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The current study used data from the first phase of the NICHD-SECCYD study, which was collected from birth to age three. These data were collected from 1991 to 1995. The current study utilized a time-lagged, multilevel model to examine the association between increases in maternal relative earnings and subsequent increases in father responsibility for routine childcare tasks over time. Both maternal emotional intimacy and parenting stress were examined as potential moderating effects. The sample included married and cohabitating families. The central constructs for this study were measured at the 6, 15, 24, and 36-month time points, with fathers reporting on their own responsibility for routine childcare tasks and with mothers reporting on their own and their husband's earnings, their perceptions of emotional intimacy, and their own parenting stress. Results indicated that maternal relative earnings were positively associated with subsequent father responsibility for routine childcare tasks. Although emotional intimacy did not moderate this association, the association between maternal relative earnings and father responsibility for routine childcare tasks was stronger as parenting stress decreased. These findings may have applied implications for intervention programs.

THE EFFECT OF MOTHERS' RELATIVE EARNINGS ON FATHERS'
RESPONSIBILITY FOR ROUTINE CHILDCARE TASKS ACROSS
THE FIRST THREE YEARS: THE MODERATING ROLES OF
EMOTIONAL INTIMACY AND PARENTING STRESS

by

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TABLE OF CONTENTS

	Page
LIST OF TABLES	v
LIST OF FIGURES	vi
CHAPTER	
I. INTRODUCTION: FOCUS AND THEORY	1
II. LITERATURE REVIEW AND PROPOSED STUDY	23
III. METHOD	35
IV. RESULTS	46
V. DISCUSSION	50
REFERENCES	66
APPENDIX A. TABLES	83
APPENDIX B. FIGURES	93

LIST OF TABLES

	Page
Table 1. Descriptive Statistics for Primary Variables.....	83
Table 2. Descriptive Statistics for Time-Varying Control Variables	84
Table 3. Descriptive Statistics for Time-Invariant Control Variables	86
Table 4. Intercorrelations Among Time-Varying Variables	88
Table 5. Intercorrelations Among Time-Invariant Variables	89
Table 6. Multilevel Models Predicting Fathers' Responsibility for Routine Care Tasks.....	91

LIST OF FIGURES

	Page
Figure 1. Maternal Relative Earnings by Parenting Stress in Prediction of Father Responsibility for Routine Childcare Tasks	93

CHAPTER I

INTRODUCTION: FOCUS AND THEORY

The vast majority of research on parenting and child development has focused on mothers, often disregarding the positive impact that fathers can have on their children. This is likely due to enduring societal beliefs that mothers should play a substantial role in caregiving and fathers should contribute through breadwinning (Lamb, 2000). As these views have begun shifting in the U.S., fathers have started to increase their participation in childcare and are currently more involved than ever before, with fathers increasing their time in childcare from 2.5 hours a week in 1965 to 8 hours in 2016 (Parker & Livingston, 2019). However, fathers on average are still much less involved in childcare than are mothers, who have also seen a similar increase in childcare involvement over time, from 10 hours in 1965 to 14 hours in 2016, despite also increasing their paid work from 9 to 25 hours across this same time period. This suggests that this increase in childcare may not be unique to fathers (Bianchi, Robinson, & Milkie, 2006; Parker & Livingston, 2019). One reason why parental involvement has continued to increase for both mothers and fathers is due to parents subscribing to the idea of intensive parenting, or parenting that is “child centered, expert guided, emotionally absorbing, labor intensive and financially expensive” (Faircloth, 2014, pp. 27). This parenting philosophy has outweighed structural changes such as maternal employment, even for parents who may have limited time or financial resources to successfully do it (Craig, Powell, & Smyth,

2014). Although fathering has not been studied to the extent that mothering has, over the past three decades scholars have begun viewing fathers as active caregivers, leading to an upsurge in research. There is increasing evidence that fathers play an important role in their children's social-emotional development (Cabrera, Shannon, & Tamis-LeMonda, 2007; Marsiglio, Amato, Day, & Lamb, 2000) and as fathers vary in their levels of involvement, researchers should examine the factors that promote greater involvement in caregiving. The general construct of father involvement in caregiving is defined conceptually as the quality and quantity of time fathers spend in childcare tasks with their children.

When focusing on residential fathers, there is evidence that the quantity of father involvement in caregiving activities is associated with children's socioemotional outcomes. For example, children exhibit fewer behavioral problems when fathers were more involved in childcare (Amato & Rivera, 1999; Gryczkowski, Jordan, & Mercer, 2010). This association may be even more pronounced for male children (Aldous & Mulligan, 2002). Although the evidence has been mixed as to whether father involvement is related to children's internalizing problems, preliminary findings suggest that greater involvement in caregiving activities may predict fewer internalizing problems if caregiving occurs in the context of a supportive coparenting relationship (Jia, Kotila, & Schoppe-Sullivan, 2012). Supportive coparenting refers to the "affirmation of the other's competency as a parent, acknowledging and respecting the other's contributions, and upholding the other's parenting decisions and authority" (Feinberg, 2003, pp. 104). Learning to coparent well is particularly important after the birth of a child.

The transition to parenthood can be a difficult period, with couples having to reallocate their time to childcare (Kluwer, 2010). Additionally, the infancy and toddlerhood periods require parents to be more hands-on and directly involved in caregiving than any other periods in child development, which can lead to added levels of stress and time strain for parents. Many married mothers also return to work soon after having a baby in order to help provide financial support, and this can contribute to parenting role strain when trying to cover childcare duties. In 2017, 60% of married mothers with children under the age of three years old were in the workforce, with 67% of these employed mothers having one-year-old infants (U.S. Bureau of Labor Statistics, 2018). Despite mothers' employment, they are also commonly responsible for the majority of caregiving, with fathers being more likely to spend their parenting time playing with children rather than engaging in caregiving activities (Kotila, Schoppe-Sullivan, & Kamp Dush, 2013). However, mothers of children under three years of age have reported that they value when fathers engage in caregiving tasks (Fuligni & Brooks-Gunn, 2003). Therefore, one dimension of parenting that should be of particular interest to researchers is responsibility for routine childcare tasks, or tasks that are highly repetitive and less enjoyable, such as changing diapers, bathing, and feeding children. As mothers have been reported to do as much as twice the routine childcare as fathers, it is a place in which delegation can occur (Kotila, Schoppe-Sullivan, & Kamp Dush, 2013). As advised by Craig and Mullan (2011), identifying factors associated with the sharing of routine childcare of children is necessary to better understand how to promote greater gender equity in childcare.

Findings from the NICHD Study of Early Child Care and Youth Development (NICHD SECCYD; NICHD, 2000) showed that fathers increased their involvement in routine childcare tasks from 6 months through 36 months, although more research is needed to assess potential antecedent factors. One potential factor may be related to maternal employment, as there is evidence that the percentage of income that mothers earn relative to their partners is positively associated with father involvement occurring during the same time period (NICHD, 2000). With so many mothers returning to work within a year of giving birth, it is likely that their incomes will be increasing following their time off, and these increases in income may be predictive of subsequent increases in father involvement. Research shows that fewer than 10% of mothers return to work within one month after the birth of a child, but those numbers start to substantially increase by 6 months, and by 9 months postbirth that number rises to 60% (Han, Ruhm, Waldfogel, & Washbrook, 2008). Further, many mothers who want to stay at home with their newborns but who have families that are reliant on their income may compromise by returning to part-time employment before transitioning back to full time. As income increases with number of work hours, mothers who return to work should experience an increase in their earnings as they return to work or move from part-time to full time work hours.

Additionally, the current study's data were collected prior to the establishment of the Family Medical Leave Act (FMLA), which entitles employees to take unpaid, job-protected time off. Data from the Bureau of Labor Statistics' Employee Benefits Survey (Waldfogel, 1999) show the percentage of women working for the private sector who had

access to family leave coverage in 1991. For full-time and part-time employees in medium-sized and large establishments, 39% and 20%, respectively, reported having any leave, with only 5% reporting paid leave for either group. For those working full-time at small establishments, the number dropped to 19% for those reporting any leave, with 11% reporting paid leave. As such, many mothers in the current sample stopped working after the birth of their child, leading to a lack of income, before returning to work and beginning to earn income again. This also means that fathers were less likely to take time off themselves, as their time off was not protected either. Therefore, across this sample, mothers' earnings are expected to increase, with fathers' earnings remaining stay stable.

No study as of yet has examined whether increases in income predict subsequent increases in father involvement. Additionally, mothers often delegate tasks for fathers to complete, rather than asking fathers to assist them (Meteyer & Perry-Jenkins, 2010). When negotiating who does what in childcare, mothers who have greater relative earnings can use the power associated with this advantage to act as delegators in the decision-making process. Maternal relative earnings refers to the percentage of the couple's total earned income that the mother contributes. As this income percentage increases, so does mothers' power, which allows them to negotiate out of the less enjoyable caregiving responsibilities and delegate them to fathers. When used for this purpose, mothers' relative earnings earned from returning to work can lead to greater father responsibility for routine childcare tasks later on. Unfortunately, mothers who are not employed lack this particular form of leverage in the decision-making process, which might result in them having less bargaining power and less influence in delegating tasks.

Society teaches women that they need to highly identify with mothering, and current societal beliefs have led mothers to spend more time in childcare than ever before (Bianchi, 2000). However, with greater economic contributions and the power these contributions afford comes an increased feeling of entitlement for equality in the division of labor among women in the workforce (Perry-Jenkins, Pierce, & Goldberg, 2004). Societal expectations, however, may lead some mothers to be uncomfortable asking for help from their partners when they become overwhelmed or experience work-family conflict and personally desire some help. When negotiating who does what in childcare, mothers may make decisions as to whether or not to negotiate their need for childcare help with their partner depending on the quality of their past interactions and relationship. In their qualitative study on how couples successfully balance family and work, Zimmerman, Haddock, Current, and Ziemba (2003) interviewed 47 middle-class dual-earner couples with children who perceived themselves as being successful at balancing work and family. The couples discussed shared emotion work and identified mutual enjoyment and respect as being vital to their ability to work through parenting challenges. One couple shared that when the mother acknowledged that things were not going well, the father would then look for ways to make things run more smoothly. This was consistent with many other couples who discussed generosity and offering assistance to each other when feeling stressed as being central to their ability to coparent well together. As Reis and Shafer (1988) noted, when individuals confide in their partners and receive caring responses, they are more likely to view their relationships as intimate and be more likely to disclose their thoughts and feelings again. This lends supports to the idea that in

relationships with high emotional intimacy, in which mothers believe that fathers care about their thoughts and feelings, and in which they feel supported by them, they may be more willing to both express their need for help with routine childcare tasks and to negotiate for fathers to take on additional responsibilities. Alternatively, if mothers don't trust that their partners will respect their thoughts and feelings, or if they have been met with defensiveness in the past when trying to do so, they may not want to broach the topic with their partners. Instead, they may choose to continue doing the work themselves, as it may require less energy than would the conversation. Therefore, the increase in power due to increased relative income might not matter as much for mothers who perceive lower emotional intimacy.

Theoretically, the process will be two-fold for mothers who feel more confident in disclosing their feelings and needs with their partners, who and for whom fathers are more responsive to such disclosures. First, mothers will use their bargaining power to negotiate out of routine childcare tasks, leading to these mothers performing fewer routine childcare tasks themselves. Then, these mothers will bargain for fathers to do more to fill that gap, leading to increased paternal responsibility for routine childcare tasks. Mothers' relative earnings may be less relevant in families in which fathers desire more responsibility, as mothers may not need to discuss a need for help with fathers to get them more involved in routine childcare tasks.

Additionally, some mothers may struggle during the infancy and toddlerhood periods because children of this age are highly reliant on their caregivers for assistance in everyday tasks. This high reliance can lead mothers to feel stressed in their parenting

role, especially if they feel that they are unable to pursue their own interests due to the responsibilities of raising a child. Parenting stress is defined as the experience of distress or discomfort that results from demands associated with the role of parenting (Deater-Deckard, 1998). Mothers who experience higher levels of parenting stress may be more likely to use increases in their bargaining power to encourage fathers to become more involved, in order to relieve themselves of some of their caregiving responsibilities. However, increases in mothers' relative earnings may be less relevant in families in which mothers are experiencing lower levels of parenting stress, as mothers may not feel as much of a need to get fathers to assume some of the childcare responsibilities.

Thus, as a preview, the focus of this study is to examine whether increases in maternal relative earnings are predictive of later increases in father responsibility for routine childcare tasks. Emotional intimacy and maternal parenting stress will be examined as potential moderators of this relationship as mothers may be more likely to express a need for help with their partners when their relationships are more emotionally intimate, or when they are experiencing higher levels of parenting stress.

Theoretical and Conceptual Foundations

Fathers' roles in child development have changed substantially over the years. Beginning in Puritan times and into the 1800s, fathers were responsible for giving their children a religious education and acting as good religious role models. Although fathers played a role in their children's moral upbringing, mothers were responsible for caregiving. Following industrialization, fathering became associated with breadwinning - an idea that still exerts a strong influence today. During that time, fathers were expected

to provide financial support for their children, whereas mothers provided physical and emotional support. In some respects, mothering was viewed as a relationship and fathering was viewed as a status.

During World War II, researchers began questioning whether the absence of fathers during wartime affected children's development. The majority of work at this time focused on father presence versus absence, with the goal of investigating whether father absence led to undesirable outcomes for children. Pauline Sears (1951) was the first to research the topic, concluding that children, especially boys, were at an increased risk for psychosocial problems when their fathers were absent. Other studies reflected the idea that the absence of fathers was associated with children's poorer sex-role development, father-child attachments, and psychological difficulties (Day & Lamb, 2004). Subsequently, other researchers began investigating *what* about fathers influenced child development, with a focus on fathers' psychological characteristics.

During the mid-1970s, fathering foci changed once again with a shift in thinking about the construct. This shift led to a reconceptualization of fathering into what Lamb (2000) calls "the New Nurturant Father." According to Lamb, nurturant fathers are interested in playing active roles in their children's upbringing. Consistent with this, researchers are now more likely to view fathers as inhabiting multiple roles in relation to their children, such as parent, friend, teacher, and breadwinner (Lamb & Tamis-Lemonda, 2004). This change in conceptualization was, in part, due to a push for social change. Around this time, many feminists focused on the need for men to assume more responsibility for their children, and fathers' rights movements emphasized that

nonresident fathers could be involved in more ways than just providing child support (Marsiglio et al., 2000). Both of these efforts helped transform the scholarly construct of fathering to include nurturing. Consistent with this reformulation, demographic studies showed that fathers were beginning to take more responsibility for caregiving, albeit slowly (Pleck & Masciadrelli, 2004). How researchers define and characterize the ways that fathers are involved have varied as society's views of the fathering role have progressed.

Pleck's (2012) Model of Father Involvement

One way to conceptualize father involvement is by using Pleck's (2012) revised version of Lamb's multidimensional model of father involvement (Lamb, Pleck, Charnov, & Levine, 1987). The original model was initially created to address inconsistencies in the various ways researchers had been measuring the concept (Fagan, Day, Lamb, & Cabrera, 2014). Lamb and colleagues initially defined involvement as "the amount of time spent in activities with the child" (pp. 884), and the model included three separate components: interaction, availability, and responsibility. Interaction, also referred to as engagement, referred to the father's "direct contact with the child, through caretaking and shared activities." Availability, also referred to as accessibility, was a related concept "concerning the father's potential availability for interaction, by virtue of being present or accessible to the child." Direct interaction did not have to be occurring for fathers to be available to their children. Finally, responsibility referred to "the role the father takes in making sure that the child is taken care of and arranging for resources to be available for the child." According to Lamb et al., the responsibility component could

include tasks such as arranging for babysitters or making pediatrician appointments and taking children to them.

This initial conceptualization of father involvement had a few limitations. First, there was a lack of precision in the definition of the responsibility component, which led to measurement inconsistencies (Pleck, 2012). Second, others noted a failure to include additional dimensions of fathering that may be related to child outcomes, such as providing financially for children and cognitive monitoring (McBride, Schoppe-Sullivan, & Rane, 2002). Lastly, the conceptualization of father involvement focused primarily on the quantity of involvement, ignoring the quality (Pleck, 2012). To address these limitations, Pleck (2012) proposed a new conceptualization of father involvement that included three primary components: positive engagement, warmth and responsiveness, and control, and two auxiliary components: indirect care and process responsibility. Positive engagement referred to “interactions with the child of the more intensive kind likely to promote development;” warmth and responsiveness referred to sensitive behaviors or expressions of positive affect; and control referred particularly to “monitoring and decision making.” The auxiliary components were revisions of the old responsibility component, with indirect care referring to the “activities done for the child that do not entail interaction with the child” and process responsibility, referring to a father’s “monitoring that his child’s needs for the first four components of involvement are being met.”

This new model addressed Pleck’s critique that he and Lamb had not defined responsibility precisely enough, and also addressed McBride et al.’s (2002) criticism that

the model did not include financial provisions and cognitive monitoring. Finally, the new component of positive engagement addressed the concern about quality vs. quantity. This updated model encompassed a larger array of behaviors that fathers engage in related to childcare. According to Schoppe-Sullivan, McBride, and Ho (2004), the construct of father involvement is multidimensional, but they suggested that researchers interested in studying it should choose specific aspects that they are interested in and then collect information about those particular aspects of involvement from multiple sources. This current study will adopt their suggestion by focusing on fathers' responsibility for routine childcare tasks, as there is evidence that mothers find this type of involvement to be the most valuable when sharing childcare responsibilities with fathers (Fulgini & Brooks-Gunn, 2003). Theories such as the bioecological perspective can help to explain what factors play a role in predicting the amount of routine childcare provided by fathers.

The Bioecological Perspective

The bioecological perspective (Bronfenbrenner & Ceci, 1994) focuses on developmental change, which is driven through a mechanism that Bronfenbrenner calls proximal processes, or the "engines of development" (Bronfenbrenner & Evans, 2000, p. 118). Proximal processes are interactions between the individual and his or her environment that occur on a fairly regular basis over extended periods of time (Bronfenbrenner & Ceci, 1994), and during infancy they occur primarily with parents or caregivers. When fathers engage in proximal processes with their infants, they help promote development. These processes vary substantially due to the characteristics of the developing person, their contexts, and the time periods over which the processes take

place. Context is of particular importance for understanding fathers' level of responsibility for routine childcare tasks.

One context that may affect how involved fathers become is their exosystem, or the environments that affect them indirectly through their effects on those with whom they interact. Mothers' work environments may affect fathers indirectly, as maternal employment provides mothers with earnings that they can use as leverage when bargaining about the division of routine childcare tasks. Bargaining theory has often been used to explain how couples negotiate the division of housework tasks, and therefore it may have utility for explaining the division of childcare as well.

Bargaining Theory

In 1996, two economists, Lundberg and Pollak, proposed using a theory of bargaining and distribution in marriage when discussing finances and decision-making. The current model at the time was the common preference model, which proposed that families' expenditures were independent of who earned or controlled family resources. Income was viewed as a "pooled" entity that was allocated to maximize a single objective function. However, proponents of women's empowerment were beginning to argue that women's education and income affect their decision-making authority regarding family life, and the common preference model could not account for this. Additionally, studies of the time were finding that couples did not view their incomes in terms of pooling, and that children benefitted from their mothers earning a larger relative portion of family resources (Lundberg, Pollack, & Wales, 1995).

To address these issues, Lundberg and Pollak (1996) discussed the merits of bargaining theories, which “place distribution within marriage in a theoretical framework that is consistent with existing analyses of marriage and of divorce: two decision makers with well-defined preferences choosing an action or strategy from a well-specified set of alternatives” (pp. 156). Lundberg and Pollak (1996) point to the Nash bargaining model as the leading bargaining model of marriage. According to this model, the husband and wife are the two bargaining members, and both rely on their individual contributions (such as earnings) to negotiate. When they are unable to agree, the payoff received is represented by a “threat point,” which can be associated with a non-cooperative equilibrium within the marriage, or at the extreme, divorce. The husband and wife settle their differences by bargaining, with the contributions received by either partner depending on the threat point, such that the higher one’s contributions at the threat point, the higher one’s utility in bargaining. In terms of earnings, this means that the higher one’s relative earnings is, the more bargaining power one will have within the marriage.

Bargaining models have traditionally been used to explain the negotiating that goes into dividing up household chores (Bittman et al., 2003; Sullivan, 2011). However, they may also be useful for understanding the division of childcare as well.

Unfortunately, the evidence is less clear in regard to this applicability, possibly due to the nature of childcare tasks. Parents may find doing chores burdensome but may enjoy the intrinsic rewards of providing childcare. Research has shown that parents rate childcare more positively than housework, and that childcare may be more related to a sense of future investment (see Chesley & Flood, 2017 for a review). Therefore, mothers may not

be as likely to want to bargain about childcare as they would about housework. However, in families in which mothers prefer fathers be involved, they may use their relative earning power to bargain for the more enjoyable tasks, and to delegate the more chore-like tasks to fathers. The level of emotional intimacy in mothers' relationships may affect how willing they are to engage in conversations regarding childcare with their partners.

The Interpersonal Process Model of Intimacy

There has been a lack of consensus on the conceptualization of emotional intimacy, as researchers have considered it together with self-disclosure, relationship satisfaction, and commitment (see Gaia, 2002 for a review). It also is not the same as sexual intimacy, despite it often being discussed in the context of intimate relationships. Theorists and researchers began discussing intimacy in the 1950s, and its conceptualization has changed and evolved over the past half century, from a unidimensional construct to a multidimensional one including emotional intimacy as one of the general intimacy dimensions.

Erik Erikson (1968) was one of the first theorists to write about intimacy in his stage theory. During adolescence, individuals move through the sixth stage of psychosocial development, that of intimacy versus isolation. During this conflict, they must discover their own identities and then learn how to share them with others in order to create relationships. Failure to do so results in social isolation and "self-absorption." Success leads to a synthesis of the two identities in which both individuals have a profound concern for one another, defined by Erikson as intimacy. Harry Stack Sullivan (1953) also believed that the need for intimacy began in adolescence, and he asserted that

it is needed for individuals to feel validated and worthy. Abraham Maslow (1954) also considered intimacy to be essential for healthy emotional growth and described it as a prerequisite for the higher levels in his hierarchy of needs. According to Maslow, until an individual met basic needs such as food and shelter and then psychological needs such as intimacy and feelings of accomplishment, they could not reach the top level of self-fulfillment needs, or self-actualization.

D. H. Olson (1975) was the first to include emotional intimacy as a component of intimacy, in addition to social, intellectual, sexual, recreational, spiritual, and aesthetic intimacy. He defined it as experiencing a closeness of feelings. R. A. Lewis expanded this definition by describing emotional intimacy as including behaviors or “mutual self-disclosure and other kinds of verbal sharing, as declarations of liking and loving the other, and as demonstrations of affections” (1978, pp. 108). However, self-disclosures are only one aspect of emotional intimacy. According to Gaia (2002) in her review of past and current literature, emotional intimacy can be described as consisting of seven nonverbal and verbal components, including self-disclosure, emotional expression, support, trust, physical intimacy or touch, mutuality, and closeness. Despite the conceptualization of emotional intimacy becoming clearer over time, the major theories relating to intimacy have typically addressed intimacy in more general terms.

According to Reis and Shaver’s Interpersonal Process Model of Intimacy (1988), intimacy is an interpersonal, transactional process composed of self-disclosure and partner responsiveness. Based off their motives, needs, goals, and fears, individuals disclose self-relevant feelings and information. Their partners then provide emotional and

behavioral responses based on their own motives, needs, goals, and fears. Next, the individual interprets and reacts to their partner's response. If the response leads to the individual feeling understood, validated, or cared for, he or she is likely to interpret the interaction as intimate and be more likely to disclose once again. In terms of emotional intimacy, this would refer to the disclosure of emotionally-laden thoughts, feelings, and needs. Reis and Patrick (1996) considered emotional self-disclosures to be most strongly related to intimacy.

According to Laurenceau and colleagues (2004), the interpersonal process model of intimacy is useful for multiple reasons. First, it acknowledges that levels of intimacy can vary between relationships and individuals, with some relationships being more intimate and some individuals wanting more intimacy. Second, the model conceptualizes intimacy as a dynamic process unfolding over time, such that specific interactions between partners can vary in their level of intimacy. Third, the model produces a set of specific, tenable, and testable hypotheses reflecting various mediators and moderators related to the process of developing intimacy. Fourth, the model acknowledges that individuals make global evaluations of their relationships based on recurring interactions over time. Individuals who consistently feel understood, validated, or cared for after their self-disclosures are more likely to evaluate their relationships as more intimate and find their relationships to be more satisfying and trustworthy. Those who feel unheard or uncared for after their self-disclosures are more likely to evaluate their relationships as less intimate and may begin to limit their self-disclosures.

Despite its strengths, the interpersonal process model of intimacy is limited in that partners often play both the role of the discloser and the responder over the course of an interaction, which the theory does not take into account in its feedback loop. In relationships with high emotional intimacy, in which mothers believe that fathers care about their thoughts and feelings, and in which they feel supported by them, they may be more willing to both express their need for help with routine childcare tasks and to negotiate for fathers to take on additional responsibilities. Additional factors may also lead mothers to negotiate with fathers to take on more responsibilities. For example, mothers who experience high levels of parenting stress may also be more willing to encourage their partners to get involved through their use of facilitative gatekeeping behaviors. Facilitative gatekeeping refers to gate-opening behaviors that encourage father involvement, such as asking father's opinions on parenting issues or arranging activities for fathers to do with their children (Trinder, 2008).

Role Strain Theory

Pearlin (1989) emphasized the importance of studying stress as it provides the opportunity to observe how the structural arrangements of people's lives, and the experiences that they have due to these arrangements, affect their well-being. Stress stems from perceiving particular experiences as threatening or burdensome, and many of these experiences occur within relationships in the family. For parenting, stress comes from the distress or discomfort that results from demands associated with the role of parenting (Deater-Deckard, 1998). The tasks associated with the parenting role can be found as stressful for parents as they take up a significant amount of time. For example,

mothers spent an average of 14 hours a week on childcare in 2016, which equates to roughly the number of hours in some part-time jobs (Parker & Livingston, 2018). For employed mothers, these hours go beyond their hours worked in part-time or full-time employment.

According to Abidin (1995), there are three factors that lead to parenting stress: feeling overwhelmed by the level of responsibilities, feeling trapped, and strains in the parent–child relationship. Mothers who experience higher levels of parenting stress may be particularly interested in bargaining with fathers to increase their responsibility for routine childcare tasks in order to reduce their own stress. One way in which mothers may encourage fathers to become more involved is through facilitative gatekeeping.

Maternal Gatekeeping Theory

Allen and Hawkins (1999) define maternal gatekeeping as a set of beliefs or behaviors that can facilitate and inhibit greater father involvement. Maternal gatekeeping was originally conceptualized as having three dimensions: “mothers’ reluctance to relinquish responsibility over family matters by setting rigid standards, external validation of a mothering identity, and differentiated conceptions of family roles” (Allen & Hawkins, 1999, p. 199). By setting rigid, and sometimes unattainable standards, mothers can make parenting more difficult for fathers. If fathers can’t or won’t meet these standards, mothers may take away their parenting privileges in order to parent “their way.” This can include redoing tasks that fathers have already done or criticizing fathers’ parenting. Mothers may also feel that parenting and childcare define their roles as women, and therefore parenting by fathers threatens their maternal identities. Mothers

may then gatekeep in order to validate their roles and maintain their power and influence. Finally, mothers may hold non-egalitarian beliefs that women should be responsible for childcare and that men should be breadwinners. When fathers become too involved in parenting, mothers may feel that their territory is being encroached on and gatekeep to keep the roles divided (Allen & Hawkins, 1999).

Scholars have criticized Allen and Hawkins' (1999) definition as inadequately comprehensive, as their conceptualization is more aligned with inhibition than facilitation (Puhlman & Pasley, 2013). For example, some have pointed to the overwhelming focus on maternal behaviors that restrict father involvement (Adamsons, 2010) and others have noted the lack of consideration for fathers' roles in gatekeeping processes (Walker & McGraw, 2000). To address these limitations, Puhlman and Pasley (2013) proposed a new definition and expanded conceptualization, drawing from family systems theory and a feminist perspective. They defined maternal gatekeeping as "a set of complex behavioral interactions between parents, where mothers influence father involvement through their use of controlling, restrictive, and facilitative behaviors, directed at father's childrearing and interaction with children on a regular and consistent basis" (pp. 177). The maternal gatekeeping dimensions of control, encouragement, and discouragement operate on intersecting continua from low to high, and the separation of discouragement from encouragement allows for the ability to understand the complexities surrounding the different contributions of each.

In their model, control refers to "the degree to which mothers are controlling over family matters and fathering behaviors" (pp. 179), and control is expressed through the

degree to which mothers hold positions of power in which they are the ultimate decisions makers in regards to family functioning, and their intensity in overseeing father-child interactions. Puhlman and Pasley (2013) do not deem control to be positive or negative as it can both limit and enhance father involvement. Encouragement refers to the degree to which mothers act to support fathers, and it is intended to lead fathers to increase or maintain high levels of involvement. Finally, discouragement refers to the degree to which mothers are discouraging and critical of fathers and their involvement with children. These behaviors can be both overt, such as dissuading fathers from being involved, to more subtle behavior, such as redoing tasks done by fathers.

Mothers who are experiencing high levels of parenting stress may be especially likely to use maternal gatekeeping to facilitate/encourage fathers to take over a larger portion of routine childcare responsibilities to relieve themselves of what they view as a burden. They may lower their control in order to get fathers more involved, or they may directly encourage father involvement. They may use the power they gain from increases in their relative earnings to put more pressure on fathers as well (i.e., a control process).

When viewed together, these theories can help to explain why increases in maternal relative earnings should predict later increases in father responsibility for routine childcare tasks. First, bargaining theory can help to explain how a factor of maternal employment, earnings, can lead to mothers negotiating who is responsible for various routine childcare tasks, as their earnings provide them with the power needed to successfully delegate. Although mothers and fathers are in a relationship with each other, fathers' involvement with their children is not directly impacted by mothers'

employment. The bioecological systems theory is useful for understanding why this indirect effect occurs, as fathers are situated within nested levels of the environment that can exert both direct and indirect effects. Mothers' employment is an exosystem for fathers, indirectly affecting them through their influence on mothers. However, these theories do not also explain why the two proposed moderators, emotional intimacy and parenting stress, may affect the relationship between maternal relative earnings and father responsibility for routine childcare tasks.

The Interpersonal Process Model of Intimacy posits that couples with higher emotional intimacy are more likely to feel comfortable sharing their wants and needs with each other, which suggests an environment that may be more conducive to mothers feeling confident in using their bargaining power. Additionally, role strain theory helps to explain how parenting stress impacts mothers and may make them more likely to want to bargain with fathers in order to lighten their own load. Maternal gatekeeping theory helps to further explain why mothers may be delegating their tasks, as pushing for fathers to get more involved represents a facilitative gatekeeping behavior. Together, each of these theories helps to inform the current study.

CHAPTER II

LITERATURE REVIEW AND PROPOSED STUDY

Borrowing from the tenets of the aforementioned theories, I propose that 1) father responsibility for routine childcare tasks will increase over time, 2) maternal relative earnings will increase over time, 3) increases in maternal relative earnings will predict subsequent increases in father responsibility for routine childcare tasks, and 4) this association will be stronger among couples in which mothers report higher levels of emotional intimacy or parenting stress than in couples in which mothers report lower levels of intimacy or parenting stress.

The Associations Between Maternal Employment and Father Involvement

An increase in White women returning to the workforce postbirth led to questions about how dual-earning couples juggle employment and caregiving responsibilities (Bianchi & Milkie, 2010). With the vast majority of married mothers being employed, there is an increased need for fathers to be more involved, as well as additional opportunities to do so (Fuligni & Brooks-Gunn, 2003). For example, in 2017 61.9% of married mothers with children under 3 were employed, with 43% of married mothers working full-time (U.S. Bureau of Labor Statistics, 2018). Although researchers have examined the role that maternal employment plays on mothers' own parenting behaviors (Buehler, O'Brien, Swartout, & Zhou, 2014), less research has been conducted that looks at the effect of specific maternal employment factors on fathers' parenting behaviors.

This leaves an important gap in regard to what effect maternal work and its associated earnings has on fathering. Three maternal employment factors that have been studied include employment status, work hours, and relative income.

Maternal employment status. According to the United States Department of Labor (2013), the percentage of mothers with children under 3 who were employed jumped from 34.3% to 54.5% between 1975 and 1991. With this increase in mothers returning to work after having a child, one of the first questions asked was whether fathers were more involved when mothers were employed versus when they were not employed. Meyeter and Perry-Jenkins (2010) found that when mothers worked full-time, but not when they worked part-time, fathers reported more involvement with their one-year old infants. The literature also has shown that fathers engage in more parenting during mothers' absences when mothers work nonstandard schedules (Rapoport & Le Bourdais, 2008; Wight, Raley, & Bianchi, 2008; Weinshenker, 2016) but that they do not do more parenting when mothers are at home rather than at work (Weinshenker, 2016).

Maternal work hours. One of the most studied maternal employment factors is work hours. Findings suggest that there is a link between how many hours mothers are employed and father involvement. For example, Jacobs and Kelly (2006) found that the more hours mothers worked outside the home, the more accessible fathers were to their children, the more responsibility fathers took in childcare, and the more time fathers served as their children's primary caregivers. Sandberg and Hofferth (2001) found when mothers worked more hours, fathers were slightly more involved.

Other findings suggest that this relationship is conditional. For example, Bittman et al. (2003) found that maternal work hours were positively related to father's time in routine childcare activities, but not interactive care. Connelly and Kimmel (2009) suggested that availability plays a role, as they found that wives' greater hours of employment were positively related to husbands' caregiving on weekdays when time is constrained but not on weekends.

Maternal relative earnings. The amount of money that mothers earn in comparison to fathers may be uniquely predictive of father involvement, above and beyond mothers' work hours. However, much of the research on relative earnings has focused on the division of household tasks rather than childcare tasks. Consistent with bargaining theory, the majority of findings suggest that when individuals earn a greater proportion of the household earnings, they engage in fewer household tasks (Bittman et al., 2003; Schneider, 2011; Sullivan, 2011), although not all studies have found this effect (Gupta, 2007). There is limited and mixed support for whether fathers are more involved in childcare when their wives increase their relative share of family earnings. For example, Raley, Bianchi, and Wang (2012) found that fathers participated in more routine childcare of their children when mothers contributed a greater share of the couple's earnings, and that the ratio of "father care" to "mother care" increased when mothers were contributing more. However, Deutsch et al. (1993) failed to find this association in their longitudinal study, as did Marsiglio (1991) when analyzing cross-sectional data. In their longitudinal study of father involvement, Meteyer and Perry-Jenkins (2010) found that fathers who contributed a higher proportion of the family

earnings experienced a *greater* increase in involvement over the first year of their children's lives than did fathers who contributed a lower proportion of income. Connelly and Kimmel (2009) also found limited support for bargaining theory in that fathers' time in child-care was negatively related to mothers' relative wages among those surveyed in the American Time Use Study.

Raley and colleagues (2012) provided a possible explanation for why the link between maternal relative earnings and father involvement is weak. According to bargaining theory, mothers who earn more relative to their husbands should be able to negotiate doing fewer childcare tasks. However, they argue that only some types of father care are sensitive to mothers' employment, as mothers may only be willing to bargain away the less desirable tasks, such as scheduling appointments or arranging transportation, and may keep the more enjoyable ones for themselves, such as playing or reading. Preliminary evidence for this comes from the NICHD study (2000), in which decreases in fathers' relative earnings were negatively associated with fathers' involvement in routine childcare tasks, with both earnings and father involvement changing over the same periods of time. These findings support the tenets of bargaining theory in that mothers' higher relative earnings (i.e., father's lower relative earnings) were associated with greater father involvement in a specific type of caregiving – routine childcare.

A limitation of past research is that although studies have looked at the effects of maternal relative earnings on father involvement, they have ignored the role of time beyond simply examining whether earnings and involvement increase or decrease

together. The current literature is lacking studies in which father involvement is lagged behind earnings, in order to assess whether changes in relative earnings predict *subsequent* changes in involvement. Lagging is important as it strengthens inferences regarding the time-ordering of relative earnings and father involvement. The period from infancy to age three provides a unique period in order to examine the longitudinal effects of relative earnings on father involvement, as many mothers are returning to paid work within a year of giving birth and should be experiencing increases in their earnings. Additionally, as couples are falling into a parenting rhythm over the first year, mothers should begin being able to assess whether they feel that their partners are taking on an adequate amount of the responsibility for routine childcare tasks or whether they feel that their partners should be doing more. As mothers spend substantially more time engaged in childcare than do fathers (Bianchi et al., 2006), there is often room for fathers to get more involved, especially as mothers begin juggling both work and parenting. Therefore, it is likely that increases in father involvement will follow increases in mother's relative earnings, as these greater earnings should afford mothers greater power with which to negotiate childcare responsibilities. However, there are likely many variables that might conditionalize this lagged, longitudinal association, with maternal reports of emotional intimacy and parenting stress being two particularly important couple and individual factors.

The Moderating Role of Mothers' Reports of Emotional Intimacy

There is evidence to suggest that individuals construct their expectations about the availability of support based upon on their past interactions with a partner. Much of this

evidence comes from the attachment literature, in which individuals create internal working models, or expectations about responsiveness based on past experiences with an attachment partner (George, Kaplan, & Main, 1984-1996). Individuals who have experienced responsiveness characterized by support and sensitivity are most likely to be classified as securely attached and to have internal working models in which they expect others to be supportive and responsive. For example, Feeney and Collins (2001) found that their adult participants expressed stronger beliefs about the availability of support from their partners when their partners responded to their distress in supportive and caring ways.

However, when individuals are responded to by their partners in ways that are unsupportive, defensive, or express a lack of caring, they are likely to expect this type of response from their partners in the future. Research has also found that individuals who begin to expect that their partners won't be supportive can fall into self-fulfilling prophecies which lead to the continued receipt of unsupportive behavior. This is in part due to rejection sensitivity, or the tendency to anxiously expect and emotionally overreact to the possibility of rejection by relationship partners (Levy, Ayduk, & Downey, 2001). Individuals who score high on rejection sensitivity measures may use self-protective behaviors to avoid the possibility of experiencing further rejection. This suggests not only that mothers may avoid discussing their need for help with routine childcare tasks with their partners if they expect their partners to be unsupportive, but that mothers may also continue doing most of the tasks as a self-protective behavior to avoid the potential of not receiving the support that they need.

There also is evidence that when couples have less emotionally intimate relationships, fathers are less responsive to mothers' emotional needs and requests for help with child-care tasks. In their qualitative study on father responsivity, Matta and Knudson-Martin (2006) interviewed 40 ethnically, religiously, and educationally diverse married couples with children under the age of 5. Their construct of interest was father responsivity, or the degree to which fathers recognize and attend to the needs of their wives and children, including attention to their emotional needs, household and child-care tasks, and power and fairness within the couple relationship. They found that the fathers in their low-responsivity group demonstrated an expectation for their own needs to be attended to, but little awareness of the needs of their wives and an unwillingness to be influenced by them. In addition to this, fathers in their low-responsivity group also were low in father involvement. Matta and Knudson-Martin described the difference between the low-responsivity fathers and those of moderate and high responsivity by their openness to pitching in to help in addition to their higher attunement to their wives' wants and needs. This suggests that fathers who are more emotionally intimate with their wives may be more willing to hear their wives wants and needs, and also more willing to be influenced by them.

Finally, there is evidence that fathers are more able to learn caregiving behavior in the context of a supportive relationship with their partner. In their study on the effects of marriage on fathering, Bradford and Hawkins (2006) tested whether intimate and committed marital relationships help to create a foundation for fathers to learn competent fathering, or affective, cognitive, and behavioral aspects of fathering that are comprised

of abilities, skills, and identities that develop over time. They proposed that emotional intimacy in the couple relationship provided fathers with the opportunity to learn nurturing capacities and found that intimacy was moderately associated with competent fathering, with intimacy and competent fathering increasing over the same periods of time. This is important as mothers are more likely to allow fathers to parent their children when they evaluate their caregiving skills more positively (Fagan & Barnett, 2003). When considered with the finding that father involvement in childcare is associated with more satisfaction with the division of childcare for mothers (Carlson, Hanson, & Fitzroy, 2016), these findings suggest that an emotionally intimate relationship between caregivers may play a role in promoting father involvement in routine childcare tasks.

Emotional intimacy may act as a moderating variable on the relationship between maternal relative earnings and father responsibility for routine childcare tasks. Mothers who believe that fathers are caring and supportive may be more willing to express their need for help with routine childcare tasks and to negotiate for fathers to take on additional responsibilities. They also might use their power associated with increases in relative earnings to do so. Alternatively, mothers who have experienced defensiveness in the past when trying to discuss the division of childcare with their partners may not want to broach the topic regardless of whether they have experienced an increase in their earnings. Instead they may just continue taking on the responsibility themselves. Therefore, the effect of relative earnings on father responsibility for routine childcare tasks may be stronger among mothers reporting higher emotional intimacy with their partners than among mothers reporting lower emotional intimacy. No studies as of yet

have tested the moderating effect of emotional intimacy on routine childcare tasks.

Another factor that may play a moderating role is that of parenting stress.

The Moderating Role of Mothers' Reports of Parenting Stress

There is some evidence that father involvement is related to mothers' stress levels. For example, Nomaguchi, Brown, and Leyman (2017) examined this relationship using data from the Fragile Families and Child Wellbeing Study and found that fathers' participation in child-related chores was negatively related to maternal stress. Kalil, Ziol-Guest, and Coley (2005) found that when mothers perceived that fathers were decreasing their involvement over time (as opposed to maintaining either a stable high or low level of involvement), they experienced increases in their parenting stress over time as well. Finally, Coley and Schindler (2008) found similar results when using a composite of mothers' reports of fathers' parenting contributions that included whether fathers took responsibility for their toddlers' daily routine childcare, whether fathers took responsibility for making sure that their toddlers were well behaved, and how close they felt that fathers were to their toddlers. Utilizing a fixed-effects model, they found that increases in fathers' parenting contributions over the first two waves predicted significant declines in mothers' parenting stress. However, as the authors included a measure of relationship quality in their composite, it is unclear how large a role responsibility for daily routine childcare uniquely played.

No study as of yet has addressed this relationship in the opposite direction, with higher levels of maternal stress leading to increases in father involvement. However, due to the unique need for parents to be hands-on and directly involved in the caregiving of

infants and toddlers, they are likely to experience higher levels of parenting stress during this time. This is especially the case for mothers who are much more likely to be responsible for routine childcare tasks than fathers (Kotila et al., 2013). Highly stressed mothers may look for ways to reduce their stress, and one way to do so may be by delegating tasks to fathers to reduce their own parenting load. Therefore, maternal parenting stress may act as a moderating variable on the relationship between maternal relative earnings and father responsibility for routine childcare tasks as mothers experiencing higher levels of stress may be particularly interested in using the power associated with increases in relative earnings to bargain for more father responsibility for routine childcare tasks. Alternatively, mothers who are not experiencing high levels of parenting stress may not feel the need to reduce their own levels of responsibility by delegating to fathers. Therefore, the effect of relative earnings on father responsibility for routine childcare tasks may be stronger among mothers reporting higher levels of parenting stress than among mothers reporting lower levels of parenting stress.

Control Variables

Participant characteristics that occur at the same time as the study variables may affect the dependent variable as well (i.e., father responsibility for routine childcare tasks). Higher educated parents (Bianchi et al., 2006), older parents (Castillo, Welch, & Sarver, 2011) fathers who work fewer hours or have wives who work greater hours (Jacobs & Kelly, 2006; Tanaka & Waldfogel, 2007), and Black fathers (Jones & Mosher, 2013) have been found to participate more in childcare. Fathers whose families have higher total incomes (NICHD, 2000) and fathers in larger families have been found to

participate less in childcare (Pleck, 1997). Additionally, measures of maternal personality (i.e., agreeableness, neuroticism, and extraversion) have been found to be predictive of father involvement (NICHD, 2000), and cohabitating parents have been found to vary from married parents in regard to education and age (Reeves & Krause, 2017). Additional controls related to child characteristics (infant sex, temperament, and birth order) have been identified as well (NICHD, 2000). Finally, it is possible that mother and father work hour scheduling flexibility and childcare hours may impact father involvement.

Therefore, maternal depressive symptoms, total family income, father and mother work hours, hours in childcare, father and mother work hour scheduling flexibility, maternal prenatal employment status, father and mother age, education, race and ethnicity, mothers' neuroticism, extraversion, and agreeableness, the number of children in the household, baby sex and birth order, and infant temperament will be included as controls in the analyses.

The Study

The following hypotheses were tested using a time-lagged growth curve analysis. As a main goal of this study was to test whether changes in maternal relative earnings predicted subsequent changes in father responsibility for routine childcare tasks, the use of a time-lagged model helped to reduce threats to internal validity by establishing temporal precedence among the variables (Shadish, Cook, & Campbell, 2002).

The Following Hypotheses were Tested

Hypothesis 1. Increases in maternal relative earnings will be associated with subsequent increases in father responsibility for routine childcare tasks after controlling

for potentially confounding factors.

Hypothesis 2a. The longitudinal association between maternal relative earnings and father responsibility for routine childcare tasks will be stronger in couples in which mothers report higher levels of emotional intimacy than for other couples.

Hypothesis 2b. The longitudinal association between maternal relative earnings and father responsibility for routine childcare tasks will be stronger in couples in which mothers report higher levels of parenting stress than for other couples.

CHAPTER III

METHOD

Sampling Procedures and Characteristics

The present study used data from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care. Recruitment began in 1991. 5,416 mothers met the eligibility criteria (mother speaks English, mother is over 18 years of age, infant is healthy, and there are no plans to move from the area in the coming year) and agreed to be contacted after their return home from the hospital. A subset of this group was selected for the sample using a stratified random sampling plan that was designed to ensure that at least 10% of the recruited families had mothers who had not graduated from high school, at least 10% were headed by single mothers, and at least 10% had children who were women of color. When infants were 1 month old, 1,364 children (58% of those contacted) were enrolled in the study. The recruited families included 24% children of color, 11% mothers without a high school education, and 14% single mothers. Prior to giving birth, 861 (63%) of the enrolled mothers were employed. Further, 53% were planning to work full time after the baby was born, 23% were planning to work part time, and 24% were not planning to be employed. The recruited families were similar to the eligible families in the hospitals on these demographic variables, except that mothers enrolled in the study were slightly more likely (4%) to report that they expected to be employed than nonparticipating mothers. Additionally, in

spite of the stratified sampling plan, the SECCYD sample has higher proportions of European American families, higher educational attainment, higher household income, and higher receipt of public assistance than the U.S. population (NICHD Early Child Care Research Network, 2001).

Six of the research sites (i.e., Arkansas, California, Kansas, Pittsburgh, North Carolina, and Wisconsin) obtained funding to collect additional information directly from fathers. After infants and mothers were enrolled in the study, households at these sites were invited to participate in the father protocol if a husband or partner was in residence ($N = 817$). In most cases, the men were married to the infants' mothers (87.7%). As the number of cohabitating fathers is too few to run a moderating analysis using marital status, factors related to differences in father involvement between cohabitating and married fathers will be controlled in order to retain the cohabitating fathers in the sample for the present study (Corwyn & Bradley, 1999). Of those eligible, 566 households with fathers participated in at least one data collection period (69.3%) between 6 and 54 months.

The analytic sample for this project included married or cohabitating families where both mothers and fathers reported on their respective variables and there are data for each variable at one or more time points. Retaining the cohabitating families is preferable to dropping them as reducing sample size leads to a reduction in power to detect effects that are otherwise present (Schlomer, Bauman, & Card, 2010). This resulted in an analytic sample of 472 families. Four hundred and five (86%) of the mothers in the current sample were employed prenatally, with 75% of the mothers

working full time and 25% of the mothers working part time. Fathers that participated were more likely to be White, ($X^2(1) = 59.67, p < .001$), to have at least some college education ($X^2(1) = 25.38, p < .001$), to be with mothers who were White ($X^2(1) = 63.72, p < .001$), have at least some college education ($X^2(1) = 25.38, p < .001$), were older ($t_{815} = -5.05, p < .001$), and reported fewer depressive symptoms at 1 month ($t_{814} = 2.39, p < .05$) than those who were eligible but did not participate. There were no significant differences between fathers who participated and eligible fathers who didn't participate in terms of age, child sex, child temperament, and child birth order.

Research Design

The current study used data from the first phase of the NICHD-SECCYD study, which was collected from birth to age three. The first phase includes 5 time points, when infants were 1, 6, 15, 24, and 36 months. The central constructs for this study were measured at the 6, 15, 24, and 36-month time points, with fathers reporting on their own responsibility for routine childcare tasks, and with mothers reporting on their own and their husband's earnings, their perceptions of emotional intimacy, and their own parenting stress. The period from infancy to age three provides a unique period in order to examine the longitudinal effects of relative income on father involvement as mothers should be experiencing increases in their income due to returning to work, and they should begin to be able to assess whether they feel that their partners are taking on an adequate amount of the responsibility for routine childcare tasks as their parenting routines fall into place.

Data Collection Procedures

In 1991, mothers were recruited through hospital visits about their infant's birth. Recruitment and selection procedures are described in the study documentation, available at www.icpsr.umich.edu/icpsrweb/ICPSR/studies?q=SECCYD. During home visits at 6, 15, 24, and 36 months, fathers completed questionnaires concerning their involvement in child caregiving activities. The 36-month forms were not completed by fathers at the Arkansas and Wisconsin sites. During separate home visits during the same time periods, mothers were interviewed and completed questionnaires pertaining to their personality, attitudes, beliefs, family demographics, financial resources, child temperament, and their relationship with their partner.

Measures

Father responsibility for routine childcare tasks. Fathers were given the My Time Spent as a Parent (Glysch & Vandell, 1992) questionnaire when their children were 15, 24, and 36 months old. This questionnaire was given as part of a larger survey packet and asked fathers to describe their responsibilities for caregiving activities. The 18 items included changing the child's diapers, giving the child a bath, taking the child to a sitter or daycare, feeding the child, taking the child to the doctor, buying toys for the child, attending to the child when he or she cries, dressing the child, getting up at night to attend to the child, buying toys for the child, putting the child to bed, making child-care arrangement, doing the child's laundry, reading to the child, buying clothes for the child, playing with the child, talking to the child, and taking the child on outings. One of the items: buying toys for the child appeared twice in the questionnaire. The repeat item was

excluded. Four of the items: reading to the child, playing with the child, talking to the child, and taking the child on outings were excluded, as they reflected more interactive childcare tasks rather than routine childcare tasks. This left 13 items which were rated on a 5-point scale, ranging from 1 = *partner's job*, 3 = *we share equally*, 5 = *my job*. Higher mean scores reflected greater responsibility for routine childcare tasks. This measure has evidence of adequate internal consistency reliability in the current sample. Cronbach alphas for the 15, 24, and 36 month time points were .69, .79, and .78, respectively. Assessing father responsibility with a broader measure of father responsibility than routine care for childcare tasks using data from the same time points ($N = 378$), NICHD (2000) reported Cronbach alphas that ranged from .72 to .80. They also found that this measure was negatively correlated with measures of father work hours and father and mother age, and positively correlated with mother work hours, providing evidence of construct validity. This was a time-varying variable in the current study.

Maternal relative earnings. At the 6, 15, and 24-month time points, mothers reported on their annual earnings and their spouses' annual earnings. Mothers who reported 0 work hours for themselves or their partners, and then did not respond to the earnings question (likely due to it being non-applicable) were given scores of 0, as employment is requisite for earnings. Maternal relative earnings were computed by calculating the percentage of the couple's total earnings that the mother contributed. A higher score reflected a higher relative proportion for mothers. This was a time-varying predictor in the current study.

Mothers' reports of emotional intimacy. At the 6, 15, and 24-month time points, mothers completed the emotional intimacy subscale from the Personal Assessment of Intimacy in Relationship (PAIR) inventory (Schaefer & Olson, 1981). The questionnaire asked mothers to respond to six questions regarding their relationship with their spouse or partner. The six items included: My (spouse/partner) listens to me when I need someone to talk to, I can state my feelings without (him/her) getting defensive, I often feel distant from my (spouse/partner) (reverse scored), my (spouse/partner) can really understand my hurts and joys, I feel neglected at times by my (spouse/partner) (reverse scored), and I sometimes feel lonely when we're together (reverse scored). Items are rated on a 5-point scale, ranging from 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neutral*, 4 = *somewhat agree*, 5 = *strongly agree*. The items were averaged into a composite measure, and higher scores reflected greater emotional intimacy. This was a time-varying variable in the current study.

This measure of emotional intimacy has evidence of adequate internal consistency reliability and construct validity. Assessing emotional intimacy using data from the 54 months, first grade, and fifth grade time points ($N = 1364$), Buehler and O'Brien (2011) reported Cronbach alphas that ranged from .86 to .89. Using data from the 54-month timepoint ($N = 606$), Engle and McElwain (2013) reported a Cronbach alpha of .86. Schaefer and Olson (1981) found that this measure was negatively correlated with measures of marital control and conflict, providing evidence of construct validity.

Mothers' reports of parenting stress. At the 6-month time point, mothers completed a 25-item version of the 101-item Parenting Stress Index (PSI; Abidin, 1983). The

questionnaire asked mothers to report on their feelings about parenting, and included three subscales: attachment, restrictions of role, and sense of competence. The restrictions of role subscale was used in this study and has 7 items. It was chosen as the questions were most similar to those used in the Parent Role Quality Scale (used at 15 and 24 months) which asks parents to rate how concerning the parenting role is to them. Sample items included “Being a parent is harder than I thought it would be,” “Most of my life is spent doing things for my baby,” and “I feel trapped by my responsibilities as a parent.” Items are rated on a 5-point scale from 1 = *strongly disagree*, to 5 = *strongly agree*. The items were summed, with higher scores representing higher levels of parenting stress. The PSI appears to have adequate reliability and validity demonstrated for both employed and not employed mothers (Abidin, 1983). Cronbach’s alpha in the current sample was .76.

After the 6-month time point, the PSI was no longer administered, and mothers reported on parenting stress during the 15 and 24-month time points using a shortened version of the 30-item Parent Role Quality Scale (Barnett & Marshall, 1991). They were asked to rate how much of a concern they felt about 10 items, such as “not being able to spend your time the way you want” and “having too much to do for your child or children,” respectively. Scores ranged from 1 = *not a concern* to 4 = *extremely concerning*, with a fifth option of “N/A” which was coded as missing. The items were summed, with higher scores representing higher levels of parenting stress. The Parent Role Quality Scale appears to have adequate internal reliability, test–retest reliability, and predictive validity (Barnett & Marshall, 1991). Cronbach’s alphas for the current sample

were .78 at 15 months and .81 at 24 months. Consistent with other studies using this dataset in which variables have been created from measures that have changed over time (Campbell et al., 2007; Manning, 2018, Nelson & O'Brien, 2012), this was treated as a time-varying variable. The summed scores from both parenting stress measures were standardized to put the measures on the same scale (1-5). Nelson and O'Brien (2012) used both parenting stress measures as well and reported a correlation of .41 ($p < .01$) between the 6 month and 15 month assessments when the measure of parenting stress was changed, providing evidence of predictive validity.

Control variables. Both time invariant and time-varying controls are included in the analyses. The time invariant controls of maternal and paternal years of education, age, race, ethnicity, and maternal agreeableness, extraversion, and neuroticism come from the 6-month time point. Maternal prenatal employment status came from the prenatal time point. The time-varying controls of maternal depressive symptoms, total family income, father work hours, mother work hours, hours in non-maternal childcare, and mother work hour scheduling flexibility came from the 1, 6, 15, and 24 month time points. Father work hour scheduling flexibility from the 1 and 6 month time points, and the number of children in the household at 6 and 24 months were included as time-varying controls in the analyses as well.

Education. Mothers reported on their own and their partner's level of education, which was scored in years (e.g., high school = 12 years, 4-year college – 16 years).

Age. Mothers reported on their own and their partner's age in years.

Race. Mothers reported on their and their partner's race. As the majority of fathers and mothers reported their race as either Black or White (97% each, respectively), the other three groups (American Indian, Eskimo, or Aleutian, Asian or Pacific Islander, and other) were all collapsed into "Other." The original "Other" category was too small to consider in analyses on its own, so race was dummy coded in the final coding scheme, such that 0 = Other (Black and original "other" category) and 1 = White.

Ethnicity. Mothers reported on whether they and their partners were Hispanic or not. Ethnicity was dummy coded such that 0 = Not Hispanic and 1 = Hispanic.

Maternal personality. Mothers were asked to complete the NEO Personality Inventory (Costa & McCrae, 1989). The subscales of neuroticism, extraversion, and agreeableness were used.

Maternal depressive symptoms. Mothers reported on their depressive symptoms using the Center for Epidemiological Studies-Depression scale (Radloff, 1977), a 20-item self-report measure.

Total family income. Mothers reported on their family's annual total family income.

Work hours. Mothers reported on their and their partners' typical weekly work hours.

Hours in non-maternal childcare. Mothers were asked to report on the number of hours a week that their children spent in a variety of childcare settings. The number of hours a week that children were in all non-maternal childcare options were summed.

Work hour scheduling flexibility. Mothers were asked “how flexible are your work hours” and “how flexible are your partner’s work hours.” Responses ranged from 1 = *not at all* to 4 = *completely flexible*.

Plan of Analysis

Descriptive statistics for the main variables were calculated using SPSS (version 25). Raw data were examined for multicollinearity among independent variables, multivariate normality, relative variances, and missing data. Multicollinearity occurs when two measures are highly correlated, indicating they are measuring very similar constructs (Wilcox, 2018).

Hypotheses were tested using Mplus. All continuous predictor variables that were used in the interactions were centered on the grand mean at each time point (Robinson & Schumacker, 2009). A time-lagged, longitudinal analytic approach was implemented such that maternal relative earnings were modeled as temporally preceding father responsibility for routine childcare tasks. This allowed for the examination of whether maternal relative earnings assessed at time t is associated with changes in father responsibility for routine childcare tasks at time $t+1$. This was done in order to strengthen the time-ordered assumptions of the model (Buehler et al., 2014). Time was centered at the first timepoint in order to observe change beginning in infancy up to the end of toddlerhood (Biesanz et al., 2004). Rather than examining associations between the variables within a given time point across time, the associations between mothers’

relative earnings at a given time point and father responsibility for routine childcare tasks at the next time point were estimated (Garst, Frese, & Molenaar, 2000).

Missing Data

The NICHD SECCYD data has attrition, as is expected in longitudinal data. Data can be missing completely at random (MCAR), missing at random (MAR), or not missing at random (NMAR) (Schafer & Graham, 2002). MCAR data are not correlated with any variable and there is no pattern for missing data. MAR data occur when missingness can be explained by either another variable or a set of variables in the data. Finally, NMAR data occurs when MAR assumptions are not upheld. MAR cannot be tested, and it is rare for MCAR to hold unless missingness is planned. Schafer and Graham (2002) recommend the use of either multiple imputation (MI) or full information maximum likelihood (FIML) to handle missing data. MI generates unbiased point estimates and valid estimated standard error by pooling of the parameter estimates from imputed datasets. FIML uses all available information to provide a maximum likelihood estimation of parameters. As the default approach in Mplus is FIML, and as MI requires separate steps to complete, missing data on the time varying and time-invariant variables were addressed in Mplus using FIML. Unstandardized coefficients are presented in the results as Mplus only provides standardized coefficients for multilevel models using ESTIMATOR = BAYES. Additionally, as Mplus uses listwise deletion when there is missing data on predictor variables, and as Mplus only uses FIML on dependent variables, independent variables were entered into the model as dependent in order to address missing data on the predictors (Muthén & Muthén, 1998-2017).

CHAPTER IV

RESULTS

Descriptive Information

Table 1 presents the descriptive information (means, standard deviations, and missing data) for the primary variables. Tables 2 and 3 present the descriptive information for the time-varying and time-invariant controls, respectively. Zero-order correlations are displayed in Tables 4 and 5.

Fathers' Responsibility for Routine Childcare Tasks

Before testing hypotheses, I examined the unconditional growth curve for fathers' responsibility for routine childcare tasks from 15 months to 36 months (see Table 6, column 1). The average responsibility for routine childcare tasks score at child age 15 months was 2.47 (variable scaled 1-5). Fathers' responsibility for routine childcare tasks was stable over time, on average ($b = .01, ns$). However, fathers' levels of responsibility for routine childcare tasks did vary between participants at the beginning of the study ($b = 2.43, p < .01$). A decomposition of the total variance in father responsibility scores indicated that 76% of the variance was between fathers ($b = 0.13, p = .07$) and 24% of the variance was within fathers across time ($b = .04, p < .01$). Therefore, the unconditional growth model indicated that there was sufficient variability in responsibility for routine childcare scores between and within fathers for further analyses.

Hypothesis 1: Maternal Relative Earnings

Before testing whether changes in maternal relative earnings predicted changes in fathers' responsibility for routine childcare tasks, I examined the unconditional growth curve for maternal relative earnings from 6 months to 24 months. The average relative earnings score at child 6 months was 28.30 (variable scored in percentage). Maternal relative earnings increased over time, on average ($b = 0.13, p < .05$), and varied between participants at the beginning of the study ($b = -0.51, p < .05$). A decomposition of the total variance in maternal relative earnings scores indicated that 83% of the variance was between mothers ($b = 11.42, p < .01$) and 17% of the variance was within mothers across time ($b = 2.39, p < .01$). Therefore, the unconditional growth model indicated that there was sufficient variability in relative earnings scores between and within mothers for further analyses.

The first hypothesis was that increases in maternal gross relative earnings across time would be associated with subsequent increases in father responsibility for routine childcare tasks. Controlling for numerous covariates (see Table 6, column 2), maternal relative earnings was positively associated with fathers' responsibility for routine childcare tasks ($b = 0.01, p < .05$). Given that this predictor was time varying and the data were lagged, this finding indicates that increases in maternal relative earnings were associated with *subsequent* increases in father responsibility for routine childcare tasks. Thus, hypothesis 1 was supported.

Hypothesis 2a: Emotional Intimacy as a Moderator

Hypothesis 2a was that the association between maternal relative earnings and father responsibility for routine childcare tasks would be stronger in couples in which mothers reported higher levels of emotional intimacy than for other couples. Controlling for covariates (see Table 6, column 3), emotional intimacy did not interact with maternal relative earnings to predict father responsibility for routine childcare tasks ($b = -0.00$, $p = .06$). Thus, hypothesis 2a was not supported.

Hypothesis 2b: Parenting Stress as a Moderator

Hypothesis 2b was that the association between maternal relative earnings and father responsibility for routine childcare tasks would be stronger in couples in which mothers reported higher levels of parenting stress than for other couples. Controlling for covariates (see Table 6, column 4), emotional intimacy interacted with maternal relative earnings to predict father responsibility for routine childcare tasks ($b = -0.01$, $p < .01$).

In order to test and interpret the significant interaction effect, a *Johnson-Neyman* graph was created using the MODEL CONSTRAINT: LOOP PLOT command in Mplus (Clavel, 2015). The Johnson-Neyman technique (Johnson & Neyman, 1936) is considered more specific than the simple slopes technique when examining a continuous by continuous moderator because it allows for the calculation of regions of significance across the entire range of the moderator, rather than splitting the moderator into “low” and “high” groups using some predetermined cut points. A visual inspection of the significant interaction terms can be found in Figure 1. The X-axis in the Loop plot depicts a continuous range of parenting stress, and the Y-axis represents a continuous range of

values for the adjusted effect of maternal relative earnings on father responsibility for routine childcare tasks (Clavel, 2015). The red line represents values of the adjusted effect (maternal relative earnings on father responsibility for routine childcare tasks) that correspond to the full range of all continuous values of parenting stress (measured in standard deviation units $-SD$ $-$). The blue lines above and below the red plot line represent 95% confidence bands around the adjusted effect of maternal relative earnings on father responsibility for routine childcare tasks. Consequently, the plot shows that the effect of maternal relative earnings on father responsibility for routine childcare tasks was significant and positive for mothers experiencing low parenting stress (below $.15$ SD). The effect of maternal relative earnings on father responsibility for routine childcare tasks was not significant for mothers with higher parenting stress ($.15$ SD and above), approximately. Given that the predictor was time-varying and the data were lagged, this plot shows that the lower parenting stress is, the more maternal relative earnings is associated with subsequent father responsibility for routine childcare tasks. Although the association between maternal relative earnings and father responsibility for routine childcare tasks was moderated by parenting stress, due to it being in the opposite direction as hypothesized, hypothesis 2b was not supported.

CHAPTER V

DISCUSSION

The goal of this study was to examine whether increases in maternal relative earnings are predictive of later increases in father responsibility for routine childcare tasks, as increasing father involvement has been found to be beneficial for both fathers and mothers. Emotional intimacy and maternal parenting stress were examined as potential moderators of this association as mothers may be more likely to express a need for help with their partners when their relationships are more emotionally intimate, or when they are experiencing higher levels of parenting stress. The results of past research have shown that maternal relative earnings play a role in influencing father involvement in routine childcare tasks occurring across the same time points. The results of this study extend this literature by suggesting that maternal relative earnings also predict subsequent father involvement in routine childcare tasks, and that this longitudinal association may be conditional.

Maternal Relative Earnings and Subsequent Father Responsibility

The first goal of the study was to determine if maternal relative earnings from child age 6 to 24 months is related to subsequent father responsibility for routine childcare tasks from 15 to 36 months. A unique feature of this study was the lagging of the dependent variable to examine subsequent change rather than parallel associations in which the predictor and dependent variable change together over time. This lagging lent

strength to the time-ordered assumptions of the model. The findings of this study confirmed the time-ordered hypothesis, as maternal relative earnings was predictive of later father responsibility for routine childcare tasks. This suggests that not only do these variables change over time, but that maternal relative earnings has an influence on later changes in father involvement for routine childcare across the infancy and toddlerhood periods. That a maternal employment factor affected father involvement can be explained by a bioecological theoretical perspective, as a part of fathers' exosystem indirectly impacted them through their partners, a part of their microsystem. Further, as the inclusion of maternal work hours did not affect the association between maternal relative earnings and father responsibility for routine childcare tasks and numerous time-invariant and time varying controls were considered, this suggests that mothers' earnings from work are uniquely predictive of later responsibility for routine childcare tasks, and not the number of hours that mothers spend working.

The addition of the numerous controls is also important for understanding this association. When maternal relative earnings increase, so does father responsibility for routine childcare at the next time point, even after controlling for the significant effects of total family income, hours in nonmaternal childcare, prenatal maternal employment, and maternal neuroticism on father responsibility for routine childcare tasks. This suggests that maternal relative earnings might play a significant and important role in predicting father responsibility for routine childcare tasks, even after controlling for some of the other important predictors. According to bargaining theory, couples rely on their individual contributions to negotiate issues within their relationships (Lundberg & Pollak,

1996). As contributions increase, so should an individual's bargaining power. Therefore, when mothers experience increases in their earnings, they should also increase their negotiating power and can use it to allocate additional tasks to fathers to complete in their stead, which the current finding supports. As parenting can be time consuming and stressful, having this option can be especially beneficial for mothers in order to get everything done, as mothers are more likely to take on the majority of parenting work compared to fathers, even though father involvement is increasing (Kotila et al., 2013). Therefore, mothers who earn a greater proportion of the family income relative to their partners are at an advantage when negotiating who does which childcare tasks.

Although this finding provides support for the use of bargaining theory in research on the division of childcare, the majority of past research using the theory has focused on the division of housework (Bittman et al., 2003; Schneider, 2011). There is limited research guided by bargaining theory examining the relationship between relative earnings and childcare responsibilities, and the results have been mixed with some finding an association in the opposite direction (Meteyer & Perry-Jenkins, 2010) and others not finding a significant association (Deutsch et al. 1993; Marsiglio, 1991). However, Raley and colleagues (2012) suggested that these mixed findings may have been due to researchers focusing on childcare in general. They argued that because parents were more likely to find intrinsic enjoyment from parenting tasks, that mothers may only be willing to bargain away the less desirable, or routine childcare tasks, keeping the more enjoyable ones for themselves. When examining the association using a measure of routine childcare tasks measured using daily time diaries, and controlling for

mothers' work hours, Raley and colleagues (2012) found a positive association between maternal relative earnings and father involvement for children up to the age of thirteen, as well as no association between mothers' work hours and father involvement. This finding supports the tenets of bargaining theory, as fathers increased their responsibility when mothers earned a greater proportion of the couples' income. Further, the current study controlled for maternal work hours as Raley and colleagues did and found that maternal relative earnings was predictive of father responsibility for routine childcare tasks above and beyond those of maternal work hours. This provides additional evidence that it is the maternal employment factor of relative earnings that uniquely plays a role in predicting father involvement rather than the number of hours mothers work

The current finding that increases in maternal relative earnings was associated with increases in father responsibility for routine care tasks is consistent with past findings from Raley et al. (2012). The current study also extended these initial findings in a variety of ways. For example, Raley and colleagues focused on married couples with children under the age of thirteen, and the current study focused specifically on the infancy and toddlerhood period and included both married and cohabitating couples. By following couples with infant-aged children across 4 time points, this study provided the ability to examine the association between maternal relative earnings and father responsibility for routine childcare tasks during the infancy and toddlerhood periods specifically, with all parents dealing with the parenting challenges reflective of those particular developmental periods.

Additionally, the current study extends Raley et al.'s (2012) research by following couples across multiple time points, and by examining the effects of maternal relative earnings on subsequent father involvement. These additions allow for the examination of changes over time both within and between individuals, as well as strengthens the time-ordered assumptions of the model. As bargaining theory posits that income provides mothers with bargaining power, the finding that as mothers' relative earnings increases, so does subsequent father responsibility for routine childcare tasks provides important support for the theory and its utility in future studies. Finally, this study extends Raley et al.'s (2012) work through its inclusion of two potential moderating factors that help to explain this association.

Emotional Intimacy as a Moderator

Emotional intimacy and parenting stress were identified as the two potential moderating factors. Reis and Shaver argued in their Interpersonal Process Model of Intimacy (1988) that emotional self-disclosures are strongly related to intimacy, and those that feel more understood and cared for in their relationships will be more likely to continue sharing their thoughts and feelings. Therefore, the hypothesis was proposed that mothers who felt that their partners were more open to hearing their thoughts and needs, reflected as higher emotional intimacy, would be more likely to use their bargaining power from the relative earnings to discuss their needs for parenting help with their partners. However, this hypothesis was not supported, as emotional intimacy did not moderate the relationship between maternal relative earnings and father responsibility for routine childcare tasks. Emotional intimacy also did not have a main effect on father

responsibility for routine childcare tasks, suggesting that whether mothers feel their partners are supportive and respectful of their thoughts and feelings may not play a significant unique role in whether they choose to delegate tasks to fathers.

Past results have been more consistent with the Interpersonal Process Model of Intimacy (1988), finding that when couples have less emotionally intimate relationships, fathers are less responsive to mothers' emotional needs and requests for help with childcare tasks (Matta & Knudson-Martin 2006). Additionally, mothers may avoid discussing their need for help with routine childcare tasks with their partners if they expect their partners to be unsupportive, instead choosing to do most of the tasks as a self-protective behavior to avoid the potential of not receiving the support that they need (Levy et al., 2001). Therefore, if mothers do not feel that fathers will be responsive, they may not feel that it is worth using their bargaining power as it will likely not be successful. However, this idea was not supported.

One reason that an effect might not have been found in this study may have been due to the inclusion of both biological and stepfathers in the analysis. Using the same dataset, Adamsons et al. (2007) found that marital intimacy was significantly related to the amount of involvement for stepfathers but not biological fathers. Therefore, it is possible that emotional intimacy may have functioned as a moderator only for the stepfathers in the sample. It is possible that the role of emotional intimacy is more relevant when bargaining with a parent who has chosen the parenting role, rather than one who is related biologically and may view the fathering role differently. Had the analysis been conducted with each type of father independently, it is possible that an

effect would have been found. However, as this study's focus was specifically on residential fathers as a group, a second-order moderating analysis in regard to type of father was not proposed.

A second reason for the lack of an interaction may be that emotional intimacy is a reflection of the marital relationship rather than the coparenting relationship. According to McBride and Rane (1998), assessments of coparenting relationships may be stronger predictors of father involvement than are parents' global ratings of marital satisfaction, because the coparental relationship is related to children whereas the marital relationship is not. Therefore, examining factors related to the coparenting relationship rather than the marital relationship may prove to be more effective. Despite the fact that the effect of the coparenting relationship may be stronger than that of the marital or couple relationship, it still does not explain why a significant, yet smaller effect was not found. One limitation of the Interpersonal Processing Model of Intimacy is that the focus is on the emotional intimacy of a specific relationship, rather than on specific aspects of that relationship. This overlooks the fact that mothers might pick and choose which thoughts and feelings to disclose. Therefore, it is possible that mothers could be very open with their partners about their thoughts and feelings about personal issues, but withhold those related to childrearing. Gatekeeping theory can help to shed light on this, as mothers who hold more traditional beliefs about parenting may be more likely to withhold sharing their need for parenting help with their partners. Following this reasoning, if mothers choose to disclose everything personal except for their parenting needs with their partners, then

whether or not they view the relationship as emotionally intimate might have little bearing on whether fathers get more involved.

In addition to focusing on the coparenting relationship, future studies should also consider the father-child relationship. Research has found that men consider their experiences as fathers to be highly influenced by their relationships with their children (Palkovitz, 2002). Therefore, mothers may be more concerned with the father-child relationship than with the coparenting relationship when trying to influence father involvement. As the conceptualization of father involvement has very recently begun to shift to that of father-child relationship quality (FCRQ; Palkovitz, 2019), an exciting future direction will be to examine the role that FCRQ plays in predicting father responsibility for routine childcare tasks.

Parenting Stress as a Moderator

The second identified moderator was parenting stress. According to role strain theory (Pearlin, 1989), it is important to study stress as it provides the opportunity to observe how the structural arrangements of people's lives, and the experiences that they have due to these arrangements, affects their well-being. As higher stress is related to less sensitive parenting behaviors (Belsky, 1983), understanding the role of parenting stress in relation to father involvement is important for understanding how to help mothers share some of the childcare burden. Therefore, the hypothesis was proposed that mothers who were experiencing higher levels of parenting stress would be more likely to use their bargaining power from the relative earnings to discuss their needs for parenting help with their partners.

Findings have shown that increases in fathers' parenting contributions predict significant declines in mothers' parenting stress (Coley & Schindler, 2008; Nomaguchi et al., 2017). However, no study as of yet has examined this relationship in the opposite direction, with parenting stress predicting father involvement, or with parenting stress acting as a moderator. Although the hypothesis regarding the directional moderating effect of parenting stress was not supported, an interesting finding emerged. Parenting stress did moderate the association between maternal relative earnings and subsequent father responsibility for childcare tasks, but the Johnson-Neyman plot (Clavel, 2015) showed that the effect was in the opposite direction as hypothesized. Rather than the association between maternal relative earnings and subsequent father responsibility for childcare tasks being stronger for couples in which parenting stress was higher, the relationship was stronger only for couples in which parenting stress was lower. It appears that mothers may be more likely to use their bargaining power afforded from their increased earnings when they are not highly stressed, suggesting that bargaining may be stressful in and of itself, with mothers avoiding it when their parenting stress is higher. It will be important in future research to have mothers report on whether bargaining about childcare responsibility itself adds to their parenting stress, in order to support the use of role strain theory in similar work.

One reason for why this contradictory result may have been found is informed by gatekeeping theory. Although gatekeeping is often referred to in terms of inhibitive behaviors, or those that mothers employ to prevent fathers from getting involved in childcare, it can also be viewed in terms of facilitative behaviors, or behaviors that

mothers employ to increase father involvement. Research has shown that mothers are more likely to allow fathers to parent when they view them as capable caregivers (Fagan & Barnett, 2003). When mothers are less stressed about parenting, they may consider childcare tasks to be easy and consider it to be something that fathers can do successfully. Under these conditions, mothers may then be willing to use the power afforded to them by their relative earnings to allocate tasks for fathers to complete, using facilitative gatekeeping behaviors. On the other hand, mothers who are more stressed about parenting may evaluate it as difficult. They may choose to take on all of the tasks related to the parenting role rather than allow fathers to attempt them and potentially fail. This might be especially true for mothers with more traditional childrearing beliefs, who view parenting tasks as being the part of the “mother” role. In this sense, mothers may believe that they are the only ones capable of childcare duties, and thus rely on inhibitive gatekeeping behaviors to keep fathers from getting involved. Explication of this interaction would benefit from a measure of mother’s childrearing beliefs. Despite this, this finding suggests that the association between maternal relative earnings and subsequent father responsibility for routine childcare tasks is conditional on parenting stress, leading to a potential point of intervention.

Strengths and Limitations

The current study contributes to the knowledge of the association between maternal relative earnings and later father responsibility for routine childcare tasks across infancy and toddlerhood, with specific attention to the moderating role of parenting stress. The strengths of this study include the time-ordering of study variables, the

extensive use of time-varying and invariant controls, the use of father reports of parenting behaviors, and the specific focus on involvement in routine childcare tasks. Time-ordering of the variables was done in order to strengthen the assumptions of the model. Rather than examining the predictor and dependent variables changing over the same time periods, the associations between mothers' relative earnings at a given time point and father responsibility for routine childcare tasks at the next time point was estimated. Time-lagging the longitudinal data and also including both time-varying and time invariant controls helped to control for the influence of relatively stable effects in addition to potentially confounding variables (Curran & Bauer, 2011).

The use of father reports of parenting behavior is another strength of the current study. First, though mothers can be adequate reporters of fathers' time with children, their reports can be subject to bias as they are not always available to see fathers and children together. Importantly, fathers have been found to be reliable reporters of their own involvement with their young children (Wical & Doherty, 2005). Second, when researchers rely on single informants to report on both the independent and dependent variables in their studies, this leads to increases in shared-method variance. According to Marsiglio et al. (2000), shared-method variance tends to increase the correlation between variables, resulting in overestimates of the real association. This makes it difficult to know whether the correlations are accurate estimates, or if they are due to factors related to the informants. By having mothers report on the independent variables and fathers report on the dependent variable, this reduces the threat of inflated associations due to shared informant bias.

Finally, this study focused on responsibility for routine childcare tasks. There currently are many individual fathering theories being used, rather than one all-encompassing theory. This has led to issues with comparing across studies due to multiple conceptualizations of the construct (Cabrera et al., 2007). Schoppe-Sullivan and colleagues (2004) conducted a confirmatory factor analysis using four facets of involvement (responsibility, affection/communication, participation in activities, and cognitive monitoring) to compare the utility of unidimensional and multidimensional models and to provide measurement advice to researchers. Their modeling procedures supported conceptualizing father involvement as a multidimensional construct, consisting of distinct domains. They proposed that global indexes of involvement were not effective, and that researchers should decide which aspects are important for their studies and collect data on them. Following their suggestions, this study focused on routine childcare tasks, as mothers report doing twice the routine childcare as fathers, making it a place in which bargaining can occur (Kotila et al., 2013).

Despite these strengths, the study is not without limitations. First, as this study focused on the first three years of childhood, these results cannot be generalized to couples with children beyond the toddlerhood age. As mentioned previously, the infancy and toddlerhood ages can be particularly challenging for parents as these children require substantial hands-on attention with daily tasks that older children may be able to do themselves. Parents need to spend more time directly engaged in routine childcare such as feeding and changing diapers, tasks specific to these age groups, and some mothers may find this particular type of involvement to be especially stressful due to the amount

of direct engagement required. Additionally, though mothers may take time off from employment for other reasons and thus experience a decrease and then increase in earnings as they return, the period immediately following the birth of a child is unique as all mothers must make the decision as to whether to continue working, to decrease their hours, or to take time off, which is often dependent on their access to family leave.

Additionally, though the time-ordering of the longitudinal variables helps to strengthen inferences, definitive conclusions about the causal relations cannot be made as the associations were not also modeled in the opposite direction to rule them out nor was an experimental design used. A benefit of experimental designs is that participants are randomly assigned to groups, removing the need to control for additional variables or selection effects. This study did rely on extensive time-varying and time invariant controls, but it is possible that there are other variables that were not accounted for in this study. For example, mother involvement was not controlled as mothers did not directly report on their responsibility for routine childcare tasks. Although mothers' involvement could potentially be inferred from the father involvement measure, it is subject to bias as fathers are not always available to see mothers' interactions with their children.

Another limitation of the current study is in regard to the internal consistency of the father responsibility for routine childcare tasks measure. Although the 24 and 36 month Cronbach alphas were acceptable at .79 and .78, respectively, the 15 month alpha was relatively low at .69. This suggests that the measure may not be unidimensional. If this is the case, the measure may be better reflected as an index score. Unlike scales, which measure levels of intensity at the variable level, indexes are constructed by

accumulating the scores assigned to individual items without concern about the intercorrelations. An assumption when using the measure as a scale is that fathers who are highly responsible for one task should be highly responsible for other tasks. However, as couples may divide up tasks between them, it is possible that some fathers may be high on the tasks that they are responsible for and low on the tasks that they aren't responsible for, suggesting that an index may be more appropriate.

A final limitation of the current study has to do with historical context. As the data for the current study were collected beginning in 1990, the Family and Medical Leave Act (FMLA) had not yet been established. FMLA entitles eligible employees to take unpaid, job-protected leave after the birth of a child and to care for the newborn child within the first year after birth. By the time FMLA was established in 1993, the children in the study were close to three years old. Therefore, the data in the study do not reflect the current state of parental leave in the country, in which many mothers are able to take unpaid time off after the birth of a child without the risk of losing their jobs, which can affect patterns of postpartum maternal employment and earnings (Schott, 2012).

Future Directions

This study helps to understand how maternal relative earnings influences later father responsibility for routine childcare tasks across the infancy and toddlerhood periods. However, it also provides direction for future studies. First, although this study examined change over time, it was examined time linearly. Due to this, it is unclear whether any of the associations were stronger between specific time points or weaker at

others. Future work should examine the rate of change across the infancy and toddlerhood, or utilize a cross-lagged panel design to test for potentially different patterns among the associations across the waves.

Second, this study focused on mothers' experiences with the goal of better understanding how to help get fathers more involved. However, it did not take into account paternal factors such as fathers' perceptions of emotional intimacy or stress, which may play a role in how involved they become. Maternal parenting stress acted as a moderator, but fathers' parenting stress may as well, as more stressed fathers may be less likely to want to take on additional tasks. Future studies should also focus on the contexts surrounding fathers' experiences, such as their parenting stress and their reports of emotional intimacy, and their appraisals of their own parenting skills in order to gain a fuller understanding of the context of the entire couple relationship.

Finally, as mentioned above, the conceptualization of father involvement has very recently begun to shift to that of father-child relationship quality (FCRQ; Palkovitz, 2019). Therefore, an exciting future direction will be to examine the role that FCRQ plays in predicting father responsibility for routine childcare tasks. Potential questions should revolve around whether and how fathers' relationships with their children impact how involved they become. Another theory that can help to guide future work is that of identity theory (Styker, 1968). Although external factors like maternal bargaining or gatekeeping behaviors may influence father involvement, there are also internal factors that may play a role as well. For example, where does the parenting role fall on fathers' identity hierarchies? Are fathers who identify more with the parenting role more likely to

become involved, or more easily bargained with? What does father involvement look like for fathers who wish they could be more or less involved than they are? These are just a few possible questions for future work.

In conclusion, results of this study demonstrate that maternal relative earnings play a role in influencing subsequent father involvement in routine childcare tasks. This association is conditionalized on parenting stress, such that the relationship is stronger for couples in which parenting stress was lower, and not significant for couples in which parenting stress was higher. Future studies including mother reports of responsibility for routine childcare tasks, mother beliefs about childrearing, and father-child relationship quality are warranted.

REFERENCES

- Abidin, R. R. (1995). Parenting Stress Index, Third Edition: Professional Manual. Odessa, FL: Psychological Assessment Resources, Inc.
- Abidin, R.R. (1983). Parenting Stress Index: Manual, Administration Booklet, and Research Update. Charlottesville: Pediatric Psychology Press.
- Adamsons, K. (2010). Using identity theory to develop a mid-range model of parental gate-keeping and parenting behavior. *Journal of Family Theory and Review*, 2, 137-148.
- Aldous, J., & Mulligan, G. M. (2002). Fathers' child care and children's behavior problems. *Journal of Family Issues*, 23, 624-647.
doi:10.1177/0192513X02023005003
- Allen, S. M., & Hawkins, A. J. (1999). Maternal gatekeeping: Mothers' beliefs and behaviors that inhibit greater father involvement in family work. *Journal of Marriage and Family*, 61, 199–212. Retrieved from <http://www.jstor.org/stable/353894>
- Amato, P.R. & Rivera, F. (1999). Paternal involvement and children's behavior problems. *Journal of Marriage and Family*, 61, 375-384.

- Barnett, R. C., & Marshall, N. L. (1991). The relationship between women's work and family roles and their subjective well-being and psychological distress. In M. Frankenhaeuser, U. Lundberg, & M. Chesney (Eds.), *Women, work and health: Stress and opportunities* (pp. 111-136). New York, NY: Plenum.
- Belsky, J., Burchinal, M., McCartney, K., Vandell, D. L., Clarke-Stewart, K. A., & Owen, M. T. (2007). Are there long-term effects of early child care? *Child Development, 78*, 681–701.
- Bianchi, S. M. (2000). Maternal employment and time with children: Dramatic change or surprising continuity. *Demography, 37*, 401–414. doi:10.1353/dem.2000.0001
- Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*, 705–725. <https://doi-org.libproxy.uncg.edu/10.1111/j.1741-3737.2010.00726.x>
- Bianchi, S., Robinson, J., & Milkie, M. (2006). *Changing rhythms of American family life*. New York: Russell Sage Foundation.
- Biesanz, J. C., Deeb-Sossa, N., Papadakis, A. A., Bollen, K. A., & Curran, P. J. (2004). The role of coding time in estimating and interpreting growth curve models. *Psychological Methods, 9*, 30–52.
- Bittman, M., England, P., Sayer, L., Folbre, N., & Matheson, G. (2003). When does gender trump money? Bargaining and time in household work. *American Journal of Sociology, 109*, 186–214.

- Bradford, K., & Hawkins, A. J. (2006). Learning competent fathering: A longitudinal analysis of marital intimacy and fathering. *Fathering: A Journal of Theory, Research, and Practice about Men as Fathers*, 4, 215–234. <https://doi-org.libproxy.uncg.edu/10.3149/fth.0403.215>
- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101, 568-586. doi:10.1037/0033-295X.101.4.568
- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs, and empirical findings. *Social Development*, 9, 115-125. doi:10.1111/1467-9507.00114
- Buehler, C., & O'Brien, M. (2011). Mothers' part-time employment: Associations with mother and family well-being. *Journal of Family Psychology*, 25, 895–906. <https://doi-org.libproxy.uncg.edu/10.1037/a0025993>
- Buehler, C., O'Brien, M., Swartout, K. M., & Zhou, N. (2014). Maternal employment and parenting through middle childhood: Contextualizing factors. *Journal of Marriage and Family*, 76, 1025–1046.
- Cabrera, N. J., Shannon, J. D., & Tamis-LeMonda, C. (2007). Fathers' influence on their children's cognitive and emotional development: From toddlers to pre-K. *Applied Developmental Science*, 11, 208-213. doi:10.1080/10888690701762100

- Campbell, S. B., Matestic, P., von Stauffenberg, C., Mohan, R., & Kirchner, T. (2007). Trajectories of maternal depressive symptoms, maternal sensitivity, and children's functioning at school entry. *Developmental Psychology, 43*, 1202–1215. <https://doi-org.libproxy.uncg.edu/10.1037/0012-1649.43.5.1202>
- Carlson, D. L., Hanson, S., & Fitzroy, A. (2016). The division of child care, sexual intimacy, and relationship quality in couples. *Gender & Society, 30*, 442–466. <https://doi-org.libproxy.uncg.edu/10.1177/0891243215626709>
- Castillo, J., Welch, G., & Sarver, C. (2011). Fathering: The relationship between fathers' residence, fathers' sociodemographic characteristics, and father involvement. *Maternal and Child Health Journal, 15*, 1342–1349.
- Chesley, N., & Flood, S. (2017). Signs of change? At-home and breadwinner parents' housework and child-care time. *Journal of Marriage and Family, 79*, 511–534. doi: 10.1111/jomf.12376
- Clavel, F. (2015). *Advanced topics: Plotting better interactions using the Johnson-Neyman technique in Mplus*. Retrieved April 14, 2017, from <https://clavelresearch.wordpress.com/2015/03/23/advanced-topics-plotting-better-interactions-using-the-johnson-neyman-technique-in-mplus/>.
- Coley, R. L., & Schindler, H. S. (2008). Biological fathers' contributions to maternal and family functioning. *Parenting: Science and Practice, 8*, 294–318. <https://doi-org.libproxy.uncg.edu/10.1080/15295190802522814>
- Connelly, R., & Kimmel, J. (2009). Spousal economic factors in ATUS parents' time choices. *Social Indicators Research, 93*, 147–152.

- Corwyn, R. F., & Bradley, R. H. (1999). Determinants of paternal and maternal investment in children. *Infant Mental Health Journal, 20*, 238–256.
- Costigan, C. L., & Cox, M. J. (2001). Fathers' participation in family research: Is there a self-selection bias? *Journal of Family Psychology, 15*, 706–720.
- Craig, L., & Mullan, K. (2011). How mothers and fathers share childcare: A cross-national time-use comparison. *American Sociological Review, 76*, 834-861.
doi:10.1177/0003122411427673
- Craig, L., Powell, A., & Smyth, C. (2014). Towards intensive parenting? Changes in the composition and determinants of mothers' and fathers' time with children 1992–2006. *British Journal of Sociology, 65*, 555–579. <https://doi-org.libproxy.uncg.edu/10.1111/1468-4446.12035>
- Curran, P. J., & Bauer, D. J. (2011). The disaggregation of within-person and between-person effects in longitudinal models of change. *Annual Review of Psychology, 62*, 583-619.
- Day, R. D., & Lamb, M. E. (2004). *Conceptualizing and measuring father involvement*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Deater-Deckard, K. (1998). Parenting Stress and Child Adjustment: Some old hypotheses and new questions. *Clinical Psychology: Science and Practice, 5*, 314-332.
- Deutsch, F. M., Lussier, J. B., & Servis, L. J. (1993). Husbands at home: Predictors of paternal participation in childcare and housework. *Journal of Personality and Social Psychology, 65*, 1154–1166. <https://doi-org.libproxy.uncg.edu/10.1037/0022-3514.65.6.1154>

- Engle, J. M., & McElwain, N. L. (2013). Parental depressive symptoms and marital intimacy at 45 years: Joint contributions to mother–child and father–child interaction at 65 years. *Developmental Psychology, 49*(, 2225–2235. <https://doi-org.libproxy.uncg.edu/10.1037/a0032450.supp>
- Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: Norton.
- Fagan, J., & Barnett, M. (2003). The relationship between maternal gatekeeping, paternal competence, mothers' attitudes about the father role, and father involvement. *Journal of Family Issues, 24*, 1020–1043. <https://doi-org.libproxy.uncg.edu/10.1177/0192513X03256397>
- Fagan, J., Day, R., Lamb, M. E., & Cabrera, N. J. (2014). Should researchers conceptualize differently the dimensions of parenting for fathers and mothers? *Journal of Family Theory & Review, 6*, 390-405.
- Faircloth, C. (2014). Intensive parenting and the expansion of parenting. In E. J. Lee, J. Bristow, C. Faircloth, & J. Macvarish (Eds.), *Parenting culture studies* (pp. 25–51). Houndmills, Basingstoke, Hampshire: Palgrave Macmillan. doi:10.1057/9781137304612
- Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: An attachment theoretical perspective. *Journal of Personality and Social Psychology, 80*, 972–994. <https://doi-org.libproxy.uncg.edu/10.1037/0022-3514.80.6.972>

- Feinberg, M. (2003). The internal structure and ecological context of coparenting: A framework for research and intervention. *Parenting: Science and Practice, 3*, 95–131.
- Fuligni, A. S., & Brooks-Gunn, J. (2004). Measuring mother and father shared caregiving: An analysis using the Panel Study of Income Dynamics-Child Development Supplement. In R. D. Day, M. E. Lamb (Eds.), *Conceptualizing and measuring father involvement* (pp. 341-357). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Gaia, A. (2002). Understanding emotional intimacy: A review of conceptualization, assessment and the role of gender. *International Social Science Review, 77*, 151-170.
- Garst, H., Frese, M., & Molenaar, P. C. (2000). The temporal factor of change in stressor-strain relationships: A growth curve model on a longitudinal study in East Germany. *Journal of Applied Psychology, 85*, 417–438.
<http://dx.doi.org/10.1037/0021-9010.85.3.417>
- George, C., Kaplan, N., & Main, M. (1984-1996). *Adult attachment interview protocol*. Unpublished manuscript, University of California, Berkeley.
- Glysch, R. L., & Vandell, D. L. (1992, March). *Associations between family of origin relationships and parental involvement with 1-month-old infants*. Paper presented at the meeting of the Southwestern Society for Research in Human Development, Tempe, AZ.

- Gryczkowski, M. R., Jordan, S. S., & Mercer, S. H. (2010). Differential relations between mothers' and fathers' parenting practices and child externalizing behavior. *Journal of Child and Family Studies, 19*, 539-546. doi:10.1007/s10826-009-9326-2
- Gupta, S. (2007). Autonomy, dependence, or display? The relationship between married women's earnings and housework. *Journal of Marriage and Family, 69*, 399-417. <https://doi-org.libproxy.uncg.edu/10.1111/j.1741-3737.2007.00373.x>
- Han, W., Ruhm, C. J., Waldenfogel, J., & Washbrook, E. (2008). The timing of mothers' employment after childbirth. *Mon Labor Rev., 131*, 15-27.
- Jacobs, J. N., & Kelley, M. L. (2006). Predictors of paternal involvement in childcare in dual-earner families with young children. *Fathering: A Journal of Theory, Research, and Practice about Men as Fathers, 4*, 23-47.
- Jia, R., Kotila, L. E., & Schoppe-Sullivan, S. J. (2012). Transactional relations between father involvement and preschoolers' socioemotional adjustment. *Journal of Family Psychology, 26*, 848-857. doi:10.1037/a0030245
- Johnson, P., & Neyman, J. (1936). Tests of certain linear hypotheses and their applications to some educational problems. *Statistical Research Memoirs, 1*, 57-93. <http://dx.doi.org/10.1007/BF02310468>.
- Jones, J., & Mosher, W. D. (2013). Fathers' involvement with their children: United States, 2006-2010. *National Health Statistics Reports, 71*, 1-21. <http://www.cdc.gov/nchs/data/nhsr/nhsr071.pdf>

- Kalil, A., Zioli-Guest, K. M., & Coley, R. L. (2005). Perceptions of father involvement patterns in teenage-mother families: Predictors and links to mothers' psychological adjustment. *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, *54*, 197–211. <https://doi-org.libproxy.uncg.edu/10.1111/j.0197-6664.2005.00016.x>
- Kluwer, E. S. (2010). From partnership to parenthood: A review of marital change across the transition to parenthood. *Journal of Family Theory & Review*, *2*, 105-125. doi:10.1111/j.1756-2589.2010.00045.x
- Kotila, L. E., Schoppe-Sullivan, S. J., & Kamp Dush, C. M. (2013). Time parenting activities in dual-earner families at the transition to parenthood. *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, *62*, 795-807. doi:10.1111/fare.12037
- Lamb, M. E. (2000). The history of research on father involvement: An overview. *Marriage & Family Review*, *29*, 23-42. doi:10.1300/J002v29n02_03
- Lamb, M. E., Pleck, J. H., Charnov, E. L., & Levine, J. A. (1987). A biosocial perspective on paternal behavior and involvement. In J. B. Lanaster, J. Altmann, A. S. Rossi, & L. R. Sherrod (Eds.), *Parenting across the lifespan: Biosocial perspectives* (pp. 111-142). Hawthorne, NY: Aldine.
- Lamb, M.E., & Tamis-LeMonda, C.S. (2004). The role of the father: An introduction. In M.E. Lamb (Ed.), *The role of the father in child development* (pp. 1-31). Hoboken, NJ: Wiley & Sons.

- Laurenceau, J.-P., Rivera, L. M., Schaffer, A. R., & Pietromonaco, P. R. (2004). Intimacy as an Interpersonal Process: Current Status and Future Directions. In D. J. Mashek & A. P. Aron (Eds.), *Handbook of closeness and intimacy*. (pp. 61–78). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Levy, S. R., Ayduk, O., & Downey, G. (2001). The role of rejection sensitivity in people's relationships with significant others and valued social groups. In M. R. Leary (Ed.), *Interpersonal rejection* (pp. 251-289). New York, NY, US: Oxford University Press.
- Lewis, R. (1978). Emotional intimacy among men. *Journal of Social Research, 34*, 108–121. doi:10.1111/j.1540-4560.1978.tb02543.x.
- Lundberg, S., & Pollak, R. A. (1996). Bargaining and distribution in marriage. *Journal of Economic Perspectives, 10*. 139-158.
- Lundberg, S., Pollak, R., & Wales, T. (1997). Do Husbands and Wives Pool Their Resources? Evidence from the United Kingdom Child Benefit. *The Journal of Human Resources, 32*, 463-480. doi:10.2307/146179
- Manning, L. B. (2018). The relation between changes in maternal sensitivity and attachment from infancy to 3 years. *Journal of Social and Personal Relationships*. <https://doi.org/10.1177/0265407518771217>
- Marsiglio, W. (1991). Paternal Engagement Activities with Minor Children. *Journal of Marriage and Family, 53*, 973–86.

- Marsiglio, W., Amato, P., Day, R. D., & Lamb, M. E. (2000). Scholarship on fatherhood in the 1990s and beyond. *Journal of Marriage and Family*, *62*, 1173-1191.
doi:10.1111/j.1741-3737.2000.01173.x
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper and Row.
- Matta, D. S., & Knudson-Martin, C. (2006). Father responsibility: Couple processes and the coconstruction of fatherhood. *Family Process*, *45*, 19–37. <https://doi-org.libproxy.uncg.edu/10.1111/j.1545-5300.2006.00078.x>
- McBride, B. A., & Rane, T. R. (1998). Parenting alliance as a predictor of father involvement: An exploratory study. *Family Relations*, *47*, 229-236.
- McBride, B. A., Schoppe, S. J., & Rane, T. R. (2002). Child characteristics, parenting stress, and parental involvement: Fathers versus mothers. *Journal of Marriage and Family*, *64*, 998-1011. doi:10.1111/j.1741-3737.2002.00998.x
- Meteyer, K., & Perry-Jenkins, M. (2010). Father involvement among working-class, dual-earner couples. *Fathering: A Journal of Theory, Research, and Practice about Men as Fathers*, *8*, 379–403.
- Muthén, L.K. and Muthén, B.O. (1998-2017). Mplus User's Guide. Eighth Edition. Los Angeles, CA: Muthén & Muthén
- Nelson, J. A. and O'Brien, M. (2012) Does an unplanned pregnancy have long-term implications for mother-child relationships? *Journal of Family Issues*, *33*, 506-526.

- NICHD Early Child Care Research Network. (2000). Factors associated with fathers' caregiving activities and sensitivity with young children. *Journal of Family Psychology, 14*, 200–219.
- NICHD Early Child Care Research Network. (2001). Nonmaternal care and family factors in early development: An overview of the NICHD Study of Early Child Care. *Journal of Applied Developmental Psychology, 22*, 457–492.
- Nomaguchi, K., Brown, S., & Leyman, T. M. (2017). Fathers' participation in parenting and maternal parenting stress: Variation by relationship status. *Journal of Family Issues, 38*, 1132–1156. <https://doi-org.libproxy.uncg.edu/10.1177/0192513X15623586>
- Olson. D. H. (1975). Intimacy and the aging family. *Realities of aging*. Minneapolis: University of Minnesota. Minneapolis.
- Osborne, C., Dillon, D., Craver, J. W., & Hovey, I. (2016). *Making good on fatherhood: A review of the fatherhood research*. Child & Family Research Partnership. University of Texas at Austin.
- Palkovitz, R. (2002). *Involved fathering and men's adult development: Provisional balances*. Mahwah, NJ: Erlbaum.
- Palkovitz, R. (2019). Expanding our focus from father involvement to father-child relationship quality. *Journal of Family Theory and Review, 11*, 576-591. <https://doi-org.libproxy.uncg.edu/10.1111/jftr.12352>

- Parker, K., & Livingston, G. (2019, June 12). 8 facts about American dads. Retrieved July 03, 2019, from <https://www.pewresearch.org/fact-tank/2019/06/12/fathers-day-facts/>
- Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behavior, 30*, 241–256. <https://doi-org.libproxy.uncg.edu/10.2307/2136956>
- Perry-Jenkins, M., Pierce, C. P., & Goldberg, A. E. (2004). Discourses on diapers and dirty laundry: Family communication about child care and housework. In A. L. Vangelisti (Ed.), *Handbook of family communication*. (pp. 541–561). Mahwah, NJ: Lawrence Erlbaum Associates Publishers
- Pleck, J. H. (1997). Paternal involvement: Levels, sources, and consequences. In M. E. Lamb (Ed.), *The role of the father in child development* (pp. 66-103). Hoboken, NJ, US: John Wiley & Sons Inc.
- Pleck, J. H. (2012). Integrating father involvement in parenting research. *Parenting: Science and Practice, 12*, 243-253. doi:10.1080/15295192.2012.683365
- Pleck, J. H., & Masciadrelli, B. P. (2004). Paternal Involvement by US Residential Fathers: Levels, Sources, and Consequences. In M. E. Lamb (Ed.) , *The role of the father in child development., 4th ed* (pp. 222-271). Hoboken, NJ: John Wiley & Sons Inc.
- Puhlman, D. J., & Pasley, K. (2013). Rethinking maternal gatekeeping. *Journal of Family Theory & Review, 5*, 176–193.

- Raley, S., Bianchi, S. M., & Wang, W. (2012). When do fathers care? Mothers' economic contribute and fathers' involvement in child care. *American Journal of Sociology, 117*, 1422–1459.
- Rapoport, B. and Le Bourdais, C. (2008). Parental time and working schedules. *Journal of Population Economics, 21*, 903-932.
- Reeves, R. V., & Krause, E. (2017, April 05). Cohabiting parents differ from married ones in three big ways. Retrieved from <https://www.brookings.edu/research/cohabiting-parents-differ-from-married-ones-in-three-big-ways/>
- Reis, H. T., & Patrick, B. C. (1996). Attachment and Intimacy: Component Processes. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 523–563). New York: Guilford.
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.), *Handbook of personal relationships: Theory, research and interventions*. (pp. 367–389). Oxford: John Wiley & Sons.
- Robinson, C., & Schumacker, R. E. (2009). Interaction effects: Centering, variance inflation factor, and interpretation issues. *Multiple Linear Regression Viewpoints, 35*, 6–11.
- Sandberg, J. F. & Hofferth, S. L. (2001). Changes in children's time with parents: United States, 1981–1997. *Demography, 38*, 423-436.

- Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR Inventory. *Journal of Marital and Family Therapy*, 7, 47–60. <https://doi-org.libproxy.uncg.edu/10.1111/j.1752-0606.1981.tb01351.x>
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7, 147-177. doi:10.1037/1082-989X.7.2.147
- Schneider, D. (2011). Market earnings and household work: New tests of gender performance theory. *Journal of Marriage and Family*, 73, 845–860. doi:10.1111/j.1741-3737.2011.00851.x
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, 57, 1–10.
- Schoppe-Sullivan, S. J., McBride, B. A., & Ho, M. R. (2004). Unidimensional versus multidimensional perspectives on father involvement. *Fathering: A Journal of Theory, Research, and Practice About Men as Fathers*, 2, 147-163. doi:10.3149/fth.0202.147
- Schott, W. (2012). Going back part-time: Family leave legislation and women’s return to work. *Population Research Policy Rev*, 31, 1-30. doi: 10.1007/s11113-011-9221-6.
- Sears, P. S. (1951). Doll play aggression in normal young children: Influence of sex, age, sibling status, father’s absence. *Psychological Monographs*, 65.

- Seltzer, M.M., Floyd, F.J., & Hindes, A.R. (2004). *Research methods in intellectual disabilities: The family context* (pp. 237-260). In E. Emerson, C. Hatton, T. Parmenter, & T. Thompson (Eds.). *Handbook of methods for research and evaluation in intellectual disabilities*. NY: John Wiley.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Stryker, S. (1968). Identity Salience and Role Performance: The Relevance of Symbolic Interaction Theory for Family Research. *Journal of Marriage and Family*, *30*, 558-564. doi:10.2307/349494
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York, NY: W W Norton & Co.
- Sullivan, O. (2011). An end to gender display through the performance of housework? A review and reassessment of the quantitative literature using insights from the qualitative literature. *Journal of Family Theory & Review*, *3*, 1–13.
- Tanaka, S., & Waldfogel, J. (2007). Effects of parental leave and work hours on fathers' involvement with their babies: Evidence from the millennium cohort study. *Community, Work & Family*, *10*, 409–426.
- Trinder, L. (2008). Maternal gate closing and gate opening in postdivorce families. *Journal of Family Issues*, *29*, 1298–1324. doi:10.1177/0192513X08315362
- U.S Bureau of Labor Statistics (2013). (BLS Reports No. 1040) Retrieved from <https://www.bls.gov/cps/wlf-databook-2012.pdf>

- U.S. Department of Labor, Bureau of Labor Statistics. (2018). *Labor force characteristics by race and ethnicity, 2017*. (BLS Reports No. 1076) Retrieved from <https://www.bls.gov/opub/reports/race-and-ethnicity/2017/home.htm>
- Waldfogel, J. (1999). Family leave coverage in the 1990s. *Monthly Labor Review*, *October*, 13-2.
- Walker, A. J., & McGraw, L. A. (2000). Who is responsible for responsible fathering? *Journal of Marriage and Family*, *62*, 563–569.
- Weinshenker, M. (2016). Nonstandard parental employment schedules and father involvement. *Community, Work & Family*, *19*, 396–413.
- Wical, K. A., & Doherty, W. J. (2005). How reliable are fathers' reports of involvement with their children: A methodological report. *Fathering*, *3*, 81–91.
- Wight, V., Raley, S., Bianchi, S. (2008). Time for children, oneself, and one's spouse among parents who work nonstandard hours. *Social Forces*, *87*, 243-271.
- Wilcox, R. R. (2018). Robust regression: Testing global hypotheses about the slopes when there is multicollinearity or heteroscedasticity. *British Journal of Mathematical and Statistical Psychology*. <https://doi-org.libproxy.uncg.edu/10.1111/bmsp.12152>
- Zimmerman, T. S., Haddock, S. A., Current, L. R., & Ziemba, S. (2003). Intimate partnership: Foundation to the successful balance of family and work. *American Journal of Family Therapy*, *31*, 107–124. Retrieved from <http://search.ebscohost.com.libproxy.uncg.edu/login.aspx?direct=true&db=psyh&AN=2003-01326-004&site=ehost-live>

APPENDIX A

TABLES

Table 1. Descriptive Statistics for Primary Variables

Variable	6 months	15 months	24 months	36 months
Father responsibility for routine childcare tasks				
Descriptive				
<i>M</i>		2.47	2.47	2.49
<i>SD</i>		0.37	0.40	0.41
Total <i>N</i>		416	413	262
Missing <i>n</i>		56	59	210
Maternal relative earnings				
Descriptive				
<i>M</i>	28.30	30.74	31.58	
<i>SD</i>	27.49	29.14	29.33	
Total <i>N</i>	454	454	452	
Missing <i>n</i>	18	18	20	
Emotional intimacy				
Descriptive				
<i>M</i>	3.96	3.89	3.76	
<i>SD</i>	0.77	0.81	0.90	
Total <i>N</i>	326	399	371	
Missing <i>n</i>	146	73	101	
Parenting stress				
Descriptive				
<i>M</i>	2.56	2.55	2.52	
<i>SD</i>	0.67	0.57	0.59	
Total <i>N</i>	471	471	445	
Missing <i>n</i>	1	1	27	

Table 2. Descriptive Statistics for Time-Varying Control Variables

Variable	Prenatal	1 month	6 months	15 months	24 months
Maternal depressive symptoms					
Descriptive					
<i>M</i>		10.98	8.67	9.25	9.13
<i>SD</i>		8.71	8.14	8.60	8.62
Total <i>N</i>		472	471	471	446
Missing <i>n</i>		0	1	1	26
Total family income					
Descriptive					
<i>M</i>		38,798	48,797	49,378	52,489
<i>SD</i>		32,424	37,047	35,146	36,347
Total <i>N</i>		462	470	471	465
Father work hours					
Descriptive					
<i>M</i>		42.84	44.17	42.58	41.93
<i>SD</i>		14.20	13.48	15.66	14.39
Total <i>N</i>		461	445	460	448
Missing <i>n</i>		11	27	12	24
Mother work hours					
Descriptive					
<i>M</i>		2.51	21.67	23.01	23.36
<i>SD</i>		8.48	18.80	19.78	19.05
Total <i>N</i>		472	470	470	465
Missing <i>n</i>		0	2	2	7
Hours in childcare					
Descriptive					
<i>M</i>		4.95	23.46	24.38	25.91
<i>SD</i>		13.22	21.10	21.21	21.58
Total <i>N</i>		472	472	471	470
Missing <i>n</i>		0	0	1	2
Father work hour scheduling flexibility					
Descriptive					
<i>M</i>		2.75	2.56		
<i>SD</i>		0.72	0.79		

Total <i>N</i>	433	431		
Missing <i>n</i>	39	41		
Mother work hour scheduling flexibility				
Descriptive				
<i>M</i>	3.24	2.79	2.78	2.80
<i>SD</i>	0.86	0.86	0.85	0.80
Total <i>N</i>	49	319	318	320
Missing <i>n</i>	423	153	154	152
# of children in household				
Descriptive				
<i>M</i>		1.89		2.04
<i>SD</i>		0.96		1.03
Total <i>N</i>		471		466
Missing <i>n</i>		1		6

Table 3. Descriptive Statistics for Time-Invariant Control Variables

Variable	<i>N/n (%)</i>	<i>M (SD)</i>
Baby's sex	472 (100)	
Female	230 (48.7)	
Male	242 (51.3)	
Baby's birth order	472 (100)	1.86 (.90)
Infant temperament	471 (100)	2.33 (.55)
Father's age	455 (96)	30.92 (5.73)
Mother's age	472 (100)	28.51 (5.51)
Father's education (<i>N</i> = 462)		
< High School	33 (3.5)	
High School or GED	82 (17.7)	
Some college, no degree	156 (33.8)	
Bachelor's degree	106 (22.9)	
Some graduate work or Master's degree	64 (13.9)	
Law degree	9 (1.9)	
More than a masters or a doctoral degree	12 (2.6)	
Mother's education (<i>N</i> = 472)		
< High School	32 (6.8)	
High School or GED	96 (20.3)	
Some college	158 (33.5)	
Bachelor's degree	112 (23.7)	
Some graduate work or Master's degree	61 (12.9)	
Law degree	7 (1.5)	
More than a masters or a doctoral degree	6 (1.3)	
Father's race (<i>N</i> = 471)		
Other	43 (9.1)	
White	428 (90.9)	
Mother's race (<i>N</i> = 471)		
Black	31 (6.8)	
White	440 (93.2)	

Father Hispanic (<i>N</i> = 471)		
Yes	20 (4.2)	
No	451 (95.8)	
Mother Hispanic (<i>N</i> = 471)		
Yes	24 (5.1)	
No	448 (94.9)	
Maternal prenatal employment status		
Full time (<i>n</i> / %)	303 (64.2)	
Part time (<i>n</i> / %)	102 (21.6)	
Not employed (<i>n</i> / %)	67 (14.2)	
Mother personality		
Neuroticism	469 (99)	29.74 (7.19)
Extraversion	469 (99)	43.22 (5.49)
Agreeableness	469 (99)	46.67 (5.12)

Table 4. Intercorrelations Among Time-Varying Variables

	1	2	3	4	5	6	7	8	9	10	11	12
Father responsibility for routine childcare tasks	--											
Maternal relative earnings	.28**	--										
Emotional intimacy	.09**	-.03	--									
Parenting stress	.01	-.04	-.29**	--								
Maternal depressive symptoms	.07*	.01	-.37**	.41**	--							
Total family income	-.12**	-.02	.13**	-.10**	-.23**	--						
Father work hours	-.19**	-.43**	.03	-.03	-.07**	.23**	--					
Mother work hours	.22**	.72**	.03	-.08**	-.11**	.16**	---.03	--				
Hours in childcare	.25**	.66**	-.02	-.03	-.10**	.15**	-.10**	.70**	--			
Father work hour scheduling flexibility	-.05	-.11*	.12*	-.09	-.04	.08*	-.13**	-.15**	-.16**	--		
Mother work hour scheduling flexibility	-.15**	-.19**	-.04	-.04	.01	-.05	.03	-.28**	-.25**	.15**	--	
# of children in household	-.03	-.09**	.00	.08*	.07*	-.02	-.03	-.12**	-.17**	.02	-.05	--

Notes: * $p \leq .05$, ** $p \leq .01$

Table 5. Intercorrelations Among Time-Invariant Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Father responsibility for routine childcare tasks	--														
Baby's sex ₁	-.15*	--													
Baby's birth order	-.06*	.03	--												
Infant temperament	-.11*	.06**	-.07*	--											
Father age	-.06	.03	.21**	.05*	--										
Mother age	-.10*	.03	.23**	.06**	.76**	--									
Father education	-.06*	-.01	-.01	.15*	.35**	.41**	--								
Mother education	-.06*	.07**	-.03	.14**	.38**	.51**	.61**	--							
Father race ₂	-.10*	.03	-.13*	.12**	.12**	.19**	.13**	.19**	--						
Mother race ₂	-.08*	.02	-.16*	.09**	.10**	.12**	.09**	.15**	.75**	--					
Father Hispanic ₃	.07*	.03	.03	-.05*	-.05*	*	*	*	.04	.04*	--				
Mother Hispanic ₃	.09**	.03	.05*	-.02	-.01	-.03	-.01	-.05*	.06**	.04	.14**	--			
Mother neuroticism	.06*	-.04	-.09*	-.14*	-.17*	-.24*	-.21*	-.23*	-.07*	-.07*	.06**	-.01	--		
Mother extraversion	-.06*	.01	.03	.05*	-.02	.01	.11**	.09**	.07**	.06**	-.02	.03	-.32*	--	

Table 6. Multilevel Models Predicting Fathers' Responsibility for Routine Care Tasks

Predictors	Unstandardized Coefficients			
	(1)	(2)	(3)	(4)
Father responsibility for routine care tasks				
Intercept	2.43**	3.43**	3.51**	3.43**
Time (child age)	0.01	0.14	0.12	0.13
Maternal relative earnings		0.01*	0.01*	0.01*
Emotional Intimacy			0.03	
Emotional Intimacy X Maternal Relative Earnings			-0.00	
Parenting Stress				0.01
Parenting Stress X Maternal Relative Earnings				-0.01**
Control variables				
Maternal depressive symptoms		0.01	0.02	0.01
Total family income		-0.01**	-0.01**	0.01**
Father work hours		-0.00	-0.00	-0.00
Mother work hours		0.01	0.00	0.01
Hours in childcare		0.02**	0.02**	0.02*
Father's work hour scheduling flexibility		-0.01	-0.01	-0.01
Mother's work hour scheduling flexibility		-0.02	-0.02	-0.02
# of children in household		0.03	0.03	0.03
Baby's sex ₁		-0.04	-0.04	-0.05
Baby's birth order		-0.08	-0.09	-0.08
Infant temperament		0.04	0.04	0.05
Father's age		-0.01	-0.01	-0.00
Mother's age		-0.09	-0.09	-0.09
Father's education		-0.01	-0.01	-0.01
Mother's education		0.01	0.00	0.01
Father's race ₂		-0.13	-0.13	-0.13
Mother's race ₂		-0.04	-0.04	-0.04

Father Hispanic ³	0.03	0.03	0.04
Mother Hispanic ³	0.22	0.22	0.23
Prenatal Full-time (FT)	-0.03**	0.04	-0.03
Prenatal Not-employed (NE)	-0.05**	-0.02	-0.01
Mother personality			
Neuroticism	0.13**	0.13*	0.12*
Extraversion	0.00	-0.01	0.00
Agreeableness	-0.05	-0.04	-0.05

Notes: Parameters are unstandardized regression coefficients.

Model 1: The unconditional growth model for fathers' responsibility for routine childcare tasks

Model 2: Maternal relative earnings predicting fathers' responsibility for routine childcare tasks, with covariates included

Model 3: Model 2 with the inclusion of emotional intimacy and the interaction between maternal relative earnings and emotional intimacy predicting fathers' responsibility for routine childcare tasks, with covariates included

Model 4: Model 2 with the inclusion of parenting stress and the interaction between maternal relative earnings and parenting stress predicting fathers' responsibility for routine childcare tasks, with covariates included

Father responsibility for routine childcare tasks is centered at 15 months.

Maternal relative earnings is centered at 6 months.

FT indicates the contrast between full-time and part-time work hours. NE indicates the contrast between no employment and part-time work hours.

¹ 0 = male, 1 = female

² 0 = Other, 1 = White

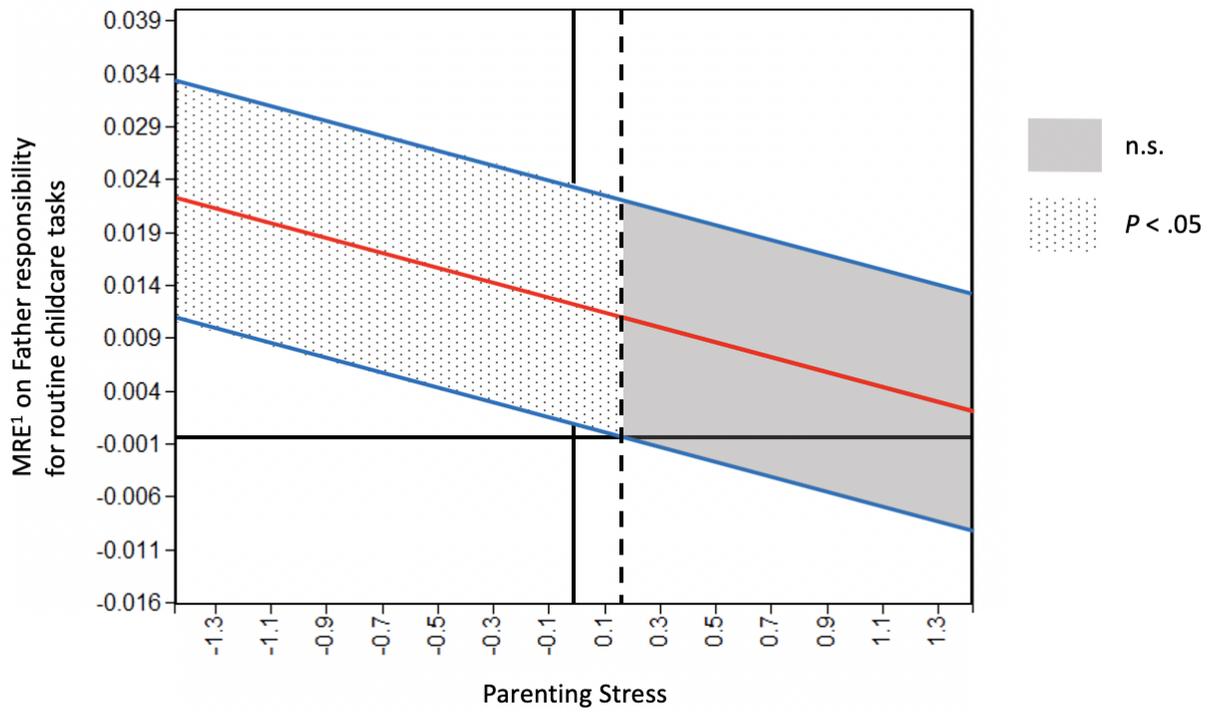
³ 0 = Not Hispanic, 1 = Hispanic

* $p \leq .05$, ** $p \leq .01$

APPENDIX B

FIGURES

Figure 1. Maternal Relative Earnings by Parenting Stress in Prediction of Father Responsibility for Routine Childcare Tasks



Notes: Figure shows range from -1.5 SD to 1.5 SD of parenting stress as a moderator.
1 MRE = Maternal relative earnings