes in families of children with developmental delay may drive PTI's to take preventive approaches with families at risk for receiving special education services in their elementary-age years. Alternately,

PTI's could serve as a resource for families of school-aged children with DD. PTI services targeting coparenting support could include support in use of consistent parenting strategies, mutual support in childrearing endeavors, and effective problem-solving around child-related issues.

The field continues to move toward an emphasis on effective parenting together. Lee and Hunsley (2006) highlight this move in their paper on family-based coparenting interventions. The authors discuss potential issues that may arise as a result of including only one caregiver in parent training. First, consistent with findings from this study, parents may disagree over types of childrearing strategies, which can impact child outcomes. Second, even if both parents are in agreement, one parent may struggle with learning and applying these strategies without the support of professional help.

Findings for studies examining partner support training are inconclusive. Several studies provide evidence for the effectiveness of coparenting support training in combination with typical parent management training (Dadds, Sanders, Behrens, & James, 1987; Webster-Stratton, 1994). Other studies have yielded no differences between parents in the partner-support condition compared to parents in the typical parent training condition (e.g., Sanders et al., 2007).

Sanders, Bor, and Morawska (2007) examined the longitudinal effects of Triple P parenting program, a population-level multi-tiered parent-training program in a sample of 139 families of children between the ages of 3 and 8 with either oppositional defiant disorder or attention-deficit-hyperactivity disorder. The authors sought to examine whether participants randomized to the most intensive level of Triple P, which included 14 visits, tailored to family needs, and additional parental support training, would have

significantly better outcomes compared to participants randomized in the standard parent training program, which included 14 individual visits, or the self-directed program, which included a guide book and a work book for parents to use at their own pace. The authors found that participants in the intensive condition approached significance in lower levels of children diagnosed with disruptive behavior disorders. Beyond this finding, the authors found no significant differences across families in any of the three conditions.

While these results may be puzzling, several factors may have contributed to intervention effectiveness at the highest tier. Sanders et al. (2007) did not explore the treatment of partner support and child management within the context of triadic interactions (i.e., with both parents and child present). Partner support interventions typically include dyadic observations as outcome variables (Roberts et al., 2006; Sanders et al., 2007; Webster-Stratton, 1994). Studies with coaching and feedback following observations of triadic interactions (Dadds et al., 1987; Kelley, Embry, & Baer, 1979) have demonstrated the successful impact of partner support training. Including observations of triadic interactions during treatment would allow interventionists to provide important feedback regarding effective coparenting support. This is especially noteworthy given the current study's findings which suggested "spill-over" from parent perceptions of coparenting quality and satisfaction to actual behaviors during whole-family interactions.

Limitations

Several limitations suggest that findings be interpreted with caution. First, we cannot specify the direction of our relations, given that they are cross-sectional. It is possible that a transactional relationship exists between these variables; further research

could expound on that possibility. Another limitation to consider is the homogeneity of the sample: the majority of our participants are Caucasian, educated and mid-income. Results should be interpreted with caution regarding the degree to which they can be generalized to other populations. A third notable limitation is that our samples were small and underpowered for both studies. Finally, limited statistical power due to relatively small sample sizes for both studies may have played a role in limiting the significance in some of our findings. For sample 1, we were restricted to detecting a medium effect size; with study 2, it was restricted to a large effect size. We did find some nonsignificant medium effect sizes in studies 1 and 2 that were nonetheless clinically meaningful, and that may have reached significance with a greater number of participants. More research is needed to examine these variables with larger sample sizes.

Regarding the observation coding system for Study 2, we did not distinguish between PC and AC coparenting behaviors. Had we included data collection on each parent, we may have yielded data that better represented PC and AC reports of coparenting quality. However, inclusion of behaviors for each parent might make data collection more burdensome. Scholars recommend including fewer behaviors during direct observations to decrease the likelihood of low IOA (Gast, 2010). In addition, we defined child appropriate behavior as positive or neutral verbalizations. Limiting this definition to more specific socially appropriate behaviors (e.g., using polite words, sharing, smiling, etc) may have more accurately mapped on to appropriate behavior.

Future Directions

Future studies can continue to contribute to this literature by addressing the above limitations. Future researchers would benefit from including more family variables as

covariates in their analyses. Inclusion of family demographic variables (i.e., income, education, or race) and of parent mental health or relationship satisfaction would provide important information regarding the degree to which coparenting quality predicts child outcomes above and beyond these salient factors.

While it stands that children diagnosed with developmental delays are at risk, half of the current study's sample were in special education, and half had "graduated" from early childhood special education and were in regular education. That said, our study did not include indicators of child school outcomes. Future research should consider child outcomes beyond the home setting. School related dependent variables (e.g., classroom observations, teacher ratings, child grades) might provide insight into how coparenting quality influences school success.

Next, inclusion of longitudinal designs would further strengthen future studies examining coparenting and child outcomes. Past research has provided extensive support for longitudinal links between coparenting behavior and child outcomes for children in middle childhood and adolescence (O'Leary & Vidair, 2005; Riina & McHale, 2014)

Regarding parenting variables, future researchers might benefit from identifying and quantifying parents' roles and responsibilities, rather than simply identifying whether they are primary caregivers. While one parent may identify as the primary caregiver, their partner may share an equal number of responsibilities. Including the extent to which parents attend to parenting duties may help to explain variance in child outcomes.

Lastly, it may be of benefit to collect data on behaviors individually exhibited by both parents. This could elucidate connections between parent reports of coparenting and observed coparenting. Further, distinguishing between PC and AC observed behaviors

might allow for significant relations between these behaviors and observed child behaviors. For instance, we could determine if only primary caregivers' undermining behavior predicted child behaviors.

Conclusion

Limitations notwithstanding, the current study contributed to the field in several ways. This is one of the first studies to use a multi-method and multi-informant approach to examine the coparenting relationship within families of children with DD. It provides evidence for the impact of coparenting quality on child outcomes, as measured through both parent report and observation. Our findings supported links between parent-reported coparenting quality and child problem behaviors as well as the mediating role of parenting self-efficacy in the relation between coparenting quality and child problem behaviors for primary caregivers. Lastly, we identified links between primary caregiver-reported coparenting quality and observed undermining behavior. Our findings offer insight into similarities and differences in caregivers' perceptions of their own parenting beliefs and behaviors, their coparenting relationships and their children's' well-being. Taken together, the current study further elucidates knowledge of family-level variables in a population already at risk for poor outcomes, advancing research in both the coparenting and DD literature.

APPENDIX A

TABLES AND FIGURES

Table 1

*Descriptive Statistics of Family Demographics from Study 1 (*N *= 56)*

	M (*SD*)	*n* (%)
Child		
Mean age in years	6.15 (.96)	
Male		46 (82%)
Caucasian/white		50 (89%)
In regular ed 80% or more		17 (30%)
Not in special education		12 (21%)
Primary caregiver		
Mean age in years	34.89 (5)	
Female		54 (96%)
Caucasian/white		50 (89%)
With college or grad degree		28 (50%)
Full time employed		13 (23%)
Annual income	$64,769 ($39,910)	
Alternate caregiver		
Mean age in years	36.94 (6.31)	
Male		27 (90%)
Caucasian/white		52 (93%)
With college or grad degree		21 (39%)
Full time employed		39 (70%)

Table 2

Descriptive Statistics of Parent-Reported Variables from Study 1

Variable	*M* (*SD*)	Median
Primary caregiver		
Difficulty with coparenting problems	28.87 (14.48)	24.50
Partner support	58.22 (9.23)	59.50
Role satisfaction	1.21 (.89)	1.05
Behavioral self-efficacy	85.40 (14.63)	88.93
Child problem behaviors	53.32(14.20)	55.00
Alternate caregiver		
Difficulty with coparenting problems	27.00 (12.25)	23.50
Partner support	59.24 (8.13)	60.50
Role satisfaction	.74 (.66)	.63
Behavioral self-efficacy	86.30 (14.92)	91.61
Child problem behaviors	52.82 (11.67)	53.00

Table 3

Bivariate Correlations among Parent-Reported Coparenting Measures for Study 1

	1	2	3	4	5	6
1. PC-reported role satisfaction	-					
2. AC-reported role satisfaction	.45**	-				
3. PC-reported coparenting difficulty	.09	.25	-			
4. AC-reported coparenting difficulty	.39**	.52**	.49**	-		
5. PC-reported coparenting support	-.49**	-.55**	-.37**	-.74**	-	
6. AC-reported coparenting support	-.35**	-.53**	-.58**	-.55**	.55**	-

Note. PC = primary caregiver; AC = alternate caregiver. **$p < .01$.

Table 4

Regression Analysis for Primary Caregiver-Reported Variables Predicting Problem Behaviors

Variable	*B*	*SE B*	*β*
Step 1			
Study assignment	4.83	3.81	.17
Step 2			
Study assignment	3.72	3.71	.13
Coparenting difficulty	.29	.13	.30
R^2		.11	
F		3.42*	

Note. *$p < .05$.

Table 5

Regression Analysis for Variables Predicting Alternate Caregiver-Reported Problem Behaviors

Variable	*B*	*SE B*	*β*
Step 1			
Study assignment	-2.17	3.17	-.09
Step 2			
Study assignment	-.69	2.89	-.03
Coparenting difficulty	.43	.12	.45
R^2		.21	
F		6.97**	

Note. **$p < .01$.

Table 6

*Descriptive Statistics of Family Demographics in Study 2 (*N = 30*)*

	M (*SD*)	*n* (%)
Child		
Mean age in years	6.33 (.95)	
Male		26 (86%)
Caucasian/white		28 (93%)
In regular ed 80% or more		11 (36%)
Not in special education		4 (13%)
Primary caregiver		
Mean age in years	35.67 (5.00)	
Female		29 (97%)
Caucasian/white		28 (93%)
With college or grad degree		13 (43%)
Full time employed		9 (30%)
Annual income	$70,268 ($40,523)	
Alternate caregiver		
Mean age in years	38.00 (6.12)	
Male		29 (97%)
Caucasian/white		29 (97%)
With college or grad degree		13 (43%)
Full time employed		21 (70%)

Table 7

Descriptive Statistics of Observed Coparenting and Child Behaviors for Study 2

	M (SD)
All tasks	
Supportive coparenting	15% (6%)
Undermining coparenting	4% (4%)
Positive parenting	13% (12%)
Child appropriate behavior	58% (20%)
Child inappropriate behavior	10% (11%)

Table 8

Correlations among Observed Coparenting Behaviors and Reported Coparenting Behaviors

Variable	1	2	3	4	5	6	7	8
1. PC PPC	-							
2. PC WDW	.52**	-						
3. Total PSB	-.05	.32	-					
4. Total UB	.27	.31	.28	-				
5. FP PSB	-.09	.29	.83**	.27	-			
6. FP UB	.40*	.39*	.27	.85**	.32	-		
7. Book PSB	.17	.35	.67**	.46*	.51**	.54**	-	
8. Book UB	.55**	.44*	.29	.79**	.25	.73**	.48**	-

Note. PSB = partner support behavior; UB = undermining behavior; FP = free play task; book = book reading task; WDW = Who Does What Scale; PPC = Parent Problems Checklist. PC = primary caregiver-reported.
*$p < .05$, **$p < .01$.

Table 9

Correlations among Observed Coparenting Behaviors and Reported Coparenting Behaviors

Variable	1	2	3	4	5	6	7	8	9
1. Total PSB	-								
2. Total UB	.28	-							
3. Total CAB	-.30	.22	-						
4. FP CAB	-.44*	.01	.88**	-					
5. CU PSB	-.66**	.21	-.47**	-.55**	-				
6. CU UB	.04	.60**	.29	.17	-.05	-			
7. Puzzle UB	.18	.52**	.28	.09	.03	.35	-		
8. Puzzle CAB	-.25	.25	.72**	.58**	-.38*	.23	.39*	-	
9. Book CAB	-.08	.29	.80**	.52**	-.23	.37*	.25	.41*	-

Note. PSB = partner support behavior; UB = undermining behavior; FP = free play task; book = book reading task; WDW = Who Does What Scale; PPC = Parent Problems Checklist. PC = primary caregiver-reported.
*$p < .05$, **$p < .01$.

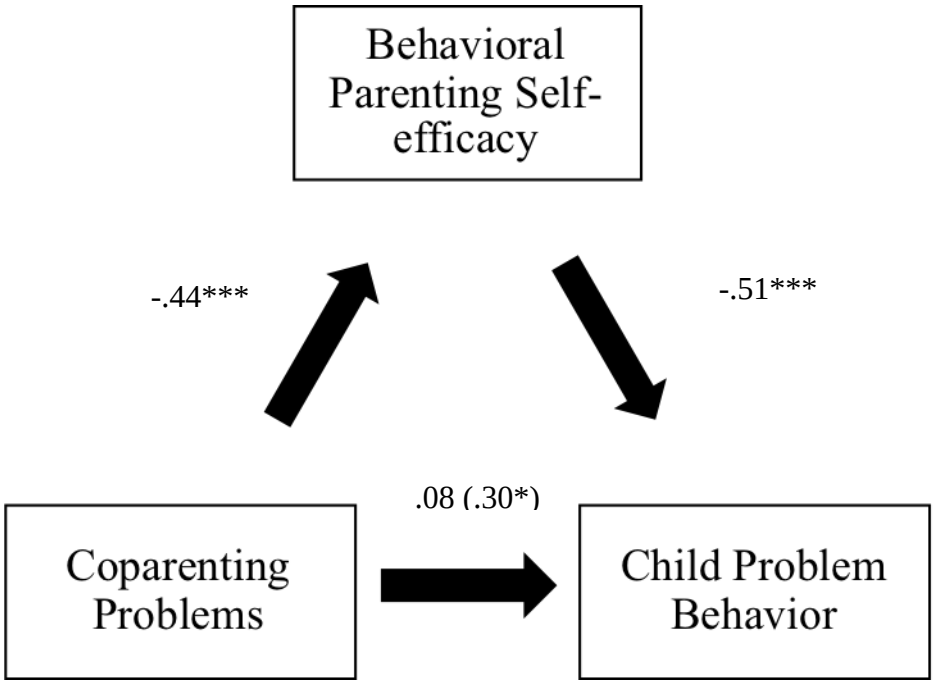

Figure 1. Indirect effect of primary caregiver-reported coparenting problems on child problem behavior through parenting self-efficacy. Note: *p < .05, ** p < .01, ***p < .001, parentheses indicate direct path.

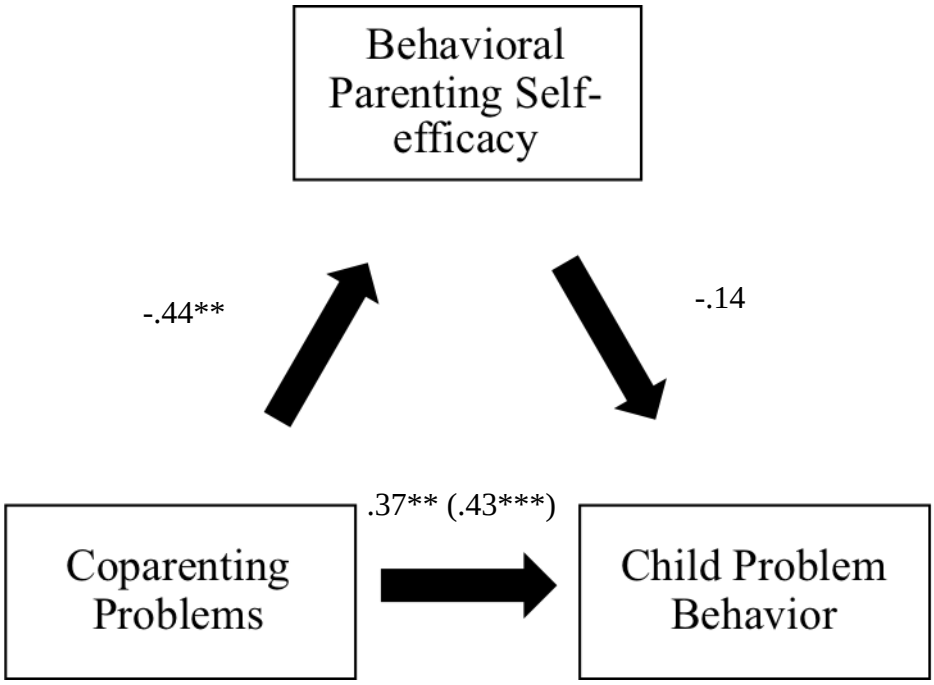

Figure 2. Indirect effect of alternate caregiver-reported coparenting problems on child problem behavior through parenting self-efficacy. Note: *p < .05, ** p < .01, ***p < .001, parentheses indicate direct path.

APPENDIX B

STUDY 1 PHONE SCREENING

OPP – Family Phone Recruitment Script for Study 1

OP___ ___ ___

Hi, (*insert name*), my name is Margaret Rosencrans, and I'm calling with the Oregon Parent Project from University of Oregon. I don't know if we've met during assessments but I've worked on the OPP for the past few years. Right now, I'm really interested in following a smaller group of families who have participated in the project. If you have a minute or two, I'd love to tell you a little more about an invitation for you and your partner to complete some surveys we would mail home to you. Is this a good time to talk?

If no: No problem! When would be a better time?

If yes: Great!

I'd like to start by explaining why we want to continue following our OPP families. As you might imagine, it can be difficult to get both parents to participate in research with their busy schedules and family life. That's actually a really big issue in research; dads rarely give their perspectives on their own family experiences! I would like to invite you to participate in my dissertation study called Oregon Parent Project (OPP)-Family. For this project, I'm really trying to address that gap and to get both moms and dads to comment on their family experiences.

As part of this project, you and your partner will be asked to complete a packet of surveys about your experiences with parenting and being in a couple. All together the surveys are expected to take about 30-45 minutes and you and your partner would each receive $25, so $50 total, for your time.

Participation in this study is voluntary, so you can choose to participate or not. Additionally, everything that we talk about is confidential. We can't share your information with anyone else. Should you decide to participate in the study, I will go over an Informed Consent Form, which describes everything in more detail.

First I need to ask a few questions.

Before I go any further I want to make sure that you still have a partner in the home. Your last assessment with us was (*insert date*). At that time you had indicate that your partner, (*insert name*) was living with you and (*insert child's name*). Is that still the case?

If no: Ok, unfortunately that's one of the requirements for this study. Thank you so much for your time today. We really appreciate your support!
If yes: Okay, next question:

Is s/he still actively involved in parenting?

If no: Ok, unfortunately that's one of the requirements for this study. Thank you so much for your time today. We really appreciate your support!
If yes: Ok, next question:

How long has your partner lived with your child?
If 2 or more years: Great! Do you have questions at this time?

Would you like to participate in this project?

If no: Thank you for your time and if you have any questions or would like to reconsider, please feel free to call me. Have a good day!

If yes: Great! The tricky part here is that the UO research office wants me to get consent from both parents, so I can go through the consent with you now, which takes about 5 minutes, but I'll also have to go through consent for (*insert AC's name*). I can consent you both now or at another time when you're both home, or I can arrange a time to call (*insert AC's name*) to go through consent with him; what do you think would work best?

Once I get the okay from both of you, then I can send those mail-home packets to you. We're asking all partners to complete the packets by themselves and to send back the mail-home packets to us within 2 weeks of receiving them, which would be (*insert date*). We will include two pre-stamped envelopes for you and your partner so you can each send them individually whenever you're done.

- - - - - - - - - - - - -

(Only complete if eligible and caregivers wish to participate)

Primary Caregiver (PC) Preferred Contact Information

Phone #: (Home) _____
(Work)_____

Cell# or Other: _____

Alternate Caregiver (AC) Preferred Contact Information

Phone #: (Home) _____
(Work)_____

Cell# or Other: _____

Calling PC at a different time? Y N Date_____ Time_____

Calling AC at a different time? Y N Date_____ Time_____

Calling both PC and AC at a different time? Y N Date_____ Time_____

Mailing Address for PC:
_____

Mailing Address for AC (if different):
_____

APPENDIX C

STUDY 2 PHONE SCREENING

OPP – Family Phone Recruitment Script for Study 2

OPF___ ___ ___

Hi (*insert name*), my name is Margaret Rosencrans, and I am from the University of Oregon and the Oregon Parent Project for Families. I'm calling because you completed a mail home packet for (*insert child's name*) a couple of [months/weeks] ago. We would like to follow up with an invitation for you, (*insert partner's name*), and (*insert child's name*) to do some activities, like playing with toys. Is this a good time to talk?

If no: No problem! When would be a better time?

If yes: Great!

First of all, thank you so much for completing these packets! Getting perspectives from both moms and dads is so important to this research so we're really appreciative of your participation.

These activities will be part of the second and final part of my dissertation project. I'm interested in how both parents and children work together as a family. Unlike your previous involvement in OPP, where we've just focused on one parent and the child, now we're interested in the broader family, which research just doesn't focus on enough!

As part of this project, you will be asked to participate in three short videotaped activities that will include playing with toys, and looking at books. Each activity will be videotaped and you can complete these activities in our center here on campus at the University of Oregon or we can come to your home to complete them, whatever is the most convenient for you. All together the visit would be expected to take about 25-35 minutes and your family would receive $35 total for your time.

Participation in this study is voluntary, so you can choose to participate or not. Additionally, everything that we talk about is confidential. We can't share your information with anyone else. Should you decide to participate in the study, I will go over an Informed Consent Form, which describes everything in more detail.

Before I go any further I need to ask a few questions. Your last assessment with us was (*insert date*). At that time you had indicate that your partner, (*insert name*) was living with you and (*insert child's name*). Is that still the case?

If no: Ok, unfortunately that's one of the requirements for this study. Thank you so much for your time today. We really appreciate your support!
If yes: Okay, next question:

Is s/he still actively involved in parenting?

If no: Ok, unfortunately that's one of the requirements for this study. Thank you so much for your time today. We really appreciate your support!
If yes: Ok, next question:

Has your partner lived with you and (*insert child name*) since the last assessment?

If no: Ok, unfortunately that's one of the requirements for this study. Thank you so much for your time today. We really appreciate your support!

If yes: Great! Do you have questions at this time?

Would you like to participate in this project?

If no: Thank you for your time and if you have any questions or would like to reconsider, please feel free to call me. Have a good day!

If yes: Great! Our next step is to schedule a time that would work for you, (*insert partner name*) and (*insert child name*) to come in for a visit at the Prevention Science Institute or to schedule a visit to your home. For these dates (*insert date range*), what day/time would work best for you?

Lab Visit Scheduled:

Day_____ Date_____/_____/_____
Time:_____

In-Center or In-home_____

Home address for in-home visits:_____

Any Special Instructions for in-home visits:_____
_____

Reminder call phone number:_____

Great! Thank you so much for your time today. We will be sending reminder postcards about the lab visit and will call the day before to make sure that time still works for you.

APPENDIX D

STUDY 1 CONSENT FORM

University of Oregon Prevention Science Institute

The Oregon Parent Project for Families

Mail-Home Survey Adult Consent

You are being invited to participate in a study called Oregon Parent Project (OPP)-Family. You are being asked to participate in this project because you and your child previously participated in the Oregon Parent Project. Please read this consent form carefully and call us if you have any questions before signing and returning this consent.

What is the purpose of the project?

- The purpose of the study is to better understand how parents work together to parent their child.
- We expect about 100 families to participate in this study.
- In order to be eligible for this study, you and your partner must both agree to participate.

What will you be asked to do if you choose to be in the project?

- If you agree to participate, you will be asked to complete a packet of mail-home surveys and mail them back to us. Mail-home surveys should take about 30-45 minutes to complete. Below is a description of the surveys. If you agree to participate in this part of the study and complete the mail-home surveys, we may invite you to complete a second part of this study in our lab.

- We will ask you questions about your family and background, including parenting experiences, your romantic relationship, your wellbeing, and your child's behavior at home. All of these questions will be part of your mail-home packet.

- You and your partner will each receive a $25 check for completing and mailing back your packet of surveys.

What are the risks to my participation?

- There are few risks for taking part in this study, but it is possible you may experience some minor discomfort when answering some sensitive questions

about yourself (e.g., anxiety or depression) and about your family (e.g., your romantic relationship). If you do not feel comfortable answering a question(s), you do not have to answer them.

What are the benefits of being in the study?

- The purpose of this study is to better understand how partners work together while parenting their children. Although there may not be a direct benefit to you personally, your taking part in the study may benefit society. Together with other parents, you and your partner's participation in this study will provide valuable information on the ways that parents work together and how that helps children and their families.

How do you keep my families information confidential?

- All of information you give us will be kept private. In any sort of report we may publish, we will not include any information that will make it possible to identity you or your child.

- All records are kept in locked files. We will put an ID number instead of your names on all of the surveys you complete.

- Access to the records will be limited to the researchers; however, please note that the Institutional Review Board and the internal University of Oregon Auditors may review the research records.

What are your rights?

- Your participation is voluntary. You can choose not to answer any questions and you can choose which parts of the mail-home packet you want to complete.

- You are free to withdraw at any time, for any reason; there is no penalty. If you choose not to participate, it will not affect your current or future relations with the University.

- The researcher conducting this study is Margaret Rosencrans. Margaret is completing this study as part of her dissertation. Dr. Laura Lee McIntyre, Principal Investigator for the Oregon Parent Project, is her advisor. For questions or more information concerning this research you may contact Dr. McIntyre, at 541-346-7452 or llmcinty@uoregon.edu.

- If you believe you may have suffered a research related injury, or wish to withdraw from this study for any reason, contact the Project Coordinator for this study, Angie Relling, at 541-346-1983 or relling@uoregon.edu.

- If you have any questions about your rights as a research participant, you may contact: the Research Compliance Services Office, University of Oregon at (541-346-2510) or ResearchCompliance@uoregon.edu

- You have been sent 2 copies of this form. One to sign and send back to our office and one to keep for your records and future reference.

- If you have any questions about this study, please contact Angie Relling at 541-913-7095 or relling@uoregon.edu so she can answer all of your questions before you sign this consent.

Please initial below:

_____ I have been mailed a copy of this consent form for my records.

_____ I spoke with someone on the phone who explained this study to me.

_____ I agree to participate in OPP-Family.

_____As a participant in this study, I understand that I may be contacted to participate in other research studies in the future. If I do not want to be contacted in the future, I leave this item blank

Both parents will need to sign this consent form.

1) **Parent Name:_____**
   (Please Print) First M.I. Last
2) **Parent Name:_____**
   (Please Print) First M.I. Last

1) **Parent Signature: _____ Date: _____**
2) **Parent Signature: _____ Date: _____**

Project Staff Member's Name:_____Position:_____

Project Staff Member's Signature:_____Date:_____

APPENDIX E

STUDY 2 CONSENT AND ASSENT FORMS

University of Oregon Prevention Science Institute

The Oregon Parent Project for Families

Center Interview Adult Consent

You are being invited to participate in a study called Oregon Parent Project (OPP)-Family. You are being asked to participate in this project because you and your child previously participated in the Oregon Parent Project. Please read this consent form carefully and let us if you have any questions before signing and returning this consent.

What is the purpose of the project?

- The purpose of the study is to better understand how parents work together to parent their child.
- We expect about 30 families to participate in this study.
- In order to be eligible for this study, you and your partner must both agree to participate.

What will you be asked to do if you choose to be in the project?

- If you agree to participate, you will participate in a few videotaped activities with your partner and child. Below is a description of the activities. The activities should take between 30-45 minutes.

- We will ask you to play with some toys and look at some books with your partner and your child. We will also ask you to answer survey questions about your experiences with parenting with your partner.

- Your family will receive a $25 gift card for doing these activities.

What are the risks to my participation?

- There are few risks for taking part in this study, but it is possible you may experience some minor discomfort when answering some sensitive questions about yourself (e.g., anxiety or depression) and about your family (e.g., your romantic relationship). If you do not feel comfortable answering a question(s), you do not have to answer them.

What are the benefits of being in the study?

- The purpose of this study is to better understand how partners work together while parenting their children. Although there may not be a direct benefit to you personally, your taking part in the study may benefit society. Together with other parents, you and your partner's participation in this study will provide valuable information on the ways that parents work together and how that helps children and their families.

How do you keep my families information confidential?

- All of information you give us will be kept private. In any sort of report we may publish, we will not include any information that will make it possible to identity you or your child.

- All records are kept in locked files. We will put an ID number instead of your names on all of the surveys you complete.

- Access to the records will be limited to the researchers; however, please note that the Institutional Review Board and the internal University of Oregon Auditors may review the research records.

What are your rights?

- Your participation is voluntary. You can choose not to answer any questions and you can choose which parts of the mail-home packet you want to complete.

- You are free to withdraw at any time, for any reason; there is no penalty. If you choose not to participate, it will not affect your current or future relations with the University.

- The researcher conducting this study is Margaret Rosencrans. Margaret is completing this study as part of her dissertation. Dr. Laura Lee McIntyre, Principal Investigator for the Oregon Parent Project, is her advisor. For questions or more information concerning this research you may contact Dr. McIntyre, at 541-346-7452 or llmcinty@uoregon.edu.

- If you believe you may have suffered a research related injury, or wish to withdraw from this study for any reason, contact the Project Coordinator for this study, Angie Relling, at 541-346-1983 or relling@uoregon.edu.

- If you have any questions about your rights as a research participant, you may contact: the Research Compliance Services Office, University of Oregon at (541-346-2510) or ResearchCompliance@uoregon.edu

- You have been sent 2 copies of this form. One to sign and send back to our office and one to keep for your records and future reference.

- If you have any questions about this study, please contact Angie Relling at 541-913-7095 or relling@uoregon.edu so she can answer all of your questions before you sign this consent.

Please initial below:

_____ I have been mailed a copy of this consent form for my records.

_____ I spoke with someone on the phone who explained this study to me.

_____ I agree to participate in OPP-Family.

_____ As a participant in this study, I understand that I may be contacted to participate in other research studies in the future. If I do not want to be contacted in the future, I leave this item blank

Both parents will need to sign this consent form.

3) Parent Name:_____
(Please Print) First M.I. Last

4) Parent Name:_____
(Please Print) First M.I. Last

3) Parent Signature: _____ Date: _____

4) Parent Signature: _____ Date: _____

Project Staff Member's Name:_____ Position:_____

Project Staff Member's Signature:_____ Date:_____

University of Oregon Prevention Science Institute

The Oregon Parent Project for Families

Center Interview -- Child Assent Form

This is a study to learn more about kids and families. You can help with this project if you would like to. You do not have to help if you do not want to.

If you would like to help us with this project, you will be asked to play with some games, toys and books with your parents for about 20 minutes. While you're playing, one of our project staff will be videotaping all three of you and they will also be giving instructions.

Your name will not be put on any papers written about this project. Your name will not be put on the video recordings and they will be erased after the study is done.

If you decide to help with this project but then change your mind you can stop helping at any time.

If you do not understand what our project staff is asking you to do, please ask them questions.

If you want to help with this project, please write your name on the line at the bottom of this page.

Child's Name _____

Child's Signature

_____

Witness in lieu of signature: In my judgment, the child understands the information in this consent form and agrees to be in the study.

Witness Signature _____Date _____

APPENDIX F

MEASURE INVENTORY FOR STUDY 1

Measure	Description
Who Does What Scale (WDW)	The WDW scale is a self-report measure for caregivers about family tasks (e.g., making dinner, paying bills) and childrearing tasks (e.g., getting up at night with our child, teaching our child, bathing our child, disciplining our child). Each caregiver rates the extent to which they are involved in each task on a scale of 1-9 (i.e., 1 = she does it all, 5 = we both do it equally, 9 = he does it all), and indicates the extent they would like to be involved for each task on a scale of 1-9.
Parenting Tasks Checklist (PTC)	The PTC is a 28-item self-report measure for caregivers to rate the extent of their confidence (i.e., 0 = certain I cannot do it and 100 = certain I can do it) in handling child behaviors and tasks (e.g., getting dressed, throwing a tantrum, going shopping with child).
Child Behavior Checklist (CBCL)	The CBCL is a self-report measure for caregivers about child internalizing (e.g., feels to guilty, worries, withdrawn) and externalizing (e.g., bragging, boasting; cruel to animals; demands a lot of attention; impulsive or acts without thinking) behaviors. This measure has been standardized for this population of participants.
Perceptions of Coparenting Questionnaire (PCPQ)	The PCPQ is a self-report measure for caregivers about their coparenting relationship. Caregivers report the degree to which (i.e., never, rarely, occasionally, frequently, always) they feel that they are supported by their partner (e.g., “my partner backs me up when I discipline my child”; “my partner and I use similar parenting techniques”), and the degree to which they feel undermined by their partner (e.g., “my partner criticizes my parenting in front of the child”; “my partner competes with me for the child’s attention”).
Parent Problem Checklist (PPC)	The PPC is a self-report measure for caregivers about the degree to which they agree or disagree over childrearing issues (e.g., fighting in front of children, discussions about childcare turning into arguments, lack of discussion about anything). Parents mark whether or not each item is an issue (i.e., yes or no) and to what extent it is an issue (i.e., 1 = not at all, and 7 = very much)

APPENDIX G

BEHAVIOR DEFINITIONS AND EXAMPLES

Partner support behavior. Partner support behavior is defined as any instance in which a) parent provides contingent attention or prompting towards compliance following a partner's command, or b) any instance in which parent provides positive attention to his or her partner

- Contingent Attention or Prompting of Compliance Following Partner Directive: Any instance in which a) the parent verbally, gesturally, or physically prompts the child to comply with the partner's command or b) utters a praise statement (defined as one or more words used in a positive evaluation of the child) within ten seconds of child compliance following partner's instruction

    - Examples
        - "Thanks for listening to your mom!"
        - "Wow! That was quick!"
        - "Nice."
        - "Do what your mom said."
        - "No, your dad said you had to clean up."
        - *Dad points to toy box following mom's command to open it*
    - Non-examples
        - "Of course you listen to Mom, but not me."
        - *Continues playing with toys*
        - *Smiles at partner*
        - *Provides a conflicting direction to child*
        - *Mom says "*time to clean up*"; Dad says* "I think we should race these cars one more time."

- Positive Attention to Partner is defined as any instance in which a parent utters a positive or neutral statement directed towards the partner, which includes one or more words, and includes one or more of the following: statements and/or questions related to the activity, statements and/or questions about the child, praise statements directed to partner about the child, or praise statements directed to the partner about the partner. Statements may or may not include direct eye contact or physical contact (e.g., touching arm) with the partner.

    - Examples
        - "She is having a blast with these blocks. I think we know what to get her for her birthday!"
        - "Look at how nicely our daughter is coloring this picture!"
        - "Did you see how quickly he followed your direction?"
        - "Thanks for making me this pizza, Dad!"
        - "How many blocks do you think he has in that tower?"
    - Non-examples

- "Did you go to the bank today?"
- "Of course she makes you cake but not me."
- "We're playing with blocks again? I wish we could do something less boring."
- "Don't let him hold the car, he'll want to put it in his mouth."

Partner undermining behavior. Partner undermining behavior is defined as any instance in which a parent a) provides a command to the child that conflicts with the partner's command, b) utters a statement to the partner, which includes one or more words, that is a negative evaluation of the partner, or c) utters a statement to the child, which includes one or more words, that is a negative evaluation of the partner

- Examples
  - "No, don't let him do that" *(to partner)*
  - "Your tower is so bad" *(to partner)*
  - "You're doing it wrong!"*(to partner)*
  - "Your mom doesn't know how to race cars" *(to child)*
  - (*To child, after partner has said to build a tower)* "First make a house with the blocks"
  - (*To child, after partner has said to clean up)* "No, let's play for one more minute!)
- Non-examples
  - "Hmm, I wonder what your dad is going to cook for us!"
  - "Looks like your mom is drawing something silly for us!"
  - "I'm hungry…what should we have for dinner?"
  - "Honey, look at how fast our son is doing this puzzle!"

Child Inappropriate Behavior. Inappropriate behaviors include any instance in which the child engages in aggression, disruption, or negative vocalizations. Aggression is defined as any instance in which the child uses parts of his or her body (e.g., hands, elbow, feet) to hit, bite, or kick another person. Disruption is defined as any instance in which the child uses parts of his or her body (e.g., hands, elbow, feet) to hit or throw another object. Negative vocalizations are any instance in which the child, screams, swears, whines/yells/growls, or says threatening words.

- Examples
  - Kicks dad (aggression)
  - Hits mom (aggression)
  - Throws puzzle piece across the room
  - Screams "NO"
  - Whines, "I don't want to do it that way"
- Non-examples
  - Tickles mom
  - Throws ball
  - Says, "no thank you"

Child Appropriate Behavior. Appropriate behaviors include any instance in which the child utters neutral or positive statements, uses echolalia, or babbles/attempts to speak using a consonant/vowel sound (e.g., "ba").

- Examples
    - "let's race our cars!"
    - "this box is hard to open"
    - "I want the red bag first"
    - "ca-ca-ca"
    - "more please"
- Non-examples
    - Pointing to things
    - *(yelling for car)* "ca!"

Child compliance. Child compliance is defined as any instance in which child follows or starts to follow a command delivered by parent(s) within ten seconds of the last word of the direction. Compliance may or may not be in response to several parent instructions; if this is the case, compliance has occurred if the child begins to follow one of the commands issued within ten seconds. A command is defined as a question or statement either telling the child what to do or what not to do, which may or may not be accompanied with one or more additional commands.

- Examples
    - *Child starts putting blocks away as soon as his dad tells him to*
    - *Parent says,* "Come here! Let's play over here! Let's look at these blocks and build a tower" *and child begins to move over to parent but does not look at blocks.*
    - *Parent says,* "will you race cars with me?"; *child nods head and picks up a car*
- Non-examples
    - *Parent delivers several commands at once; child continues to engage with toys and ignores parent*
    - *Child looks at parent after he or she delivers a command but does not initiate behavior to follow direction*
    - *Parent asks child,* "will you play with us?*" and child says no.*
    - *Parent says,* "don't put toys in your mouth" *and child continues to suck on a toy*

APPENDIX H

VIDEOTAPED OBSERVATION TASK SCRIPT

Video Triadic Play Task Script

- Get everything out and ready and set up camera
    - Header
    - Tripod
    - Take Structured Activity bag out & place it somewhere out of reach
- Hold bin with you
- Get timer ready and push record on camera (set timer as stop watch counting up)
    - Film Header
- Say to parent something like "Just so you know I will be reading from a script so it might sound kind of odd. This is just so everyone gets the same instructions."
- Start reading instructions:

"Next we will be conducting a short, 12 minute observation of all three of you playing with some toys I brought. Do you have questions before we start?

STANDARDIZED TOYS - FREE PLAY
(5 minutes)

"**All three of you will have the chance to play with these toys I brought. Try to pretend like I'm not here and play like you normally would. I'll let you know when it's time to clean up."**

- Push Bin to Parent

00:00 Start Timer at "Go"
"GO AHEAD AND PLAY"

04:00 One Minute Warning:
"**You have one more minute before it's time to clean up and get ready for the next activity."**
5:00 Stop Timer

CLEAN UP
(2 minutes)

"It's time to clean up now. Please put all of toys back into the box."
5:00 Start Timer at "GO"
"GO AHEAD AND CLEAN UP."

If they are finished cleaning but two minutes are not yet finished, say,

"Wow! That was fast! We have ____ more minutes/seconds until the next activity."

7:00 Stop Timer

If all of the toys have been picked up after two minutes, say,

"Thank you for cleaning up so quickly! We have one more activity today."

If all the toys have NOT been picked up, say,

"Thank you for helping clean up. Let me quickly help finish so we can move on to our last activity."

- Help clean up toys if necessary **(**You can finish later if needed)

- Move toy bin out of reach

STRUCTURED ACTIVITY

(5 minutes)

"Here is a puzzle for your child. This puzzle might be a little tricky, and it's okay if you don't finish it. You can help him/her with the directions and with words, but we ask that you do not touch the puzzle yourself."

- Set puzzle down

7:00 Start Timer at "Go"

"GO AHEAD AND GET STARTED"

11:00 One Minute Warning:

"**You have one more minute.**"

12:00 Stop Timer

"That's it for puzzle. Great work!" (To child say)

- Let parent lead finishing the task. Child can finish puzzle, or can finish cleaning up then:
  "Thanks for playing with these toys! We have another activity you get to do with your parents.

BOOK TASK

(5 minutes)

"**All three of you will have the chance to look at these books I brought. Try to pretend like I'm not here and look at the books like you normally would. I'll let you know when it's time to clean up."**

- Push box of books to parent

00:00 Start Timer at “Go”

“GO AHEAD AND PLAY”

04:00 One Minute Warning:

“**You have one more minute before it’s time to clean up.**

5:00 Stop Timer

“That’s it for the books. Great work!” (To child say)

- Turn off camera
- Let parent lead finishing the task. Child can finish book, or can finish cleaning up

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