

## **MCH Research Final Report**

**Project:**     **The Direct and Indirect Effects of Father Involvement on Maternal and Child Well-Being in Families of Children with Disabilities**

**Grant:**       **R40MC11276**

### **I. Introduction**

#### **A. Nature of the Research Problem**

Although a rapidly growing body of research has documented the impact of father involvement with typically developing children, little is known about how men approach parenting children with disabilities, and how their involvement impacts child, mother and family well-being. This gap in our knowledge base is problematic given that families of children with disabilities have been found to experience higher levels of stress than families with typically developing children, and that children with disabilities are at higher risk for experiencing lower quality (including highly punitive) parenting. This limitation in our understanding also severely hampers the efforts of researchers, policy makers and early intervention service providers as they seek to develop and implement initiatives designed to expand the support services available for fathers as they struggle to better meet the needs of their children with disabilities. Using data from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), the current project was an important first step in filling this serious void in the research and program development literature.

#### **B. Purpose, Scope, and Methods of the Investigation**

A goal of this project was to identify the roles played by fathers in families of children with developmental challenges in reducing the potential negative impact of childhood disabilities on maternal and child outcomes. The following two research questions were addressed in the study:

1. What is the trajectory of father involvement over time and how does this trajectory differ for families of children with and without disabilities?
2. What are the direct and indirect effects of father involvement on maternal and child well-being in families of children with disabilities, and does such involvement mediate and/or moderate the negative impact of having a child with a disability on maternal and child outcomes?

Findings from this study will generate a knowledge base that will contribute to the development and evaluation of interventions that improve father involvement and ultimately lead to improved maternal and child outcomes in families of children with disabilities.

#### **C. Nature of the findings**

Five main findings have emerged from analyses with this project, each of which holds implications for both policy and practice.

1. When exploring the trajectory of father involvement over time, more similarities than differences were identified when comparing fathers of children with disabilities and those without.
2. A child's overall functional ability is a more consistent predictor of later child outcomes than general categories of child disability status.
3. Child disability status only predicts father involvement when functional abilities of the child are taken into account.
4. Parents of children with disabilities are at significantly greater risk for separation than parents of typically developing children when children were 9 months and 2 years of age. The two groups of parents did not differ significantly in their risk of separation when children were 4 years of age.
5. There are variations in the longitudinal impact of father involvement on later student achievement based on ecological contexts, with the greater differences based on child ethnicity and family income.

## **II. Review of the Literature**

In spite of the recent changes in societal expectations for fatherhood that have resulted in researchers, policy makers, and practitioners placing greater emphasis on paternal roles (Lamb, 2004), the literature on fathers' influence on children has focused primarily on fathering within the context of children who are typically developing. This gap in current research is problematic given that families of children with disabilities have been found to experience higher levels of stress than families with typically developing children (Dyson, 1997; Hastings et al., 2005; Hodapp, Fidler, & Smith, 1998; Trute, 1995). Further, children with disabilities are at higher risk for experiencing lower quality (including highly punitive) parenting (Feldman, McDonald, Serbin, Stack, Secco, & Yu, 2007; Knitzer, Theberge & Johnson, 2008; Lee, Holditch-Davis & Miles, 2007).

Having a child with a disability is often stressful and disruptive to families (Dyson, 1997; Keller & Honig, 2004; Perry, Sarlo-McGarvey, & Factor, 1992; Innocenti & Huh, 1992) and in particular to mothers (Hall, Burns & Reiss, 2007; Olsson & Hwang, 2001). In such families many studies have found that mothers' stress levels were higher than fathers' (Hastings, 2003; Little, 2002; Patterson, 1991), and that sources of stress often differ for fathers and mothers. For example, mothers may experience stress from giving up their employment or education activities to focus on parenting a child with a disability while fathers do not typically experience similar disruptions (Konstantareas, Hornatidis, & Plowright 1992). Higher levels of maternal stress precipitated by having a child with child with a disability have also been found to be related to family problems (Dyson, 1997; Hastings et al., 2005). These findings are problematic given consistent research evidence suggesting that maternal stress and depression often limits mothers' ability to provide optimal parenting for their children (Knitzer, Theberge & Johnson, 2008; McLennan & Kotelchuck, 2000).

Recent research has begun to document many of the negative outcomes that can be linked to higher levels of maternal stress and depression associated with parenting a child with a disability. Greater levels of maternal stress and depression in families of children with disabilities have been found to be negatively related to several family outcomes including children's overall health status (e.g., Heller et al., 2000), child behavior problems (e.g., Feldman et al., 2007; Hastings, 2003; Hastings et al., 2005), maternal general health (e.g., Hedov, Anneren & Wikblad, 2000; Heller, Hsieh & Rowitz, 2000), and effective maternal parenting (e.g., Feldman et al., 2007), as well as with greater levels of paternal stress (e.g., Hastings et al., 2005). This emerging line of research suggests that parenting a child with a disability has potentially negative consequences for the child, the mother and father, and the family unit as a whole.

Reflecting recent changes in societal expectations for parents, researchers have begun to examine fathers' influence in families that face non-normative challenges such as having a child with a disability (Simmerman, Blacher & Baker, 2001). For instance, fathers' positive attitudes were found to be indicative of lower maternal stress levels in families of children with disabilities (Dyson, 1997). Similarly, paternal support has been found to significantly reduce maternal stress in families of children with disabilities (Saloviita, Italinna, & Leinonen 2003), while increased father involvement is positively related to mothers' marital satisfaction (Simmerman, Blacher & Baker, 2001). Fathers' active parenting and family roles have also been identified as a potential buffer of the negative consequences of parenting a child with a disability on mothers stress, depression and parenting quality (Keller & Honig, 2004; Olsson & Hwang, 2001), as well as a way to insulate children from the negative effects of maternal depressive symptoms (Shonkoff & Phillips, 2000). These studies indicate that fathers can make important contributions to maternal, child, and family well-being in families of children with disabilities.

While this research on fathers of children with disabilities is informative, there exist numerous limitations. First, there have been few studies conducted within the current socio-cultural context, the majority being before the 1990's. Although these early studies are important for their conceptualizations, their methodological attributes are often wanting while the applicability of their findings to families of children with disabilities in the 21st century are limited (see Seligman & Darling, 2007). This scarcity of recent research also creates a "vacuum" from which direct service providers work as they seek guidance from scholars on how to provide best practices in family-based programming that is responsive to contextual factors within the home (Hemmeter et al., in press; Sarkadi, Kristiansson, Oberklaid & Bremberg, 2008). A second major limitation of this research has been the overdependence on cross-sectional studies that utilize small, unrepresentative samples with few or no controls for family demographics (McBride, Dyer, Santos & Jeans, 2008; Turbiville & Marquis, 2001). Such methodological problems limit our ability to draw conclusions about the roles played by fathers in families of children with a disability, how these roles may change across time, and how they might vary across different ecological and demographic contexts for parenting (e.g., low income families, minority families, families with multiple children, dual earner families, etc.). Finally, much of the existing research on fathers' roles in families of children with disabilities is lacking due to several methodological problems that parallel the general field of research on fathers – e.g., the use of limited and/or temporal based measures of fathering, a focus on parent-child relations during one specific period of children's development, overdependence on maternal reports of father involvement (Sarkadi, Kristiansson, Oberklaid & Bremberg, 2008; Turbiville & Marquis,

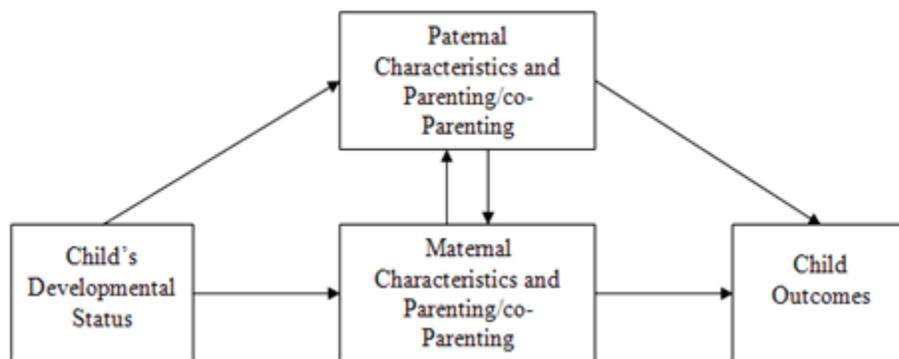
2001). As a result of these limitations, very little is known about the unique and overlapping roles played by fathers in families of children with disabilities, and how their involvement impacts maternal, child and family well-being. This gap in the knowledge base severely hampers the efforts of researchers, policy makers and direct service providers as they seek to develop and implement initiatives designed to expand the support services available for fathers as they struggle to better meet the needs of families with disabled children.

### III. Study Design and Methods

#### A. Study Design

Drawing from family systems theory, the conceptual model guiding this study (see Figure 1) proposes that child developmental status has a direct influence on mothering, fathering, co-parenting, and maternal well-being that in turn have a direct influence on child outcomes. This model places fathering and positive co-parenting as a central mediator and/or moderator of the effect of child's developmental status on mothering and maternal well-being. Fathering is hypothesized to have a direct impact on child outcomes, while at the same time acting as a mediator and/or moderator of the influence of child developmental status on maternal outcomes (e.g., quality of maternal parenting, maternal depression). In addition, fathering is also hypothesized to moderate relationships between the levels of mother variables and child outcomes. For example, fathers who are highly and positively engaged with their children may mitigate the influence of poor mothering or maternal depression on child outcomes.

Figure 1. Conceptual Model



#### B. Population Studied

Data for the study were drawn from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), one of the richest sources of information available about child development during the early years. The ECLS-B is a nationally representative, longitudinal data set of approximately 10,000+ U.S. children born in 2001. Children participating in the study come from diverse socioeconomic and racial/ethnic backgrounds, while the data set includes oversamples of Asian and Pacific Islander children, American Indian and Alaska Native children, Chinese children, twins, low birth weight children, and very low birth weight children. Included in the ECLS-B is data from approximately 8,392 residential and 2,198 non-residential fathers/father figures, as well as information on a subset of children with identified disabilities and/or developmental delays. The ECLS-B study was designed to provide researchers, policy makers, child care providers, teachers and parents with detailed information about children's

early life experiences, and focuses on children’s health, development, care and education during the formative years from birth through the transition to kindergarten. Data for the ECLS-B was gathered from children, their parents, their child care providers, their teachers, and school administrators. Methods used with the ECLS-B include interview, survey and observational data collection formats, as well as direct assessments of children’s growth and development.

### C. Sample Selection

For analyses focused on the impact of father involvement we focused on a subset of children within the ECLS-B that were identified as having a resident mother and father/father figure at all three time points. The sample was further reduced to include only families for whom the outcome variables of interest (e.g., children’s school readiness scores) were available. This produced a final sample of 3,750 children (48% boys; 52% girls) and their families. As per NCES data security requirements when using ECLS-B data, all n’s are rounded to the nearest 50. The racial/ethnic breakdown of children in the sample included 2,100 White, non-Hispanic, 150 African American, 550 Hispanic, 500 Asian, non-Hispanic, 50 American Indian, and 300 multi-race. For analyses focused on the impact of child disability status on child and family outcomes, the entire ECLS-B sample was used – i.e., 10,700+ children and their families.

### D. Instruments Used

The comprehensive nature of the three time points of data available within the ECLS-B lends itself to the construction of latent and observed variables that were used analyses designed to address the research questions outlined above. The following are examples of the types of information from the ECLS-B data set that will be used in constructing the variables for analyses:

#### demographic factors

family income  
parents’ education  
parental employment status  
biological status of father  
neighborhood quality  
household composition  
community support for disabled children

#### characteristics of the child

age of diagnosis of disability  
age & gender  
health history  
developmental milestones  
language development  
social/emotional development  
temperament  
school readiness skills

#### characteristics of the father

residential status  
knowledge of child development  
marital & childbearing history  
overall health  
depression, stress  
social support network  
attitudes towards fatherhood

#### characteristics of mother

prenatal/neonatal experiences  
knowledge of child development  
attitudes towards fatherhood  
marital & fertility history  
overall health  
depression, stress  
beliefs about children’s learning  
social support network

#### family functioning

maternal/paternal parenting styles  
quality of marital relationship  
child nutrition/feeding practices  
residential stability  
household food sufficiency  
receipt of welfare & public assistance  
access to health care/insurance  
conflict resolution style

The above listing provides just a few examples of the types of information about children and families that is available in the three waves of data in the ECLS-B. One unique aspect of the rich data available in the ECLS-B is its inclusion of a variety of measures of parental and family functioning (e.g., use of the CES-D to assess maternal depressive symptoms, use of the Bayley Short Form – Research Edition to assess perceptual/motor development of infants, assessments of maternal and paternal perceptions of marital conflict, etc.). A variety of informants provided this information during each wave of data collection (e.g., mothers, fathers, child care providers, birth records, etc.).

## **E. Statistical Techniques Employed**

Three primary statistical approaches were used in analyses for the project. First, multiple group latent variable growth curve modeling (see Duncan, Duncan, & Stryckter, 2006) was used to examine the growth of father involvement across the four groups identified for use in the analyses. Separate latent growth curve models were created for each of the types of involvement. In these analyses, a single growth curve model was specified and the data for each of the four groups (i.e., 3 disability groups based on timing of diagnosis and 1 group of typically developing children) were fit to that model, independent of each other (i.e., no constraints across groups). A series of Wald tests of parameter constraints were used to examine differences in the slope between groups. This identified how child developmental status was related to how fathers' involvement changes over time. In these analyses, demographic variables were used as controls.

For analyses addressing the impact of father involvement on maternal and child outcomes, a cross-lag method with mediators (Cole & Maxwell, 2003) was used. With this approach, the direct influence of father involvement at wave 't' on the mediator and child outcomes at wave t + 1 were examined. Further, the influence of the mediator at wave t + 1 on child outcomes at wave t + 2 was modeled. Structural Equation Modeling (SEM) was used in these analyses. A similar approach was used in analyses examining the impact of child disability status on father involvement.

For analyses exploring risk of separation associated with raising a child with a disability, discrete-time survival analysis using Stata (Statacorp, 2007) were performed. Survival analysis is a variation of logistic regression that allows the researcher to consider not only the probability that an event will occur, but also determines how that probability changes over time. Survival analysis is a useful tool for determining the association between children's disability status and parents' likelihood of separation because it allows one to see the influence of disability status after controlling for other factors that affect parents' likelihood of separation and to see this effect over time.

## **IV. Detailed Findings**

*Main Finding 1.* Our latent variable growth curve models yielded information about paternal involvement of men who have children with developmental delays. In contrast to our expectations, findings indicated many more similarities than differences in fathers' involvement with their children with and without developmental delays. Despite assumptions about how men

may be differentially involved with their children with developmental delays, we did not find this pattern in our sample. Indeed, most striking to us is that there was no evidence that literacy or language involvement was different for children with and without developmental delays.

*Main Finding 2.* As expected, significant differences in child functional abilities scores emerged when comparing children with disabilities to those without disabilities. Consistent with expectations, significant differences in functional abilities scores also emerged when comparing children across disability categories. As hypothesized, functional ability scores also emerged as a significant predictor of all child outcomes measured (i.e., direct assessments of cognitive, math and reading abilities; self-regulation and communication skills; and positive classroom learning behaviors), even after controlling for the amount of variance explained by disability status. These patterns held when examining the relationship between functional abilities, child disability status and child outcomes both at one time point (cross-sectional) and across time.

*Main Finding 3.* Based on our multilevel growth models, child disability status alone did not predict later father involvement. When adding child functional abilities into the models, a suppressor effect emerged. That is, disability status only predicted father involvement when the child's functional abilities was included in the model, and this relationship only emerged for fathers whose children had more severe limitations as a result of their disabilities.

*Main Finding 4.* These analyses examined the longitudinal relationship between disability status and parents' separation. The ECLS-B dataset provided a valuable opportunity to examine this relationship using data that is both recent and nationally representative. As hypothesized, we found that disability status was related to parents' separation such that the odds of separation between birth and the 9 month assessment for parents of children with disabilities were 1.79 times the odds for typically developing children. Odds of separation for parents of children with disabilities between the 9 month assessment and the 2 year assessment were 1.77 times the odds of parents of typically developing children. However, when children were between 2 and 4 years of age, parents of children with disabilities were not at significantly greater risk for separation. For the first two time points, disability status significantly predicted parent's separation even after controlling for other predictors of separation.

*Main Finding 5.* Results from these analyses revealed an indirect link between father involvement and children's later achievement. Although there was no direct association between early father involvement and later school achievement, such an association did emerge via the relationship between later father involvement and student achievement. Moreover, the patterns of association differed markedly as a function of several demographic contexts, including ethnicity and socioeconomic status.

## **V. Discussion and Interpretation of Findings**

### **A. Conclusions to be Drawn From Findings**

Three main conclusions can be drawn from the findings of this project. First, having a child with a disability adds an additional layer of risk to families in terms of relationship stability. As highlighted in our findings, families raising a young child with a disability are at a significantly

higher risk of separating and/or divorcing than those families with typically developing children. Raising a child with a disability is a stressful context for parenting, and this stress appears to be having a negative impact on relationship stability for these families.

Second, based on our findings, it is clear there are more similarities than differences in the ways in which men approach parenting tasks in families of children with and without disabilities. This finding is in contrast to commonly held beliefs and anecdotal reports from early intervention personnel that fathers do not become engaged in child rearing activities when the child has a diagnosed disability and/or developmental delay.

Finally, our findings indicate that a categorical approach to grouping children with disabilities that is commonly used in the early intervention field may not fully capture potential differences in child and family process that occur within categories of disabilities (e.g., father involvement may vary significantly across families of children diagnosed with autism). A more comprehensive view of the child's abilities captured in our functional abilities index scores consistently emerged as a better predictor of child outcomes than disability status alone, and also emerged as a significant predictor of some forms of father involvement.

## **B. Explanation of the Study Limitations**

Two major limitations exist in findings and conclusions that can be drawn from this study. First, measures of father involvement were limited to the items included in the ECLS-B dataset. Although comprehensive, they may not fully capture the full breadth of men's parenting of children with and without disabilities. Second, all analyses were restricted to families in which the father/father figure was present in the home at all three time points for data collection. Although weights were used in analyses and results are representative of all residential fathers in the U.S., our findings are only generalizable to those families in which the father/father figure resides in the home. The antecedents and consequences of father involvement in families of children with and without disabilities may be very different for non-residential fathers.

## **C. Comparison with Findings of Other Studies**

Limited research has been conducted on father involvement in families of children with disabilities, and the little that has been undertaken has been plagued by methodological limitations (e.g., small sample sizes, limited measures of father involvement and family functioning, no longitudinal studies). Our study was designed as a first step in addressing many of these limitations, and is the initial effort to begin building a literature base on this topic.

## **D. Possible Application of Findings to Actual MCH Health Care Delivery Situations**

Parents play an important role in early intervention services provided to young children with disabilities. A major premise underlying the IDEA legislation and its focus on Part C is that parents are one, if not the most important influences on the early development of children with disabilities, and that parental involvement is a critical ingredient of effective developmental intervention. For example, previous research has suggested that early intervention tends to be successful at promoting development only when it helps parents interact more responsively with

their children (Mahoney, Wheeden & Perales, 2004). In spite of this, very little is known about what roles men play in parenting young children with disabilities, and how such involvement may impact child and family outcomes (MacDonald & Hastings, 2010). This gap in the knowledge base severely hampers the efforts of early intervention providers as they seek to develop and implement initiatives to expand the support services available for families of children with disabilities.

Findings from our project provide insight for direct service providers regarding the roles played by fathers in families of children with disabilities. This insight can then be used as they begin to develop the sensitivity and awareness of the needs caregivers, and in particular, fathers might have across the life span when raising children with disabilities.

## **VI. List of Products**

### **Publications**

McBride, B.A., Dyer, W.J., & Laxman, D.J. (2012). Father involvement and student achievement: Variations based on ecological contexts. *Early Child Development and Care*, 52, 1-17.

Dyer, W.J., McBride, B.A., Santos, R.M., & Jeans, L. (2009). A longitudinal examination of father involvement with children with disabilities: Does timing of diagnosis matter? *Journal of Early Intervention*, 31, 265-281.

McBride BA, Dyer WJ, Liu Y, Brown GL, Hong S. The differential impact of early father and mother involvement on later student achievement. *J Educ Psych*. 2009 May;101(2):498-508.

### **Conference Presentations**

McBride, B.A., Dyer, W.J., Santos, R.M., Hebbeler, K., & Barton, L. (2012, February). *Innovative Approaches to Using Large Scale Longitudinal Datasets to Explore Parenting Issues in Families of Children with Disabilities*. Panel presentation at the Conference on Research Innovations in Early Intervention, San Diego, CA.

McBride, B.A., Dyer, W.J., Santos, R.M., Laxman, D.J., & Jeans, L.M. (2011, April). *A functional domains approach to examining the impact of childhood disabilities*. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Montreal, Quebec.

McBride, B.A., Dyer, W.J., Santos, R.M., Laxman, D.J., & Jeans, L.M. (2011, April). *The impact of child disability status on father involvement in childrearing*. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Montreal, Quebec.

Laxman, D.J., Dyer, W.J., & McBride, B.A. (2011, April). *Mothers' and fathers' level of involvement over time: Reciprocal influences*. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Montreal, Quebec.

Laxman, D.J., Dyer, W.J., & McBride, B.A. (2010, November). *Child temperament and father involvement*. Poster presented at the Annual Conference of the National Council on Family Relations, Minneapolis, MN.

McBride, B.A., Dyer, W.J., Santos, R.M., Laxman, D., & Jeans, L. (2010, April). *Early father involvement and later child behavioral outcomes*. Paper presented at the American Educational Research Association Annual Meeting, Denver, CO.

McBride, B.A., Dyer, W.J., & Santos, R.M. (2010, February). *Men's parenting behaviors in families of children with disabilities*. Panel presentation at the Conference on Research Innovations in Early Intervention, San Diego, CA.