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### What do fathers do?

A look into the daily activities of fathers versus mothers using time diary data

The transition to parenthood is a critical time in which family interaction patterns are established. According to Family Systems Theory (S. Minuchin, 1974), individuals cannot be completely understood outside of the systems in which they reside. Thus, it is important to understand how interactions between certain family members (i.e. between parents or between parents and children) influence the functioning of individuals and the family unit as a whole. Understanding the development of these interactions may provide insight into later family functioning, as the family system will continue to function in this manner until a major change or “shock” to the system alters the interactions between individuals (S. Minuchin, 1974). In families experiencing the transition to parenthood, the patterns of interaction established over the first year of life may be significant predictors of later child, parent, and family functioning, and provide a unique perspective on the development of parental involvement.

While much research documents discrepancies in parental time use (Bianchi, Robinson, & Milkie, 2006; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001; Venn, Arbor, Meadows, & Hilsop, 2008), we have little understanding of how dual-earner parents establish interaction and childcare patterns with their children over the transition to parenthood. Recent findings suggest that mothers most often participate in childcare activities with their children more than fathers, in both absolute and relative terms, fathers spend the majority of their time interacting with their children rather than providing routine care (Craig, 2006). However, these data are not from the United States, and may be influenced by cultural differences in parental beliefs and childrearing

practices. Understanding how contemporary, dual-earner parents in the United States spend time with their children may also provide insight into how social standards for both parenting and fatherhood have translated into practice. Additionally, the use of longitudinal time-diary data among mothers and fathers in the same family may provide a more complete understanding of how family interaction patterns evolve over time.

Specifically, this project seeks to understand how working parents in new families work together to provide care for their infant. Do fathers participate in childcare more often because mothers are unable to devote such a large portion of their time due to similar work constraints? Do mothers engage children less because they spend such a large portion of their time in childcare, or do parents each see the importance of engagement with their child and maximize their play time because of their inability to spend a large portion of time in with their child in general? Are parents spending time with their child as a family, or are they caring for their child alone while the other parent works or does household tasks? Simply put, what do new parents do? We study these questions in a sample of 182 first-time parent, dual-earner couples residing in a large Midwestern city, and compare parental involvement at 3, 6, and 9 months postpartum.

### **Theory**

Family systems theory (e.g. S. Minuchin, 1974) posits that families are organized units that form stable interaction patterns – both related and distinct from the interaction patterns of the dyadic (marital, parent-child) or other subsystems that comprise the family unit. Thus, individuals cannot be fully understood independently from the network of relationships in which those individuals are embedded (Cox & Paley, 1997; P. Minuchin, 1985). Understanding how family interaction patterns emerge across the transition to parenthood may provide a greater

understanding of why discrepancies in parental involvement develop over time. Maternal involvement has been associated with paternal involvement (Pleck & Hofferth, 2008), thus we extend previous research by examining how maternal involvement in specific domains (e.g. engagement, responsibility, childcare, and accessibility) is associated with paternal involvement at subsequent time points.

### **Benefits of Father Involvement**

Why does father involvement matter? A long tradition of research has documented the importance of mothers to children (Ainsworth, 1979; Bowlby, 1969). Yet, recent research has documented a variety of benefits for children who have involved fathers. Flouri and Buchanan (2003) found that father involvement in childhood has protective effects on adolescent psychological maladjustment, while father involvement in adolescence protects women from adult psychological distress. Interestingly, these protective effects did not vary based on the level of mother involvement (Flouri & Buchanan, 2003), further supporting the argument that father involvement alone directly produces positive effects for children. These direct benefits are not limited to psychological outcomes for children. Father involvement has also been shown to play a positive role in the linguistic, cognitive, and language development of children (Perlmann & Gleason, 1993). Father's participation in certain aspects of parenting such as discipline and responding to requests for attention has been shown to be correlated with children's higher self esteem. Close father-child relationships have been linked to occupational and educational mobility in adults (Amato, 1994). Fathers can positively impact student achievement when they take on active roles in schools, and this impact has been shown to be *in addition* to the impact of mother's school participation (Mcbride, Schoppe-Sullivan & Ho, 2005). Further, children with

involved fathers form and maintain more successful intimate relationships (Hwang & Lamb, 1997; Flouri & Buchanan, 2000). When fathers engage in activities which can be considered indirect care, including making childcare arrangements and scheduling doctor's appointments, children tend to become adults who subscribe to a more egalitarian view of gender roles (Deutsch, Servis, & Payne, 2001).

While the importance of the direct benefits of father involvement can no longer be ignored, there are also positive indirect effects of father involvement. Recently, father's interactive time with children has been shown to affect levels of mother engagement over time, suggesting the role of the father influences the mother-child relationship as well (Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004). For example, father's engagement at 24 months predicted mother's levels of engagement at later times. Possible mechanisms for which this association exists may reside in fathers' demographic characteristics, with educated, employed, and co-resident fathers promoting child development through fostering the mother-child relationship (Tamis-LeMonda et al., 2004). Because these fathers are able to provide multiple benefits to their families which may include living arrangements that are relatively stable and a steady flow of income, mothers may feel less stressed and have the time and energy to focus on multiple aspects of the development of their children. In low income families, financial support has been found to be a positive influence in the lives of children, where the income provided by fathers can meet basic needs such as housing and diet which help produce more favorable outcomes for children (Cabrera & Peters, 2000), such as the development of personal growth and family relationships.

### **Conceptualization of Parental Involvement**

Lamb, Pleck, Charnov & Levine (1985) developed a widely-used framework of father involvement that conceptualizes father involvement in three domains: engagement, responsibility, and accessibility. *Engagement* refers to direct interaction with the child, and includes activities such as singing or reading with the child. *Responsibility* refers to indirectly providing care for the child, such as scheduling doctor's appointments or making childcare arrangements. *Accessibility* refers to the availability of the parent, such that the parent is close enough and able to respond to the child, but is not participating in any activities either with or for the child. Additionally, because childcare activities are such a large proportion of time spent with the child during the first year of life, we examine childcare itself as a separate domain of parental involvement. *Childcare* refers to activities such as feeding or diapering the child. Because mothers in dual-earner families face similar time constraints as fathers due to work hours, we consider the comparison of parental involvement using this conceptualization to be a unique opportunity to compare specifics of parental involvement in areas that may influence child development.

*Research on engagement activities.* Time diary data from surveys such as the 1975-79 Study of Time Use (STU) and the 1997 Child Development Supplement of the Panel Study of Income Dynamics (PSID) have been used to document the trend of increasing father involvement with children within the last few decades (Pleck & Masciadrelli, 2004). Recent studies have also shown an increase in maternal childcare activities since the 1970's (Sayer, Bianchi, & Robinson, 2004; Bianchi et al., 2006). While time spent in work hours has increased for women over the same time period, women consistently engage in more childcare activities than their earlier counterparts. Fathers have also increased their primary child care hours from

three hours in 1975 to seven hours in 2000, however mothers have increased their childcare hours from ten to thirteen hours during the same time period as well (Bianchi et al., 2006).

While research has shown that levels of childcare have increased for both men and women (Sayer et al, 2004; Bianchi et al., 2006), trends in engagement time have been relatively unexplored. Pleck (1997) estimated fathers' engagement with their children to be a little over two-fifths that of mothers' time, while McBride and Mills (1993) reported fathers' engagement times as one percent higher than mothers' engagement times. The discrepancies between these results show the importance of continuing to examine levels of father involvement in engagement activities in comparison to mother's involvement due to the evolving nature of parenthood.

*Research on responsibility.* While this component of father involvement is relatively unexplored (Pleck, 2010), studies are beginning to investigate this domain through activities such as making childcare arrangements (Leslie, Anderson, & Branson, 1991; Peterson & Gerson, 1992) and taking responsibility for children's healthcare (Bailey, 1991; Moore & Kotelchuk, 2004). While some of these studies focus on the differences between mothers and fathers participation in indirect care activities (Leslie et al., 1991; Peterson & Gerson, 1992; Bailey, 1991), these studies use frequencies of activities instead of actual time spent in indirect care. However, dropping a child off to daycare on the way to work may require much less time than attending doctor appointments or making arrangements with caregivers over the phone. Using time measures and comparing mothers' time use to fathers' time use may help demonstrate how couples in dual-earner families must allocate time efficiently to care for their children.

*Research on childcare.* Socio-cultural shifts in the nature of parenting have been thought to begin to alleviate the burden of the “second shift” for working mothers. However, further exploration of this popular notion has provided weak support for its claims at best. Recent findings suggest that dual-earner families allocate their childcare time more equally than single-earner families (Milkie, Raley, & Bianchi, 2009). Conversely, other findings show that when mothers and fathers are both available for care mothers continue to provide a greater amount of care for children (Laflamme, Pomerleau, & Malcuit, 2002). Mothers may face additional constraints when flexibility in childcare activities is considered; a child who needs to eat requires immediate attention whereas playtime or making medical/childcare arrangements may be done on a more flexible schedule. This research seeks to provide more insight into the management of childcare activities in contemporary working families.

### **Measurement Issues in the Study of Father Involvement**

Some studies that have examined fatherhood with time diary data draw on time-use data gathered from national surveys that were not developed specifically for research on fatherhood (Craig, 2006; Sayer et al., 2004). While national datasets allow for better generalizability, often researchers rely on mothers’ reports of father involvement (Manlove & Vernon-Feagans, 2002) and cross-sectional analyses (Yeung et al., 2001). Hence, accurate in-depth assessments of father involvement are lacking in the literature.

Previous studies have employed various methods to measure father involvement. Some studies have interviewed children and fathers through time diaries and questionnaires to report on involvement. Ishii-Kuntz (1994) used questionnaires to measure children’s perceptions of father’s involvement while comparing father’s reported time spent on involvement activities.

Others have used methods which determine the number of care-giving tasks in which fathers participate in each day using activity frequency measures (Volling & Belsky, 1991). Still others have relied on maternal reports of father involvement through methods such as time estimates of childcare, distinguishing childcare time with the mother only, father only, and mother and father together (Manlove & Vernon-Faegans, 2002). These studies measured engagement and responsibility by asking about specific tasks that might be done during childcare, and then comparing the proportion of tasks completed by mothers as compared to fathers (Manlove & Vernon-Faegans, 2002; Volling & Belsky, 1991).

In 1999, The Council of Economic Advisors developed estimates for parental time spent caring for children by using residual time estimates. These estimates were obtained by subtracting the time a parent spent working and sleeping from the remaining time during the week, which was then assumed to be available for child engagement (Sayer et al., 2004). There are several problems with this measurement design. The differential measurement techniques for capturing father involvement make it difficult to definitively summarize what we know about father involvement in general and over time. Also, the activities that fathers may do when they play with or care for their children vary across families, so techniques tapping specific activities may be lacking because the list of potential activities is not extensive (Juster, Ono, & Stafford, 2003). Further, Lamb et al. (1985) identified simple accessibility, even without direct father-child engagement, as a component of father involvement. The construct of accessibility is missing from most studies of father involvement, but recent studies have begun to recognize the importance of including this component into their analyses (Bianchi et al., 2006; Yeung et al., 2001).

Due to subjectivity of time experience, time is often prone to error despite every attempt to objectively standardize time use (Juster et al., 2003). However, certain methods may be more useful than others when attempting to create an accurate portrait of time use. Two methods typically employed within time use studies are stylized time use methods and time diary methods. As mentioned previously, variations of these methods have been used to measure the three forms of father involvement. Each method presents both strengths and weaknesses in time measurement.

Stylized time measurements typically request participants to aggregate their daily activities into particular categories. For example, participants are asked to provide time information about “typical” activities in which they participate, e.g. diapering the child. Aggregate time-use for days, weeks, months, or the year may be requested. In contrast, time diary measurements request respondents to provide a chronology of events, most often from midnight on the target day to midnight the following day. Activities are usually collected for a workday and/or non-workday, often a weekend day. Diaries also include information on simultaneous activities, others who are involved or present, location, and other variables. While each method is prone to statistical biases, stylized methods often contain errors in the form of aggregate sums in excess of 24 hours (Juster et al., 2003). In contrast to stylized methods, because time diary measures require the respondent to sequentially list activities and do not allow for excess time allotment, participants are less vulnerable to discrepancies based on social desirability, as an increase in time in one activity will subsequently decrease time in another (Kan & Pudney, 2008). This benefit also allows for more accurate examinations of historical change using time diary data (Sayer et al., 2004). Time diaries also show advantages over

stylized measures due to the limited cognitive processing requirement (Juster et al., 2003). They also allow coders to distinguish between primary and secondary activities, a common disadvantage for stylized measurements which tend to overestimate childcare activities (Juster et al., 2003).

While numerous advantages are evident when using time diary methods, some disadvantages do exist. Certain respondents may provide more detail than others, creating a range of accuracy for certain activities. Others may provide detail for simultaneous events regardless of the trivial aspects of the activity, and yet others may choose to not report simultaneous activities due to the involved nature measure. Diaries are also unable to ascertain the quality of time spent with children, which may fall short of fully explaining involvement due to busy parents trading quantity of time for quality of time (Sayer et al., 2004). Small sample sizes also do not allow for a complete examination of parenting practices across subgroups (Sayer et al., 2004). These disadvantages, however, in no way outweigh the multiple advantages of using time diary methods to explore father involvement in great detail.

While previous research endeavors have provided us with extensive information on mothers' time use, measuring levels of father involvement over time has been a task that few have been willing to complete. To my knowledge, only one other longitudinal time diary study which specifically examines father involvement has been conducted in the United States. This study examined father's participation in their children's healthcare, measured as attendance of the child's well care visits (Bailey, 1994). High levels of attendance to well visits were observed (Bailey, 1994), suggesting that fathers are actively participating in multiple aspects of child care

activities. Longitudinal time diary studies which compare *both* father's and mother's time use within the father involvement framework are unknown to me.

### **Hypotheses**

I expect that fathers will interact with their children more often than mothers, both in absolute and relative terms at each phase. Additionally, I expect fathers to increase in time spent in engagement activities in both absolute and relative terms across phases. With respect to responsibility, I expect to see mothers participate in more responsibility activities than fathers in both absolute and relative terms and at each phase. I cannot make any predictions as to whether time spent in these activities will increase or decrease for either parents, however I do expect time spent in these activities will be relatively small when compared to engagement and childcare activities for both parents. I expect mothers to spend more of their time in childcare-related activities than fathers in both absolute and relative terms and at each phase. However, I do expect fathers to begin to share more of this time burden with mothers as time goes on.

### **Sample**

The data used to examine parental involvement in the current project comes from the New Parents Project. This short-term, longitudinal study has been specifically designed to provide an in-depth look into fathering behaviors. Data was collected from 182 dual-earner couples in the third trimester of pregnancy and at 3, 6, and 9 months postpartum. Survey, time diary, and observational data were collected. Participants were recruited through newspaper ads, OBGYN offices, childbirth education classes, flyers posted at pregnancy and health centers, community colleges, and various stores in diverse locations. A snowball technique was also employed to further expand the sample size.

Eligibility criteria for participants required that the couples be married or cohabiting, at least 18 years of age, expecting their first child and are the biological parents of the child, able to read and speak English, and currently employed full time or at least thirty hours per week when infant reached three months of age.

### **Procedures**

At each phase of the study, time diaries were completed by both parents on a workday and non-workday. Time diary collection was a modification of the American Time Use Survey. Parents reported all activities beginning at 4 AM on the target day and ending at 4 AM the following day. Participants reported where they were, what they were doing, who they were with, who the activity was for, if they were doing anything else at the same time, and if the child was in their care at the time (postpartum). Diaries were then reviewed with the participant by a trained interviewer in order to ensure correct reporting of all activities. Data was entered into SPSS and trained research assistants categorized specific activities which were quantified in order to determine the amount of time each parent spent in engagement, responsibility, and childcare activities.

### **Measures**

#### *Variables*

*Engagement.* Engagement activities included amount of time (in minutes) that parents spent in the following activities: reading, playing with children, creating arts or crafts with children, talking and listening to children, soothing or holding the child.

*Childcare.* Child care time included all minutes parents spent in the following activities: physical care for the child (waking the child up or getting the child ready to go somewhere),

feeding the child (breast, bottle, or other), changing the child's diaper, preparing meals or bottles for the child, putting the child to bed, bathing the child, dressing the child, and breast pumping.

*Responsibility* was measured as the amount of time parents spent in the following activities: organization and planning for the child (e.g. packing diaper bags), looking after the child, waiting for the child, attending meetings or conferences for the child, waiting associated with the child's education, providing medical care to the child, obtaining medical care for the child, waiting associated with the child's health, using childcare services, making telephone calls to paid childcare providers, exchanging emails with paid childcare providers, travel related to caring and helping the child, and picking up or dropping off the child.

### **Analyses**

First, the total amount of time each parent spent (in minutes) in each of the above referenced domains was calculated. Next, I combined the time spent in each domain to calculate the total time each parent spent in childcare-related activities for. From this, the proportion of all involvement spent in childcare, engagement, and responsibility activities was calculated and ranged from 0 to 1.00, where a lower number indicated a smaller proportion of total child-related time was spent in that particular domain and a higher number indicated a greater proportion of total child-related time was spent in that particular domain. Analyses were performed separately for the workday and the non-workday at phases two and four of the study. These phases were chosen in an effort to provide the most variability in involvement over time, as children who are three months old as opposed to nine months old are at very different developmental stages. Additionally, separate analyses were conducted for each day and at each phase that excluded breastfeeding and breast pumping activities in the childcare domain in an effort to compensate

for the fact that fathers are not able to participate in these specific aspects of childcare. Results presented represent analyses for the workday only.

## Results

*Engagement.* On the workday at phase 2, mothers spent significantly more time in engagement activities with their children than did fathers; 54 minutes and 37 minutes, respectively ( $t= 2.62$   $p< 0.05$ ). However, at phase 4, mothers no longer spent a significantly greater proportion of time in engagement activities with their children. At phase 4, mothers spent 58 and fathers spent 58 minutes in the domain of engagement. Proportionately, father spent significantly more of their child-related time in engagement than mothers at each phase. At phase 2, fathers spent 35 percent and mothers spent 22 percent of their total child-related time in engagement activities ( $t=3.43$ ,  $p< 0.001$ ), and at phase 4 fathers increase their proportion of total child-related time spent in engagement to 45 percent. Mothers also increase their total proportion of child-related time spent in engagement to 29 percent, however fathers still spent a significantly greater proportion of their child-related time in engagement ( $t=4.55$ ,  $p <0.001$ ). For the earlier phase, these results confirm the hypotheses that mothers will participate in more engagement time than fathers, but contradicts this hypothesis at the later phase. At both phases, the hypothesis that fathers will participate in proportionately more engagement time for mothers is confirmed, as is the hypothesis that fathers will increase in their time spent in engagement across phases.

*Responsibility.* On the workday at each phase, mothers spent significantly more time in responsibility activities than fathers. At phase 2, mothers spent 38 minutes and fathers spent 20 minutes participating in responsibility activities for their child ( $t=2.27$ ,  $p< 0.05$ ). While mothers

decreased their time spent in responsibility activities (28 minutes) and fathers remained relatively stable (19 minutes) at phase 4, this discrepancy was still significant ( $t=2.44, p < 0.05$ ). In relative terms, however, fathers spent a significantly greater proportion of all their child-related time in responsibility activities than mothers ( $t=1.85, p < 0.01$ ), but this discrepancy was no longer significant at phase 4. This confirms the hypothesis that mothers would spend significantly more time in responsibility activities than fathers, but is contradictory to the hypothesis that mothers would also spend a significantly greater proportion of their child-related time in responsibility across the phases.

*Childcare.* At each phase on the workday, mothers spent a significantly greater amount of time participating in childcare activities with their child. At phase 2, mothers spent 138 minutes and fathers spent 40 minutes in childcare activities ( $t=13.54, p < 0.001$ ). And while mothers decrease their time spent in childcare activities at phase 4 (92 minutes), fathers still spent significantly less time in childcare (38 minutes) ( $t=5.92, p < 0.001$ ). At each phase, mothers also spent a significantly greater proportion of their child-related time in childcare activities, 63 percent compared to 44 percent ( $t= 4.85, p < 0.001$ ) and 54 percent compared to 37 percent ( $t=4.79, p < 0.001$ ).

Without breastfeeding and breast pumping included in the total childcare time calculation, mothers continued to spend a greater amount of time in childcare activities at each phase. At phase 2, mothers spent 84 minutes and fathers spent 39 minutes in childcare activities, and at phase 4 mothers spent 64 minutes and fathers spent 38 minutes in childcare activities. Proportionately, however, these differences are no longer significant at each phase.

## **Discussion**

This study is among the few that consider parental involvement in these specific domains and in quantitative terms. While father involvement has been frequently considered in a quantitative manner, mother involvement is more often considered in qualitative terms alone; it is taken for granted that mothers spend large amounts of time with their children. By comparing time use in specific child-related activities between mothers and fathers, I hope to develop an understanding of how new parents in dual-earner families navigate the transition to parenthood by sharing care for their child. When found, discrepancies in involvement time may indicate that parents may be having difficulties shifting from one type of role (i.e. work) to another (i.e. parent). Over time, these interaction patterns become engrained into family functioning and may attribute to the functioning of the individuals within the family system (S. Minuchin, 1974). In the future, I hope to build off these findings and explore how large discrepancies in time use in particular domains of involvement impact functioning (i.e. mental health, relationship satisfaction, parenting satisfaction) on the individual level.

Overall, these fathers were very involved with their children. While differences in time allocation in each domain were often significant, the magnitude of the difference between parents was often small; mothers spent only 17 more minutes of engagement and 18 more minutes of time in responsibility at phase 2, and only 9 more minutes of time in responsibility at phase 4. However, at each phase mothers are more involved in childcare activities with and without breastfeeding and breast pumping included. The magnitude of this difference is very large at each phase, with mothers spending 98 more minutes at phase 2 and 54 more minutes at phase 4 (45 more minutes at phase 2 and 26 more minutes at phase 4 without breastfeeding and breast pumping) in childcare activities than fathers. These differences in levels of involvement

corroborate previous findings that mothers are more involved in childcare activities (Laflamme, Pomerleau, & Malcuit, 2002) and fathers increase in engagement activities over time with their children; however this study finds evidence of these increases at much earlier ages.

This study provides a unique look into the lives of new parents in contemporary, dual-earner families. Working parents of today face significant challenges when it comes to the negotiation of childrearing in the home. With more mothers increasingly working more hours outside the home, fathers have become more involved in the day-to-day care activities for their children. However, there is still a clear discrepancy in levels of involvement when it comes to participation in everyday childcare activities. These discrepancies in parental time use may reflect the historically gendered nature of these activities and the difficulties that parents still face when forming new families. Mothers who are working similar hours outside the home are not only participating in more child-related time overall, but are spending a disproportionate amount of time involved in basic childcare, arguably the least flexible domain of involvement. When fathers do participate in similar levels of care, the activities are less structured and can be performed at more flexible times. These patterns resemble the patterns found in research concerning the division of household labor among couples.

Strengths and limitations of this study rest upon the sample. Data comes from White, highly educated parents living at a comfortable economic level, limiting the generalizability of the findings. Alternatively, this relatively large sample of new, first-time parents in dual-earner families paired with the diverse methodological perspectives available for use allows for an abundance of potential uses for these findings. Alone, the findings of parental involvement presented in this study does little to improve our knowledge of dual-earner parents, but in

conjunction with other indicators, these results could be useful in developing a deeper understanding of a variety of other constructs. Post-partum depression, for example, may be exacerbated in mothers who shoulder a significantly greater proportion of their time in childcare activities than fathers. Parental relationship satisfaction may be improved if parents spend more time sharing equally in all aspects of childrearing. These questions and many others have the potential for exploration using these data. Future research should continue to focus on father involvement in terms of both quantity and quality, but at the same time, keep in mind that understanding the family involves taking into account the experiences of multiple members within it.

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