Coresidential Father Involvement with Early Adolescents

Joseph H. Pleck

University of Illinois

Sandra L. Hofferth

University of Maryland, College Park

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Abstract

This study tested a model hypothesizing mothers' level of involvement as well as marital conflict, mothers' work hours, and father's status as biological or step father as influences on coresident father involvement. The analysis also tested hypotheses about mother involvement as a potential mediator of the effects of marital conflict and maternal work hours on father involvement, and hypotheses about factors influencing mother involvement. Primary data were provided by children aged 10-14 from the NLSY79 who resided with their biological or step father and with their mother. A composite involvement measure including engagement in positive activities, closeness and responsiveness, and monitoring and decision-making formed a single latent factor for fathers as well as mothers. As hypothesized, father involvement was predicted by mother involvement, and the reciprocal influence was not significant. Father involvement was associated with low marital conflict and being a biological father. Mother involvement was associated with low marital conflict and low maternal work hours. Mothers' involvement partially mediated the effects of marital conflict on father involvement.

Early adolescence is a crucial period in development; it marks the decline of exclusive family influence/control and increased independence from family, greater involvement with peers, and more varied nonfamily influences. Nonetheless, as Collins and Laursen (2004) point out, despite these alterations in patterns of interaction, parent-child relationships remain important social and emotional resources well beyond the childhood years. Fathers have important influences on adolescent children (Regnerus & Luchies, 2006; Cookston & Findlay, 2006), but most research examining paternal effects on development, as well as research on the factors influencing father involvement, concerns the early period of the child's life. In addition, most research focuses on either father or mother, not considering both parents' involvement simultaneously. Using a theoretical model derived from Belsky's (1984) and Lamb, Pleck, Charnov & Levine's (1985) conceptualizations, this paper examines paternal and maternal factors that may influence resident father involvement with 10-14 year old children. A special feature of the study's theoretical model of the sources of father involvement is its inclusion of mother involvement as an influence. Although mother involvement is increasingly taken into account in studies of the *consequences* of father involvement on child outcomes, this has not been the case in research on the *sources* of father involvement.

Several recent comprehensive reviews of research on father involvement are available (Parke, 2002; Parke, Dennis, Flyr, Leidy & Schofield, 2005; Pleck, 1997; Pleck & Masciadrelli, 2004). Relying on these reviews, only selected issues in this large literature relevant to the study's theoretical model will be briefly discussed here, specifically the nature and structure of involvement, and prior conceptualizations of the factors affecting father involvement. Within the latter, special attention will be given to mother involvement as a potential influence. Discussion of this literature will inform the development of the study's theoretical model.

The Nature and Structure of Involvement

Lamb et al. (Lamb, et al., 1985; Pleck, et al., 1985) formulated paternal involvement as consisting of engagement (direct interaction with the child), accessibility (being available to the child), and responsibility (doing things for the child, and making sure the child is cared for). In later reviews, Pleck (1997; 2004) noted that the conceptualization and operationalization of father involvement have evolved in later research in ways differing somewhat from its original conception. First, the engagement component has most often been operationalized not with measures of amount of time spent, but with frequency of activities promoting development such as play, reading, and having conversations (Hofferth, et al., 2006; Marsiglio, 1991). Thus, the focus of engagement has shifted from simply time spent to participation in positive activities.

Second, paternal warmth or responsiveness to the child is increasingly included as an important aspect of paternal involvement, consistent with research showing their contribution to positive child outcomes. Evidence has accumulated that positive qualitative features such as warmth and closeness are significantly correlated with the frequency of positive engagement activities (Pleck & Masciadrelli, 2004). In addition, Pleck and Masciadrelli (2004) document how several available measures combine warmth or responsiveness with father's activity frequency. For example, Amato (1987) developed a summary "paternal support" variable combining frequency of positive paternal activities with the child's report of the father being a favorite person to have talks with, and the person in the family the child tells if he or she is really worried.

A final shift in the involvement construct concerns the responsibility component. In the original Lamb et al. formulation, responsibility included indirect care (doing things and deciding about things for the child that do not involve direct interaction with the child), and process

responsibility (ensuring that the child's needs are being met, involving monitoring and coordinating) (Pleck & Stueve, 2001; Pleck & Masciadrelli, 2004). Of these aspects of responsibility, in recent father involvement research, fathers' monitoring of and decision-making about the child have received the most attention. There is some confirmation that monitoring is significantly correlated with the frequency of engagement activities (Toth & Xu, 1999).

Thus, current research is operationalizing father involvement with assessments of positive engagement activities rather than simply engagement time spent, of closeness and responsiveness, and of monitoring and decision-making. In light of the broadening of the involvement construct by including these additional elements, the question arises, even more than it did in the construct's initial more limited formulation, whether involvement is unidimensional or multidimensional. A comprehensive analysis using a broad pool of measures including the above variables in the Child Development Supplement to the Panel Study of Income Dynamics, Schoppe-Sullivan, McBride, and Ho (2004) found multiple distinct first-order factors. However, in a second-order factor analysis, all the first-order factors except cognitive monitoring loaded on a single latent construct of overall father involvement.

Factors Influencing Father Involvement

Belsky (1984) and Lamb and others (1985; 1985) have offered the two broad theoretical models most influential in research on the sources of father involvement. Belsky's "process model" concerned the determinants of parenting in general, not specified by gender. Interestingly, however, much research Belsky cited in support of the model actually concerned fathers. Belsky's model postulated that parenting behavior is determined by (a) parents' personality, (b) characteristics of the child, and (c) "contextual sources of stress and support" that include the marital relationship, parents' job experiences, and social networks. Lamb et al.'s

"four factor model" of paternal involvement specified as predictors (a) motivation, (b) skills and self-confidence, (c) social support, especially from the mother, and (d) institutional factors, especially in the workplace. Pleck (1997) noted three congruencies between the two models. Lamb and Pleck's motivation variable factor can be interpreted as a central concomitant of Belsky's personality factor. Marital relations in Belsky correspond to the most important domain within social support in Lamb et al.'s model. Likewise, parents' jobs are the most important arena in which institutional factors influence fathering.

In theorizing new models of the sources of father involvement, the factors that Belsky and Lamb et al. emphasize hold promise. Of particular potential value are the broad factors that are congruent across these prior models.   In developing a new model, a study needs to select as proximal influences specific variables of narrower scope than the general domains specified by these prior conceptualizations, however. In addition, for a model to be realistically testable, only a limited number of variables can be employed.

Mother Involvement: A Neglected Influence on Father Involvement

Both the Belsky and the Lamb et al. models emphasize the role of mothers in father involvement. In prior research, maternal influence has been investigated in several ways. Some research has found that fathers are more involved in couples in which the mother has more favorable attitudes toward father involvement, although the association is not found in several large survey datasets (Pleck & Masciadrelli, 2004). Mothers' positive attitudes about the involvement of their own partners, as opposed to father involvement in general, have also been linked to higher levels of involvement (McBride & Rane, 1998). Father involvement is higher when mothers expect fathers to be more involved (Maurer, Pleck & Rane, 2001). There has been particular interest in potential "maternal gatekeeping" of father involvement (Allen & Hawkins,

1999). Parke (2002) has suggested that in some couples there may be an obverse process of maternal "gate opening." All these aspects of maternal influences are consistent with the overarching idea that father involvement is, in a broad sense, "mediated" by mothers (Ihinger-Tallman et al., 1993).

One aspect of mothers' influence on father involvement has not been investigated previously, although it is consistent with Belsky's marital relations factor and Lamb et al.'s emphasis on social support from the mother: mothers' own level of involvement. There are several reasons to think that mothers' involvement level could influence fathers'. Past research has found that paternal and maternal levels are relatively strongly positively correlated with each other (Aldous, Mulligan & Bjarnason, 1998; Amato & Rivera, 1999; Harris & Ryan, 2004; Ishii-Kuntz & Coltrane, 1992).   Interestingly, this positive association runs counter to the possible assumption that levels of paternal and maternal involvement must be negatively correlated because mothers and fathers compensate for each other. The similarity in fathers' and mothers' levels of involvement is perhaps less surprising, however, in light of evidence of other congruencies between fathers' and mothers' parenting. For example, father-child and mother-child relationship quality are positively correlated (King & Sobolewski, 2006). Fathers and mothers also tend to have similar parental styles (Simons & Conger, 2007).

Why might there be a positive association between fathers' and mothers' level of involvement? One possibility is that this father-mother similarity occurs only because both parents' involvement is influenced by characteristics of the child. In the studies just cited, however, the significant positive association between parents' involvement levels is evident even whenchild age and gender, as well as parental background characteristics, are controlled.

The explanation for the positive father-mother correlation in involvement receiving most support in prior literature is that fathers model their own level of involvement after mothers'. In a theoretical analysis, Hawkins et al. (1993) argue that modeling is one of the major ways in which men learn parenting. These authors further suggest that, in addition to other possible models, "fathers may observe mothers, modeling child care skills and attitudes, and use this as a basis for learning how to be an effective caregiver" (Hawkins et al., 1993, p. 536). Two qualitative studies have reported that fathers may use their children's mothers as role models for their own parenting. Masciadrelli, Pleck, and Stueve (2004) observed that when asked to discuss role models for their parenting, some fathers explicitly cited their wives. In another study, Daly (1993) found that "wives had an important modeling effect on their husbands when it came to the day-to-day decisions of parenting" (p. 25). For example, one father said "certain things [my wife] says and does—and we talk about these things—influence me" (p. 25).

How might this modeling work? Since fathers are less involved than mothers on average, it is apparent that fathers do not model their partners' *absolute* level of involvement, e.g., spend the same amount of time with the child. Rather, fathers may view their partner's level of involvement as a baseline against which they calibrate their own level. Many fathers may think that although they do not need to be just as involved as their partners are, in order to "pull their share" as parents their involvement nonetheless ought to be some reasonable proportion of what the child's mother does. Even though fathers' perception of the proportion will vary, this "benchmarking" process will lead fathers whose partners are highly involved to be more involved on average than fathers whose partners are less involved. Fathers' gauging their own involvement relative to mothers' in this way may be an important respect in which mothers' involvement functions as a "maternal template" for fathers.

Could the positive association between fathers' and mothers' involvement could potentially also be explained by modeling in the other direction?   No available theory or research has suggested that mothers model their parenting after fathers. Other evidence suggests that in general, mothers influence fathers' parenting more than vice versa. Mothers' expectations about their partner's involvement are associated with father involvement, whereas there is no association between fathers' expectations for mothers and maternal involvement (Maurer et al., 2001). In light of this finding, it is more likely that fathers model their behavior after mothers than it is that mothers model after fathers.

The potential influence of mother involvement on father involvement has implications for our understanding of how other factors influence fathering: the effect of other variables on father involvement could be partially mediated by their effect on mother involvement. For example, marital conflict is associated with lower father involvement as well as lower mother involvement (Conger, et al., 1992; Cummings, 1994; Sturge-Apple, Davies & Cummings, 2006). The effect of conflict on father involvement may be mediated in part by its effect on mothers. That is, conflict could lead to a decrease in father involvement because the diminished maternal involvement associated with conflict lowers the baseline against which fathers gauge themselves. If maternal involvement is not taken into account as a potential mediator, the direct effect of variables such as marital conflict on father involvement may be overestimated.

In research on the *consequences* of father involvement on child outcomes, the need to take maternal involvement into account has been recognized for some time (Amato & Rivera, 1999; Pleck, 1997). That is, because father and mother involvement are positively correlated, the influence of father involvement on child outcomes may be overestimated if mother involvement is not taken into account. To assess the independent effect of paternal involvement on child

outcomes, maternal involvement therefore needs to be controlled. Such analyses are increasingly

frequent, with most finding an independent association between father involvement and child

outcomes (Pleck & Masciadrelli, 2004).

Although mother involvement has been included in prior research on the consequences of

father involvement, it has not in studies of father involvement's sources. As a recent example, in

a valuable study of risk and resilience predictors of father involvement with infants, Fagan and

Palkovitz (2007) did not assess mother involvement although their study utilized other maternal

characteristics. Thus, prior research on factors related to father involvement has generally not

taken into account mother involvement's positive correlation with father involvement. That is,

earlier studies have not considered maternal involvement as a potential predictor of father

involvement, or considered it as a possible mediator of other influences on fathering. The

present study investigates these possible dynamics.

Theoretical Model of Father Involvement

The study's theoretical model for father involvement (see Figure 1) is developed using

variables in the broad domains shared by the Belsky and Lamb et al. models. Corresponding to

Belsky's and Lamb et al.'s emphasis on the role of mothers in father involvement, the model

gives special attention to mothers' own level of involvement as a new potential influence on

father involvement, not considered in previous studies. In addition, the model specifies three

other proximal influences related to the Belsky and Lamb et al. domains that have been

investigated in prior research: marital conflict, mothers' work hours, and whether the father is a

biological or step father. The inclusion of these additional proximal influences strengthens the

study's test of the influence of maternal involvement on fathering. The model also specifies

factors influencing maternal involvement. For convenience, the figure also includes the study's

measurement model of parental involvement (encompassing indicators of frequency of positive engagement activities with the child, closeness and responsiveness, and monitoring and decision-making), which are discussed later under Method.

Our theoretical model hypothesizes that mother involvement is a direct and positive influence on father involvement, but that father involvement does not reciprocally influence mother involvement. The figure includes the reciprocal path, however, since testing the hypothesis requires estimating this path. This hypothesis is based on prior findings that father and mother involvement are positively correlated, that fathers use their children's mothers as role models, and that mothers influence fathers' parenting more than vice versa.

(Figure 1 about here)

The model posits three other variables as proximal influences on paternal and/or maternal involvement. The first proximal influence on both parents' involvement is *marital conflict*. Belsky identified marital relations as a key influence on parenting, and the father's relationship with the child's mother is the most important domain of social support in Lamb et al.'s model. A positive association between paternal involvement and marital quality has been found in cross-sectional studies (Blair, Wenk & Hardesty, 1994; Jump & Haas, 1987; Kalmijn, 1999; McBride & Mills, 1993; NICHD Early Child Care Research Network, 2000), in longitudinal studies (Brody, Pellegrini & Sigel, 1986; Coysh, 1983; Feldman, Nash & Aschenbrenner, 1983; Levy-Shiff & Israelashvili, 1988), and in studies explicitly relating the degree and direction of change over time in marital adjustment to change in involvement (Volling & Belsky, 1991). Within the broad area of marital quality, conflict between spouses is receiving special attention as a primary influence on their parenting behavior and on child outcomes (Cummings & Davies, 2002). Conflict is associated with decreased involvement by both parents (Conger, et al., 1992;

Cummings, 1994; Sturge-Apple, Davies & Cummings, 2006). We thus hypothesize that *marital conflict* has a negative effect on father involvement, and on mother involvement as well.

The second proximal predictor of both parents' involvement is *mother's work hours*. Belsky identified parents' job experiences as a key influence on parenting, and the Lamb et al. model cited institutional factors, especially in the workplace, as one of its four factors. Employed mothers spend less time with their children (Bianchi, Robinson & Milkie, 2006; Bianchi, 2000). Many, though not all, studies find that fathers spend more time with children when mothers are employed (Pleck & Masciadrelli, 2004). More specifically, a recent study showed that mothers' hours employed have a significant positive association with father's time spent and activities with his children (Hofferth, 2003; Hofferth & Anderson, 2003). Consequently, we hypothesize that mother's work hours are positively associated with paternal involvement and negatively associated with maternal involvement.

The third proximal influence in the model, only on father involvement, is whether the father is the biological father or stepfather to the child (*father's bio-step status*). The term stepfather is used here in a broad sense to include all circumstances in which a non-biological father lives with the child of his partner, whether the father is married or unmarried to the partner, and whether the father has or has not legally adopted the child. Fathers' bio-step status is an important structural influence on father involvement that does not have a direct precedent in Belsky's model, which implicitly focused on families with two biological, married parents. However, this variable can be linked to the marital relations and social network factors in Belsky's model, in that mothers and others may give less support for involvement to a male who is not the biological father of the child. This process also fits directly within the social support

factor in Lamb et al.'s model. Likewise, being a stepfather may be associated with less motivation for involvement, another factor in Lamb et al.'s model.

The empirical basis for including father's bio-step status in the model is that stepfathers are less involved than biological fathers on average (Blair, et al., 1994; Hofferth & Anderson, 2003; Hofferth, 2003; Marsiglio, 1991). Some of the dynamics contributing to this association are suggested by other findings. Fathers anticipate less benefit from involvement with stepchildren than with resident biological children (Blair, et al., 1994; Hofferth & Anderson, 2003; Hofferth, 2003; Marsiglio, 1991). There is also less normative support for involvement by stepfathers than by biological fathers (Cherlin, 1978; Daly & Wilson, 1998). In addition, having biological children residing with other partners may reduce involvement with stepchildren among some stepfathers.

Maternal involvement may have an indirect association to resident fathers' bio-step status, since marital conflict may result from ambiguities of the stepparent relationship, and mothers living with stepfathers work more hours outside the home (Hofferth & Anderson, 2003). We did not find any evidence in the literature, however, that maternal involvement is directly associated with whether her residential partner is a biological father or a stepfather to her children. Thus, our model hypothesizes that being a stepfather is negatively associated with paternal involvement, but is not directly related to maternal involvement.

Finally, the model hypothesizes that maternal involvement mediates, at least in part, the influence of both marital conflict and mothers' work hours on father involvement. This hypothesis is based on prior findings that these two variables are associated with both paternal and maternal involvement and that maternal involvement may influence paternal involvement. In the case of marital conflict, the meditational hypothesis is simply that marital conflict

decreases maternal involvement, which in turn leads to lower paternal involvement. For the overall association between maternal employment and father involvement, the implications of the meditational hypothesis are less straightforward. On the one hand, maternal work is hypothesized above to have a direct positive effect on father involvement, based on the positive association found in much but not all prior research. On the other hand, if the hypothesis about the influence of mothers' involvement on fathers' involvement is valid, then there should also be an indirect negative effect of maternal work hours on father involvement, countering the direct positive effect: higher work hours decreases maternal involvement, which lowers paternal involvement. An interpretation of how these hypothetical direct and indirect effects might work simultaneously is that more maternal work hours may have a direct effect leading to higher father involvement, perhaps because women and men as well expect fathers to do more on equity grounds. However, this effect may be countered by maternal employment also lowering the baseline of mothers' involvement against which fathers gauge their own participation.

Other Features of the Model

Although not the primary focus of the study, the model specifies other associations meriting justification. Child's age and gender are influences on both parents' involvement, consistent with Belsky's emphasis on the influence of child characteristics on parenting. Fathers and mothers spend less time with older children than with younger children (Bianchi, 2000; Hofferth, 2003; Yeung, Sandberg, Davis-Kean & Hofferth, 2001). With older children, father's warmth is lower, but control is not (Hofferth, 2003). In most large-scale studies, fathers are more engaged with boys than with girls (Harris, Furstenberg & Marmer, 1998; Marsiglio, 1991; Yeung, et al., 2001), although this was not observed in the Child Development Supplement (CDS) (Hofferth, 2003). The model also includes the effect of a parent's education on that

parent's involvement, and on selected proximal variables. More educated mothers and fathers may have a preference for higher "quality" children, which implies more concentrated attention and childrearing time.

Linked indirectly to maternal involvement through both marital conflict and maternal work hours and directly to residential mother involvement are maternal depressive symptoms, either a personality or a motivational factor in the Belsky and the Lamb et al. formulations, respectively. Prior research suggests that parental depression is associated with less nurturant parenting by that parent (Conger, et al., 1992; Conger, Ge & Lorenz, 1994; McLoyd, 1990). Maternal depression is associated with both higher marital conflict (Conger, et al., 1992) and lower maternal work hours (Wethington & Kessler, 1989). Our model thus specifies that more symptoms of depression have a direct negative influence on maternal involvement, an indirect influence on both parents' involvement through marital conflict, and an indirect influence on both parents' involvement through mothers' work hours. The data to be used do not provide information on paternal depression.

Objectives of the Study

The overall objective of the study is to examine factors associated with the extent of involvement of fathers in the lives of their early adolescent children, in a model which explores maternal involvement, together with three other proximal variables (marital conflict, maternal work hours, fathers' bio-step status), as influences on father involvement, and to simultaneously investigate factors associated with maternal involvement. Because of the special role of mother involvement in the model, hypotheses about the influence of this variable and the influence of the three other proximal predictors are presented separately.

Based on our theoretical model, the study's specific objectives are (a) to test hypotheses that living with a stepfather, marital conflict, and fewer maternal work hours are associated with lower paternal involvement, (b) to test hypotheses that marital conflict and greater mothers' work hours are associated with lower maternal involvement, (c) to test the hypothesis that mother involvement influences father involvement, but that father involvement does not influence mother involvement, and (d) to test the hypothesis that the effects of marital conflict and maternal work hours on father involvement are partially mediated by mother involvement. These hypotheses are expected to hold true net of a set of background controls including gender and age of child, number of children, maternal and paternal education, paternal income, mother's age at first birth, maternal depression, and race/ethnicity.

Method

Data: NLSY79

This analysis uses as its sample children of female youth interviewed as part of the 1979 National Longitudinal Survey of Youth. The NLSY79 data sets contain information on two generations of youth – men and women 14 to 21 in 1979, the subjects of the original study, whom we call the G1 generation, and their own children, now in their late teens and early twenties, the G2 generation. The NLSY obtained detailed information on the children of the G1 women (the Child-Mother study) every other year beginning in 1986, and, in 1988, began interviewing the G2 generation as they entered their teen years (ages 10 and older). We created a data base with the G2 generation's earlier detailed reports of their (G1) parents' involvement with them during the ages of 10 to 14, collected in self-administered supplements at those ages, as well as other information about the children and their parents during that same period. In 1994, children 15 and older were interviewed with an instrument similar to that used with their

mothers and these young adults have continued to be interviewed as the Young Adult study, but those data are not used here

The sample consists of 3,319 youth who were 10-14 between 1994 and 2002, who had turned 15 by 2004, who answered a self-administered questionnaire at least once between 1994 and 2004, and who were living with two parents at the time of the interview(s). The original number of youth was 4,796. This was reduced to 3,319 by selecting only those living with a residential father. Finally, youth who were did not fill out the self-administered questionnaire that provided the information on relationship with their mother and father were deleted as no information was available on the dependent variables. Those administered the instrument but who omitted some items used in this study were retained. Although the 1992 wave was the first in which preadolescents reported on their parents, the data were collected consistently only from 1994 on. Because these youth were eligible to be interviewed every other year between 10 and 14, a child could theoretically have participated up to 3 times over that period; about half in fact completed more than one interview. For those cases, one interview was randomly selected for inclusion in the analysis, with the exception that 10-year-olds were oversampled to yield a more equal age distribution. In the final analysis file, 17% are age 10, 24% age 11, 17% age 12, 25% age 13, and 17% are age 14. Variables used in the analysis were taken from the selected interview year or averaged over the 10-14 year period.

Measures

Mother and father involvement. The child's reports of each parent's involvement with him/her at the interview year are the primary dependent variables in the study. Engagement in positive activities was measured by two questions: How well do each of your parents and you share ideas or talk about things that really matter? (1 = *not very*, 2 = *fairly*, 3 = *quite*, 4 =

extremely well) and How often does each parent miss the events or activities that are important to

you? (1 = *a lot*, 2 = *sometimes*, 3 = *almost never*). The closeness and responsiveness component

of involvement was assessed by two items: How close do you feel to each of your parents? (1 =

not very, 2 = *fairly*, 3 = *quite*, 4 = *extremely*) and How often does each of your parents listen to

your side of the argument (1 = *often*, 2 = *sometimes*, 3 = *hardly ever*) (reverse-coded). The

monitoring and decision-making aspect of involvement was measured by two questions: How

often does each of your parents know whom you are with when you are not at home? (1 = *often*,

2 = *sometimes*, 3 = *hardly ever*) (reverse-coded), and how many of the following five areas the

mother and father each participate in making decisions about: child's clothes, child's spending

money, which friends to go out with, how late to stay out, how much TV to watch. For each

area, the child reported whether mother, father, and/or self decided, with multiple responses

possible.

  Father and mother characteristics. In order to determine family background for children

who answered questions from age 10 to age 14, we identified the survey years the child was 10-

14 and computed average parental and family characteristics for those years. Paternal

characteristics are defined as characteristics of the residential father, whether the biological or

the married or unmarried stepfather. A dummy variable (1, 0) is included for whether the

residential father was ever a stepfather when the child was 10-14. Mother's and residential

father's completed years of education over the years their child was 10-14 were calculated.   The

mother's age at first birth is unique for each mother and identified in the year she first gave birth.

The mother's depression score, consisting of 20 items from the Center for Epidemiological

Studies-Depression Scale (CES-D) (Radloff, 1977) that were asked in 1992 prior to most

children becoming 10-14, provides an important indicator of her mental health. This measure is

interpreted as assessing level of depressive symptoms rather than clinical depression per se. An

example of an item is: "During the past week I did not feel like eating, my appetite was poor.

Did you feel this way none of the time or rarely (0), some of the time (1), occasionally (2), or

most of the time (3)?" The reliability (Cronbach's alpha) for this scale is .89.

Employment and income. We include a measure of the average annual hours the mother

worked for pay over the period the child was 10-14, divided by 1,000. The data indicate only

whether the father is employed, not his hours or his wages, and there is substantial missing data

in the male reports of employment status, making them less useful. We obtained the income of

household members other than the mother (almost always the father's income) every year and

averaged it over the years the child was 10-14. For analysis, the natural log of dollars in ten

thousands was used.

Family context. The number of children in the family is available every year. We

averaged total number of children in the family over the years the child was 10-14.   The marital

relationship is critical to parent-child relationships. The NLSY79 asked the children about

conflict between parents over the child in the self-administered questionnaire when the child was

10-14: How much do your parents (bio/bio-step) argue? (1 = never, 2 = once in a while, 3 =

fairly often, 4 = very often).   Mother's race-ethnicity is indicated with two dummy variables,

nonHispanic African American (1,0) and Hispanic (1,0). The omitted category is

nonHispanicWhite.

Child characteristics include age in the year of the child's self-administered interview,

and gender, coded 1 for male and 0 for female.

Data Analysis Plan

Confirmatory factor analysis using EQS was first used to test whether the six

involvement variables formed a single factor for each parent. Because the items are reported by

the child for both parents, the question of measurement equivalence between paternal and

maternal factors does not arise. Structural equation models based upon Figure 1 were conducted,

using population weights. In the estimation of the model, we permitted all paths among the

independent variables shown in the figure to be estimated. We permitted errors between each of

the mother involvement and father involvement items to be correlated; this helps address same-

informant bias in assessments of parental involvement. Cases with missing data were retained in

the file and the model was estimated using maximum likelihood taking missing data into

account. The correlation matrix is included in the appendix.

Model fit is evaluated using the chi-square statistic and fit indexes. A nonsignificant chi-

square indicates a good model fit. When sample sizes are large, however, a significant chi-square

is generally expected. Thus, two additional fit indices are also used (Byrne, 2001). The

comparative fit index (CFI) (Bollen & Long, 1993) compares the hypothesized model and the

independence model (e.g., there are no relationships between the variables in the model). The

CFI ranges from 0 to 1.00, with a cutoff of .95 or higher indicating a well fitting model and .90

indicating an adequate fit (Byrne, 2001; Hu & Bentler, 1995). Browne and Cudeck's (Browne &

Cudeck, 1993) root mean square error of approximation (RMSEA) compares the model to the

projected population covariance matrix. RMSEA values below .05 indicate a good model fit and

values between .05 and .08 indicate an adequate fit (Browne & Cudeck, 1993; Byrne, 2001).

In testing the hypothesis that maternal involvement influences paternal involvement, but

not vice versa, the reciprocal path is estimated in the Figure 1 model. Although longitudinal

analysis in principle might help disentangle cause-effect relationships among family variables, it

cannot help to disentangle the direction of maternal and paternal involvement influences on each

other because even with data going back to pregnancy, we could not determine which came first.

Prior influences cannot be ruled out (McCartney, Burchinal & Bub, 2006). Here we use a

simultaneous model to assess direction of influence in the short-term. Estimation of reciprocal

relationships in the model is possible because instrumental variables are available for both

paternal involvement (father's bio-step status, paternal education) and maternal involvement

(maternal depression, maternal education). These instrumental variables can be argued on

theoretical grounds to have a direct influence on only one parent's involvement, e.g., paternal

education should directly influence only paternal involvement. Also helping to identify the

direction of influence is the sample's inclusion of men who have not lived with the children from

birth but entered the family sometime later. This provides additional variation in fathering

behavior, facilitating analysis.

Results

Table 1 shows the means, standard deviations, and correlations among the variables.

Children in this study averaged 12 years of age and half were male. The average education of

mothers and fathers was similar, about 13 years. Mothers were age 23, on average, at first birth.

About 16% of children were living with a stepfather. Children lived in families that averaged 2.6

children. Of the total sample, 7% of children were black and 6% were Hispanic. Spouse/partner

income averaged about $12,710 dollars in 2004 dollars. Mothers averaged about 1,246 hours of

work in the previous year. Scores on the CES-D ranged from a minimum of 0 to a maximum of

20, with an average of 8.6. Children reported that their parents argued once in a while (an

average score of 2.1).

(Table 1 about here)

Measurement Model: Mother and Father Involvement

Table 2 shows the standardized factor loadings for mother and father involvement and each of the individual variables. The fit indices were taken from confirmatory factor analyses for father involvement by itself, mother involvement by itself, and both involvement latent variables in the same model. Model fit for a single involvement factors was good (mothers: CFI = .965, RMSEA = .048; fathers: CFI = .987, RMSEA = .039; combined: CFI = .970, RMSEA = .046). Closeness and sharing ideas were the most highly associated with the underlying involvement factors for mothers and for fathers. Listens was the variable associated next most highly with mother and father involvement. The other variables load at lower levels, but the loadings are still highly significant.   Although the factor loadings for mother involvement are somewhat lower than those for father involvement, the model for mother involvement nonetheless has good fit, and all loadings are statistically significant. A two-factor model in which the decisions item and the monitoring item (knows who the child is with) were in a separate factor was also tested (not shown), but did not fit the data as well as the one-factor model. These results suggest that the involvement factors are similar for mothers and for fathers and that a single-factor model fits the data well. The table also shows the correlations between the error terms for the items across parents from a model run with both maternal and paternal involvement indicators included. The errors for the comparable items are significantly associated.

(Table 2 about here)

Structural Model: Associations among Background, Proximal Variables, and Father and Mother Involvement

The study hypotheses are tested by the structural models for the influence of background and proximal variables on the involvement of fathers and mothers (Table 3). Table 3, Model 2

estimates the associations between the proximal variables and paternal involvement in the

study's theoretical model that includes maternal involvement. Table 3, Model 1, reports results

from an alternative model in which maternal involvement was not included. Comparison of

Model 2 to Model 1 assists in testing the study's hypotheses about the influence of mother

involvement on father involvement, and about mother involvement as a mediator of the influence

of maternal work hours and marital conflict on father involvement. Table 4 shows estimates of

the influence of background variables on the proximal variables (maternal work hours, marital

conflict, and fathers' bio-step status) in the study's theoretical model. The results in Table 4 and

in Table 3, Model 2, come from the same SEM analysis but are presented in different tables.

Taken together, these results correspond exactly to Figure 1.

The fit statistics for the study's model are shown in Table 3, Model 2. The CFI = .917

and the RMSEA = .047, with a confidence interval of .044 to .050, which indicates that the

model has a good fit to the data. For the alternative model without maternal involvement (Table

3, Model 1), with a CFI of .888 and an RMSEA of .056, the fit is only adequate. The difference

in model fit is statistically significant ($p < .001$). Model 2's R square (.337) is substantially

higher than Model 1's (.147), another indicator of an improved model. Thus, the inclusion of

maternal involvement improves the fit of the model.

(Table 3 about here)

Influences on father involvement. In Model 2, as hypothesized, the coefficient for the

path from mother involvement to father involvement is significant and large (beta = .429). This

coefficient is twice as high as any other predictor in Model 2. One standard deviation of

variation in mother involvement is associated with almost half a standard deviation of variation

in father involvement. In contrast, the influence of father on mother involvement is small and nonsignificant (beta = .043), as expected.

Among the proximal variables, being a stepfather and marital conflict are significant negative predictors of father involvement in Model 2, as hypothesized (beta = -0.202; -0.129). Contrary to hypothesis, maternal work hours are not significantly linked to father involvement (beta = .008). Among the background variables, child age and gender and paternal education are also significant predictors (see table; betas provided in text for hypothesized associations only).

Influences on mother involvement. Lower mother involvement is predicted by greater marital conflict (beta = -.094) and higher work hours (beta = -0.065), supporting the hypotheses. Additionally, greater maternal depression is associated with less maternal involvement. Having an older child is associated with lower maternal involvement as well.

Mediating role of mother involvement. When Model 2's results are compared with those in Model 1 to evaluate the hypothesized mediating role of mother involvement in the effect of other influences on father involvement, for marital conflict the criteria for partial mediation are met. The beta coefficient for the path from conflict to father involvement drops from -0.176 in Model 1 without mother involvement, to -0.129 in Model 2 with mother involvement, a 27% reduction. In addition, as reported above, the paths from conflict to mother involvement, and from mother involvement, are significant. Since this meditational relationship was hypothesized, we conducted the Sobel test, which showed that the indirect effect of marital conflict on paternal involvement through maternal involvement is statistically significant at $p<.05$ (t = -2.475, p = .013). Thus, in addition to the direct negative effect of marital conflict on father involvement noted earlier, conflict also has an indirect negative effect through mother involvement.

Maternal involvement does not, however, mediate the effect of maternal work hours on father involvement. In Model 1 without mother involvement, maternal work hours were unrelated to father involvement (beta = -0.004), and this coefficient changes only trivially (beta = .006) in Model 2 with mother involvement. However, prior findings indicate that higher maternal work hours do have an indirect negative effect on father involvement via mother involvement: higher work hours are significantly associated with lower mother involvement (beta = -.065), which in turn leads to lower father involvement (beta = .429).

Additionally, higher child age is associated with lower father involvement directly, as well as indirectly via its influence on mother involvement.

Structural Models: Associations between Background and Proximal Variables

Table 4 shows the associations between the background variables and the three proximal variables — marital conflict, whether the dad is a stepfather, and the work hours of the mother – for the study's model. Although no hypotheses were developed for these associations, these additional results complete the estimation of the model.

(Table 4 about here)

Influences on marital conflict. Maternal depression is linked to greater marital conflict. Greater father education is linked to lower conflict but greater father income is not. Age and gender of the child and race-ethnicity are not associated with parental conflict. The results suggest that besides its direct negative effect on mother involvement shown in Table 3, maternal depression has an indirect effect on mother involvement via marital conflict.

Influences on father's bio-step status. Women who have more education and who have children at a later age are more likely to still be living with their children's biological father.

Older children and female children are more likely to be living with a stepfather.   Race and

ethnicity are not linked to presence of a stepfather.

Influences on mothers' work hours. Mothers with more completed education, mothers

who were older at first birth, and mothers who have fewer children work more hours. In

contrast, having a spouse with greater income reduces her work hours.   The older the age of the

child, the lower the work hours of the mother. In the only instance in this study in which

race/ethnicity matters, African American mothers work more hours than white, non-Hispanic

mothers. Finally, maternal depression is associated with reduced work hours.

Considering these Table 4 results together with earlier findings in Table 3 on the direct

effects of the background variables on maternal and paternal involvement, there is evidence that

some background variables have both direct effects on paternal involvement, and indirect effects

on it via the proximal predictors. First, child age is associated with lower father involvement

both directly, and indirectly because older children are more likely to have stepfathers, who tend

to be less involved. Second, being a male child is linked with higher father involvement both

directly, and indirectly because male children are less likely to have stepfathers. Third, paternal

education is associated with higher father involvement both directly, and indirectly because

families with more educated fathers have lower marital conflict, and less conflict is associated

with greater father involvement.

Discussion

Using data from national sample of children aged 10-14 from the NLSY79 who resided

with their biological father or stepfather and with their mother, this study tested a model for

father involvement that included level of mother involvement and three other primary proximal

influences (marital conflict, mothers' work hours, father's bio-step status) as influences. These

predictors were drawn from the broad domains of influences on parental and paternal

involvement that the Belsky and the Lamb et al. conceptualizations share in common. The

model hypothesized that level of mother involvement influences father involvement. In addition

to its direct influence, the model also hypothesized that mother involvement mediates the

influence of marital conflict and mothers' work hours on father involvement. The study further

tested hypotheses about the factors influencing mother involvement. Consistent with recent

practice in the operationalization of involvement, the study used a composite measure of each

parent's involvement that included engagement in positive activities, closeness and

responsiveness, and monitoring and decision-making.

The study found that indicators of these three aspects of father involvement form a single

latent factor. This finding contributes to the literature on whether paternal involvement is best

conceptualized as unidimensional or multidimensional. Consistent with Schoppe-Sullivan,

McBride, & Ho (Schoppe-Sullivan, et al., 2004), decision-making and monitoring had somewhat

weaker relationships to the latent involvement factor than did other indicators. However, a one-

factor model nonetheless fit the data best. In addition, although the factor loadings for mother

involvement were somewhat lower than for father involvement, the model for mother

involvement using the same indicators nonetheless had good fit and significant loadings. These

results suggest that at least as reported by early adolescents, paternal involvement and maternal

involvement have similar factor structures. This finding is consistent with recent work on

similarities in the structure of parenting dimensions across gender (King & Sobelewski, 2006;

Skinner, et al., 2005).

As hypothesized, high marital conflict and being a stepfather are associated with lower

father involvement. Also as hypothesized, marital conflict and mothers' work hours predicted

lower mother involvement. Additionally, maternal depression has a negative effect on maternal involvement, both directly and via its linkage to marital conflict. These findings concerning pathways from maternal depression to marital conflict, and then to father and mother involvement are consistent with prior research by Conger et al. (1992) and McLoyd (1990).

The most innovative result of the study is its finding that level of maternal involvement positively influences level of father involvement. The hypothesized influence of mothers' involvement on fathers' involvement was supported in several different ways. The study's theoretical model that included maternal involvement as an influence on father involvement (Model 2) fit the data significantly better than an alternative model omitting this variable. The coefficient for the effect of mother involvement on father involvement in the study's model was both significant and substantial, whereas the reciprocal effect of father involvement on mother involvement was not significant. Further, since the model controlled for child characteristics, race-ethnicity, marital conflict, and mothers' work hours, these variables' common influence on both fathers' and mothers' involvement can be ruled out as the source of the link between parent's involvement. In terms of research implications, the finding that maternal involvement influences the level of father involvement provides additional reason to control for the former in studies of the effects of the latter on child outcomes (Amato & Rivera, 1999; Pleck, 1997).

In addition, the study explored whether mother involvement functions as a partial mediator of the influence of marital conflict and mothers' work hours on fathering. The present results suggest that the effect of marital conflict on fathers' involvement is indeed partially mediated by maternal involvement. If this partial maternal mediation is not considered, the direct effect of marital conflict on father involvement will be overestimated. Altogether, results

provide support for the study's key hypotheses about maternal involvement as both a direct influence and as a mediator of other influences on paternal involvement.

One limitation of the study is the study is that the data about father and mother involvement are provided by a single reporter, the child. Although same-informant bias is reduced to some degree by allowing the errors in the involvement indicators to be correlated across parents, the linkage between parents' involvement may nonetheless be overestimated. The availability of only six indicators of involvement may also have limited the study's ability to detect multiple factors within parental involvement as well as to detect differences in its structure between fathers and mothers.   Marital conflict was assessed by a single item, reported by the same informant providing data on parental involvement. Although we used instrumental variables to help assess the bidirectional influence of maternal and paternal involvement on each other, the data used are cross-sectional. Given that most of these families have been together for the child's entire lifetime, and short-term cross-lagged models are unlikely to show sufficient variation for identification, this cross-sectional design was the best available. Finally, the results can be generalized only to two parent families; comparable work needs to be conducted on single parent families with non-resident fathers as well.

The study has compensating strengths. The focus on parental involvement with early adolescents is important because the involvement of their fathers has been studied less often than that of men with younger children. The sample is large and nationally representative of early adolescents in the 1990s. The data about parental involvement, and the data about two of the proximal predictors (maternal work hours and fathers' biostep status) and about the background variables, are from different informants, avoiding same-informant bias in assessing relationship between the latter variables and parental involvement.

In conclusion, although father and mother involvement have been studied simultaneously in research on the *consequences* of father involvement, this has not been the case in prior quantitative studies of the *sources* of father involvement.   This study's inclusion of mother involvement in modeling father involvement provides new understanding of the joint nature of coresidential parental involvement. The role of mother involvement in father involvement, and the manner in which maternal involvement mediates other influences on father involvement, merit increased research attention as part of the broader exploration of the dynamics of coparenting.

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Table 1: Means and standard deviations of all variables in the model

Variable Description	Mean	SD
Child Age	12.063	1.317
Child Male	0.498	0.500
Stepfather	0.156	0.363
Maternal Depression	8.642	8.497
Paternal Education	13.362	2.555
Maternal Education	13.240	2/1591
Mother's Age at First Birth	22.942	3.855
Maternal Annual Work Hours/1000	1.246	0.885
Number of Children	2.595	1.015
African American	0.073	0.260
Hispanic	0.064	0.244
Close to mother	3.564	0.690
Mother listens	2.303	0.722
Shares ideas with mother	3.159	0.855
Mother knows who child is with	2.834	0.436
# of Decisions mother makes	3.668	1.547
Mother does not miss key events	2.592	0.607
Close to father	3.238	0.914
Father listens	2.128	0.761
Shares ideas with father	2.861	0.952
Father knows who child is with	2.561	0.630
# of Decisions father makes	2.526	1.757
Father does not miss key events	2.289	0.715
Marital Conflict	2.123	0.736
Spouse Income/10,000 (Natural Log)	1.271	0.802
Number of cases		3319

Table 2. Measurement Model (Standardized loadings)

Items	Individual Models		Joint Model		Correlation between errors in mother-father items
	Mother	Father	Mother	Father	
Close to mother/father	0.448	0.628	0.666	0.733	.485***
Mother/father Listens	0.496	0.521	0.402	0.497	.585***
Shares ideas w mother/father	0.546	0.648	0.68	0.752	.568***
Knows who child is with	0.331	0.491	0.257	0.435	.442***
# of decisions mother/father makes	0.275	0.386	0.252	0.315	.520***
Mother/father does not miss events	0.332	0.445	0.307	0.395	.423***
Fit (CFI/RMSEA)	.965/.048	.987/.039	.970/.046		

***p<.001

Table 3. Effects of Background and Proximal Variables on Father/Mother Involvement

Variable Description	Father Involvement							Mother Involvement		
	Model 1				Model 2			Model 2		
	Beta		B	SE	Beta		B	SE	Beta		B	SE
Child Age	-0.128	*	-0.059	0.012	-0.072	*	-0.037	0.014	-0.205	*	-0.073	0.012
Child Male	0.117	*	0.142	0.030	0.120	*	0.163	0.029	-0.036		-0.034	0.027
Maternal Depression									-0.111	*	-0.006	0.001
Paternal Education	0.065	*	0.015	0.006	0.053	*	0.014	0.006				
Maternal Education									0.004		0.001	0.006
Marital Conflict	-0.176	*	-0.145	0.021	-0.129	*	-0.119	0.021	-0.094	*	-0.060	0.021
Father is Stepfather	-0.242	*	-0.407	0.043	-0.202	*	-0.378	0.040				
Maternal Work Hours	-0.004		-0.003	0.017	0.008		0.006	0.017	-0.065	*	-0.035	0.014
African American												
Hispanic												
Mother Involvement	omitted				0.429	*	0.620	0.125				
Father Involvement									0.043		0.030	0.077
R square	0.144				0.334				0.115			

Fit Indices
Model 1
Chi Square   1442, 209 df
Fit   CFI=.884, RMSEA = .054, range = .051-.056
Model 2
Chi Square   1079, df=201
Fit   CFI=.917, RMSEA=.046, range = .044-.049

*p<.05

## Table 4. Effects of Background on Proximal Variables

Proximal Variables

Variable Description	Marital Conflict				Stepfather				Work hours of mom			
	Beta		B	SE	Beta		B	SE	Beta		B	SE
Child Age	-0.021		-0.012	0.012	0.069	*	0.019	0.006	-0.042	*	-0.028	0.014
Child Male	-0.014		-0.021	0.032	-0.060	*	-0.043	0.015	0.000		0.000	0.036
Maternal Depression	0.102	*	0.009	0.002					-0.082	*	-0.009	0.002
Paternal Education	-0.090	*	-0.026	0.007								
Maternal Education					-0.064	*	-0.011	0.004	0.170	*	0.070	0.010
Mother's Age at First Birth					-0.200	*	-0.019	0.002	-0.135	*	-0.031	0.006
Number of Children									-0.306	*	0.265	0.018
African American	0.005		0.015	0.062	0.011		0.016	0.030	0.046	*	0.154	0.071
Hispanic	-0.004		-0.012	0.067	-0.007		-0.010	0.032	0.036		0.129	0.075
Spouse Income	-0.035		-0.032	0.022					-0.177	*	-0.194	0.025
	0.025				0.071				0.134			
Fit Indices												
CFI	0.917											
RMSEA	0.047											
90% confidence interval of RMSEA	.044-.050											
Correlations between Errors												
Workhours	-0.033				0.038							
Stepdad	-0.010											

*p<.05

Figure 1: Theoretical Model of Father Involvement
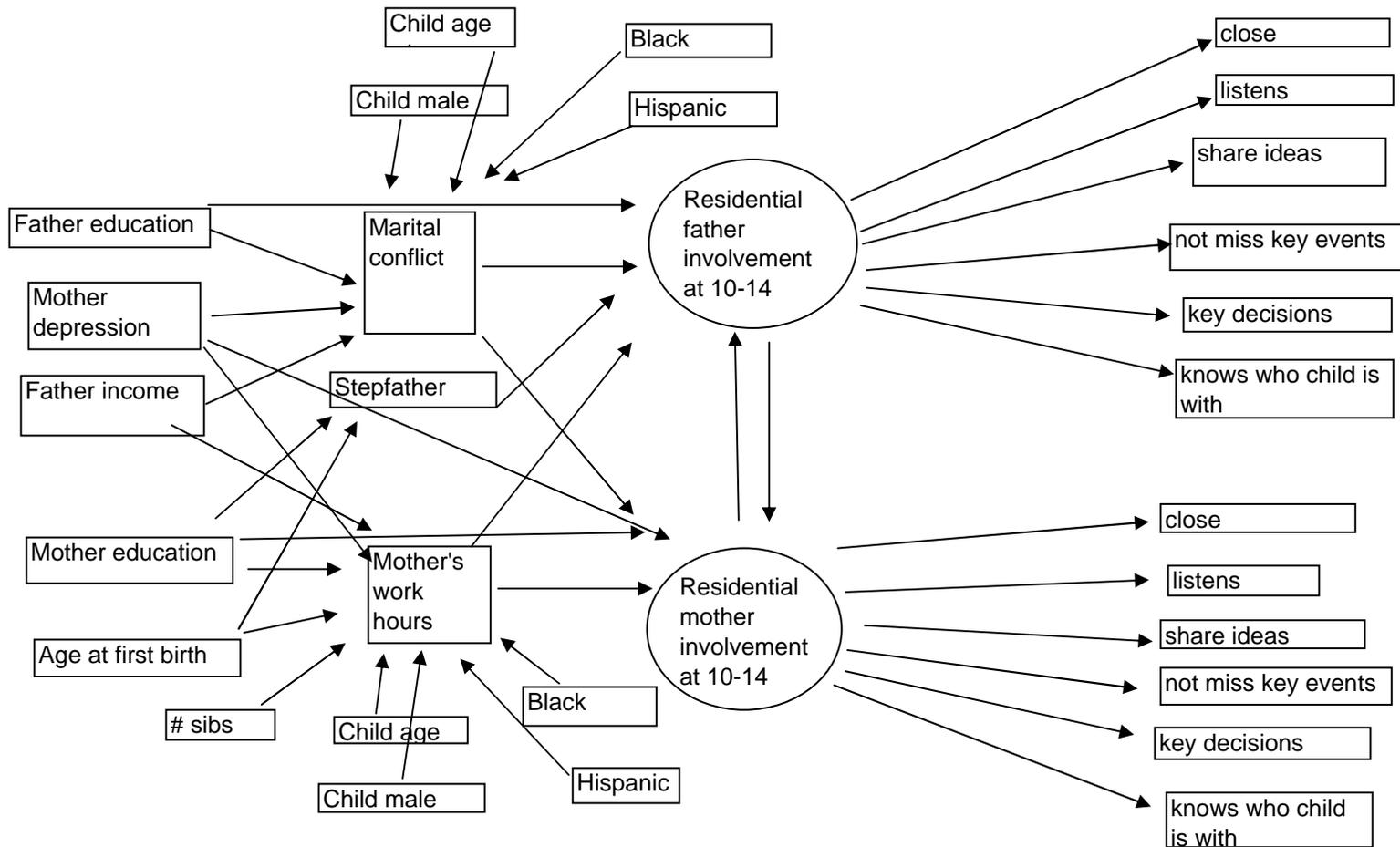
Every measured (box) and latent (circle) variable has an associated error term; not all covariances are shown in this diagram
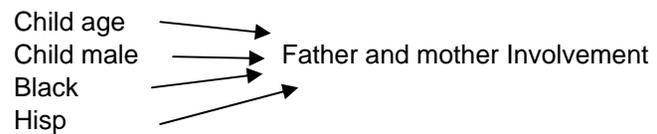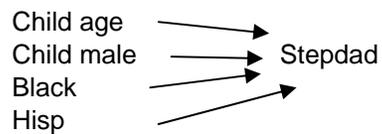
Appendix Table: Correlation matrix

	AGECHILD	MALE	STEPDAD	MOMDEP	SPED	MOMED	AFBMOM	WKHRS	NKIDS	BLACK	HISP	CLOSEM	LISTM
AGECHILD	1												
MALE	0.019	1											
STEPDAD	0.126	-0.0324	1										
MOMTDEP	0.0517	0.0219	0.1319	1									
AVGSPEDU	-0.0903	0.014	-0.0814	-0.1572	1								
AVGMOMED	-0.1012	0.002	-0.1344	-0.2087	0.5871	1							
AGEFBMOM	-0.203	-0.027	-0.2471	-0.1817	0.3405	0.4454	1						
AVGWKHRS	-0.0466	-0.0116	0.0265	-0.1232	0.0429	0.1694	0.0176	1					
AVGNUMSI	-0.0174	0.0103	-0.0314	0.0885	-0.0778	-0.1226	-0.2153	-0.2254	1				
BLACK	0.042	-0.0106	0.1638	0.0796	-0.0004	-0.0087	-0.2386	0.0619	0.0702	1			
HISP	0.032	-0.0048	-0.0022	0.0974	-0.2352	-0.2366	-0.1	-0.0386	0.1027	-0.3051	1		
CLOSEMOM	-0.1599	0.0459	-0.0096	-0.0178	-0.0098	-0.0135	0.0165	-0.0533	-0.0122	0.0196	0.0189	1	
LISTMOM	-0.0046	-0.0776	-0.0325	-0.0313	0.0147	0.0265	0.0405	0.0157	-0.0537	-0.0372	0.0154	0.2023	1
SHAREMOM	-0.0832	-0.042	0.0216	-0.0299	0.0151	0.0205	0.0156	-0.0345	-0.0249	0.046	0.0048	0.4789	0.2861
WITHMOM	-0.0328	-0.0979	-0.0427	-0.0412	0.0508	0.0657	0.0841	-0.0186	-0.0278	-0.0662	-0.0142	0.1273	0.1826
DECISMOM	-0.1694	-0.0627	-0.0455	-0.0381	0.0901	0.1173	0.1173	-0.0152	0.022	-0.0055	-0.0245	0.1513	0.0764
MISSMOM	-0.0104	-0.0669	-0.1251	-0.1235	0.1133	0.1523	0.1648	-0.0156	-0.0675	-0.1211	-0.0539	0.1455	0.1488
CLOSERDA	-0.1828	0.1055	-0.2646	-0.0493	0.02	0.0491	0.1172	-0.0243	-0.0045	-0.034	0.0149	0.4691	0.0857
LISTRDAD	-0.0303	-0.0209	-0.0683	-0.046	0.0498	0.0508	0.0651	-0.0129	0.0133	-0.0407	0.0092	0.1046	0.5323
SHARERDA	-0.111	0.1089	-0.1055	-0.026	0.0656	0.058	0.0663	-0.0452	-0.002	0.0224	-0.0003	0.3101	0.1536
WITHRDAD	-0.0331	-0.0279	-0.1155	-0.0435	0.0231	0.0329	0.0632	-0.0021	-0.0228	-0.0896	-0.0045	0.1179	0.1126
DECISRDA	-0.0876	0.0066	-0.2808	-0.075	0.1201	0.1431	0.1687	-0.0281	0.0339	-0.1136	-0.007	0.0538	0.0843
MISSRDAD	-0.0041	0.0435	-0.1683	-0.1	0.1347	0.1439	0.1449	-0.0035	-0.0765	-0.0928	-0.0274	0.0696	0.0683
CONFLICT	-0.0021	-0.0034	0.0384	0.0604	-0.0675	-0.071	-0.0688	-0.0118	-0.0244	0.0598	0.007	-0.0835	-0.0348
LSPINC	-0.0556	-0.012	-0.1219	-0.1729	0.4297	0.3628	0.3129	-0.0277	-0.0775	-0.1769	-0.1662	-0.0023	0.0206
Mean	12.063	0.498	0.156	8.642	13.362	13.24	22.942	1.246	2.545	0.073	0.064	3.564	2.303
SD	1.317	0.5	0.363	8.497	2.555	2.159	3.855	0.885	1.015	0.26	0.244	0.69	0.722

	SHAREM	WITHM	DECISM	MISSM	CLOSERD	LISTRD	SHARERD	WITHRD	DECISRD	MISSRD	CONFLICT	LSPINC
HISP												
CLOSEMOM												
LISTMOM												
SHAREMOM	1											
WITHMOM	0.1689	1										
DECISMOM	0.1629	0.1448	1									
MISSMOM	0.1463	0.1592	0.141	1								
CLOSERDA	0.2415	0.0938	0.1163	0.1251	1							
LISTRDAD	0.1835	0.099	0.0695	0.1231	0.3075	1						
SHARERDA	0.5466	0.0835	0.1409	0.1173	0.5739	0.363	1					
WITHRDAD	0.1405	0.4242	0.1114	0.1079	0.3034	0.261	0.2979	1				
DECISRDA	0.0553	0.0626	0.455	0.0992	0.2462	0.1798	0.2344	0.2465	1			
MISSRDAD	0.0737	0.0716	0.0698	0.4383	0.296	0.2073	0.2751	0.2355	0.2011	1		
CONFLICT	-0.0443	-0.0469	-0.033	-0.0751	-0.1355	-0.1069	-0.1097	-0.0905	-0.0758	-0.0905	1	
LSPINC	0.0006	0.0477	0.1049	0.1551	0.0436	0.0231	0.035	-0.0152	0.1137	0.1227	-0.0637	1
Mean	3.159	2.834	3.668	2.592	3.258	2.128	2.861	2.561	2.526	2.289	2.123	1.271
SD	0.855	0.436	1.547	0.607	0.913	0.761	0.952	0.63	1.757	0.715	0.736	0.802