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Working Paper Series

Measuring Father Involvement in Young Children's Lives: Recommendations for a Fatherhood Module for the ECLS-B

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Measuring Father Involvement In Young Children's Lives: Recommendations for a Fatherhood Module for the ECLS-B

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February 2001

Preface

The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) is a new study that will assess children's health status and their growth and development in domains that are critical for later school readiness and success. It will follow a large, nationally representative sample of infants from birth through first grade. The ECLS-B is the product of a collaboration of many sponsoring agencies. The National Center for Education Statistics (NCES) is working with the National Center for Health Statistics, the National Institute for Child Health and Human Development and other components of the National Institutes of Health, the Economic Research Services of the U.S. Department of Agriculture, the Administration of Children, Youth, and Families, and the U.S. Department of Education's Office of Special Education Programs.

Approximately 15,000 children born in the United States in calendar year 2001 will participate in the study. The sample will consist of children from different racial/ethnic and socioeconomic groups. Baseline data will be collected when these children are 9 months old. Future rounds of data collection are schedule for when the children are 18 months, 30 months, and 48 months of age, and when they reach kindergarten and first grade. Data about children's early development, families, health and health care, child care, and early education program participation will be collected through in-home interviews with the children's parents. These data will be supplemented with data collected at regular intervals from children's child care and early education providers and from their schools and teachers when they reach school age. Children will participate in a variety of activities designed to assess their development in important physical, language, cognitive, social, and emotional domains.

This paper is one of several that were prepared in support of ECLS-B design efforts. It is our hope that the information found in this paper not only will provide background on the development of the ECLS-B, but that it will be useful to researchers developing their own studies of young children, their families and educational experiences.

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Introduction and Purpose

The National Center for Education Statistics is sponsoring a new national study that will examine, from a holistic perspective, the relative contributions of early life experiences to children's school readiness. The Early Childhood Longitudinal Study - Birth Cohort (ECLS-B) will follow 10,000 children born between January and December 2001, for a total of seven years or through the completion of first grade. The initial data collection will occur at 9 months with an in-home interview. Subsequent waves of data collection are planned at 18 months, 30 months, 48 months, kindergarten and first grade, using a combination of in-home interviews, and telephone interviews using computer-assisted telephone interviewing (CATI) and computer-assisted personal interviewing (CAPI) methodologies. Data will be collected within homes and from out-of-home programs that may be related to school achievement. Consistent with the holistic perspective of this study, data collection with the biological father and/or the resident father of the child is being considered.

This paper is organized as follows: First, we identify what we currently do and do not know about the contributions of fathers' involvement in very young children's lives. Specifically, we provide an overview of the relationship between father involvement and behavioral and cognitive outcomes among young children. Second, we identify aspects of father involvement that should be measured in the early years of a child's life that would help us understand and facilitate the beneficial effects of father involvement on school outcomes. Third, we describe variations in father involvement along the continuum of resident and non-resident fathers with attention to socioeconomic, ethnic, and cultural variations, as well as incentives and barriers to father involvement. Finally, we discuss methodological and conceptual challenges to measuring father involvement in the ECLS-B.

Attached to this paper is a list of constructs that represent the different aspects of paternal involvement discussed in this paper (i.e., engagement, accessibility, responsibility), as well as the various roles that fathers play in young children's lives. In accordance with the ecological framework of the ECLS-B, we have also included in the grid constructs that represent determinants and moderators of father involvement.

The Association Between Measures of Resident Father Involvement and Child Outcomes

Fathers themselves have expanded the definition of fathering in recent years by becoming increasingly engaged in a wide variety of activities that traverse the domains associated with mothering (Lamb 1997a). In addition to the role of economic provider, many fathers assume the roles of care providers, playmates, teachers, disciplinarians, and protectors, to name a few.

One fundamental question of interest to researchers and policy makers is whether father involvement, in any or all of its various forms, is associated with child well-being. For the most part, research findings indicate that children can and do benefit from positive relationships with their fathers. More generally it appears that the components of a healthy parent-child relationship -- warmth, closeness and nurturance -- are more important than whether the parent is a mother or a father (Lamb 1997b). For instance, it appears that infants form attachments to both mothers and fathers during their first year of life and that secure attachments have positive effects on later developmental outcomes (Bridges, Connell, and Belsky 1988; Fagot and Kavanagh 1993; Feldman and Ingham 1975; Lamb 1997b). Nevertheless, the amount, frequency, and types of interaction occurring with fathers differ in everyday life, meaning that research on mother-child interaction cannot simply be extrapolated for fathers.

Small mainly observational studies of mostly European American middle-class families provide much of what is known about father involvement and outcomes among young children. Relying on findings from middle-class European American fathers necessarily restricts our understanding of the complex nature of father involvement and its effects on young children. Large, representative samples of fathers are needed to explore more fully the variations and similarities in fathering that may exist by race, ethnicity, and class.

The small-scale studies of middle-class European American fathers offer evidence that increased father involvement enhances the cognitive development of infants and preschoolers (Clarke-Stewart 1978; Nugent 1987; Wachs, Uzgiris, and Hunt 1971; Yarrow et al. 1984). For instance, Clarke-Stewart (1978) discovered that both mothers and fathers foster the intellectual development and social competence of their infants but through different parenting behaviors. She observed parents with their infants when the infants were 15, 20, and 30 months of age and found that mothers were more likely to enhance their child's skills through verbal expressions and teaching activities, while fathers were most effective through physical play activities. Although like mothers, fathers sometimes chose to read to their child or demonstrate toys, they more often chose interactive games and ball tossing or bouncing. There was a positive association between fathers' ability to engage their children in play activities for a length of time and the children's cognitive assessment score. Clarke-Stewart also observed that fathers' anticipation of their children's early independence in terms of activities like handling scissors and bathing alone was positively related to their child's cognitive development.

Numerous observational studies document the salience of maternal involvement in the development of cognitive and social skills in preschoolers (e.g., Hunter et al. 1987; Main, Kaplan, and

Cassidy 1985; Youngblade and Belsky 1992). However, several studies demonstrate the independent effect of paternal involvement and reveal that resident fathers become more involved with their children as they progress from infancy to preschool age (Clarke-Stewart 1980; Lewis 1997). For instance, fathers' role as caregiver appears to be associated with positive child outcomes, net of maternal behavior. In one study, the preschool-age children of fathers that performed 40 percent or more of the family's child care tasks had higher cognitive assessment scores, more internal locus of control, and displayed more empathy than their counterparts whose fathers were less involved (Radin 1994). A cross-cultural observational study of children in a Native American community also revealed that the more time fathers spent as primary caregivers, the higher their children's level of cognitive development as assessed by teachers' ratings of their academic performance (Radin, Williams, and Coggins 1993).

One of few existing studies using national data indicates that the association between father care and the child's cognitive development differs by the age of the child. Using data from the National Longitudinal Survey of Youth Child Supplement (NLSY-CS), Averrett, Gennetian, and Peters (1996) examined the relationship between retrospective information from the mother on daily child care by the father, and child outcomes in the domains of cognitive development and behavioral adjustment for children ages five to eight. Children who were cared for by their father during the first year of life had higher cognitive scores than their counterparts who were in center-based child care, over and above factors including measures of parental resources, demographic characteristics, household composition, and mothers' math and reading scores. In contrast, compared to children in child care centers, children who were cared for by their father during their second and third years had significantly lower scores on the same measures. Averett, Gennetian, and Peters offered the interpretation that parental care is most important during the first year of life but the social interactions and cognitive stimulation available through group activities may be more appropriate and beneficial for the developmental stages of years two and three.

The manner in which fathers interact with their children appears to be related to outcomes as well. An observational study of fathers at home with their four-year-olds revealed higher cognitive test scores among boys of fathers who were praising and helpful, compared to boys of fathers who were cool and aloof (Radin 1986). Similarly, a study of school-age children and their parents found that fathers who offered praise and compliments regarding their children's achievements had children who set high educational goals (Smith 1989). An observational study of preadolescent boys and their parents indicated higher achievement among boys whose fathers offered few negative comments and exhibited a balance between allowing autonomy and maintaining limits (Feldman and Wentzel 1990). A later study showed that harsh and inconsistent discipline from fathers negatively affected their sons' emotional adjustment and classroom behavior and ultimately led to lower school achievement (Wentzel and Feldman 1993).

Mosley and Thomson (1995) used data from the National Survey of Families and Households (NSFH) to assess the association between the academic performance and behavioral adjustment of a sample of 5- to 18-year-olds and their fathers' involvement in activities, such as eating meals together, playing or working on a project, reading or helping with homework, having private talks, and going on outings together. Over and above mothers' activities and other factors, high father involvement was

associated with lower externalizing behavior problems and higher levels of sociability for both boys and girls. Among boys, increased father involvement was also associated with fewer school behavior problems and internalizing behaviors as well as increased initiative and a higher level of school performance among 5- to 11-year-olds.

Further evidence of an association between father involvement and school success is provided by a recent analysis of data from the 1996 National Household Education Survey (NHES:96). In this study, involvement refers to both mothers' and fathers' participation in school activities including volunteering at the school, attending a general school meeting, attending a parent-teacher conference and attending a class event. In two-parent families, the involvement of both parents was associated with the increased likelihood of children in grades one through 12 getting high grades (mostly A's) and enjoying school, and the reduced likelihood of repeating a grade. In regards to getting mostly A's, father involvement was a more important predictor than mother involvement. Similarly, in single-father families, high father involvement was associated with a higher likelihood of getting mostly A's and enjoying school among children in grades one through 12, and a lower likelihood of suspension or expulsion from school among children in grades six to 12 (Nord, Brimhall, and West 1997).

Summary

This brief overview of resident father involvement and child outcomes leads to the following areas of consideration for the ECLS-B:

- It appears that fathers contribute to the lives of their children by assuming diverse roles appropriate to their children's progression through the life cycle. However, much of the available research is based on small observational studies or cross-sectional data, and in fact, relatively few studies have linked father involvement with outcomes among infants and toddlers. There is a need for new longitudinal research that follows infants through the school years and includes fathers' multiple domains of influence.

- As Lamb (1997a) points out, fathers should be studied in the larger familial context. A father's relationship with his partner, and other children, as well as how he views himself and his multiple familial and societal roles all affect his parenting style and parent-child interactions.

- Any beneficial effects of father involvement on children stem from supportive and nurturant father-child relationships. Continued large-scale research on resident father involvement should include items spanning multiple domains of paternal influence in addition to items that capture family and social contexts. Examples of relevant information are outlined throughout this background paper and are presented in the accompanying construct grid.

The Association Between Measures of Non-resident Father Involvement and Child Outcomes

Due to high rates of divorce and non-marital childbearing, increasing numbers of children live apart from their biological fathers; however, lack of co-residence does not necessarily preclude fathers from remaining actively involved in the lives of their children. Non-resident fathers may assume as many roles and engage in as many activities with their children as do resident fathers, although the amount of time they spend with their children is often more limited. The few surveys that include information on non-resident fathers usually limit involvement indicators to the provision of child support and frequency of father-child contact. Perhaps because of this shortcoming, findings based on national data provide only limited support for an association between non-resident father involvement and child outcomes. Most of the research on non-resident father involvement and child outcomes focuses on school-age children rather than infants and preschoolers perhaps in part because fathers are initially uncomfortable with visitation parenting roles after divorce or separation (Seltzer 1991; Umberson and Williams 1993) and uncertain of how to care for and interact with their offspring, particularly young children (Weiss 1975). In addition, there are no large-scale studies that include non-resident father information and follow infants longitudinally through the school years.

The strongest evidence of an association between non-resident father involvement and child well-being involves provision of child support. Several studies document a positive association between child support and child outcomes, particularly in the domain of cognitive development and academic achievement among school-age children (Graham, Beller, and Hernandez 1994; King 1994b; Knox and Bane 1994). For example, using NLSY data to examine outcomes among school-age children, King (1994b) found that the payment of child support was associated with higher levels of perceived scholastic competence and higher reading and math scores on standardized tests. Some research even suggests that the receipt of child support exerts a more positive effect than other sources of income. Data from the Panel Study of Income Dynamics for children who were between the ages of 8 and 18 when their parents divorced showed that child support payments were positively associated with the number of years in school over and above income level and welfare receipt (Knox and Bane 1994). Similarly, another study revealed that compared to other sources of income, child support had a significantly larger positive effect on educational attainment (Graham, Beller, and Hernandez 1994).

In addition, some studies reveal that child support payments are related to fewer school-related problems and general behavior problems (Furstenberg, Morgan, and Allison 1987; Greene and Moore 1996; McLanahan et al. 1994). An analysis of data from the National Survey of Children, for example, indicated that the level of child support received is associated with declines in the level of behavior problems reported by both mothers and teachers of youth ages 11 to 16 (Furstenberg, Morgan, and Allison 1987).

Argys, Peters, Brooks-Gunn, and Smith (1996) disaggregated the child support measure to examine the effects of both cooperative and court-ordered child support awards and payments on child well-being in the domains of cognitive functioning and behavioral adjustment among children ages five to eight. In their analyses, cooperative child support refers to cooperative agreements made with or

without attorney assistance as well as cooperative contributions in the absence of a formal award, and both are related to better child outcomes. In fact, they discovered that the beneficial effects of child support appear to be greatest when the child support agreement is reached cooperatively rather than by court order. For instance, in their non-marital sample of NLSY data, cooperative child support was associated with improvements in both cognitive and behavioral child outcome measures, but court-ordered child support is unrelated to child well-being. A similar but weaker pattern of results emerged among their marital-disruption sample. Clearly, the provision of child support is important to child well-being, and the expansion of knowledge in this area would be facilitated by information on the level and type of monetary and non-monetary contributions, as well as whether child support agreements are reached voluntarily or by court order.

In addition to, or in lieu of child support provided through the formal child support enforcement system, some non-resident fathers may contribute cooperative or informal child support by giving money directly to the mother of their child and/or providing items, such as groceries, clothes, toys, etc. Findings from qualitative and small-scale research suggest, for a variety of reasons, many low-income fathers are more likely to purchase items and services for their infants and young children than to pay money through the child support office (Achatz and MacAllum 1994; Edin 1994; Hardy et al. 1989; Greene and Moore 1996). Little is known about the effects of these informal monetary and non-monetary contributions on child well-being. However, findings based on a sample of African American preschoolers in families on welfare in Atlanta are suggestive. Although the effects were small, both the payment of child support through the formal system and the provision of informal child support directly to the mother were associated with improved scores on a measure of emotional and behavioral development. In addition, informal child support but not formal child support was associated with higher scores on a measure of the child's home environment, particularly its cognitive stimulation subscale (Greene and Moore 1996).

Surveys also include frequency of father-child contact as an indicator of non-resident father involvement. Research shows that many non-resident fathers have little or no contact with their children and that the level of existing contact declines over time (Furstenberg, Nord, Peterson, and Zill 1983; Lerman 1993; Mott 1990; Seltzer 1991). In addition, large-scale surveys generally find no association between father-child contact and child well-being indicators, such as cognitive test scores, academic achievement measures, behavior ratings, and measures related to perceptions of scholastic competence and self worth among children ages five and older (Baydar and Brooks-Gunn 1994; Furstenberg, Morgan, and Allison 1987; King 1994b; McLanahan 1994). While some research suggests that continued non-resident father-child contact is related to improved psychological well-being and fewer behavior problems (Peterson and Zill 1986; Wallerstein and Kelly 1980), other studies reveal that, in some cases, father-child contact is associated with lower math scores and increases in mother-reported delinquency and behavior problems (Furstenberg, Morgan, and Allison 1987; King 1994a, 1994b).

These mixed findings may reflect the inadequacy of the contact measure. Some small-scale studies suggest that the quality of the interaction or level of attachment between the father and child positively affects child outcomes and is more important than the frequency of father-child contact (Furstenberg and Harris 1993; Hess and Camara 1979). For example, findings show that maintaining a

warm, non-resident, father-child relationship in the context of an authoritative parenting style was associated with higher self esteem, better social and cognitive skills and fewer behavior problems in children (Hetherington 1991; Hetherington, Cox, and Cox 1978, 1979). In other words, frequency of contact may not adequately reflect the relationship between non-resident fathers and their children, in part because the crude measure does not distinguish between positive and negative father-child interactions. A small case-control study of low-income women and children revealed favorable effects of father-child contact on child well-being when negative factors, physical and substance abuse by fathers were controlled in the models. Father-child contact in the past year was associated with fewer internalizing and externalizing behavior scores and higher more adaptive behavioral adjustment scores, while fathers' substance abuse and fathers' physical abuse of the children were associated with adverse behavioral outcomes (Perloff and Buckner 1996).

Evidence of associations between nonresident father involvement beyond father-child contact and child outcomes are revealed in large scale surveys. For example, analyses of data from NHES:96 indicate that non-resident father involvement in school activities are associated with reduced likelihood that their sixth through 12th graders ever have been suspended or expelled from school or repeated a grade, and an increased likelihood of participation in extracurricular activities among children in the first through 12th grades (Nord, Brimhall, and West 1997). In this case, a father was considered highly involved if he engaged in three or more school-related activities (e.g., attending a general school meeting, parent-teacher conference, school or class event, and volunteering at the child's school).

Summary

The following points summarize the implications of these findings for the development of the ECLS-B**:**

- Non-resident fathers represent a growing proportion of fathers and their involvement or lack of involvement appears to affect their children's cognitive and behavioral outcomes. Therefore, the design of new large-scale surveys should include at least proxy, but preferably direct, information on non-resident father involvement beyond child support provision and contact.

- Much of the available research on non-resident father involvement and child outcomes is based on cross-sectional data with a focus on older children. There is clearly a need for new longitudinal research that follows infants through the school years and includes information on non-resident fathers.

- Large-scale, longitudinal surveys should include items that capture multiple domains of influence for both resident and non-resident fathers. For example, questions on other forms of father-child contact, such as telephone calls, letters, cards, and other forms of correspondence, may be important, especially to late-preschool and school-age children who live far from their fathers.

- Also, questions that address the positive or negative quality of interactions between father and child need to be included in large-scale studies such as the ECLS-B.

- Clearly, the provision of child support is important to child well-being, and the expansion of knowledge in this area would be facilitated by information on the level and type of monetary and non-monetary contributions, as well as whether child support agreements are reached voluntarily or by court order.

The Meaning of Father Involvement for Very Young Children

Components of Father Involvement

Lamb and colleagues (Lamb 1986; Lamb et al. 1987) have identified three types of paternal involvement: engagement, accessibility, and responsibility. The first type of involvement, engagement (also called interaction), refers to direct, one-on-one interactions with the child. Examples of engagement include time spent feeding, bathing, or changing the young child; reading stories with the child; and taking walks or playing with the child. Accessibility is the second type of involvement, which refers to times when a parent is available for interaction with the child, but is not presently engaged in direct interaction. Examples include cooking in the kitchen while the child plays in the same or a different room of the house, and driving a car while the child is in the back seat. For a non-resident father, accessibility may be represented by the geographic distance between him and his child, or the amount of contact the father and child have over the course of a month or year. The third type of parental involvement, responsibility, refers to the extent to which a father takes responsibility for his child's care and welfare. Examples of this type of involvement include planning for and taking a child to a doctor's appointment, ensuring that the child has clothes (and/or diapers) to wear, and arranging for regular and emergency child care. Some researchers claim that responsibility, although often neglected in survey studies, may be the most important component of father involvement (Working Group on Conceptualizing Male Parenting 1997).

Measuring Father Involvement

Fathers' engagement with and accessibility to their children have been assessed through time-use data gathered in national household surveys, and by means of specialized questionnaires and naturalistic observation within smaller studies (e.g., Radin 1994; Volling and Belsky 1991). An inherent difficulty with time use data is that it is a strictly quantitative measure of parental involvement and therefore does not capture the quality of parent-child interactions (Pleck 1997). Pleck contends that it is important to distinguish positive father involvement from mere amount of involvement. For instance, although fathers who are better off financially have been found to spend less time with their children (Levy-Shiff and Israelashvili 1988; Volling and Belsky 1985), they also have been found to be more positively involved with their young children than fathers of lower socio-economic status (Easterbrooks and Goldberg 1984). By gathering both quantitative and qualitative information on father involvement, we can evaluate better the relative contributions of amount and quality of father-child interactions to child outcomes. Indeed, at a recent conference on Time Use, Non-Market Work, and Family Well-Being, Zick (1997) argued that traditional diary-based categories of physical and non-physical child care may be too global to provide meaningful information on the types of parent involvement that promote child development. Zick urged that collection of new time-use data in national studies should consider reclassifying child-related activities according to the three dimensions of parent involvement outlined by Lamb et al. (1987). In doing so, additional questions would need to be formulated to capture information about accessibility and responsibility, areas that are not currently well-addressed by time diary data. Zick also recommended expanding the constructs currently collected within the engagement domain.

In addition to time-use data, father involvement has been assessed using direct observation, self-administered questionnaires, and interviewer-administered questionnaires. Observational data can yield very rich and fine-grained information on father involvement (e.g., Volling and Belsky 1991). Because this method of data collection is so expensive and labor-intensive, it is not recommended for large-scale studies. However, several interviewer observational items have been used in national studies (e.g., the Home Observation for Measurement of the Environment - Short Form (HOME-SF)) and may be able to capture some qualitative elements of the father-child relationship. Furthermore, carefully designed survey questions administered to the father directly can add detail above and beyond time-use data.

Comparisons Between Mother and Father Involvement

Researchers who have used national survey data to examine father-child interaction often compare levels of paternal involvement to levels of maternal involvement, rather than look at absolute levels of involvement. Analyses indicate that the average father in a two-parent family (with a non-working spouse) spends only about one-quarter as much time as mothers do in direct contact with their children, and only one-third as much time accessible to their children; even larger discrepancies exist with regard to responsibility, with fathers assuming negligible amounts of responsibility for their child's basic care and well-being (Lamb et al. 1987; Pleck 1983, 1997). In two-parent families with an employed mother, the differences between father and mother involvement are smaller with regard to engagement and accessibility. In these families, fathers spend about one-third as much time as mothers in direct contact, and are accessible to the child about two-thirds as much as mothers are. However, these findings, which indicate a narrowing of discrepancy between mother and father involvement, appear to be due to mothers spending less time involved with their children, rather than reflecting an increase in fathers' absolute involvement (Working Group on Conceptualizing Male Parenting 1997). Lower relative rates of father than mother involvement within two-parent families are consistent across socioeconomic and racial/ethnic groups in the United States (Hossain and Roopnarine 1994; Parke 1996), and have been replicated in other countries as well (e.g., Great Britain, Sweden, Israel; Lamb, Frodi, Hwang, and et al.1982; Richards, Dunn, and Antonis 1977; Sagi, Lamb, Shoham, Dvir, and Lewkowicz 1985). On the other hand, fathers who head single-parent families seem to be just as involved in their child's schooling (46 percent) as are single mothers (49 percent) (Nord, Brimhall, and West 1997). Thus, discrepancies in mother and father involvement seem to be most acute in two-parent families.

Not only do fathers spend less time with their young children than do mothers, but they often engage in different types of activities. Mothers tend to spend more time in routine caregiving with their infants, while fathers are more likely to engage the child in play activities (Parke and Sawin 1980). Furthermore, mothers' and fathers' play behaviors tend to be of different quality. Mothers are more likely to talk to their children and manipulate objects to gain infants' attention during play, while fathers tend to engage their young children in physical and arousing interaction during play (Parke 1996; Parke and Tinsley 1987). Fathers also tend to spend more time interacting with their sons than with their daughters (Parke 1996).

Despite differences in the amount and type of involvement that mothers and fathers engage in with their young children, researchers have concluded that mothers and fathers influence their children in similar ways with regard to the development of morality, social competence, academic achievement, and psychological adjustment (Lamb, Pleck, and Levine 1986). The only exception may be in the area of gender role development, where fathers appear to behave quite differently toward sons and daughters -- perhaps more so than do mothers -- and may exert more influence in the development of gender identity (Lamb, Pleck, and Levine 1986; Parke 1996).

Roles Fathers Play in Young Children's Lives

Father involvement initially was viewed in rather narrow terms (e.g., father presence vs. father absence), and well-established paternal roles were ones that implied mainly indirect contact with children (e.g., father as financial provider). As implied by Lamb's typology, more recently the concept of father involvement has been expanded to encompass a multitude of roles and activities that include both direct and indirect engagement with children (Amato 1987, 1996; McBride 1990; McBride and Mills 1993; Palkovitz 1997; Radin 1994; Volling and Belsky 1991). What follows is a brief review of some of the major roles fathers play in young children's lives.

Economic providers. The role of economic provider is the traditional role of a father in American society. The father is seen as the main source of support and protection to the child and mother by providing money to secure housing, food, clothing, and health insurance, among other necessities. Even among non-resident fathers, the role of economic provider (e.g., in the form of provider of child support payments) often has been the paternal role of most interest to researchers and policy-makers. There is some evidence that paternal economic contributions promote positive development in children and youth (Hawkins, Catalano, and Miller 1992; also see earlier sections of this paper). However, it also is acknowledged that a father's role as economic provider has an indirect effect on a young child's development. Indeed, a father's time spent at work is often inversely related to his accessibility to the child (Zick 1997). Nevertheless, fathers may enhance their accessibility to their children by arranging to be reached by phone or beeper while at work, or by arranging to work at home. Also, fathers who work provide important and positive role models for their children.

Caregivers and nurturers. Caregivers provide for the basic, daily needs of a child (e.g., feeding, bathing, diapering), as well as other child-related maintenance (e.g., preparing meals, taking child to appointments). Fathers also can provide nurturance in the form of expressions of affection (e.g., kissing, hugging, or using endearing nicknames), comfort (e.g., holding the child), and maintaining open communication (e.g., responding appropriately to an infant's cries, listening to the child, etc.). When caregiving or nurturing behaviors are not forthcoming from a parent, physical neglect and/or emotional detachment may result. Children who fail to receive enough physical attention and emotional support are at higher risk for developing depressive and aggressive symptoms, and antisocial and risk behaviors (Working Group on Conceptualizing Male Parenting 1997).

Among a group of highly committed yet extremely disadvantaged fathers, the most important aspect of fathering was "being there" for their child (Ray and Hans 1997a). The elements of "being

there" did not include being a provider/breadwinner, but rather being available for emotional support, being patient, and being willing to talk and listen to the child.

Most of the research evidence finds that fathers are just as warm and nurturing as mothers with their infants and toddlers (Parke 1996). Fathers, like mothers, use a special form of speech with their infants, comprised of short, repetitive phrases. Fathers are also able to discriminate among different crying patterns in their newborns (Parke 1996). However, Parke and Sawin (1980), in an observational study of forty European American infants and their parents, found that shortly after birth, mothers and fathers engaged in more stereotypical behavior. For instance, mothers provided more care and affection to their infants, whereas fathers provided more stimulation. Nevertheless, the authors noted that these roles either switched or became more homogeneous by the time the infant was three months of age. They concluded that parents learn from each other and serve as role models for each other in how to interact with their children. In another small-scale observational study, Clarke-Stewart (1980) noted that one of the most important contributions that fathers make to their children's development is in the social-affective domain.

Teachers and role models. Another role that fathers play is that of teacher and role model. Fathers, like mothers, assume the responsibility of teaching their young children age-appropriate tasks. In infancy and early childhood, these tasks would include teaching the child shapes, numbers, and letters. In later childhood, fathers may assist children in their school-work and learning to read. Fathers also may help children build their interpersonal problem-solving skills (e.g., teaching manners, teaching conflict resolution, and teaching them how to interact with others).

Sometimes, fathers are teachers through their own behavioral example. In this way, fathers are not only teachers but also are role models. For example, fathers can teach children the difference between right and wrong by conducting themselves in a morally upright and ethical fashion. Similarly, fathers can teach their children empathy by behaving sensitively to others, including the child himself. A father's conduct can have long-reaching effects on children. For example, a recent study using recall information from the Panel Study of Income Dynamics (Duncan, Hill, and Yeung 1996) found that fathers' church attendance was positively related to their children's subsequent educational attainment, earnings, and household income as adults. Although other interpretations are possible, this suggests that modeling certain behaviors, such as church attendance, can influence child outcomes in a positive way.

Friends and playmates. While the father's role as financial provider is the major role with indirect influence on children, the father's role as friend and playmate is the major role with direct influence on children. Parke (1996) contends that fathers probably make their primary contribution to child development through play. In terms of relative frequency, fathers devote more time to play with their children than do mothers (Kotelchuck 1976; Lamb 1977; Parke 1996). This is true among African American and Hispanic families as well as European American families (Hossain and Roopnarine 1994; Hossain et al. 1995, as cited in Parke 1996).

Mothers and fathers exhibit different play styles with their infants. Fathers are less verbal and more physical with their children while in play, whereas mothers are more verbal and instructive during

play (Parke 1996). For example, fathers are more likely to engage in physical games such as tickling, bouncing, and lifting than are mothers; mothers are more likely to attempt to engage their child by rattling or manipulating a toy, reading a story, or talking to the child (Lamb 1978). Fathers' play styles elicit more extreme emotional responses from young children (e.g., pleasure, surprise), yet children's attention is held more consistently by mothers' play style (Yogman et al. 1977, as cited in Parke 1996). Parke concludes that "in a variety of studies, a clear pattern emerges: fathers are tactile, physical, and arousing, while mothers tend to be more verbal, didactic, and object-oriented in their play" (Parke 1996, p. 66). Children benefit from both styles of play; it exposes them to different forms of stimulation.

Play activities -- especially physical play activities -- between father and child are most frequent during infancy and early childhood (up to age 4), and then show a decline (MacDonald and Parke 1986). As children enter middle childhood and beyond, fathers more often engage in other leisure-time activities with their children, such as walks, outings, and private talks (Parke 1996). This is true of both resident and non-resident fathers (Simons and Beaman 1996).

Monitors and disciplinarians. The disciplinarian father is one who is concerned with setting limits and punishing undesirable behavior. In one recent study of fathering behaviors among toddlers, the authors defined the role of disciplinarian as "efforts by the father to promote 'proper' behavior and discourage inappropriate behavior pertaining to widely shared values" (Jain, Belsky, and Crnic 1996, p. 434). Jain et al. provided several examples of disciplinarian behavior including providing guidance regarding manners, praising appropriate behavior and prohibiting inappropriate behavior, and meting out punishment for inappropriate behavior.

However, the "traditional" role of the father as the strict disciplinarian has mixed support in the research literature. In fact, some research has found that mothers of young children are more likely to discipline their children than are fathers, particularly in the first two years of life (Parke and Stearns 1993). For example, in a compilation of observational studies of parent-child interactions, Pedersen (1980) noted that none of the studies involving toddlers and their parents showed fathers more frequently in the disciplinarian role than mothers. In fact, the studies provided evidence that the mothers more frequently were restrictive with their young children than were the fathers. On the other hand, Jain et al. (1996), in a cluster analysis of home observational data, found that the "disciplinarian" father clearly emerged as one category and that disciplinarian fathers were less involved in caretaking, playing, and teaching, and engaged more in disciplining, controlling, and socializing their toddlers than any of the other types of fathers.

The research results also are mixed regarding the strictness of African American fathers. McAdoo (1988) reported that some studies have found that African American fathers with preschool-aged children are strict in their childrearing attitudes, and expect children to immediately obey their commands. Other studies have found that European American and African American fathers are more similar than different in their disciplinary methods. For example, research on authoritative parenting was initially conducted among European Americans, but has been found to apply among African Americans as well. McAdoo concluded that "Black fathers appear to favor childrearing strategies that involve some combination of warmth and support, as well as firm control, which is consistent with Baumrind's

model of authoritative parenting, and which may help foster positive social and emotional development in children" (p. 85). Thus, the stereotype of the father as the sole disciplinarian is not an accurate one (Yogman, Cooley, and Kindlon 1988) and the concept seems to interact with other constructs, particularly warmth.

Protectors. The protector role has a different meaning depending on the age and developmental stage of the child. However, as Garbarino (1996) stated, the "mythic" father is the child's protector, someone to whom the child can look to for "involved" strength. For infants and young children, fathers serve as "emotional guides in uncertain situations" (Parke 1996, p. 131). Infants read their fathers' cues and learn from them which strangers, events, or situations should be avoided. As children get older, fathers continue to monitor their children's safety by organizing the environment so that it is free from hazards. In some communities, by simply walking down the street with his child, a father sends a signal to others that his child is protected (W. Johnson - personal communication, March 1997). Fathers, like mothers, also can teach their children about risks to their health and safety (e.g., don't cross the street without holding my hand, don't talk to strangers). For instance, in one study of urban, low-income African American fathers with toddler-age children, fathers viewed themselves as protectors in the home and in their sometimes-threatening inner-city neighborhood (Ray and Hans 1996). Nevertheless, especially during infancy and toddlerhood, mothers are more likely than fathers to set boundaries for play and safety, organize the child's environment, and monitor the child's access to peers and playmates (Parke 1996).

Providers of emotional and practical support to mothers. As noted above, fathers traditionally have been seen as the primary providers of financial support for their families. Supporting the mother in her caregiving role both emotionally and practically is considered another primary way fathers benefit their children. Most men provide a great deal of emotional support to the mothers of their child during pregnancy and delivery of their child, and help the mother take care of the basic needs of the child once the infant is brought home (Parke 1996). This type of support to the mother indirectly affects the child. For example, mothers who are supported in their breast-feeding efforts by their husbands continue to breast-feed longer than mothers with less support from their husbands (Entwisle and Doering 1981). Many fathers continue to provide emotional and practical support to their wives beyond the first few months of parenthood. For instance, fathers are the primary providers of care for their preschoolers while mothers are working (Casper 1997).

Providers of linkages to extended family and the community. Another role that fathers can play in their children's lives is to provide linkages to their extended family and the outside community. This role may be particularly salient for non-resident fathers. The father's extended family is another important source of nurturance and support for young children. Extended family members can serve as caregivers and can also transmit cultural values and knowledge (National Center on Fathers and Families 1997). For non-resident fathers, facilitating the connections between their families and their children becomes more of an active role as some of these connections may be lost once the father no longer lives with his child. Fathers also can contribute to the development of social capital in their children by introducing them to key resources, individuals, and "gatekeepers" in the community, though this becomes more important as children get older.

Advocates for children's education. Fathers also can serve as advocates for their children's education by being involved in institutions such as child-care centers, preschools, and schools. Although data for preschool children are not available, data for children in kindergarten through grade 12 indicate that 27 percent of fathers in two-parent families and 46 percent of fathers in single-parent families are highly involved in their children's schools, meaning they engage in at least three school-related activities a year (Nord, Brimhall, and West 1997).

Fathers usually are less involved than mothers in organizing non-parental care (Mason and Duberstein 1992, cited in Vandell et al. 1997). However, in one study of parents with young children in eight urban and suburban day care centers, Fagan (1997) found many similarities between mothers and fathers in their involvement in activities such as midday visits. Fagan did find that compared with fathers, mothers spoke with the care givers and the child-care center director more often.

There are several factors that influence how actively fathers are involved in their children's education. Recent analyses of the 1996 National Household Education Survey indicate that fathers are more likely to be involved in their child's schooling if they actively choose the child's school (i.e., enroll the child in a private school or a public school of the parent's choosing) (Nord, Brimhall and West 1997). Other factors which may influence a father's level of involvement in his child's education include his educational attainment, family income, family structure, and work schedule (Lareau 1987; Zill and Nord 1994), as well as lack of school staff trained to work with parents, staff attitudes, and cultural or language differences between parents and staff (Carey, Lewis, and Farris 1998). Others (Epstein 1990; Epstein and Dauber 1991) have noted that status variables such as socioeconomic status, family structure, and race, are less important than teacher practices and attitudes, family practices, and school policies in determining how involved parents will be.

Summary

This brief review of the different categories of father involvement and the different roles that fathers play in children's lives lead to the following recommendations for the ECLS-B:

- Measures of father involvement within the ECLS-B should address aspects of engagement, accessibility, and responsibility. New items may need to be developed in order to measure adequately accessibility and responsibility -- areas of father involvement that are not currently well-addressed in national survey studies. For example, including questions on how easily a father can be reached even when not at home would help determine a father's accessibility to his child (Zick 1997).

- Ideally, it would be useful to have comparable measures of mother and father involvement along the three dimensions outlined by Lamb et al. (1987) collected in the ECLS-B. Comparisons between mother and father involvement with young children would be most useful if they went beyond "relative frequency" analyses of time-use studies.

- The quality as well as the quantity of fathers' involvement with their young children should be assessed. This may warrant the design of new methods of data collection or new measures (e.g., interviewer assessments).

- A father's role vis-a-vis his young child needs to be expanded to include a wider range of roles and activities beyond those of economic provider and playmate. Questions on father involvement in the ECLS-B should tap both direct and indirect forms of father involvement, as represented in the various fathering roles described above.

- New measures of engagement, accessibility, and responsibility may need to be designed to capture the unique qualities of non-resident father-child relationships.

Variations in Father Involvement

Socioeconomic, Ethnic, and Cultural Factors

Socioeconomic, ethnic, and cultural variations among fathers may affect their roles and even their level of involvement. Therefore, the more that is known about fathers' characteristics, the economic and social contexts in which they care for their children, and their beliefs about their roles as fathers, the greater the potential insight into fathering within and across social groups and strata.

Socioeconomic characteristics. While several studies find no association between father involvement and socioeconomic status indicators like education, income, and social class (e.g., Barnett and Baruch 1987; Gerson 1993; Pleck 1983; Volling and Belsky 1991), others find clear associations (Blair, Wenk, and Hardesty 1994; Goldschieder and Waite 1991; Haas 1988; Russell 1983, 1986). For example, two national studies reveal an association between higher education of fathers and both higher relative accessibility and higher positive engagement among school-age children (Blair, Wenk, and Hardesty 1994; Goldscheider and Waite 1991; Nord, Brimhall and West 1997). Findings from the 1996 National Household Education Survey (NHES:96) show that the likelihood that fathers of first through fifth graders are involved in their children's schools increases with fathers' education (Nord, Brimhall and West 1997). Similarly, findings from the National Survey of Families and Households (NSFH) indicate that higher paternal income is associated with more positive father-child engagement among target children ages 5 to 18 (Blair et al. 1994).

When fathers are able to contribute financially, they may be more likely to remain invested in their marital or partner relationship and to be involved with their children. For example, based on a review of literature on two-parent African American families and his own observational study of 84 middle-income, African American and European American fathers, McAdoo (1986) concluded that fathers who are able to provide for their family are more engaged and nurturing with their children than are fathers who are unable to provide economic support. Similarly, a study of 289 single, teen-mother families on AFDC in Wisconsin revealed that, according to mothers' reports, fathers who worked during the past year were more likely than their unemployed counterparts to engage in various childrearing activities and to maintain a high quality relationship with their young children (Danziger and Radin 1990).

Due in large part to society's emphasis on fathers' provider role, unemployment often negatively affects the relationship between fathers and their children. Unemployed fathers are more likely to leave or limit their involvement with their families, and less likely to form families or assume responsibility for their children born outside of marriage (Elder and Caspi 1988; Hawkins 1992; Wilson 1987). Among married couples, unemployment and underemployment often produce economic hardship which leads to a stressful home environment characterized by frequent outbursts of anger and hostility from parents, especially fathers (Elder et al. 1992).

Employed fathers with rigid, restrictive work schedules have limited ability to spend time with their families (Gerson 1993). The type of employment and work schedules of fathers affect their

interaction with their wives and children. In addition, Repitti (1989) found that fathers who have highly stressful occupations tend to withdraw from their wives and to provide little childrearing support. Compared to fathers with less stressful jobs, these fathers also are more likely to withdraw from their children and more likely to exhibit anger and impatience during their interactions with their children (Repetti 1994). On the other hand, fathers engaged in complex jobs associated with high levels of challenge and autonomy tend to spend more time helping their children, particularly their sons, develop skills (Greenberger, O'Neil, and Nagel 1994). Overall, daily participation in child care is high among fathers in lower-level white-collar jobs and professional jobs, and lower among self-employed fathers and fathers in blue-collar jobs and middle or high management positions (Gerson 1993).

Racial/ethnic and social class variations in involvement. Fathers' role orientations may vary both within and across race/ethnicity or social class groups as well. According to a small study of middle-income, African American fathers who were postal carriers, the provider role is more important than other parental roles. In contrast, a small group of low-income African American fathers ranked the provider role below developing a secure relationship with the child and providing discipline and moral guidance (Ray and Hans 1997a). An observational study that directly compared African American middle and lower income fathers' interactions with their preschool children showed middle-income fathers to be more responsive to the developmental needs of their children (Hornig and Mayne 1981).

Several studies have found that European American and African American fathers differ in their form of paternal engagement with and level of availability to their children. Compared to European American fathers, African American fathers are less likely to read to older children but more likely to play with them (Marsiglio 1991) and more likely to share housework and child-care tasks for preschool children with their partners (Ahmeduzzamen and Roopnarine 1992). In addition, some national survey findings reveal that non-resident African American fathers are more likely to visit their children (King 1994a; Lerman 1993; Mott 1990; and Seltzer 1991) and participate in childrearing decisions (Seltzer 1991) than are their European American or Hispanic counterparts.

There are perhaps as many or more similarities as there are differences regarding fathers' roles within and across race/ethnic groups. Some findings from small-scale studies suggest, for instance, that middle-income Mexican American fathers are similar to middle-income European American fathers in terms of their emphasis on paternal provider roles (Mejia 1975) and that African American middle-income fathers are similar to European American middle-income fathers in regards to their childrearing attitudes and levels of involvement (McAdoo 1988, 1993). A study of childrearing by parents in African American, European American, and Hispanic lower-income families found that fathers in all three groups are similar in their expressions of concern and care for their children and their encouragement of their children's involvement in family decision-making (Bartz and Levine 1978). However, additional data and research are needed to fully explore race/ethnic factors among understudied groups, such as American Indians, Hispanics, Asians, recent immigrants, low-income European Americans, and middle-income African Americans. Furthermore, additional research is needed to explore the similarities and differences within and among groups of very poor, working class, and middle-class fathers of various racial/ethnic groups.

In general, there appear to be cross-cultural themes of fathers who are providers, protectors, care givers, and teachers (Joe 1996). Nevertheless, in a study of American Indian families, fathers identified their main roles as protectors and disciplinarians rather than providers perhaps because of the dire unemployment circumstances of the community (Keltner 1996). This finding, like many others highlighted in this report, demonstrates the interplay of multiple individual and contextual factors in the study of father involvement and the need for multiple types of information for adequate research in the area.

Resident Contexts

Biological or step-fathers/partners in two-parent families. Most of the research that has been conducted on father involvement has been with biological fathers living in two-parent families. However, this type of resident context is not applicable to many children. For instance, whereas in 1992, two-thirds of European American children were being raised by both biological parents, only one-quarter of African American children lived with both biological parents (Bianchi 1995).

In recent years, there has been an increase in the number of step-fathers. One estimate is that one-third of all children will spend some time in a step-family before they reach 18 (Seltzer 1991). This increase in the number of step-fathers has been attributed to the increase in births to unmarried women and in post-birth marriages, the increase in divorce and remarriage rates of women with children, and changing child custody patterns (Marsiglio 1992). Researchers have noted that step-fathering is challenging because there are no cultural, social, or legal norms to guide their behavior (Hetherington and Henderson 1997; Marsiglio 1992). However, stepfathers who expect to follow a traditional nuclear family model have more difficulties than those with a more flexible family model in mind (Cherlin 1992; Hetherington and Henderson 1997).

Several factors influence how step-fathers integrate themselves into their new families and how they perceive their parenting roles. First, step-fathers who live with their step-children and their own biological children tend to be more involved than those step-fathers who live with step-children only (Marsiglio 1992). The age of the step-child at the time the new family was formed also may affect the step-fathers' level of involvement. For instance, there is some evidence that men who became step-fathers when their step-children were young have better relationships and are more involved with them (Pasley and Healow 1987). Additional factors that may affect the step-father/step-child relationship include the quality of the relationship that the step-father has with his wife or partner (Marsiglio 1992), and the child's relationship with his or her noncustodial biological father (Hetherington and Henderson 1997).

Hetherington and Henderson (1997) explain that the impact of the step-father on a child's adjustment increases with the duration of time in the remarriage. This is, in part, due to the fact that noncustodial fathers become less involved with their children over time. Thus, the step-father and the noncustodial father are not in competition over the fathering role. Similarly, since mothers usually have more of the day-to-day childrearing responsibilities, this also lessens any competition between step-fathers and biological fathers (Hetherington and Henderson 1997).

Biological single-father families. Single-father families, while relatively rare (between 3 and 5 percent of all families with children depending on how single-father families are defined; Garansky and Meyer 1996), have increased rapidly in number over the past two decades (Bianchi 1995; Greif 1995). In fact, during the 1980's, single-father families increased faster than single mother families. In 1990, nearly one out of five single-parent families was headed by a father (Bianchi 1995).

There are racial and economic differences between children living with two parents and those being raised by their fathers. Single fathers are more likely to be African American than married fathers and comprise 19 percent of non-cohabiting fathers, according to analyses of March 1995 Current Population Survey data (Brown 1996). In addition, whereas children in father-only families are faring better financially than those children living in mother-only families, they are still not as well-off as children in two-parent families. In 1992, the poverty rate for father-only families was 22 percent, nearly twice the poverty rate for two-parent families (Bianchi 1995).

There is evidence of positive outcomes among children being raised by their fathers. For example, recent analyses of the 1996 National Household Education Survey indicated that 46 percent of fathers who were single-handedly raising their children were highly involved in their children's schools (Nord, Brimhall, and West 1997). Furthermore, children with highly involved fathers were more likely than others to get mostly A's in school (Nord, Brimhall, and West 1997). Greif (1995) noted that a consistent finding from a review of the literature on single fathers is that fathers are quite capable of raising their children alone; between 5 and 25 percent of the single fathers from the studies that Greif reviewed had "serious concerns" with childrearing. Fathers who actively seek out custody of their children tend to adjust more easily to the parenting role than those men who merely "assent" to the role (Greif 1995). Other factors which may affect single fathers' adjustment include the age and gender of the children, a father's ability to balance work and parenting responsibilities, the relationship that he has with his ex-wife or partner, and a father's age and educational level (Greif 1995).

Non-resident, biological fathers. Due to high levels of divorce and out-of-wedlock childbearing in the United States, a significant proportion of fathers do not reside with their children. Household surveys that focus exclusively on fathers in two-parent families risk over-estimating the degree and type of father involvement displayed by fathers in the United States. Ideally, efforts should be made to include non-resident fathers in new national surveys that focus on family processes and child well-being.

Direct and indirect efforts to identify non-resident fathers in national surveys appear to have fallen short of the mark thus far (Sorensen 1997). For example, two national surveys that collect information on non-resident fathers, SIPP and NSFH, report 7.3 million non-resident father and 5.6 million non-resident fathers respectively. However, in both surveys, there is a significantly smaller number of non-resident fathers than custodial mothers. Sorensen hypothesized that non-resident fathers are under-represented in national surveys for three main reasons: 1) both surveys focus on individuals in households and leave out individuals in, for instance, correctional institutions and military barracks; 2) since survey weighting is based on Census figures, the surveys perpetuate the undercount of certain sub-populations like young African American males; and 3) it appears that women readily admit that they

have children living with them whose father lives outside the home while men are less likely to report that they have children living elsewhere. Based on calculations that account for all of these factors, Sorensen (1997) estimated that about 1.5 million non-resident fathers were missed by the NSFH and the SIPP. Clearly, future efforts to include non-resident fathers in national surveys should attempt to improve on existing sample design and data collection efforts.

Non-resident fathers typically have much lower levels of involvement with their children than resident fathers (National Commission on Children 1991; Nord, Brimhall, and West 1997), and when involved are more likely to engage in play than in caretaking (Furstenberg and Cherlin 1991). However, non-resident fathers also may take an active role in children's school achievement. According to analyses of NHES:96, 31 percent of non-resident fathers who have contact with their children engaged in at least one activity at their children's schools within the current school year (Nord, Brimhall, and West 1997). A longitudinal follow-up of the original Baltimore study of 400 mostly African American teen mothers initiated in the mid-1960s found that non-resident father involvement often is quite substantial initially but declines over time (Furstenberg and Harris 1993). Teen mothers were followed from pregnancy until their children reached school age in 1972 and then re-interviewed several times over the years as their offspring entered young adulthood. During the preschool years, frequency of father-child contact was relatively high, but by mid-adolescence, 46 percent of the children had no contact with their father. Similarly, at age one, 80 percent of the children received some child support, but four years later only one-in-three, and by mid-adolescence only one in six children, received child support. Furstenberg and Harris (1993) also observed that in the early years, never-married fathers were as likely to support their children as were divorced or separated fathers, but over time, previously married fathers were markedly more likely to continue support.

Studies based on nationally representative samples also find lower rates of child support payment and visitation for never married fathers compared to previously married fathers (King 1994a; Seltzer 1991; Seltzer and Bianchi 1988) and declines in non-resident father involvement over time (Furstenberg et al. 1983; Lerman 1993; Mott 1990; Seltzer 1991). Lerman (1993), focusing on a sample of never married, young non-resident fathers from the National Longitudinal Survey of Youth (NLSY), found two broad patterns of visitation and child support provision emerged based on these fathers' reports. More than half of the fathers lived near their children, visited them often, and paid child support, while the majority of the fathers rarely visited and usually paid no support (Lerman 1993).

However, a recent examination of NLSY data provides support for the contention that many never-married fathers are likely to remain involved. Some live with their biological children, while others visit frequently. Findings showed 68 to 80 percent of never-married fathers either lived with their child or visited several times a week in the first year after birth. Longitudinal data for two years later indicated that 77 percent of fathers were still living with the child and a full 68 percent continued to visit on a regular basis. The findings were similar among, European Americans, African Americans, and Hispanics. However, European American and Hispanic fathers were more likely to be living with their child while African American fathers were more likely to visit frequently (McLanahan et al. 1998).

In general, there appears to be a strong association between father-child contact and the provision of child support. Non-resident fathers that maintain contact with their children are more likely to pay child support or vice versa (Arditti and Keith 1993; Furstenberg et al. 1983; King 1994a; Nord, Brimhall, and West 1997; Seltzer, Schaeffer, and Charing 1989; Sonenstein and Calhoun 1990). For example, findings from the National Survey of Families and Households show that in the absence of financial support, contact is especially low, and the important factor is the provision of support rather than the actual amount of support (Seltzer et al. 1989). However, Veum (1993) used longitudinal data from the NLSY to examine the association between child support and visitation over time and found no causal association between the two forms of involvement. He concluded that the relationship observed in cross-sectional studies is due to unmeasured characteristics of the parents that may change over time, such as their relationship with each other or commitment to the child.

Factors associated with increases in the likelihood of non-resident father involvement are residential proximity between fathers and their children (Furstenberg et al. 1983; Lerman 1993; Seltzer 1991), a positive relationship between the mother and father, father's financial resources, father's work experience, and mother's education which is a proxy for father's education (Danziger and Radin 1990; Seltzer 1991). Factors associated with decreasing father involvement include geographic mobility, a new spouse or partner, conflicts between the mother and father, and insufficient financial resources (Furstenberg and Harris 1993; Seltzer and Bianchi 1988).

Summary

This overview of variations in father involvement highlights the following points for consideration in the development of the ECLS-B:

- Socioeconomic, racial/ethnic, and residential contexts are key among many factors that affect father involvement. There is a need for longitudinal data and research on representative samples of fathers in step-families, single-father families, and non-resident contexts.

- Only a few studies have focussed specifically on whether and how father-child interactions differ between never-married and divorced fathers, especially in terms of involvement beyond child support provision and father-child contact. Since nearly one-third of all births occur to never-married mothers, this is an important population for future research.

- Virtually no research has examined fatherhood among immigrants. Eighteen percent of current births are to mothers born outside of the United States; if the fathers also are foreign-born, this is a major gap in existing knowledge.

Incentives and Barriers to Father Involvement

There are multiple factors that may affect the extent to which fathers are involved with their children. Some factors are specific to the father (e.g., attitudinal and motivational factors, psychological well-being, timing of fatherhood), some are specific to the child (e.g., gender, age, temperament), and some are specific to the mother-father relationship (e.g., marital or relationship satisfaction, and mothers' encouragement of father-child interaction). In addition, incentives and barriers to father involvement exist outside of the family setting. These factors include meso- and macro-level factors such as societal attitudes, employment opportunities, workplace environment, and support from friends and extended family. We will consider several of these key determinants of father involvement below.

Attitudes and Beliefs

Men's beliefs about fathering and their perceptions of themselves as competent caregivers are one set of determinants of father involvement in young children's lives. Men who value the fathering role are more likely to be involved with their 3-month-old infants (Parke 1996; Palkovitz 1984). Furthermore, self-perceptions of adequacy in the caregiving role appear to be associated with higher levels of father involvement (Parke and Sawin 1980). Intervention studies have shown that increasing a father's sense of competence will increase the likelihood of interaction with the infant (Dickie and Carnahan 1980; Parke and Beitel 1986).

Another set of attitudes and beliefs that may affect father-child relations is fathers' gender-role attitudes. Egalitarian and traditional families differ in their absolute levels of paternal involvement, with egalitarian fathers being more involved (Updegraff, McHale, and Crouter 1996). Furthermore, fathers' gender-role attitudes lead to differential outcomes for children, particularly girls. Daughters of fathers who hold less gender-stereotyped beliefs maintain a higher level of achievement in math and science across the transition to junior high than those whose fathers favor more traditional roles (Updegraff, McHale, and Crouter 1996). However, other studies that have examined men's attitudes about masculinity and femininity have failed to find a relationship with father involvement (Barnett and Baruch 1987; Marsiglio 1991; McHale and Huston 1984; Pleck 1985).

A father's motivation to be involved in his child's care and development is in part influenced by his own developmental history. Some fathers may want to emulate the model of fathering set by their own father, while others may try to provide a different type of father-child relationship than they themselves experienced growing up. The likelihood of a father either "modeling" or "compensating for" his own fathering experiences is thought to be influenced by his perceptions or recollections of those experiences. That is, if a man has positive feelings about his early interactions with his father, he will likely model his father's level and type of involvement; alternatively, if his memories or feelings are negative, he may attempt to be more or less involved than his own father was (Pleck 1997). Daly (1993) has posited an alternative, "fragmentation model," suggesting that men model their fathering behaviors from a variety of sources, incorporating select behaviors from peers as well as recollections of their own childhood experiences with their fathers.

Finally, a man's desires to become a father contribute to the level of paternal involvement. Although one would anticipate paternal involvement to be more likely if the child is wanted by the father than if the child is unwanted or mistimed, empirical studies of this hypothesis have not been identified.

Psychological Well-being

Psychological well-being represents an important determinant of a father's parenting style (Belsky 1984). Cowen and Cowen (1987) found that men with high self-esteem prior to the birth of their child were more satisfied with their parenting roles than men with low self-esteem before the baby's birth. Psychological well-being is intertwined with other factors which influence father involvement, including the mother-father relationship and economic and work-related factors, and may better be characterized as a moderator of father involvement than as a predictor of it (Almeida and Galambos 1991; Pleck 1997).

Timing of Fatherhood

Increases in teen pregnancy between 1986 and 1991, especially among African American youth (Cherlin 1992; Moore, Snyder, and Glei 1995), coupled with the ongoing trend in delayed childbearing over the last decade (Collins and Coltrane 1994) has resulted in shifts in the timing of fatherhood among American males. For example, of all the infants born to women age 15-49 in 1988, 5 percent were born to fathers younger than age 20, 20 percent were born to fathers age 20-24, and 17 percent were born to fathers over the age of 35 (Landry and Forrest 1995). Timing of fatherhood within an individual's life course has significant consequences for involvement with children.

Due to low rates of marriage and high rates of divorce among teenage parents, adolescent fathers have less contact with their children than do on-time fathers (i.e., becoming a father in one's 20's) or older fathers (Parke 1996). Teen fathers are often unprepared for the financial and emotional responsibilities of parenthood (Furstenberg, Brooks-Gunn, and Chase-Lansdale 1989), which may, in turn, contribute to the low levels of paternal involvement. In addition, few teen fathers live with their children, and have less opportunity for father-child contact. However, just because a father is young and unmarried does not necessarily mean he will be uninvolved in his child's life. A recent national study showed that nearly half of young unwed fathers not residing with the mother reported visiting their infants at least once a week (although the use of mother-report rather than father-report indicates a rate of 40 percent) (Mott 1993). However, as children get older, teen fathers typically have less contact (Lerman and Ooms 1993). According to father reports, 57 percent of teen fathers visit their 2-year-olds at least once a week, but only 40 percent visit older preschool children (ages 2 to 4.5) and only 22 percent visit school-age children (ages 7.5 and older). Additionally, fathers who rarely or never visit their children are unlikely to pay child support -- another important form of paternal involvement (Furstenberg and Harris 1993).

On the other hand, fathers who delay childbearing are more likely to be involved in the lives of their children. This, in part, is due to older men being more established in their educational and career paths, and in their marriages. More established workers may enjoy more ease in balancing family and

career demands (Parke 1996). In a national study, older fathers were found to be more highly involved with their children and more satisfied with the parenting role than on-time parents (Cooney et al. 1993). Older fathers are also more likely to help with household tasks and child maintenance (Coltrane and Ishii-Kuntz 1992). Furthermore, older fathers relative to younger fathers have been observed to be more responsive and affectionate with their young children at 3 and 9 months of age (Volling and Belsky 1991).

Older fathers are more likely than younger fathers to engage in cognitively-stimulating activities, such as book-reading (Parke and Neville 1995) but less likely than younger fathers to engage in high-energy activities such as bouncing, tickling, and rough-and-tumble play (MacDonald and Parke 1986). Thus, the type of father-child interactions differ with the timing of fatherhood. These qualitative differences in paternal behavior based on the age of the father may in turn affect children's cognitive and social development.

Characteristics of the Child

Fathers have been found to touch, look at, vocalize to, and visually stimulate their infant sons more than their infant daughters, especially if they are first-born sons (Parke 1996). Indeed, fathers are found to spend more time with their sons than with their daughters from infancy through late childhood (Amato 1987; Barnett and Baruch 1987; Harris and Morgan 1991; Marsiglio 1991; Radin 1994; Weinraub and Frankel 1977). African American fathers, however, appear to be more similar in their treatment of sons and daughters than European American fathers (Hossain and Roopnarine 1993). The differential patterns of attention and involvement apportioned to sons and daughters are attributed to the fathers' attempts at early gender-role socialization (Parke 1996). This hypothesis seems likely, since studies have found that the main gender differences in paternal involvement occur in play rather than caretaking behaviors (Levy-Shiff and Israelashvili 1988).

As already shown, fathers also have been found to spend more time with younger children than with older children (Marsiglio 1991) and with first-born children than with later-born children (Rustia and Abbott 1993). Children who are born prematurely or who have difficult temperaments also elicit more paternal involvement (Parke 1996; Pleck 1997; Volling and Belsky 1991). Pleck (1997) argues that child characteristics should be considered as part of any model of father involvement, since these factors clearly influence fathers' motivation for involvement.

Influence of the Relationship with Child's Mother

Marital conflict may affect father involvement and have long-lasting effects on child well-being (Feldman, Nash, and Aschenbrenner 1983; Volling and Belsky 1987). For example, in a large-scale epidemiological study, marital discord predicted child psychological maladjustment more so than did father absence (Rutter 1973 1979; see also Cherlin et al. 1991). Alternatively, higher quality marital relations predict greater father participation in child care. Furthermore, men with higher marital satisfaction are more playful with their 9-month-old infants (Levy-Shiff and Israelashvili 1988).

Mothers have been identified as influential monitors and regulators of the father-child relationship, especially in cases of divorce (Ahrons 1983; Arendell 1992; Dudley 1991; Ihinger-Tallman, Pasley, and Buehler 1993). This "gatekeeping" role may also be important in the development and maintenance of father-child relationships in situations where the father and mother were never married (Ray and Hans 1997b, Summers et al. 1997). In a recent study of very low-income African American urban mothers and their toddlers, Ray and Hans (1997b) argue that a mother's gatekeeping role is influenced by her own early experiences with father figures as well as salient characteristics of the father of her child. The two factors that were most strongly related to father involvement were whether the father had worked recently and whether the mother perceived the father to be a reliable provider for her child (Ray and Hans 1997b).

Support from Outside the Family

Generally speaking, there is much less social support available for encouraging father involvement than there is for encouraging mother involvement (Pleck 1997). Nevertheless, social support received from sources outside of the immediate family can increase some forms of father involvement. Ahmeduzzaman and Roopnarine (1992) found that support to the father from friends and extended kin was positively associated with African American fathers' positive engagement with their children. However, as part of this support, friends and kin may be providing substitute child care, thus potentially reducing fathers' level of accessibility to their children.

Company policies and practices such as health benefits, flexible work hours, or paternity leave affects the amount and type of father involvement. Fathers who take advantage of flextime or four-day (compressed) work week schedules spend more time with their children (Pleck 1997). A father's decision to take advantage of paternity leave is often influenced by the needs of the child, the needs of the wife/partner, and financial considerations (Hyde, Essex, and Horton 1993). However, few American fathers take advantage of paternity leave, even when it is made available (Pleck 1997). Still, the available research suggests that when fathers do use paternity leave (either formally or informally by using sick days or vacation time), paternal involvement is higher (Hwang 1987; Pleck 1993). In general, social support is an incentive for higher levels of father involvement.

Economic and Work-related Factors

As noted in an earlier section, a major barrier to father involvement is difficulty securing stable employment (Sullivan 1993). Many men who are unemployed feel they cannot contribute to the support and care of their children and therefore avoid contact (Parke 1996). Unemployed fathers who do maintain a high degree of contact with their children tend to downplay the importance of the role of breadwinner and instead view their role as nurturer as most important (Ray and Hans 1997a). Nevertheless, a father's ability to provide for his child strongly affects the mother's perceptions of the father's caregiving abilities and her willingness to allow access to the child (Ray and Hans 1997b).

Among working fathers, differences in father involvement have been noted among working-, middle-, and upper-class groups (Gerson 1993). For example, as noted above, low-income fathers

tend to spend more time with their children than middle- or high-income fathers (Levy-Shiff and Israelashvili 1988; Volling and Belsky 1985). Nevertheless, middle-class fathers are more likely to engage in positive interactions with their children than are working-class fathers (Easterbrooks and Goldberg 1984).

The nature of men's work environments may have consequences for the quality of parent-child interactions as well. Specifically, Kohn (1969) found that fathers who were in blue-collar jobs that required compliance to authority were more likely to have authoritarian parenting styles (e.g., stressing conformity and obedience from their children). Relatedly, fathers with white-collar jobs that required independence and self-direction were more likely to stress independence in their children. The current nature of work environments likely differ from the period when Kohn did his studies. Nevertheless, additional qualities of contemporary work environments (e.g., flexible work hours, location) also may influence the extent and quality of fathers' involvement with their children. In general, fathers' job satisfaction has been found to be positively related to the use of reasoning in their discipline styles with their children (Kemper and Reichler 1976; McKinley 1964).

Role Stress

Most fathers as well as mothers experience difficulties in balancing their work and family commitments, at least occasionally. Fathers who are able to coordinate their home and work responsibilities (such as fathers who have flexible work hours or can work at home) often are more involved with their children. For example, among rural communities, fathers in farming families were found to be more involved in their children's lives than were fathers in non-farming families (Elder and Conger in press). Because farming is generally a family-based economic activity, there is an increased amount of contact and accessibility among all family members. Being a responsible and engaged parent is consonant with the role of being a productive farmer; thus, role stress is reduced and father involvement is increased. In addition, Bowman (1993) has argued that both perceived and real elements of role stress conspire to threaten the quality of father involvement among African American men.

Summary

Some of the key findings from this review of incentives and barriers to father involvement include the following:

- Believing that a father's role is important to child development and perceiving oneself as competent in the fathering role both serve as incentives to father involvement.

- Wanting the child and desiring to become a father may also be associated with father involvement.

- A man's recollections of his own father-child experiences from childhood could serve either as barriers or incentives to involvement.

- Egalitarian beliefs may lead to more father-child interactions in general, and more beneficial father-child interactions for girls in particular.

- The father's psychological well-being serves as a moderator of father involvement. High levels of stress and depression create barriers for father involvement, whereas high self-esteem increases the likelihood of father involvement.

- Early fatherhood appears to be a barrier to father involvement. On-time fatherhood (i.e., becoming a father in one's 20's) increases the amount of father involvement above that of teen parents, but delaying fatherhood until one's 30's or even the 40's may also yield benefits for children in increased father-child contact and more affectionate and cognitively-stimulating interactions.

- A harmonious father-mother relationship enhances the likelihood of frequent and positive father-child interactions within two-parent families. Conversely, marital conflict serves both as a barrier to father involvement and as a predictor of poor child outcomes. In situations where the father does not reside with the child, father involvement is more likely if the mother perceives the father to be capable of successfully fulfilling the provider role.

- Being employed, and experiencing job satisfaction and low role stress are all associated with higher levels of father involvement. Conversely, unemployment or job instability, as well as high role stress, serve to minimize the likelihood that fathers will be and/or stay involved in their children's lives.

- Additional support from friends, extended family, and institutions may help bolster father involvement in young children's lives.

In addition, certain characteristics of the child may either increase or decrease the extent of father involvement. A complete model of father involvement must take into account the determinants and moderators of father involvement with young children (Pleck 1997). Consequently, constructs that represent determinants and moderators of father involvement are included in the construct grid attached to this paper.

Methodological Issues

As previous sections indicate, fathers can represent an important influence on the development of a young child; however, the types and even the direction of effects are complex and substantial additional research is warranted. In particular, data about, and particularly data directly from men who are fathers are in short supply. Moreover, available data are most informative about in-home fathers and those fathers who are the most in contact with their children, creating a dearth of information about non-resident fathers and perhaps creating bias in what is known about father involvement and the influence of fathers on children's development (Garfinkel, McLanahan and Hanson 1997; Rendall et al. 1997; Cherlin, Griffith and McCarthy 1983). Hence, there is a strong need to collect new data about fathers and directly from fathers, including not only in-home biological fathers but also non-resident fathers.

Multiple studies indicate that those fathers most likely to be missed in national surveys are never-married fathers, divorced fathers, and minority fathers (Rendall et al. 1997), and low-income, non-resident fathers (Garfinkel, McLanahan, and Hanson 1997). These fathers are both absent from survey samples and tend to under-report their fatherhood, and therefore pose substantial challenges to data collection efforts (Cherlin and Griffith 1998). Most critically, because they are missing, self-report data describing their interactions, goals, attitudes, and characteristics are not available.

Regrettably, very little empirical evidence is available to guide the improvement of data collection specifically about and from fathers. Therefore, before high-quality data can be collected, a fairly wide-ranging array of methodological issues needs to be addressed. The following questions should be considered in designing a fatherhood component for a birth cohort study.

- Who should be interviewed? Who can provide what types of information? What information can be obtained from mothers and what must be obtained directly from fathers? Are data needed from all fathers and father figures?

- How can fathers who do not reside with their child be located?

- How can fathers be encouraged to participate in data collection activities?

- What is the preferred mode of data collection?

- How can under-, over-, mis-reporting be minimized?

- When and how often should data be obtained from fathers?

Because plans for the ECLS-B are moving forward rapidly, it is not possible to plan a multi-year agenda for research and testing. It is necessary to address the crucial methodological questions listed above based on the best information currently available. At the same time, it is important to identify those topics on which new or better information is needed. For some of these topics, short-

term research efforts may be able to supply an answer in time for the ECLS-B; in other cases, a longer term research effort may need to be defined. In some instances, ongoing data collection efforts that seek to obtain data from fathers, such as the Fragile Families project, the Panel Study of Income Dynamics and the Early Head Start evaluation, may provide crucial methodological insights in time to inform design decisions for the ECLS-B.

Who Should Be Interviewed? Who Can Provide What Types of Information? What Information Is Crucial to Obtain Directly from Fathers? Are Data Needed from All Fathers and Father Figures?

Mothers. Most, but not all, of the respondents in child-oriented surveys are mothers, and, in most cases, mothers can provide basic social and demographic information about the fathers of their children. Such questions have been asked of women in multiple surveys, including the National Survey of Family Growth and wave three of the National Survey of Children. Studies that examine the quality of proxy information for persons living in the same household (Moore 1988) indicate that the quality of information provided by proxy informants is comparable to the quality provided by persons about themselves for topics such as income, labor force status, and the presence of health conditions. Mothers presumably also can report the age and education of the father, though in one study, married couples were found to be better reporters about their spouses' characteristics than cohabiting couples (Tanfer, Billy, and Grady 1998). While mothers may not be fully informed about the father's interaction with older children, mothers should be able to report on the amount of contact and interaction the father has with an infant. This information can be used in analyses that focus on left censoring, and will provide basic data in cases where the father is identified but declines to be interviewed.

On the other hand, mothers cannot be expected to report on the content of the father-child interaction, on the father's feelings toward the child, or on his aspirations, expectations, attitudes, or values.

Biological fathers. Beyond basic social and demographic information and basic information about the amount of father-child contact, it is believed that fathers will be better able than mothers to provide detailed and accurate information about themselves, even for married and cohabiting couples. For biological parents who do not co-reside, the limits of maternal knowledge are only beginning to be investigated, but substantial gaps in the mother's knowledge seem likely. For example, information about what actually happens when the father and child interact almost always will be incomplete if supplied by the mother because she is not always present to observe. Even if the biological mother and father co-reside, much interaction is likely to occur at those times when the mother is absent and the father is in charge. If the parents do not co-reside and the father interacts with the baby in a different place, such as his home or his parent's home, the mother generally will be even less able to report on the content and quality of the interactions that take place.

Data on attitudes and values require self-reporting, regardless of marital status or residence patterns. That is, there is reason to believe that information about how the father feels and what he thinks (e.g., motivation for being involved) cannot reliably be supplied by the mother. However, as yet,

studies that compare maternal reports with father reports (beyond the issue of child support provision) have not been identified, making this an important topic for further methodological research.

Given evidence that the behaviors and activities of the biological father can be important to the child and indications that proxy reporting cannot equal self-report for numerous topics, it seems clear that interviewing biological fathers is desirable in a study of children.

Even if a general conclusion is reached that interviewing fathers is desirable, a critical specific question remains for the ECLS-B, that is, are there circumstances when no attempt should be made to interview the biological father? For example, in cases where there is no contact, or virtually no contact, between the mother or the child and a non-resident biological father, should any attempt be made to collect any data directly from the father? On the other hand, if there is at least some contact, what should be the criterion for deciding whether to interview the father directly? Is contact between father and child once a month or more a reasonable cut-off? Also, what if contact is less, but the father regularly provides economic support? Should an attempt be made to interview fathers who provide economic support at some level or with some frequency?

To sample fathers on the basis of the amount of contact that they have with their child raises the specter of sampling on the variable of greatest interest. Yet, it is clear that completing interviews with some fathers is virtually impossible. For example, attempts to interview fathers for the 1997 Panel Study of Income Dynamics indicate that many mothers refused to provide the names of the fathers. In particular, when the fathers had no contact with the child, an estimated nine in ten mothers could not or refused to provide contact information (S.L. Hofferth – personal communication, 1998). Mothers in contact with the father were substantially more likely to share his name and location, though detailed breakdowns are not currently available. Among biological fathers who were reached, nearly two-thirds cooperated with the survey. In the Fragile Families study interviews completed so far, among fathers for whom there was some contact information, about seven in ten completed the interview (Turner – personal communication, 1998). In the Early Head Start infant study, more than eight-in-ten of these highly disadvantaged fathers are cooperating; this high cooperation rate may reflect paternal interest and involvement in the Early Head Start program (N. Cabrera – personal communication, 1998).

Further analysis of data from the Panel Study of Income Dynamics, additional examination of the experiences of Early Head Start and the Fragile Families projects, and information generated in the course of pre-testing can further inform a decision regarding which non-resident biological fathers warrant interview attempts. At this time, it would appear that fathers divide into those who are in contact with their children and those who are not, and that it will be fruitless to attempt to interview fathers who have had no contact with their infant from the time of birth to the time the baby is six months old, when the first data collection effort occurs. One exception worth exploring is the group of fathers who are incarcerated or who are in the military and who therefore are unable to have any direct contact with their infant; it may be very possible to conduct a telephone interview with those fathers who are in contact with the mother even though they are not in a position to actually see their infant. Payment of financial support might represent a tertiary factor in deciding whether to attempt to obtain data from

fathers with virtually no contact. Fathers who live elsewhere but who provide regular financial assistance might be interviewed, even if they rarely see their children.

Field experience may suggest that fathers who have had only one contact with their infant (e.g., they were present at delivery but never afterward) also do not warrant attempts at data collection. However, it is the case that biological fathers who have minimal contact with their children at one point in time may reappear later and become important presences in the children's lives (L. Mellgren – personal communication, 1998). Such fathers could be added to the study in such instances.

Adoptive parents. A sub-group about whom data will not be collected are babies relinquished for adoption. Although this is an interesting group from a research point of view, since there is no genetic relationship between parents and children, it is believed that states will object to including these children in the sample (J. West – personal communication, 1998).

Step-fathers. The primary interest of policy makers is in biological fathers, who are the focus of child support enforcement efforts and much welfare reform activity. Biological fathers are also the focus of interest for researchers seeking to understand genetic influences on children's development and school readiness. Moreover, available research indicates that it is the presence of the biological parent in the child's life that is critical for the child's development and that children in remarried families are more similar to children growing up in single parent families than to children who live with both biological parents (McLanahan and Sandefur 1994). For all of these reasons, obtaining data about and from biological fathers has to be the highest priority, with specific exceptions being made for certain categories of biological fathers such as rapists, fathers whom the mother does not wish to name, and fathers who have relinquished a child for adoption.

Nevertheless, a group of fathers that is likely to be quite small initially but one which will grow over time is that of step-fathers. Men who are living with infants or toddlers who are not the children's biological fathers may either end up being the primary social father figures, or they may be fleeting presences in the children's lives (Mott 1990). Both groups are important to study. In particular, step-fathers who live with the child over a substantial portion of the childhood years can be important childrearing figures (Hetherington and Henderson 1997), and men who enter the children's lives when the children are still young have better relationships with the children and tend to become more involved with the children (Pasley and Healow 1987).

Of course, in an initial interview, one cannot predict which resident non-biological fathers will be present for the duration, so one cannot decide to select only long-term father figures. This inability is probably not a problem, though, because knowing about the characteristics and the level and types of involvement of men who are only temporarily present in the children's lives is a missing piece of information which may turn out to be significant for understanding children's development. How, though, should step-fathers who should be interviewed be distinguished from step-fathers who should not be interviewed? Perhaps duration of residence is a reasonable criterion (e.g., have lived in the household for a month or more). Perhaps frequency that a man stays in the household is pertinent (e.g., four or more nights a week). Alternatively, a more subjective criterion might be preferred (e.g., does

the mother define a resident male as a father figure for her child, or as a partner to herself?). It also has been argued that a mother-identified father who does not live with the mother should be eligible for interview (Turner – personal communication, 1998).

It is recognized that the individual interviewed as a step-father may change over time, and that multiple step-fathers may be interviewed over time. Rather than a problem, this seems like a potentially critical element of information about a topic that may have significant effects on children's development.

Social fathers. Other father figures can play a role in the life of a developing child, for example, grandfathers, ministers, and teachers. However important these figures are to children, they do not have the obligations or role expectations that men who are biological fathers have, nor do they have the same relationship with the mother and the child that a man has who is the husband or cohabiting partner of the biological mother. Hence, it is not high priority to interview men who are not biological or step-fathers. Nevertheless, it may be pertinent to obtain information about social fathers as part of a set of questions about extended kin networks and social support to the mother.

How Can Fathers Who Do Not Reside with Their Child Be Located?

Resident fathers. For that majority of fathers who are married to the mother of their child and the one-quarter of unmarried couples who reside together, identifying and locating the biological father is fairly straightforward, since the father is in the household. For these fathers, the issue is not so much identifying the father as it is obtaining his time and attention for data collection.

Non-resident fathers. Nearly one-third of all babies born in the United States are born to unmarried parents, and about three-quarters of these parents do not live together (U. S. Department of Health and Human Services 1995). For these biological fathers who live outside of the household, locating the father is significantly more complex. Indeed, among children under age 12 in the Panel Study of Income Dynamics, only 22 percent of absent fathers were actually interviewed. Only 11 percent of the fathers were contacted and refused, but for 29 percent, the primary caregiver refused to provide information about the father, and another 28 percent could not be located with the resources available, while interviewers did not attempt to track another 10 percent who were in jail, abroad, or determined not to be absent fathers (S. L. Hofferth – personal communication, 1998). With infants rather than older children, with more resources, and with a mandate to interview fathers in jail or who live abroad, it may be possible to increase the proportion who are actually interviewed. However, some fathers cannot be interviewed.

When, in the case of unmarried mothers, the name of the father is not recorded on the birth certificate, the name of the father only can be obtained from the mother. If the father's name is known, other sources of information can be used to locate the father, but there is some risk of offending or alienating the mother if she disapproves of the father being contacted. Moreover, many mothers refuse to help contact the father (S. L. Hofferth – personal communication 1998). For a study such as the ECLS-B, in which the mother is likely to be the primary respondent and whose cooperation is essential for conducting assessments and obtaining data from the child care provider, it is crucial to maintain the

good will of the mother. Accordingly, her assent will be needed. Hence, there are a variety of reasons to work closely and carefully with the mother. She represents the best avenue for learning the identity of the father; she is likely to know his whereabouts and how to reach him; her support is likely to increase the probability of the father's participation; and, because her good will is essential to every aspect of the study, her lack of cooperation is likely to preclude data collection from the father.

Women who do not live with the fathers of their children fall into several sub-groups. Many are in regular contact with the fathers. Analyses of data from the 1987-88 National Survey of Families and Households (NSFH) indicate that, among families with a child under age 18 who had a father living outside of the household, one-quarter of fathers had seen their children at least once a week, and 60 percent had seen their children at least several times during the past year. On the other hand, nearly 30 percent of all divorced, separated, or never-married fathers had not seen their children during the previous twelve months (Seltzer 1991).

Another subset of mothers are not in regular contact with their child's father, but will share the identity of the father; however, we do not know the magnitude of this proportion. Some of these fathers are in the military and can be interviewed. Others are institutionalized and it may or may not be possible to interview them about themselves, if not about their interaction with their child.

Another subset of mothers is comprised of women who will not reveal the identity of the father. Since we know that a small but non-trivial proportion of sexual intercourse is non-voluntary (Abma, Driscoll and Moore 1998; Laumann et al. 1994), some mothers may know but be unwilling to identify the father, or if they do identify him, legal issues regarding prosecution will need to be addressed by the data collection team. This is a subset of men about whom women have never been asked questions in a nationally representative survey. It is not known whether mothers will or will not answer questions, or what questions mothers will or will not answer, since no attempts have been made. However, women have provided information about the partners with whom they have had unwanted sex (Abma, Driscoll, and Moore 1998), suggesting that it may be possible to obtain some social and demographic information about such men from the mother.

Other women, fearing that legal authorities will pursue the father for child support, will know but refuse to share the identity of the father. Since contacting the father in these instances would almost certainly antagonize the mother, these fathers should not be asked to provide information, nor should they be counted in the response rate. Time permitting, it would be instructive in the pre-test stage to explore the reasons why a mother does not want the father to be contacted

Unknown fathers. A small but important sub-set of mothers is represented by women who do not know the father of their child at all or who knew him so briefly that even basic information on education and occupation are not known. These men will, presumably, not be in the universe of fathers with whom interviews are sought and should not be included in the calculation of a response rate.

How Can Fathers Be Encouraged to Participate?

A number of factors seem likely to increase response rates among fathers who are contacted. These range from creating a substantive interest in the topic of the study, fostering a desire to inform public policy or scientific understanding, matching the characteristics of the respondent (such as race) to the characteristics of the interviewer, providing financial incentives or gifts, creating a desire on the part of the father to please the mother of the child, and fostering a wish to assist the interviewer (Laumann, Michael, and Browning 1998; Mott 1998). Ray (personal communication, 1998) notes that non-resident fathers are more motivated by the message that the researchers want to learn about their family, rather than about them as fathers. Sellars (personal communication, 1998) notes that stressing the educational aspects of the study is motivating to fathers, since parents tend to care about how well their children do in school. In addition, interviewers need to call back repeatedly and be flexible regarding the time and place for an interview (Laumann, Michael, and Browning 1998). Indeed, interviews with fathers who are serving in the military, who are in jail or prison, or who are otherwise away can be conducted by telephone.

Obtaining cooperation from minority fathers is acknowledged to be more difficult than with European American fathers (Catania et al. 1998). Response rates are likely to be higher if minority interviewers are used, though the gender of the interviewer does not seem as critical (Laumann, Michael, and Browning 1998).

Survey researchers view financial incentives as essential elements of gaining and retaining respondent cooperation (S. L.Hofferth – personal communication, 1998; Laumann, Michael and Browning 1998; Mott 1998; Moore and Richter – personal communication, 1997). While incentives may be valuable for encouraging low-income respondents to participate, they may be equally or more critical for higher income respondents for whom the opportunity costs of their time are greater (S. L. Hofferth – personal communication, 1998). For example, in the National Survey of Men, the incentive, which was increased from a non-cash gift to a higher cash payment, was found to have a positive effect on the participation rate (Tanfer, Billy, and Grady 1998). Indeed, incentives have been found to save money because they reduce field difficulties (Mosher, Pratt, and Duffer 1994); however, the role of incentives in a cold call telephone survey seems to be less clearly positive (Cantor et al. 1997).

While incentives cannot be viewed as a form of payment because the Office of Management and Budget will not allow them to be described or discussed as such, it appears that the magnitude of the incentive does have to be larger if the task is larger (e.g., if the interview is long and/or the subject matter is uninteresting). Fortunately, fatherhood should be of moderate to high interest on the part of most potential respondents. Yet, for some fathers, the topic may be uncomfortable and even threatening. Whether this calls for a higher incentive or a different introduction and appeal is not known. Moreover, any incentive paid to the father has to be proportionate to the incentive offered to the mother. Some studies have given gifts to respondents, such as flowers and sports tickets (Laumann et al. 1998). For more affluent respondents who are not motivated to participate by a $20-25 payment, a donation to their favorite charity may be effective (Laumann et al. 1998). It may be appropriate to

experiment with incentive levels during the pre-test stage to identify the individual and joint levels of incentives that are most effective in increasing response rates and reducing field difficulties.

Explaining the goals of the study represents another way to motivate eligible respondents to participate. The specific message that is most effective across social and economic groups would benefit from focus group discussions and field testing; experimenting with the wording could increase the response rate by multiple percentage points (Cantor 1997). Similarly, if fathers participate at the urging of the mother, the rationale provided to the mother needs to motivate the mother not only to participate but also to provide a reason for the father to participate as well.

What Is the Preferred Mode of Data Collection?

Data could be collected in a variety of ways, including in-person interviews, paper and pencil questionnaires, CAPI questionnaires, CATI protocols, and observational sessions. The available literature indicates consistently that confidential methods of collecting data on sensitive or private topics, such as abortion or sexual behavior, improve reporting (Mosher et al. 1994; Sonenstein 1997; Moore and Richter – personal communication, 1997). Indeed, methodological pre-tests for the National Survey of Family Growth indicate that a combination of Computer Assisted Personal Interviewing (CAPI) reporting with payment of a $20 incentive doubled reporting of abortion. Cognitive interviewing might provide insight into which, if any, of father-child interaction topics are viewed as sensitive. In general, they do not appear to be sensitive, with the exception of domestic violence; but other topics may in fact benefit from confidential reporting as well. Moreover, fatherhood in and of itself may be a sensitive topic for non-residential fathers.

Several types of self-administered formats are possible, and all seem effective. However, item non-response and skip pattern problems are minimized by the use of computer-assisted technologies. Although, for sensitive topics, self-administered questionnaires appear to produce more honest responses (Laumann, Michael, and Browning 1998), literacy is a crucial competing factor. Minority men and particularly Hispanic men have been found to have greater difficulty with comprehension and requiring additional time to complete an interview (Laumann, Michael, and Browning 1998). In addition to privacy, a feeling on the part of respondents that they can trust the interviewer is also crucial, particularly for low-income fathers (Ray – personal communication 1998).

In conducting the National Evaluation of Welfare to Work Strategies (NEWWS, formerly the JOBS study), Child Trends has found that, despite their low levels of education and reading attainment scores, welfare mothers are able to read and answer paper and pencil self-administered questionnaires. In developing the Survey of Program Dynamics, the Census Bureau is having good success with adolescents given a response form and a headset to listen to questions (Child Trends, Inc. 1997). Also, numerous examples exist of successful use of CAPI methods to collect data, including the 1997 cohort of the National Longitudinal Survey of Youth, the National Survey of Adolescent Males, the Canadian NLSCC, and the National Survey of Family Growth. Telephone interviewing represents an additional potential data collection mode.

Although random digit methods are frustrated by low response rates under some conditions (NCES 1997; Kenney 1998), this may be less of a problem when in-person contact has been established with a parent and the telephone interview represents a follow-up to the initial in-person interview (Catania et al. 1998). In the Survey of Program Dynamics, the parent is interviewed in person and the adolescent is interviewed if he or she is present; if he/she is not present, the interviewer calls back to complete a telephone interview. Differences in the quality or nature of the responses were not identified in a pre-test among sixty adolescents (Child Trends, Inc. 1997). In sum, it seems prudent to conduct cognitive interviews to explore the sensitivity of different topics and pre-testing to explore the effectiveness and cost of the several approaches to collecting data about fathers. A typical way of conducting cognitive interviews is to ask a small, representative set of individuals to "think aloud" while they are preparing their answers. The tester can then obtain information about the respondent's understanding of a question and any concerns he may have about a question's sensitivity.

A mixed mode approach may represent the most cost-effective strategy for obtaining data from fathers, with fathers who are present in the household providing data at the time of the initial interview, if possible, but employing follow-up by other data collection strategies if this is not possible. Also, fathers who do not have a telephone would have to be interviewed in person, if they reside in a location where this is feasible.

It is important in planning, however, to keep in mind the admonition of Linda Burton (1996) that she was able to collect data from highly disadvantaged and distrustful non-resident fathers because, in the case of her study, she personally spent a great deal of time visiting and talking with the fathers to build rapport and trust; given this investment, she found them quite willing to discuss their experiences and views with her. Hence, in-person interviewing may be necessary not simply because an individual lacks a telephone but because they will not speak about their experiences as a father with a stranger over the telephone.

How Can Under-, Over-, Mis-reporting Be Minimized?

Interaction with a baby is most likely a socially desirable behavior and thus susceptible to over-reporting, while domestic violence is almost certainly a negative behavior which is susceptible to under-reporting. Several suggestions can be offered to encourage accurate reporting on this or most other similar topics.

First, increasing privacy by using the methods described above may minimize over-reporting as well as under-reporting. This suggests interviewing fathers apart from the mothers. Self-administered questionnaires, CAPI methods, or the use of head phones via Computer Assisted Self-Interviews (Audio CASI) will improve privacy of the interviews. Second, providing a range of response categories (rather than requiring a "yes" or a "no" response) may minimize the tendency to over or under-report. For example, if respondents are given only the choice of whether, "yes, they are very warm and loving," or "no, they are not warm and loving," most respondents will describe themselves as "very warm and loving." However, providing, for example, a ten-point scale rather than a yes/no question allows respondents to place themselves on the negative end of the scale by rating themselves near but not in the

worst possible category. Since almost no one will use the most extreme negative categories, the less extreme categories will identify those persons whose behavior is at the end of the admissible continuum. In addition, it allows respondents to distribute themselves on the appropriate end of the scale, rather than clumping into just a couple of categories.

Third, cognitive interviewing will be important for identifying wording that is clear and that is not offensive across socioeconomic and cultural groups. In addition, cognitive interviewing can help avoid wording that encourages respondents to aggrandize or minimize reality.

When and How Often Should Data Be Obtained from Fathers?

One element of the answer to this question is very clear. Because fathers are the most likely to be in contact with their child and the mother at the time of the birth and shortly thereafter, with increasing proportions drifting away over time, data should be collected from fathers at the time of the initial interview with the mother.

Should fathers be interviewed subsequently as well? At present, the involvement of fathers with their infants and toddlers is not well understood (Marsiglio and Day 1997), and there is a relative lack of longitudinal studies (Pleck 1997). A full understanding of the development of children and of the determinants of school readiness will require information on more than maternal inputs; consequently, it seems prudent to plan to interview fathers as often or nearly as often as mothers. If cooperation from mothers, response rates from fathers, or data quality among fathers prove to be too poor to warrant continuing data collection, a decision always can be made to terminate all interviews with fathers or to continue interviewing only particular categories of fathers. However, funds permitting, it seems that the "default" decision should be to obtain data from both mothers and fathers. In the expectation that follow-up data collection will occur, it is also important to obtain multiple sources of contact information from fathers.

Discussion of Methodological and Design Issues

Ultimately, the set of design alternatives is rather limited.

- Fathers can be interviewed either directly or proxy reporting can be used.

- Biological fathers can be the focus of the data collection effort whether or not they live with their child, or the focus can be on resident fathers regardless of their biological relationship with the child, or both.

- Fathers can be interviewed once at the outset of the study or they can be included as part of the longitudinal study sample.

- All fathers can be interviewed, or a sub-sample of fathers can be selected.

Given evidence that a mother is not, and cannot be, fully informed about the father's interaction with the child, or about his attitudes, feelings, and goals with regard to the child, the optimal design would appear to call for data collection directly from fathers. Data could be obtained from fathers either in person or by telephone, or using mixed mode methodologies in which in-person and telephone methods are combined. Information on variables such as employment status could be updated by proxy report; but information on father-child interactions and the father's attitudes, feelings, and goals would have to be updated directly from the father.

Given the substantial literature that argues for the importance of the biological father to the child's development, regardless of whether he resides with the child, the optimal design would be one in which all biological fathers are interviewed, including those who do not live with their child but who have contact with the child, and excluding fathers who impregnanted the mother using coercion, those who cannot be identified, and those having no contact or virtually no contact with the child, though the precise operational definition of "virtually no contact" needs to be established. To commit to interviewing all biological fathers (except those specifically excluded) at infancy and over time would represent a major enhancement over current practice, where fathers are infrequently interviewed at all and, when information is obtained about or from the father, data are generally collected only with the father present in the home, whether he is a biological father or a non-biological resident father.

However, because evidence indicates that step-fathers who have a sustained involvement in the life of a child can affect the child's development, it seems that, funds permitting, data collection about and from step-fathers also would be important. Again, though, the precise definition of a step-father needs to be decided. Hence, an optimal design would involve data collection with resident, non-biological fathers as well as biological fathers. Some of the fathers interviewed in this manner would end up moving out after a short period of time, representing the characteristics of "fleeting" father figures, while others would remain over a period of years, representing those step-fathers who become a long-term presence in the child's life.

Because of the great variation in the role of fathers in contemporary families, it would be best to have substantial numbers of cases to permit detailed sub-group analyses. Moreover, given lower response rate for men generally (Mosher 1998; Laumann, Michael, and Browning 1998), attrition for fathers is likely to be as high, or possibly higher, than for mothers (Mott 1998). These factors suggest interviewing all fathers. However, if funds are limited, it would be possible to sub-sample from the total sample. Such sub-sampling should provide adequate numbers of: African American and Hispanic fathers; fathers who are teens, in their twenties, and those who are older; resident and non-resident fathers; and fathers who are high school dropouts, high school graduates, those with some college or an Associate's degree, and those who have Bachelor's degrees or further advanced degrees. In practice, this might imply interviewing all fathers of color but sub-sampling white, non-Hispanic fathers. Given lower response rates and higher attrition, over-sampling Hispanic and African American men is recommended (Catania et al. 1998).

Remarkably little methodological work is available that addresses issues of locating and obtaining data specifically from fathers. As plans for the study move forward, it would be useful to

conduct cognitive research on fatherhood constructs and on question wording, research on the most effective ways to introduce and describe the study, research on the value of incentives for respondents, and research on the most effective mode of conducting the interview.

Summary

This paper has summarized what we currently know about the meaning of father involvement in young children's lives, and what we have yet to learn. It also reviews the effectiveness of different data collection methods used with both resident and non-resident fathers. Based on this review, we have put forth several recommendations for the design and implementation of a supplemental study of fathers to be attached to the upcoming national birth cohort study (ECLS-B). Specifically, we recommend:

- Interview all biological fathers, except for those who cannot be identified, those who impregnated the mother via coercion, those who have no contact or virtually no contact with the child and who also do not provide regular economic support, and/or those for whom the mother refuses to provide contact information.

- Interview non-biological resident fathers (step-fathers) who are married to or cohabiting with the biological mother (that is, her household is his primary residence).

- Interview biological fathers at the time of the initial in-home interview and as regularly thereafter as funds permit.

- Interview non-biological resident fathers only while they are married to or cohabit with the biological mother.

- Do not sub-sample from the eligible pool of fathers.

Additionally, we have attached to this paper a construct grid that summarizes the basic elements of father involvement that could be collected in a father supplement to the ECLS-B. Included in this grid are constructs which represent determinants and moderators of father involvement, including father's age and onset of fatherhood, socioeconomic status, and child characteristics. While it is recognized that much of this information will be collected in the main part of the study rather than in a supplemental data collection, we feel it is important to identify all aspects of the ecological model that may affect fathers' involvement in young children's lives.

Conclusion

Accumulated research indicates that higher levels of paternal involvement benefit young children's development (Pleck 1997). However, paternal involvement often co-occurs with other factors (e.g., higher levels of socioeconomic status, two-parent family structure, etc.) and it is therefore hard to determine empirically the effects of paternal involvement *per se* on child outcomes (but see Yogman, Kindlon, and Earls 1995). Only when longitudinal data are available to track changes in levels of father involvement along with changes in child outcomes, controlling for other factors, can we begin to explore the effects of father involvement on young children (Lamb, Pleck, and Levine 1986; Zick 1997). The ECLS-B provides a unique opportunity to explore the contributions of father involvement in young children's lives beginning at the earliest stages of life and following families up through the children's transition to school.

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CONSTRUCTS MATRICES

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
SOCIODEMOGRAPHIC BACKGROUND CHARACTERISTICS	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Father's date of birth/age	X		
Father's race/ethnicity and Hispanic origin	X		
Father's education (attainment and country where educated)	X	X	X
Father's employment status	X	X	X
Father's current occupation	X	X	X
Number of jobs currently held	X	X	X
Father's work experience (including job training)	X	X	X
Father's income (wages, total assets, annual earnings, unemployment compensation)	X	X	X
Mother's employment status	X	X	X
Public assistance (TANF, Medicaid, WIC, Food Stamps, other public transfers; public housing, subsidized housing; State-Supported Health Insurance Plans)	X	X	X
Mother's and father's marital status/remarriage/new spouse-partner	X	X	X
Child support agreement between parents (formal or informal)	X	X	X
Child custody arrangements (joint custody; visitation rights for non-resident parent)	X	X	X
Mother's and father's family structure/household composition	X	X	X
Geographic mobility of child/distance father lives from child	X	X	X
Household roster or composition	X	X	X
Presence in household of non-family members who play a key role in the child's life	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
DETERMINANTS OF FATHER INVOLVEMENT: CHARACTERISTICS OF THE FATHER	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Father's age at child's birth	X		
Age when first became father	X		
Number of children ever born/sired	X		
Intendedness of conception/wantedness of child	X		
Father's recollections of his own relationship with father growing up	X		
Father's psychological well-being (depressive symptomatology; professional psychological/psychiatric treatment; stress/anxiety related to work or parenting roles)	X	X	X
Father's self-perception/feelings of competence	X	X	X
Father's self-esteem	X	X	X
Father's locus of control	X	X	X
Father's gender-role attitudes	X	X	X
Father's beliefs about the importance of fatherhood	X	X	X
Father's perception of parenting aggravation and stress	X	X	X
Stressful life events	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
DETERMINANTS OF FATHER INVOLVEMENT: CHARACTERISTICS OF THE CHILD	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Number and age of all children living in household	X	X	X
Delivery problems	X		
Gestational age/timing of child's birth	X		
Mode of delivery	X		
Prematurity or intensive care at birth	X		
Health of child; physical growth and development	X	X	X
Child temperament	X		
Age of child	X	X	X
Gender of child	X		
Presence of other father figure in life of child	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
DETERMINANTS OF FATHER INVOLVEMENT: CHARACTERISTICS OF THE MOTHER-FATHER RELATIONSHIP	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Legal relationship: married, separated, divorced, never married, paternity established; update information	X	X	X
Relationship with mother at conception, during delivery	X		
Marital relationship: quality/satisfaction	X	X	X
Marital relationship: conflict (e.g., conflict over custody, childrearing practices, availability/responsibility; conflicts over money), conflict resolution styles	X	X	X
Father's relationship with partner (if other than mother of child)	X	X	X
Mother's perception of father's caregiving abilities	X	X	X
Mother's perception of father's ability to serve as provider	X	X	X
Support of partner in parenting role (both husband to wife, and wife to husband)	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
DETERMINANTS OF FATHER INVOLVEMENT: OUTSIDE SUPPORT	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Emotional/material/social support from extended family members: mother's side, father's side (e.g., live with family member rent free/reduced rent; received cash assistance intermittently/regularly; received in kind assistance -- groceries, child care, etc.) Frequency/type of support Satisfaction with support	X	X	X
Emotional/Material/Social Support from friends for childrearing (e.g., go to when in trouble; receive cash assistance intermittently/regularly; receive in kind assistance -- groceries, child care, etc.) Frequency/type of support Satisfaction with support	X	X	X
Father's perceptions of the availability of social supports: During pregnancy At birth During infancy/toddler years During early school years	X	X	X
Support from community institutions (e.g., Head Start, daycare centers, parenting classes; charities, food banks, etc.)	X	X	X
Home visits, assistance from health care professionals	X		
Public housing; subsidized housing	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
DETERMINANTS OF FATHER INVOLVEMENT: ECONOMIC AND JOB RELATED FACTORS	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Job status (currently employed/unemployed; prestige of job)	X	X	X
Fringe benefits/family leave policy	X	X	X
Non-traditional work hours	X	X	X
Financial hardship	X	X	X
Number of hours worked per week	X	X	X
Steady vs. intermittent employment	X	X	X
Job stress	X	X	X
Role stress	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
FATHER ROLES -- ENGAGEMENT	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Warmth/affection (e.g., holding, smiling, kissing, hugging, nicknames)	X	X	X
Shared play activities (e.g., playing together, outings together)	X	X	X
Communication (e.g., listening to child, responding to child's needs, discussing daily activities, concerns, discussing family issues)	X	X	X
Teaching age-appropriate tasks (e.g., shapes, numbers, letters)	X	X	X
Moral/ethical guidance (e.g., teaching difference between right and wrong, teaching empathy, reinforcing values, acting as role model) *May be folded into discipline in the early years*		X	X
Religious/spiritual guidance (e.g., teaching about religious/spiritual beliefs, attending church together, bedtime prayer, reading Bible stories)		X	X
Involvement with day care or preschool (e.g., help choose school, attend school meetings, volunteer at school)	X	X	X
Shared household activities between father and child (e.g., helping child perform household tasks, preparing and eating meals together)		X (starting at age 2)	X
Ethnic/racial socialization (e.g., teaching about own and other cultures)			X
Providing connections between child and extended kin (how often do you arrange visits/calls to extended kin?) Availability/distance from extended kin *Distinguish between maternal and paternal kin*		X	
Building interpersonal problem-solving skills (e.g., teaching manners, teaching conflict resolution and how to interact with others)		X	X
Developing child's autonomy (e.g., encouraging independence, giving child choices, helping child learn new skills)	X	X	X
Discipline/harsh punishment/violence/abuse (e.g., setting rules/limits, punishment, and rewards; hitting and slapping the child, yelling and swearing at the child; verbal abuse, sexual abuse, physical abuse) Has child witnessed violence in the home	X	X	X

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
FATHER ROLES -- ACCESSIBILITY	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Availability to child in home	X	X	X
Frequency of visits/phone calls/letters to child (if non-resident father)		X	X
Ease of contact while out of the home (e.g., at work) by child, mother, and/or child care provider *Ask in employment section*			X
Geographic distance between father and child (if non-resident father) *Ask in core rather than in supplement*	X	X	X
New constructs may need to be developed			

CONSTRUCTS FOR FATHER INVOLVEMENT IN ECLS-B			
FATHER ROLES -- RESPONSIBILITY	CHILD AGE		
	0-12 months	1-2 years	3-7 years
Provisioning (e.g., providing money, housing, clothing, health insurance, monetary and nonmonetary child support, formal child support order, amount of order, informal child support arrangements, impasse)	X	X	X
Provision of child care: who does what? (Time use)	X	X	X
Child-related maintenance (e.g., feeding, bathing, diapering, cooking, cleaning, shopping, taking child to appointments)	X	X	X
Planning (e.g., scheduling appointments, well-baby care, taking to or picking up from child care, helping to pick a child care program, planning vacations, holidays, birthdays)	X	X	X
Support to child's mother (e.g., car maintenance, driving other household members, providing emotional support)	X	X	X
Monitoring/supervision (e.g., knowing where child is at all times, knowing child's friends, knowing what child watches on TV)		X (starting at age 2)	X
Protection Neighborhood choice Enforcing household safety -- smoke detectors, electric socket covers, etc. Teaching safety -- don't talk to strangers, look both ways, etc.	X	X	X
Transmission of rituals (e.g., playing Santa Claus, special occasions)			X
Routines (e.g., dinnertime)		X	X
Ordering the activities for the child's interactions with the larger community		X	X
Presence/absence of visitation order; whether father complies with order	X	X	X
New constructs may need to be developed			

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Listing of NCES Working Papers to Date

Working papers can be downloaded as pdf files from the NCES Electronic Catalog (http://nces.ed.gov/pubsearch/). You can also contact Sheilah Jupiter at (202) 502–7444 (sheilah_jupiter@ed.gov) if you are interested in any of the following papers.

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96–19	Assessment and Analysis of School-Level Expenditures	William J. Fowler, Jr.
97–15	Customer Service Survey: Common Core of Data Coordinators	Lee Hoffman
97–43	Measuring Inflation in Public School Costs	William J. Fowler, Jr.
98–15	Development of a Prototype System for Accessing Linked NCES Data	Steven Kaufman
1999–03	Evaluation of the 1996–97 Nonfiscal Common Core of Data Surveys Data Collection, Processing, and Editing Cycle	Beth Young
2000–12	Coverage Evaluation of the 1994–95 Common Core of Data: Public Elementary/Secondary School Universe Survey	Beth Young
2000–13	Non-professional Staff in the Schools and Staffing Survey (SASS) and Common Core of Data (CCD)	Kerry Gruber
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2000–16b	Lifelong Learning NCES Task Force: Final Report Volume II	Lisa Hudson
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96–04	Census Mapping Project/School District Data Book	Tai Phan
98–07	Decennial Census School District Project Planning Report	Tai Phan
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96–08	How Accurate are Teacher Judgments of Students' Academic Performance?	Jerry West
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97–24	Formulating a Design for the ECLS: A Review of Longitudinal Studies	Jerry West
97–36	Measuring the Quality of Program Environments in Head Start and Other Early Childhood Programs: A Review and Recommendations for Future Research	Jerry West
1999–01	A Birth Cohort Study: Conceptual and Design Considerations and Rationale	Jerry West
2000–04	Selected Papers on Education Surveys: Papers Presented at the 1998 and 1999 ASA and 1999 AAPOR Meetings	Dan Kasprzyk
2001–02	Measuring Father Involvement in Young Children's Lives: Recommendations for a Fatherhood Module for the ECLS-B	Jerry West
Education Finance Statistics Center (EDFIN)		
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97–43	Measuring Inflation in Public School Costs	William J. Fowler, Jr.
98–04	Geographic Variations in Public Schools' Costs	William J. Fowler, Jr.

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1999–05	Procedures Guide for Transcript Studies	Dawn Nelson
1999–06	1998 Revision of the Secondary School Taxonomy	Dawn Nelson
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98–15	Development of a Prototype System for Accessing Linked NCES Data	Steven Kaufman
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1999–09b	1992 National Adult Literacy Survey: Sample Design	Alex Sedlacek
1999–09c	1992 National Adult Literacy Survey: Weighting and Population Estimates	Alex Sedlacek
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National Assessment of Educational Progress (NAEP)		
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97–30	ACT's NAEP Redesign Project: Assessment Design is the Key to Useful and Stable Assessment Results	Steven Gorman
97–31	NAEP Reconfigured: An Integrated Redesign of the National Assessment of Educational Progress	Steven Gorman
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97–44	Development of a SASS 1993–94 School-Level Student Achievement Subfile: Using State Assessments and State NAEP, Feasibility Study	Michael Ross
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95–06	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95–07	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
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1999–13	1993–94 Schools and Staffing Survey: Data File User's Manual, Volume IV: Bureau of Indian Affairs (BIA) Restricted-Use Codebook	Kerry Gruber
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97–36	Measuring the Quality of Program Environments in Head Start and Other Early Childhood Programs: A Review and Recommendations for Future Research	Jerry West
1999–01	A Birth Cohort Study: Conceptual and Design Considerations and Rationale	Jerry West
2001–02	Measuring Father Involvement in Young Children's Lives: Recommendations for a Fatherhood Module for the ECLS-B	Jerry West
Educational attainment		
98–11	Beginning Postsecondary Students Longitudinal Study First Follow-up (BPS:96–98) Field Test Report	Aurora D'Amico
Educational research		
2000–02	Coordinating NCES Surveys: Options, Issues, Challenges, and Next Steps	Valena Plisko

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Employment		
96–03	National Education Longitudinal Study of 1988 (NELS:88) Research Framework and Issues	Jeffrey Owings
98–11	Beginning Postsecondary Students Longitudinal Study First Follow-up (BPS:96–98) Field Test Report	Aurora D'Amico
2000–16a	Lifelong Learning NCES Task Force: Final Report Volume I	Lisa Hudson
2000–16b	Lifelong Learning NCES Task Force: Final Report Volume II	Lisa Hudson
2001–01	Cross-National Variation in Educational Preparation for Adulthood: From Early Adolescence to Young Adulthood	Elvira Hausken
Engineering		
2000–11	Financial Aid Profile of Graduate Students in Science and Engineering	Aurora D'Amico
Faculty – higher education		
97–26	Strategies for Improving Accuracy of Postsecondary Faculty Lists	Linda Zimbler
2000–01	1999 National Study of Postsecondary Faculty (NSOPF:99) Field Test Report	Linda Zimbler
Fathers – role in education		
2001–02	Measuring Father Involvement in Young Children's Lives: Recommendations for a Fatherhood Module for the ECLS-B	Jerry West
Finance – elementary and secondary schools		
94–05	Cost-of-Education Differentials Across the States	William J. Fowler, Jr.
96–19	Assessment and Analysis of School-Level Expenditures	William J. Fowler, Jr.
98–01	Collection of Public School Expenditure Data: Development of a Questionnaire	Stephen Broughman
1999–07	Collection of Resource and Expenditure Data on the Schools and Staffing Survey	Stephen Broughman
1999–16	Measuring Resources in Education: From Accounting to the Resource Cost Model Approach	William J. Fowler, Jr.
2000–18	Feasibility Report: School-Level Finance Pretest, Public School District Questionnaire	Stephen Broughman
Finance – postsecondary		
97–27	Pilot Test of IPEDS Finance Survey	Peter Stowe
2000–14	IPEDS Finance Data Comparisons Under the 1997 Financial Accounting Standards for Private, Not-for-Profit Institutes: A Concept Paper	Peter Stowe
Finance – private schools		
95–17	Estimates of Expenditures for Private K–12 Schools	Stephen Broughman
96–16	Strategies for Collecting Finance Data from Private Schools	Stephen Broughman
97–07	The Determinants of Per-Pupil Expenditures in Private Elementary and Secondary Schools: An Exploratory Analysis	Stephen Broughman
97–22	Collection of Private School Finance Data: Development of a Questionnaire	Stephen Broughman
1999–07	Collection of Resource and Expenditure Data on the Schools and Staffing Survey	Stephen Broughman
2000–15	Feasibility Report: School-Level Finance Pretest, Private School Questionnaire	Stephen Broughman
Geography		
98–04	Geographic Variations in Public Schools' Costs	William J. Fowler, Jr.
Graduate students		
2000–11	Financial Aid Profile of Graduate Students in Science and Engineering	Aurora D'Amico
Imputation		
2000–04	Selected Papers on Education Surveys: Papers Presented at the 1998 and 1999 ASA and 1999 AAPOR Meetings	Dan Kasprzyk
Inflation		
97–43	Measuring Inflation in Public School Costs	William J. Fowler, Jr.
Institution data		
2000–01	1999 National Study of Postsecondary Faculty (NSOPF:99) Field Test Report	Linda Zimbler

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Instructional resources and practices		
95–11	Measuring Instruction, Curriculum Content, and Instructional Resources: The Status of Recent Work	Sharon Bobbitt & John Ralph
1999–08	Measuring Classroom Instructional Processes: Using Survey and Case Study Field Test Results to Improve Item Construction	Dan Kasprzyk
International comparisons		
97–11	International Comparisons of Inservice Professional Development	Dan Kasprzyk
97–16	International Education Expenditure Comparability Study: Final Report, Volume I	Shelley Burns
97–17	International Education Expenditure Comparability Study: Final Report, Volume II, Quantitative Analysis of Expenditure Comparability	Shelley Burns
2001–01	Cross-National Variation in Educational Preparation for Adulthood: From Early Adolescence to Young Adulthood	Elvira Hausken
Libraries		
94–07	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
97–25	1996 National Household Education Survey (NHES:96) Questionnaires: Screener/Household and Library, Parent and Family Involvement in Education and Civic Involvement, Youth Civic Involvement, and Adult Civic Involvement	Kathryn Chandler
Limited English Proficiency		
95–13	Assessing Students with Disabilities and Limited English Proficiency	James Houser
Literacy of adults		
98–17	Developing the National Assessment of Adult Literacy: Recommendations from Stakeholders	Sheida White
1999–09a	1992 National Adult Literacy Survey: An Overview	Alex Sedlacek
1999–09b	1992 National Adult Literacy Survey: Sample Design	Alex Sedlacek
1999–09c	1992 National Adult Literacy Survey: Weighting and Population Estimates	Alex Sedlacek
1999–09d	1992 National Adult Literacy Survey: Development of the Survey Instruments	Alex Sedlacek
1999–09e	1992 National Adult Literacy Survey: Scaling and Proficiency Estimates	Alex Sedlacek
1999–09f	1992 National Adult Literacy Survey: Interpreting the Adult Literacy Scales and Literacy Levels	Alex Sedlacek
1999–09g	1992 National Adult Literacy Survey: Literacy Levels and the Response Probability Convention	Alex Sedlacek
1999–11	Data Sources on Lifelong Learning Available from the National Center for Education Statistics	Lisa Hudson
2000–05	Secondary Statistical Modeling With the National Assessment of Adult Literacy: Implications for the Design of the Background Questionnaire	Sheida White
2000–06	Using Telephone and Mail Surveys as a Supplement or Alternative to Door-to-Door Surveys in the Assessment of Adult Literacy	Sheida White
2000–07	"How Much Literacy is Enough?" Issues in Defining and Reporting Performance Standards for the National Assessment of Adult Literacy	Sheida White
2000–08	Evaluation of the 1992 NALS Background Survey Questionnaire: An Analysis of Uses with Recommendations for Revisions	Sheida White
2000–09	Demographic Changes and Literacy Development in a Decade	Sheida White
Literacy of adults – international		
97–33	Adult Literacy: An International Perspective	Marilyn Binkley
Mathematics		
98–09	High School Curriculum Structure: Effects on Coursetaking and Achievement in Mathematics for High School Graduates—An Examination of Data from the National Education Longitudinal Study of 1988	Jeffrey Owings
1999–08	Measuring Classroom Instructional Processes: Using Survey and Case Study Field Test Results to Improve Item Construction	Dan Kasprzyk

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Parental involvement in education		
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Participation rates		
98–10	Adult Education Participation Decisions and Barriers: Review of Conceptual Frameworks and Empirical Studies	Peter Stowe
Postsecondary education		
1999–11	Data Sources on Lifelong Learning Available from the National Center for Education Statistics	Lisa Hudson
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Postsecondary education – persistence and attainment		
98–11	Beginning Postsecondary Students Longitudinal Study First Follow-up (BPS:96–98) Field Test Report	Aurora D'Amico
1999–15	Projected Postsecondary Outcomes of 1992 High School Graduates	Aurora D'Amico
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97–26	Strategies for Improving Accuracy of Postsecondary Faculty Lists	Linda Zimbler
2000–01	1999 National Study of Postsecondary Faculty (NSOPF:99) Field Test Report	Linda Zimbler
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2000–10	A Research Agenda for the 1999–2000 Schools and Staffing Survey	Dan Kasprzyk
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Public school finance		
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98–01	Collection of Public School Expenditure Data: Development of a Questionnaire	Stephen Broughman
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1999–02	Tracking Secondary Use of the Schools and Staffing Survey Data: Preliminary Results	Dan Kasprzyk
2000–12	Coverage Evaluation of the 1994–95 Public Elementary/Secondary School Universe Survey	Beth Young
2000–13	Non-professional Staff in the Schools and Staffing Survey (SASS) and Common Core of Data (CCD)	Kerry Gruber

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Statistical methodology		
97–21	Statistics for Policymakers or Everything You Wanted to Know About Statistics But Thought You Could Never Understand	Susan Ahmed
Students with disabilities		
95–13	Assessing Students with Disabilities and Limited English Proficiency	James Houser
Survey methodology		
96–17	National Postsecondary Student Aid Study: 1996 Field Test Methodology Report	Andrew G. Malizio
97–15	Customer Service Survey: Common Core of Data Coordinators	Lee Hoffman
97–35	Design, Data Collection, Interview Administration Time, and Data Editing in the 1996 National Household Education Survey	Kathryn Chandler
98–06	National Education Longitudinal Study of 1988 (NELS:88) Base Year through Second Follow-Up: Final Methodology Report	Ralph Lee
98–11	Beginning Postsecondary Students Longitudinal Study First Follow-up (BPS:96–98) Field Test Report	Aurora D'Amico
98–16	A Feasibility Study of Longitudinal Design for Schools and Staffing Survey	Stephen Broughman
1999–07	Collection of Resource and Expenditure Data on the Schools and Staffing Survey	Stephen Broughman
1999–17	Secondary Use of the Schools and Staffing Survey Data	Susan Wiley
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2000–17	National Postsecondary Student Aid Study:2000 Field Test Methodology Report	Andrew G. Malizio
Teachers		
98–13	Response Variance in the 1994–95 Teacher Follow-up Survey	Steven Kaufman
1999–14	1994–95 Teacher Followup Survey: Data File User's Manual, Restricted-Use Codebook	Kerry Gruber
2000–10	A Research Agenda for the 1999–2000 Schools and Staffing Survey	Dan Kasprzyk
Teachers – instructional practices of		
98–08	The Redesign of the Schools and Staffing Survey for 1999–2000: A Position Paper	Dan Kasprzyk
Teachers – opinions regarding safety		
98–08	The Redesign of the Schools and Staffing Survey for 1999–2000: A Position Paper	Dan Kasprzyk
Teachers – performance evaluations		
1999–04	Measuring Teacher Qualifications	Dan Kasprzyk
Teachers – qualifications of		
1999–04	Measuring Teacher Qualifications	Dan Kasprzyk
Teachers – salaries of		
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Training		
2000–16a	Lifelong Learning NCES Task Force: Final Report Volume I	Lisa Hudson
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Variance estimation		
2000–03	Strengths and Limitations of Using SUDAAN, Stata, and WesVarPC for Computing Variances from NCES Data Sets	Ralph Lee
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Violence		
97–09	Status of Data on Crime and Violence in Schools: Final Report	Lee Hoffman

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Vocational education		
95–12	Rural Education Data User's Guide	Samuel Peng
1999–05	Procedures Guide for Transcript Studies	Dawn Nelson
1999–06	1998 Revision of the Secondary School Taxonomy	Dawn Nelson