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## Non-Resident Father Involvement and Adolescent Well- Being: Father Effects or Child Effects?

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**NONRESIDENT FATHER INVOLVEMENT AND ADOLESCENT WELL-  
BEING: FATHER EFFECTS OR CHILD EFFECTS?\***

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**NONRESIDENT FATHER INVOLVEMENT AND ADOLESCENT WELL-  
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ABSTRACT

Is active fathering by nonresident fathers a cause or a consequence of adolescent well-being? Past studies of nonresident father involvement have assumed a father effects model in which active parenting by fathers improves adolescent adjustment. A child effects model, in which fathers respond to levels of well-being among their adolescent offspring by becoming more or less involved parents, could also account for the positive association between active fathering and adolescent adjustment. We utilize nationally representative data from the 1995 and 1996 waves of the National Longitudinal Study of Adolescent Health (Add Health) to estimate the cross-lagged associations between nonresident father involvement and the externalizing problems, internalizing problems, and academic achievement of 3,394 adolescents. Contrary to assumptions from a socialization perspective and findings from past research on nonresident fathers, our results do not support a father effects model. Our data are more consistent with a child effects model in which levels of adolescent well-being cause, rather than result from, levels of nonresident father involvement.

Children who live apart from their fathers, compared with children who reside with both parents, face a number of economic and social disadvantages that appear to increase the risk of behavior problems, subjective distress, and school failure (Amato 2005; McLanahan and Sandefur 1994). Many family scholars believe that nonresident fathers can mitigate some of these negative outcomes by maintaining close and supportive relationships with their children. Consistent with this assumption, researchers have found positive links between active and emotionally supportive involvement on the part of nonresident fathers and multiple dimensions of children's well-being (Amato and Gilbreth 1999). In these studies, researchers have implicitly assumed a *father effects* perspective in which the causal direction runs primarily from fathers to children. Because almost all of these studies have relied on cross-sectional data, however, it is impossible to assess the direction of causation.

A *child effects* perspective also can account for the associations between nonresident fathers' behavior and offspring outcomes. This model assumes that offspring characteristics affect paternal behavior and the nature of the parent-child relationship (Bell and Chapman 1986; Russell and Russell 1992). According to this perspective, paternal behavior is viewed as a *reaction* to the behavioral and emotional characteristics of children rather than an *action* that contributes to children's well-being. With respect to nonresident fathers, when children experience emotional and behavioral problems and school failure, fathers may withdraw from these relationships, perhaps because visits are unrewarding. In contrast, when children are well-adjusted and academically successful,

nonresident fathers may seek out more frequent contact and a deeper level of involvement.

Distinguishing between the father effects perspective and the child effects perspective is important for two reasons. First, researchers in the field of child development have increasingly developed and tested child effects models. As we describe later, some of these studies provide substantial support for the existence of child effects. In contrast, most sociological studies implicitly assume that parents' actions shape children's behavior, aspirations, and achievement (e.g., Coleman 1988; Conger et al. 2000; Dornbusch et al. 1987; Kohn 1969; Lareau 2003). Incorporating the notion that children actively shape the level and nature of parental involvement would represent a useful corrective to traditional perspectives that view child socialization as being primarily a one-way process.

Second, the notion of child effects has implications for social policy. Many social scientists assume that positive father involvement is beneficial, irrespective of whether fathers live with their children (Braver 1998; Lamb 1999). Based on this assumption, about half of U.S. family courts mandate education courses for divorcing parents, a central goal of which is to keep noncustodial parents (usually fathers) actively involved in their children's lives (Emery, Kitzmann, and Waldron 1999). Many states have initiated *Responsible Fatherhood* programs to help fathers meet their child support obligations, increase fathers' access to their children, and encourage better quality parenting from fathers (Pearson et al. 2003). At the federal level, the Office of Child Support Enforcement initiated the State Child Access and Visitation Program in 1997,

which allocates \$10 million per year to states to “establish and administer programs to support and facilitate noncustodial parents’ access to and visitation of their children” (Pearson, Davis, and Thoennes 2006, p. 373). In 2006, the federal government allocated \$50 million per year for five years toward additional programs that promote responsible fatherhood. Yet, despite the large number of programs aimed at strengthening the ties between nonresident fathers and their children, the research literature on which these programs are based is surprisingly modest.

In this study, we use nationally representative, longitudinal data to examine the associations between nonresident father involvement and adolescent well-being. We include five distinctive aspects of fathering--contact, shared activities, communication, emotional closeness, and payment of child support--that have rarely been examined within the same study. To provide a comprehensive assessment of adolescent well-being, we focus on three outcomes: externalizing problems, internalizing problems, and academic achievement. Developmental researchers generally consider externalizing problems (delinquent and antisocial behavior) and internalizing problems (symptoms of depression and other indicators of psychological distress) to be central dimensions of child adjustment and well-being (Achenbach and McConaughy 1997). Academic achievement--assessed by grades in several subjects--is important because it is closely related to future educational attainment and health (Moore et al. 2001; Ross and Wu 1995).<sup>1</sup> We rely on cross-lagged models to provide simultaneous estimates of the effects of nonresident fathering on adolescent well-being and the effects of adolescent well-

being on nonresident fathering. To our knowledge, our study is the first to assess the relative importance of father effects and child effects in nonresident father families.

## BACKGROUND

### *Father Effects*

Most of the early research on nonresident fathers focused on the frequency of contact and payment of child support. Many researchers assumed that frequent visitation by nonresident fathers benefits children in the same way as frequent involvement by resident fathers (Marsiglio et al. 2000). A smaller number of family scholars have attempted to measure the *quality* of the nonresident father-child relationship in addition to the *quantity* of contact. Both the amount and nature of parental involvement reflect the level of social capital inherent in the parent-child relationship (Coleman 1988). Social capital is a key resource for children's development, but parents must be available and involved if children are to benefit (Amato 1998).

*Contact and visitation.* Although visitation is assumed to be a central component of the relationship between nonresident fathers and children, studies based on large national samples have found little or no relationship between the frequency of contact and offspring well-being (Furstenberg, Morgan, and Allison 1987; King 1994). One difficulty in interpreting these studies is that frequent contact can represent a positive, neutral, or negative influence on children. On one hand, contact may be beneficial if a warm and supportive father-child relationship exists within the context of a cooperative co-parental relationship. On the other hand, contact may be harmful if it involves negative behaviors by fathers or is accompanied by conflict between parents (Amato and

Rezac 1994; Amato and Sobolewski 2004; King and Heard 1999). Nonetheless, although visitation *per se* does not appear to have a consistent relationship with child well-being, contact is a necessary (but not sufficient) condition for nonresident fathers to make other social contributions to their children's lives (King and Sobolewski 2006). For this reason, it is important to include information on contact in studies of nonresident father involvement.

*Economic contributions.* Fathers' economic contributions are an important resource for children in all types of families (Coleman 1988; Becker 1991). For nonresident fathers, child support payments are an appropriate measure of the transfer of financial capital to offspring. Child support payments can alleviate some of the economic disadvantage faced by single mothers and provide a less stressful home environment for children. A few studies report modest positive links between the payment of child support and children's behavioral adjustment (Furstenberg et al. 1987; McLanahan et al. 1994) and academic achievement (Argys et al. 1998; Graham, Beller, and Hernandez 1994; King 1994; Knox and Bane 1994). Even though the association between child support payment and children's well-being is modest, child support should be included in studies of nonresident fathering because it is positively related to contact (Seltzer 2000) and relationship quality (Stewart 2003).

*Shared activities and communication.* Even when nonresident fathers see their children frequently, the time that fathers and children spend together varies substantially in content and quality. Because of the limitations of time and distance, contact between nonresident fathers and children tends to be social rather than instrumental (Furstenberg

and Nord 1985). In fact, over half of all nonresident fathers spend a majority of time with children in leisure activities (Stewart 1999). Activities such as playing sports and watching movies--in the absence of other fathering behaviors--may not be related to children's well-being. Other types of father involvement, such as working on school projects, talking with children about problems, and attending religious services together, may be more directly related to children's educational and social development. Of course, visits that focus exclusively on instrumental activities are likely to become boring over time to fathers and children alike. In general, fathers who engage in a balanced mix of social and instrumental activities demonstrate that their children are important to them. Open communication about events in children's lives also is likely to be associated with positive child outcomes. The parenting literature shows that expressing an interest in children's lives promotes a sense of security and being cared for among children and adolescents (Maccoby and Martin 1983).

*Relationship closeness.* Research suggests that the closeness of the father-child bond is a particularly salient dimension of the father-child relationship and is associated with better outcomes for children (Amato and Gilbreth 1999). Emotionally close relationships may be particularly important for child well-being because nonresident fathers who have close bonds with children can be more effective in monitoring, communicating with, and teaching children (Amato 1998; King, Harris, and Heard 2004). Furthermore, a close relationship is likely to facilitate the transfer of fathers' financial resources to children (Furstenberg and Hughes 1995; Nord and Zill 1996).

### *Child Effects*

Early studies of the links between parenting and child well-being typically assumed that behavioral problems among children were the result of inept parenting. In recent decades, however, researchers have increasingly recognized that children's characteristics and behavior can affect a variety of parents' attitudes and behaviors (Bell and Chapman 1986; Russell and Russell 1992). The child effects model views children as active agents in shaping their social environments, including their relationships with parents.

Evidence for child effects has been found across all stages of development, from early infancy to adolescence. For example, studies show that mothers of "difficult" infants--that is, infants who express a good deal of negative emotionality--report less confidence in their parenting skills and more symptoms of stress and depression than do other mothers (Crockenberg and Leerkes 2003). Similarly, studies of adolescents have shown that successful parental monitoring is primarily a function of children's willingness to disclose information to parents, rather than parents' active efforts to supervise their children (Crouter and Head 2002; Statin and Kerr 2000). One study by Sheeber and colleagues (1998) found gender differences in parents' reactions to children's behavior. Among a sample of depressed adolescents, mothers tended to increase their level of support whereas fathers tended to withdraw from interaction. Similarly, stepfathers tend to decrease their warmth and involvement in response to adolescents who display a high degree of externalizing problems (Anderson et al. 1999). To our knowledge, however, no study has addressed the existence of child effects in relationships between nonresident fathers and adolescents.

Relationships between nonresident fathers and adolescents are often fragile and may be particularly susceptible to child effects. In general, fathering is more variable than mothering (Arendell, 2000) and more sensitive to contextual influences, such as family structure (Doherty, Kouneski, and Erickson 1998). Adolescence, in particular, may be a developmental period in which child effects are prominent. Most parents feel that it is developmentally appropriate to grant more autonomy to adolescents than to younger children (Hosley and Montemayer 1997). From the point of view of nonresident fathers, visits with children can be awkward, and tension in the father-child relationship leads some nonresident fathers to disengage from their children (Hetherington and Kelly 2002). The costs of maintaining relationships with troubled adolescents may outweigh the benefits to some nonresident fathers, especially if they also face structural constraints, such as geographical distance, financial cost of maintaining contact, and commitments to new families (Arditti 1995; Manning and Smock 1999; Stewart 1999). Likewise, they may feel ill-equipped to deal with a delinquent or depressed teenager. Not living in the same household may make it easier for nonresident fathers than for resident fathers to disengage from troubled adolescents.

Adolescents' attitudes toward the father may also contribute to the weakening or strengthening of the father-child relationship. In general, parental involvement declines as children move into adolescence, largely because adolescents tend to spend more time with peers (Furstenburg 2000). Teenagers who experience behavior problems and academic failure are especially likely to retreat from the family and into peer groups. Adolescents may place part of the blame for their problems on nonresident fathers, thus

exacerbating interpersonal tension during visits. Regardless of whether it is the nonresident father, the adolescent, or both who withdraw from the relationship, evidence that adolescent well-being influences levels of paternal participation would support a child effects model.

#### *Other Relevant Factors*

Associations between paternal involvement and offspring well-being may be due to a variety of variables. To minimize the possibility of observing spurious associations, our analyses control for a number of adolescent, father, and family characteristics.

*Adolescent characteristics.* Adolescent gender, age, and race-ethnicity may be linked to nonresident father participation as well as adolescent well-being. Fathers tend to be more involved with sons than daughters (Harris and Morgan 1991), and sons tend to report closer relationships with fathers than do daughters (King 2002; Youniss and Smollar 1985). Some studies of nonresident fathers show that sons enjoy longer, more frequent visits than do daughters (Hetherington and Kelly 2002; Manning and Smock 1999). Nevertheless, during secondary school, girls have higher levels of academic achievement than do boys (Ruban and McCoach 2005), which may encourage greater father involvement. With respect to age, older adolescents tend to be less involved with parents, spend more time with peers, and display more problems, such as depression and delinquency (Furstenberg 2000). Nonresident father involvement also varies across racial-ethnic groups, albeit in complex ways (King et al. 2004).

*Father-adolescent history.* Nonresident fathers tend to stay more involved in their children's lives if they were married to the child's biological mother when the child was

born (King et al. 2004; Seltzer and Bianchi 1988). Similarly, if the child lived with the father at some point, the nonresident father may be more committed to the father-child relationship and therefore more involved in active fathering when living apart from the child. Additionally, the more recently the father and offspring shared a residence, the more involved the nonresident father is likely to be (Seltzer and Bianchi 1988). All of these factors are also potentially related to children's well-being (Amato and Sobolewski 2004; Brown 2004).

*Father characteristics.* Socioeconomic status, measured in this study as educational attainment, is positively related to paternal involvement and children's well-being (Amato and Booth 1997). Nonresident fathers' socioeconomic status is a consistent predictor of involvement, with high levels of education being associated with more frequent contact (Seltzer, Schaeffer, and Charng 1989; Stephens 1996). We also control for fathers' nativity, because foreign-born fathers face more language and cultural barriers to active involvement with adolescent children than do fathers born in the United States (McAdoo 1978). Adolescents of immigrant parents also have lower levels of academic achievement than do native-born students if English is not the primary language spoken in the home (Kao and Tienda 1995).

*Family structure.* Family structure is likely to influence both nonresident father involvement and adolescent well-being. We control for the presence of a stepfather in the adolescent's residence, because several studies show that adolescents with stepfathers tend to have less involved nonresident fathers (Furstenberg et al. 1983; Seltzer and Bianchi 1988; Stephens 1996). Other studies show that adolescents face more problems

in stepfather families than in mother-only families (Hetherington 1993). We also include adolescents who live with neither biological parent. Recent research indicates that adolescents who live with neither parent have the lowest level of father involvement (Harris and Ryan 2004), as well as particularly low levels of well-being (Brown 2004).

*Mother characteristics.* Mothers who are emotionally close to their children may encourage nonresident fathers to remain actively involved and be more willing to engage in cooperative co-parenting out of a concern for children's well-being. Adolescents who report higher levels of closeness to mothers also tend to have stronger relationships with both resident and nonresident fathers (Buchanan, Maccoby, and Dornbusch 1996; King and Sobolewski 2006). In addition, a high quality mother-child relationship is an important social resource for children that may lessen behavior problems and help children succeed in school. We also control for mother's educational attainment and nativity, which are indicators of human capital that may be related to adolescent academic achievement and behavior problems.

## GOALS AND HYPOTHESES

Our first goal was to examine the links between a general construct of nonresident father involvement that we refer to as *active fathering* and multiple dimensions of adolescent well-being. In cross-sectional analyses, we expected to find results comparable to those reported in previous studies of nonresident fathers. Our first hypothesis is that active fathering is negatively related to externalizing problems and internalizing problems and is positively related to academic achievement among adolescents. Our second hypothesis is that child support is weakly associated with adolescent well-being, given that prior

research finds that it is related modestly to a limited set of outcomes. Support for these hypotheses, however, would provide no evidence about the direction of influence.

Our second goal was to use longitudinal data to test a cross-lagged model that simultaneously estimated father and child effects. Based on the father effects perspective, our third hypothesis is that active fathering at  $t_1$  predicts positive adolescent well-being at  $t_2$ , controlling for levels of adolescent well-being at  $t_1$ . Correspondingly, based on the child effects perspective, our fourth hypothesis is that adolescent well-being at  $t_1$  predicts active fathering at  $t_2$ , controlling for levels of active fathering at  $t_1$ . It is possible, of course, that significant estimated effects appear for both cross-lagged paths--an outcome that would provide support for both perspectives.

Although the focus of our paper is on nonresident fathers, our third goal was to estimate cross-lagged models for resident biological fathers. These analyses provide an important comparison to the results for nonresident fathers. For example, we might find evidence of child effects (and no father effects) among resident fathers as well as nonresident fathers, which would suggest that child effects dominate most forms of father-adolescent interaction, irrespective of living arrangements. Conversely, we might find evidence of father effects among resident but not nonresident fathers, which would suggest that resident fathers influence adolescents more than do nonresident fathers.

## DATA AND MEASURES

### *Samples*

*Nonresident biological fathers.* The data in this study come from the first two waves of the National Longitudinal Study of Adolescent Health (Add Health), which

were conducted in 1995 and 1996 (Harris et al. 2003). The full 1995 (Wave 1) sample includes interviews with 20,475 adolescents and their parents (or parent figures). The sample is representative of children in grades 7 through 12 in the United States when appropriate sample weights are used. In 1996, 14,738 (72%) of adolescents were re-interviewed. Our sample was comprised of adolescents who had a living, nonresident biological father in 1995 and had valid sample weights.<sup>2</sup> After excluding adolescents who did not provide any data on father involvement or their own well-being ( $n = 131$ ), the Wave 1 sample included 5,535 cases. For the longitudinal analyses that included Waves 1 and 2, the sample size was reduced to 3,394 for several reasons (see below). To maximize the comparability of results between the cross-sectional analysis (based on Wave 1) and the longitudinal analysis (based on Waves 1 and 2), we restricted the cross-sectional analysis to the 3,394 adolescents who had valid data in both waves.

*Resident biological fathers.* For comparative purposes, we relied on a sample of adolescents with resident biological fathers in Waves 1 and 2.<sup>3</sup> To keep statistical power constant across analyses, we randomly sampled 3,394 adolescents with married resident fathers from the total Add Health sample. Consistent with the criteria noted earlier, adolescents selected from the larger sample must have provided some information on father involvement and their own well-being, and they must have had valid sample weights.

### *Measures*

For interested readers, Appendix A contains full details on the central independent and dependent variables.

*Nonresident father involvement.* The indicators of the *active fathering* latent construct came from adolescent reports and consisted of measures of *contact*, *shared activities*, *communication*, and *emotional closeness*. The two contact items measured how often adolescents stayed overnight with their nonresident fathers and how often they talked with or received a letter from their fathers in the last 12 months. Responses ranged from 0 = *not at all* to 5 = *more than once a week*. These two items were averaged to produce a measure of contact ( $\alpha = .70$ ). Shared activities and communication were based on eight items that adolescents may have done with their fathers in the past four weeks (0 = *no* and 1 = *yes*). The five activities included going shopping, playing a sport, attending a religious event, attending a cultural event, and working on a school project together. The three types of communication involved talking about school grades, talking about other school-related topics, and talking about social events. We created separate activities ( $\alpha = .71$ ) and communication ( $\alpha = .77$ ) scales by averaging the relevant items. Father-child closeness was measured with one question that asked how close adolescents felt to their biological fathers. Responses ranged from 1 = *not close at all* to 5 = *extremely close*. Although we would have preferred multiple items on the emotional tone of the father-child relationship, this was the only question in the Add Health survey that referred to nonresident fathers.

*Child support* was a dichotomous variable based on mothers' reports and indicated whether nonresident fathers generally paid child support (0 = *no* and 1 = *yes*).<sup>4</sup> In an earlier conceptualization of the active fathering latent construct, we included child support as an observed indicator. The measurement model indicated that this version did

not fit the data well, however, and the factor loading for child support on the active fathering construct was low. Therefore, we included child support as a separate (observed) independent variable in the regression analysis.

*Adolescent well-being.* We treated three dimensions of adolescent well-being--*externalizing problems, internalizing problems, and academic achievement*--as separate latent variables. All well-being items were based on adolescent reports and all multi-item scales were created by taking the mean of the relevant items.

The externalizing problems latent variable was based on three observed indicators: *delinquency, violent behavior, and substance use*. Delinquency was a 10-item scale with items referring to stealing, lying, and general antisocial behavior ( $\alpha = .78$ ). Violent behavior was an eight-item scale with items referring to fighting and using weapons ( $\alpha = .81$ ). Both of these scales pertained to behaviors in the past year with possible responses ranging from 0 = *never* to 2 = *three or more times*. Substance use was an eight-item scale with questions referring to tobacco, alcohol, and marijuana use in both the past year and the past month ( $\alpha = .87$ ).

The internalizing problems latent variable was based on three observed indicators: *depressive symptoms, negative outlook, and low self-esteem*. Depressive symptoms was a seven-item scale that included the frequency of feeling lonely, feeling sad, and being unable to shake off the blues ( $\alpha = .84$ ). Negative outlook was a four-item scale, and items asked how often adolescents felt hopeless about the future or that life was not worth living ( $\alpha = .70$ ). These two scales referred to the previous week and responses ranged from 0 = *never* to 2 = *most of the time*. Low self-esteem was a six-item scale, and items

included feelings of pride in one's accomplishments and having good qualities ( $\alpha = .87$ ). Responses ranged from 1 = *strongly agree* to 4 = *disagree*. We constructed the scale so that higher scores reflected low self-esteem.

Academic achievement was a latent variable based on four objective indicators: *grades in English, math, social studies, and science*. Adolescents were asked to report their most recent grades in these subjects on a standard four-point scale.<sup>5</sup>

*Control variables.* Gender of the adolescent was coded as 0 = *male* and 1 = *female*. Age was measured as an interval variable. Race-ethnicity was measured as a set of dummy variables that included *Black, Hispanic, Asian, and Native American*, with *White* serving as the reference category. Whether the adolescent *ever lived with the nonresident father* was included as a dichotomous variable (0 = *no* and 1 = *yes*). The *number of years since the adolescent lived with the nonresident father* was included as an interval variable. *Father education* and *mother education* were ordinal variables, with 1 = *never attended high school* to 9 = *post-graduate training*. *Father nativity* and *mother nativity* were dichotomous variables, with 0 = *born outside the U.S.* and 1 = *born in the U.S.* Two family structure characteristics, whether the adolescent had a *stepfather* or a *nonresident biological mother*, were included as dichotomous variables (0 = *no* and 1 = *yes*). A measure of emotional *closeness to mother* was identical to the closeness variable for nonresident fathers described earlier. Table 1 displays the means (or proportions) and standard deviations for all study variables. Alpha reliability coefficients are displayed for scales, where appropriate.

[TABLE 1 ABOUT HERE]

### *Analysis*

The cross-lagged model is illustrated in Figure 1. We relied on *Mplus* (Muthén and Muthén 2005) to estimate all paths simultaneously. For the sake of simplicity, we omitted the control variables from the figure. All control variables, however, were correlated with the  $t_1$  variables and had direct paths leading to the  $t_2$  variables. The Add Health data set relies on a stratified and clustered sampling design, so we adjusted all standard errors for clustering, stratification, and weighting.

[FIGURE 1 ABOUT HERE]

With respect to attrition, adolescents who were seniors during the Wave 1 interviews were not re-interviewed in 1996 (Wave 2). This decision meant that 878 adolescents were excluded from the analysis. Another 1,263 adolescents were lost between Waves 1 and 2 through attrition. Attrition was more common among Black adolescents, adolescents from families with relatively low annual incomes, and adolescents whose fathers did not pay child support. Following Heckman (1979), we used probit regression to calculate lambda--the probability of leaving the sample between Waves 1 and 2--based on these variables. We included lambda as a control variable. Lambda did not attain significance in any analysis, however, and its inclusion did not affect the results, so we removed it from all tables for the sake of parsimony.

Missing data were rare (less than 5%) for the items used to create the central independent and dependent variables. For each multi-item scale, adolescents must have answered at least one survey question pertaining to the scale to receive a score. Less than 10% of cases had missing data on any of the control variables. Rather than use listwise

deletion of cases, we relied on full information maximum likelihood estimation. This method provides better estimates of population parameters than does listwise deletion when the data are assumed to be missing at random and conditional on other variables in the model (Allison 2002).

## RESULTS

### *Measurement Model*

Figure 2 shows the measurement model for the four latent variables: active fathering, externalizing problems, internalizing problems, and academic achievement. The paths between active fathering and its four observed indicators ranged from .68 to .81.

Correspondingly, the paths between the three adolescent well-being variables and their objective indicators were consistently high. We relied on two indexes of model fit--the Comparative Fit Index (*CFI*) and the Root Mean Square Error of Approximation (*RMSEA*). A *CFI* greater than or equal to .90 (Bentler 1990) and an *RMSEA* less than or equal to .08 (Browne and Cudeck 1993) indicate that the model provides an acceptable fit to the data. According to these indexes, the measurement model fit the data well (*CFI* = .96, *RMSEA* = .03). The correlations among all four latent constructs were significant and in the expected directions.

[FIGURE 2 ABOUT HERE]

### *Cross-Sectional Model*

Table 2 displays coefficients for the regression of adolescents' externalizing problems, internalizing problems, and academic achievement on active fathering and payment of child support in Wave 1. The unstandardized coefficients indicate that active fathering

was negatively associated with adolescents' externalizing problems, negatively associated with adolescents' internalizing problems, and positively associated with adolescents' grades. These results are consistent with our first hypothesis, which predicted modest associations between active father involvement and a range of positive adolescent outcomes. In contrast, fathers' payment of child support was not related to any of the three adolescent outcomes, providing no support for our second hypothesis that child support would be weakly related to adolescent well-being.<sup>6</sup>

[TABLE 2 ABOUT HERE]

#### *Cross-Lagged Models*

Using two waves of data, we estimated separate cross-lagged models for each dimension of adolescent well-being. To ensure that the same latent variables were measured at  $t_1$  and  $t_2$ , we constrained the loadings of the indicators for all latent variables to be identical in both waves. We also included correlations between the error terms at  $t_1$  and  $t_2$  for each of the observed indicators. Both of these steps are recommended when analyzing two-wave data with latent variables (Jöreskog and Sörbom 1988).

Table 3 shows the results of the cross-lagged analysis of active fathering and adolescent well-being with all control variables included in the equations. Active fathering at  $t_1$  strongly predicted active fathering at  $t_2$ , which indicates that nonresident father involvement was stable over time. Likewise, externalizing problems, internalizing problems, and academic achievement at  $t_1$  were strong predictors of their counterparts at  $t_2$ , which indicates that adolescent well-being was stable over the one-year span.

[TABLE 3 ABOUT HERE]

With respect to the cross-lagged paths, active fathering at  $t_1$  was not associated with any measures of adolescent well-being at  $t_2$ . In contrast, adolescent externalizing behavior at  $t_1$  was negatively and significantly associated with active fathering at  $t_2$ . Similarly, adolescent academic achievement at  $t_1$  was positively and significantly associated with active fathering at  $t_2$ . Adolescent internalizing behavior at  $t_1$  was negatively associated with active fathering at  $t_2$ , although the  $t$  statistic corresponding to this coefficient only approached significance ( $p = .09$ ). Overall, active fathering by nonresident fathers appeared to have no effect on adolescent well-being, but adolescent well-being appeared to affect nonresident father involvement. These results provide consistent support for the child effects perspective and no support for the father effects perspective.

As an exploratory step (and also to be consistent with analyses reported later), we examined each of the four observed indicators of active fathering separately, as reported in Table 4. We incorporated measurement error into the models by relying on the alpha reliability coefficients. For example, the activities scale had a reliability coefficient of .71, which indicated 29% measurement error. We multiplied the variance of the scale by .29 and set the error variance to this value. We followed the same procedure for contact and communication (30% and 23% measurement error, respectively). Because emotional closeness was a single-item measure, we assumed 30% measurement error. We conducted 12 separate cross-lagged analyses examining each relationship among the four active fathering indicators and the three adolescent outcomes. All models fit the data reasonably well.

[TABLE 4 ABOUT HERE]

Adolescents' externalizing problems at  $t_1$  were associated with lower levels of father contact, shared activities, and emotional closeness at  $t_2$ . Similarly, internalizing problems at  $t_1$  were associated with fewer shared activities and less frequent contact at  $t_2$ . Finally, higher grades at  $t_1$  were associated with more communication and greater frequency of contact at  $t_2$ . In contrast, no indicator of active fathering at  $t_1$  was associated significantly with any adolescent outcome at  $t_2$ . These results are consistent in suggesting that all forms of active fathering among nonresident biological fathers were responses to adolescent well-being, rather than the reverse.

#### *Cross-Lagged Models for Resident Fathers*

For comparative purposes, we tested cross-lagged models to assess the links between adolescent well-being and active parenting among resident biological fathers. The analyses included the same three adolescent outcomes described earlier and three of the four variables used to define active fathering: communication, activities, and closeness. For resident parents, there was no item equivalent to the frequency of contact. The wording of survey items for resident fathers and nonresident fathers was identical.<sup>7</sup>

We initially attempted to replicate the analysis shown in Table 3. Unlike the results for nonresident fathers, however, the factor loadings and fit indexes for resident fathers revealed that the parenting items did not reflect a single latent variable. To illustrate this problem, the average correlation (root mean square) between the indicators was .56 for nonresident fathers but only .32 for resident fathers. Substantively, these results indicate that nonresident fathers who engage in one form of active parenting tend

to engage in other forms as well. In contrast, among resident fathers, these parenting dimensions are only weakly bound together. For example, some adolescents may communicate often with resident fathers, but engage in shared activities infrequently. Methodologically, these results mean that it was necessary to analyze each indicator of active fathering separately for resident fathers. Following the procedures described earlier, we incorporated measurement error into the indicators by relying on their alpha reliability coefficients. The results of this analysis are shown in Table 5. Note that all models fit the data well.

[TABLE 5 ABOUT HERE]

With respect to externalizing problems, the results for resident fathers were comparable to those of nonresident fathers. That is, adolescent externalizing behavior at  $t_1$  appeared to lower fathers' participation in shared activities and communication between  $t_1$  and  $t_2$ . Similarly, externalizing problems appeared to lower adolescents' feelings of closeness to fathers. Active fathering at  $t_1$  was associated with lower externalizing problems at  $t_2$ , but the coefficient only approached significance. In contrast, the results for internalizing problems and grades showed clear evidence of reciprocal effects. On the one hand, internalizing problems at  $t_1$  appeared to lower participation in shared activities, the amount of communication with fathers, and closeness to fathers between  $t_1$  and  $t_2$ . On the other hand, fathers' participation in shared activities and communication at  $t_1$  appeared to lower adolescents' internalizing problems between  $t_1$  and  $t_2$ . Similarly, adolescents' grades appeared to increase the frequency of shared activities and communication, whereas fathers' shared activities and communication

appeared to improve children's grades. Although child effects were more numerous (eight of the nine associations were significant), evidence of father effects also was apparent (four of the nine associations were significant). Comparing Tables 4 and 5 indicates that the size of the coefficients reflecting child effects tended to be larger in resident father families than in nonresident father families. This pattern suggests that child effects may be stronger among resident than nonresident fathers.

## DISCUSSION

The link between nonresident father involvement and children's well-being has implications for theory and policy. Most family scholars assume that positive father involvement in two-parent families provides important benefits to children--an assumption supported by a large number of studies (Marsiglio et al. 2000).

Correspondingly, many scholars--and various local, state, and federal programs--assume that the positive involvement of nonresident fathers has comparable benefits for children (Lamb 1999; Braver 1998). Many studies show that positive aspects of the nonresident father-child relationship are linked to multiple dimensions of children's well-being (Amato and Gilbreth 1999). Yet, the possibility exists that these links are due to child effects rather than father effects. Is active fathering by nonresident fathers a cause or a consequence of adolescent adjustment and well-being?

We explored this question using nationally representative data from the 1995 and 1996 waves of the Add Health data set. In cross-sectional analyses, a latent variable comprised of contact, shared activities, communication, and feelings of closeness was related to adolescents' externalizing problems, internalizing problems, and academic

achievement in the anticipated direction. This finding is consistent with our first hypothesis and congruent with prior literature suggesting that the active involvement of nonresident fathers is associated with generally positive outcomes among children and adolescents.

Contrary to our second hypothesis, however, fathers' payment of child support was not associated with adolescent outcomes in general. This finding appears to contradict several prior studies (Graham, Beller, and Hernandez 1994; King 1994; Knox and Bane 1994). This discrepancy may be due to two factors. First, most studies of child support have focused on children younger than adolescents. It is possible that nonresident fathers' economic contributions are more consequential when children are young and the family's financial situation is more precarious--that is, before unmarried mothers become established in the labor force or remarry. This conclusion is consistent with King and Sobolewski (2006) who found no association between the payment of child support and most measures of well-being in a sample of older children. Second, our measure of child support was limited, given that it was based on a simple dichotomy reflecting whether fathers generally paid child support. Unfortunately, the data set lacked information on the regularity of child support payments and whether fathers paid the full amount awarded. This limitation may have attenuated the associations between child support and adolescent well-being in our study.<sup>8</sup>

Our main goal was to estimate cross-lagged paths between active fathering by nonresident fathers and three forms of adolescent well-being using two waves of data. Contrary to our third hypothesis, the paths from active fathering at  $t_1$  to adolescent well-

being at  $t_2$  were not significant for any outcome. These findings provide no support for a father effects perspective. Consistent with our fourth hypothesis, however, the paths from adolescent well-being at  $t_1$  to active fathering at  $t_2$  were significant for two outcomes and showed a consistent trend for the third. These findings suggest that nonresident fathers are especially likely to be involved with adolescents who exhibit few behavior problems, have positive moods, and are doing well in school. This pattern supports a child effects perspective in which nonresident fathers maintain close attachments to well-adjusted adolescents and disengage from troubled adolescents. Although this is the first study we know of to test for child effects in a sample of children with nonresident fathers, our results are consistent with past research that demonstrates a tendency for both resident fathers and stepfathers to decrease their levels of involvement when teenagers are troubled or hostile (Anderson et al. 1999; Sheeber et al. 1998).

To provide a comparison, we also estimated cross-lagged effects between resident fathers and adolescents. In contrast to the analysis of nonresident fathers, these analyses suggest that active parenting among resident parents has the potential to lower internalizing behaviors and raise grades among adolescent offspring. At the same time, we found evidence that adolescent well-being affects the involvement of resident fathers. These findings suggest that adolescents and resident fathers (in contrast to nonresident fathers) are engaged in reciprocal patterns of influence. Presumably, the fact that nonresident fathers do not share a household with their children lessens their influence and makes them more reactive to children's behavior. Our tentative conclusion, therefore, is that fathers influence their adolescent children (and vice versa) as long as they live in

the same household. When fathers and adolescents live in different households, however, the system of mutual influence breaks down and children become the dominant force in the relationship.

Our findings may disappoint many observers--scholars as well as policy-makers--who wish to see nonresident fathers maintain close ties with their children. It is important to keep in mind, however, that the present study is based on a sample of *adolescents*. Adolescents, compared with younger children, have a considerable degree of autonomy in their choice of relationships. It is not surprising, therefore, to find evidence of child effects in this age group. Poorly-adjusted adolescents can shut nonresident fathers out of their lives either by making themselves unavailable--for example, by canceling visits--or by making visits uncomfortable and aversive for fathers. Adolescents who are involved in delinquent activities and are failing classes are likely to spend more time with peers than with parents and other family members. These adolescents may limit contact with their fathers to avoid confrontations about their behavior and school performance. In contrast, well-adjusted adolescents may seek out time with their fathers. Correspondingly, fathers are likely to be drawn to successful, happy children and enjoy spending time with them. Our focus on adolescents, therefore, may account for why child effects were common, not only among nonresident fathers, but also among resident fathers.

Although our study shows no evidence of nonresident father effects, it does not follow that state-funded programs for nonresident fathers are a waste of taxpayer money. It is possible, for example, that father effects are stronger among young children than adolescents. In contrast to adolescents, young children are more dependent on their

parents and are less likely to have adopted stable trajectories of antisocial behavior or school failure. Consequently, the active involvement of caring and supportive nonresident fathers may be beneficial for these children. To examine this possibility, we encourage researchers to estimate cross-lagged effects between fathers and offspring using samples of children in the preschool or primary school years. It is also likely that adolescents value having close ties to nonresident fathers, even if these ties do not directly translate into high scores on scales of well-being. For example, a study by Fabricius (2003) found that a majority of young adults with divorced parents reported that they deeply regretted the loss of contact with their fathers. Weak ties with nonresident fathers, therefore, may result in a degree of emotional pain for adolescents, but not necessarily make them more prone to delinquency, increase their symptoms of depression, or lower their grades.

Moreover, even if active father involvement does not improve the well-being of adolescents, the maintenance of a strong father-adolescent relationship may benefit offspring in the long run. Parent-child relationships take on new significance as children make the transition to adulthood--a time when youth leave home, complete their educations, form career plans, become economically independent, and begin their own families. During these critical years, offspring receive many potential benefits from parents, including emotional support; companionship; advice with educational plans, jobs, homes, and family life; practical assistance with everyday tasks, such as child care; and money for special purchases, such as down payments on a car or home. These transitional years have become more difficult in recent decades due to declining wages for young men, the rising cost of housing, and the increasing cost of a college education

(Amato and Booth 1997). Correspondingly, the length of time that youth are economically and emotionally dependent on parents has increased in recent decades (Furstenberg 2000). Because the early adult years present many challenges, and because parents represent a key resource for making the transition to adulthood, having strong ties with *both* parents is likely to benefit offspring over the life course.

Our findings suggest that socialization researchers should incorporate child effects into their theoretical and empirical models. For example, a great deal of research has shown that interparental conflict is associated with a variety of problems among children (Amato and Booth 1997; Davies and Cummings 1994). These models rarely consider the possibility that children with behavioral or mental health problems place stress on the marital relationship. Similarly, research has suggested that parents' emotional distress and use of poor coping strategies have deleterious consequences for children (Bynum and Brody 2005; Elder 1974). These studies would benefit from considering the influence of children's misbehavior on parents' distress and ability to cope with daily stressors. More generally, researchers would gain from conceptualizing socialization as a process of reciprocal influence in which children shape their parents' child-rearing styles just as parents shape their children's behavior.

Like all studies, our study contains some notable limitations. First, our independent and dependent variables were derived from interviews with adolescents. Our study would have been stronger if data on fathering and child outcomes came from independent sources. Second, it is possible that omitted variables may have affected active parenting on the part of nonresident fathers as well as adolescent outcomes,

resulting in the observation of spurious associations. Although it is impossible to discount this possibility, we attempted to minimize it by controlling for a broad range of child, father, and family characteristics. Finally, we stress that our study--based on survey data--cannot establish the causal direction between variables with certainty. All we can claim is that our results for nonresident fathers are more consistent with a child effects perspective than with a father effects perspective.

In conclusion, our study contributes to a growing literature that suggests the importance of child effects in understanding parent-child relationships. Although child developmentalists have increasingly incorporated child effects into their conceptual and empirical models, sociologists have rarely incorporated this notion into their models of socialization. Our findings suggest that low levels of adolescent well-being may be a barrier to, rather than a result of, nonresident father involvement. It would be premature, however, to conclude on the basis of one study that nonresident fathers do not play an important role in their children's lives. Given the theoretical and policy implications of our findings, it is critical that other researchers replicate our results with other samples, especially samples of younger children, as well as samples of older youth who no longer live with either parent.

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## NOTES

1. In the Add Health data, for example, grades in Wave 1 significantly predict high school graduation, college attendance, and college graduation six to seven years later in Wave 3 (analyses not shown).
2. Adolescents without sample weights were not part of the nationally representative portion of the Add Health survey.
3. All resident fathers in this sample are married to the resident biological mothers of the adolescents.
4. We utilized a simple dichotomous variable, rather than the amount in dollars, because the amount of the award is related to the socioeconomic status of the nonresident father (Sorensen 1997).
5. Although it is possible that some adolescents inflated reports of their grades, Dornbusch and colleagues (1987) found a correlation of .76 between high school students' self-reported grades and official grade point averages.
6. We also tested the hypothesis that nonresident father involvement has more beneficial consequences for sons than for daughters in both our cross-sectional and longitudinal analyses using multiple group models. In one analysis, we constrained the path coefficients to be identical for sons and daughters. In a second analysis, we allowed the path coefficients for sons and daughters to vary. Comparing the chi-square values of these two sets of models provided no evidence that the association between active fathering and adolescent well-being differed by adolescent gender in any of the analyses.
7. The analyses included the same control variables with the exception of those that are

relevant only for nonresident fathers (child support, adolescent born in marriage, ever lived with father, years since lived with father, stepfather in home, and nonresident mother). The results for nonresident fathers did not change when we restricted the control variables to the same subset employed for resident biological fathers.

8. Other researchers have relied on the monetary worth of payments (Graham, Beller, and Hernandez 1994; Knox and Bane 1994). In supplementary analyses not reported earlier, we replaced the dichotomous measure of *whether* fathers paid with a measure reflecting the *amount* that fathers paid. The results based on the second measure, however, were identical to those based on the dichotomous variable.

Table 1. Descriptive Statistics for All Variables Used in the Analyses of Nonresident Biological Fathers

Variables	Wave 1			Wave 2		
	<i>M</i>	<i>SD</i>	<i>Alpha</i>	<i>M</i>	<i>SD</i>	<i>Alpha</i>
<i>Father involvement</i>						
Contact	2.11	1.50	.70	1.95	1.43	.68
Activities	.18	.25	.71	.11	.19	.61
Communication	.42	.40	.77	.35	.39	.76
Closeness	3.08	1.44	----	3.01	1.46	----
Child support	.57	----	----	----	----	----
<i>Adolescent well-being</i>						
Nonviolent delinquency	.29	.32	.78	.23	.29	.77
Violent behavior	.26	.35	.81	.15	.28	.82
Substance use	.22	.31	.84	.25	.32	.83
Depressive symptoms	.42	.44	.84	.41	.43	.84
Negative outlook	1.01	.68	.70	.98	.68	.72
Low self-esteem	1.92	.59	.82	1.84	.58	.85
English grade	2.76	1.03	----	2.73	.93	----
Math grade	2.69	1.14	----	2.59	.97	----
Social studies grade	2.94	1.18	----	2.75	.94	----
Science grade	2.90	1.19	----	2.64	.97	----
<i>Adolescent variables</i>						
Age	15.89	1.63	----	----	----	----
Female	.53	----	----	----	----	----
<i>Race/ethnicity</i>						
White	.62	----	----	----	----	----
Black	.25	----	----	----	----	----
Hispanic	.10	----	----	----	----	----
Asian	.02	----	----	----	----	----
Native American	.01	----	----	----	----	----
Born in marriage	.60	----	----	----	----	----
Ever lived with father	.80	----	----	----	----	----

Years since lived with father	9.49	5.36	----	----	----	----
<i>Family variables</i>						
Father education	5.75	3.00	----	----	----	----
Father born in U.S.	.91	----	----	----	----	----
Mother education	5.49	2.47	----	----	----	----
Mother born in U.S.	.93	----	----	----	----	----
Nonresident mother	.09	----	----	----	----	----
Stepfather in home	.22	----	----	----	----	----
Closeness to mother	4.57	.77	----	----	----	----

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*Notes:*  $N = 3,394$  in Wave 1 and Wave 2 (unweighted).  $M$  = Mean or proportion;  $SD$  = Standard deviation. Standard deviations are not shown for proportions. Means and standard deviations are weighted. In the longitudinal analyses, all of the adolescent and family variables (control variables) came from Wave 1; therefore, Wave 2 values are not shown.

Table 2. Unstandardized and Standardized Coefficients for the Regression of Adolescent Well-Being on Active Fathering in Wave 1:

Nonresident Biological Fathers

Independent variables	<u>Externalizing problems</u>			<u>Internalizing problems</u>			<u>Academic achievement</u>		
	<i>b</i>	<i>(SE)</i>	<i>beta</i>	<i>b</i>	<i>(SE)</i>	<i>beta</i>	<i>B</i>	<i>(SE)</i>	<i>beta</i>
Active fathering	-.02**	(.01)	-.09	-.03***	(.01)	-.12	.05*	(.02)	.08
Child support	.03	(.04)	.07	.03	(.04)	.05	-.06	(.11)	-.04
Age	.01**	(.00)	.08	.03**	(.01)	.13	.01	(.01)	.02
Female	-.11***	(.02)	-.25	.13***	(.02)	.22	.29***	(.05)	.19
Race/ethnicity									
White	----	----	----	----	----	----	----	----	----
Black	-.01	(.02)	-.02	-.01	(.02)	-.01	-.18**	(.06)	-.10
Hispanic	.12***	(.03)	.17	.06	(.03)	.05	-.06	(.11)	-.03
Asian	.02	(.04)	.02	.11	(.06)	.05	-.07	(.16)	-.01
Native American	.03	(.04)	.01	.09	(.10)	.03	.05	(.22)	.01
Born in marriage	-.02	(.02)	-.04	-.02	(.02)	-.03	.14*	(.06)	.09
Ever lived with father	.08***	(.02)	.13	.05	(.03)	.06	-.09	(.06)	-.05
Years since lived with father	.00	(.00)	.08	.00	(.00)	.07	-.01*	(.01)	-.08
Father education	-.00	(.00)	-.05	.00	(.00)	.03	.02*	(.01)	.07
Father born in U.S.	.02	(.03)	.02	-.06	(.04)	-.06	-.13	(.07)	-.05
Mother education	-.05	(.06)	-.06	-.06	(.07)	-.05	.05*	(.02)	.02
Mother born in U.S.	-.01	(.01)	-.05	-.01*	(.00)	-.08	.04***	(.01)	.13
Nonresident mother	.02	(.02)	.02	.06*	(.03)	.06	.07	(.07)	.03

Stepfather in home	-.03*	(.01)	-.06	.00	(.02)	.01	.05	(.05)	.03
Closeness to mother	.08**	(.03)	.09	.03	(.03)	.02	.09	(.12)	.03
$R^2$		.13***			.12***			.10***	

Notes:  $N = 3,394$ . For overall model,  $\chi^2 = 1,505.9$  ( $df = 235$ );  $CFI = .92$ ;  $RMSEA = .03$ .

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$  (two-tailed).

Table 3. Cross-Lagged Associations between Active Fathering and Adolescent Well-Being in Waves 1 and 2: Nonresident Biological Fathers

	<u>Externalizing problems</u>			<u>Internalizing problems</u>			<u>Academic achievement</u>		
	<i>b</i>	( <i>SE</i> )	<i>beta</i>	<i>b</i>	( <i>SE</i> )	<i>Beta</i>	<i>B</i>	( <i>SE</i> )	<i>beta</i>
Active fathering $t_1 \rightarrow$ Active fathering $t_2$	.76***	(.02)	.80	.75***	(.02)	.79	.76***	(.02)	.80
Well-being $t_1 \rightarrow$ Well-being $t_2$	.52***	(.04)	.64	.73***	(.03)	.73	.77***	(.02)	.79
Active fathering $t_1 \rightarrow$ Well-being $t_2$	.00	(.01)	.00	.00	(.01)	.00	.00	(.02)	.01
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.24*	(.11)	-.05	-.17 <sup>a</sup>	(.10)	-.06	.08*	(.03)	.05
$\chi^2$ ( <i>df</i> )	1,512.13 (239)			1,108.42 (239)			1,025.51 (300)		
<i>CFI</i>	.91			.93			.94		
<i>RMSEA</i>	.04			.03			.03		

Notes:  $N = 3,394$ . All models control for variables shown in Table 2.

\*  $p < .05$ . \*\*\*  $p < .001$ . <sup>a</sup> $p = .09$  (two-tailed).

Table 4. Cross-Lagged Associations between Dimensions of Active Fathering and Adolescent Well-Being in Waves 1 and 2:

Nonresident Biological Fathers

	<u>Externalizing problems</u>			<u>Internalizing problems</u>			<u>Academic achievement</u>		
	<i>b</i>	( <i>SE</i> )	<i>beta</i>	<i>b</i>	( <i>SE</i> )	<i>beta</i>	<i>b</i>	( <i>SE</i> )	<i>beta</i>
<i>Father contact</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	-.01	(.01)	-.01	.00	(.01)	.00	.01	(.01)	.01
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.36**	(.14)	-.05	-.24*	(.11)	-.05	.13**	(.05)	.07
$\chi^2$ ( <i>df</i> )	628.81 (81)			374.75 (83)			302.70 (132)		
<i>CFI</i>	.91			.95			.96		
<i>RMSEA</i>	.05			.03			.02		
<i>Father shared activities</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	.01	(.02)	.02	.01	(.03)	.01	.02	(.01)	.02
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.06**	(.02)	-.07	-.06**	(.02)	-.10	.02	(.01)	.05
$\chi^2$ ( <i>df</i> )	636.40 (81)			373.10 (83)			303.10 (132)		
<i>CFI</i>	.90			.94			.95		
<i>RMSEA</i>	.05			.03			.02		
<i>Father communication</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	-.01	(.03)	-.01	.00	(.01)	.01	.01	(.01)	.04
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.06	(.04)	-.04	-.04	(.04)	-.03	.03*	(.01)	.05
$\chi^2$ ( <i>df</i> )	635.06 (81)			368.74 (83)			308.99 (132)		
<i>CFI</i>	.90			.94			.95		
<i>RMSEA</i>	.05			.03			.02		

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<i>Father emotional closeness</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	-0.01	(.02)	-0.01	.01	(.01)	.01	-0.01	(.01)	-0.01
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.44**	(.16)	-.06	-.16	(.12)	-.03	.05	(.05)	.03
$\chi^2$ ( <i>df</i> )	610.02 (81)			375.33 (83)			308.99 (132)		
<i>CFI</i>	.91			.95			.96		
<i>RMSEA</i>	.04			.03			.02		

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*Notes:*  $N = 3,394$ . All models control for variables shown in Table 2. Standardized stability coefficients: .63 (father contact), .81 (father shared activities), .55 (father communication), .66 (father emotional closeness), .65 (externalizing problems), .73 (internalizing problems), and .79 (academic achievement).

\*  $p < .05$ . \*\*  $p < .01$  (two-tailed).

Table 5. Cross-Lagged Associations between Dimensions of Active Fathering and Adolescent Well-Being in Waves 1 and 2:

Resident Biological Fathers

	<u>Externalizing problems</u>			<u>Internalizing problems</u>			<u>Academic achievement</u>		
	<i>b</i>	( <i>SE</i> )	<i>beta</i>	<i>b</i>	( <i>SE</i> )	<i>beta</i>	<i>B</i>	( <i>SE</i> )	<i>beta</i>
<i>Father shared activities</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	-.08 <sup>a</sup>	(.05)	-.08	-.05*	(.02)	-.07	.12**	(.05)	.11
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.08*	(.04)	-.09	-.12*	(.05)	-.12	.17**	(.05)	.11
$\chi^2$ ( <i>df</i> )	233.25 (56)			438.54 (56)			355.56 (97)		
<i>CFI</i>	.94			.96			.95		
<i>RMSEA</i>	.03			.05			.03		
<i>Father communication</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	-.04	(.06)	-.03	-.04*	(.02)	-.05	.13*	(.06)	.09
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.10**	(.04)	-.10	-.22**	(.06)	-.17	.30**	(.05)	.25
$\chi^2$ ( <i>df</i> )	238.70 (56)			448.97 (56)			333.92 (97)		
<i>CFI</i>	.94			.97			.95		
<i>RMSEA</i>	.03			.05			.03		
<i>Father emotional closeness</i>									
Active fathering $t_1 \rightarrow$ Well-being $t_2$	-.04	(.05)	-.04	-.03	(.04)	-.04	.04	(.04)	.02
Well-being $t_1 \rightarrow$ Active fathering $t_2$	-.08**	(.03)	-.07	-.09*	(.04)	-.07	.04	(.04)	.02
$\chi^2$ ( <i>df</i> )	259.73 (56)			471.57 (56)			341.18 (97)		
<i>CFI</i>	.95			.97			.96		
<i>RMSEA</i>	.03			.05			.02		

*Notes:*  $N = 3,394$ . All models control for adolescents' age, gender, and race-ethnicity; fathers' and mothers' education and nativity; and mother-adolescent relationship closeness. Standardized stability coefficients: .68 (father shared activities), .53 (father communication), .94 (father emotional closeness), .70 (externalizing problems), .70 (internalizing problems), and .71 (academic achievement).

\*  $p < .05$ . \*\*  $p < .01$  <sup>a</sup>  $p = .10$  (two-tailed).

Figure 1. Cross-Lagged Model of Active Fathering and Adolescent Well-Being

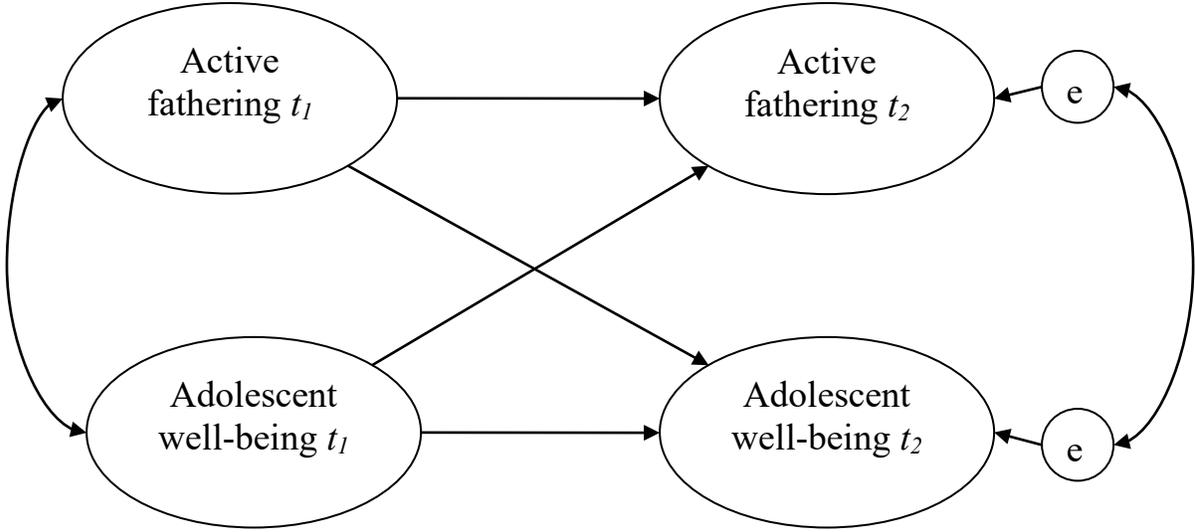
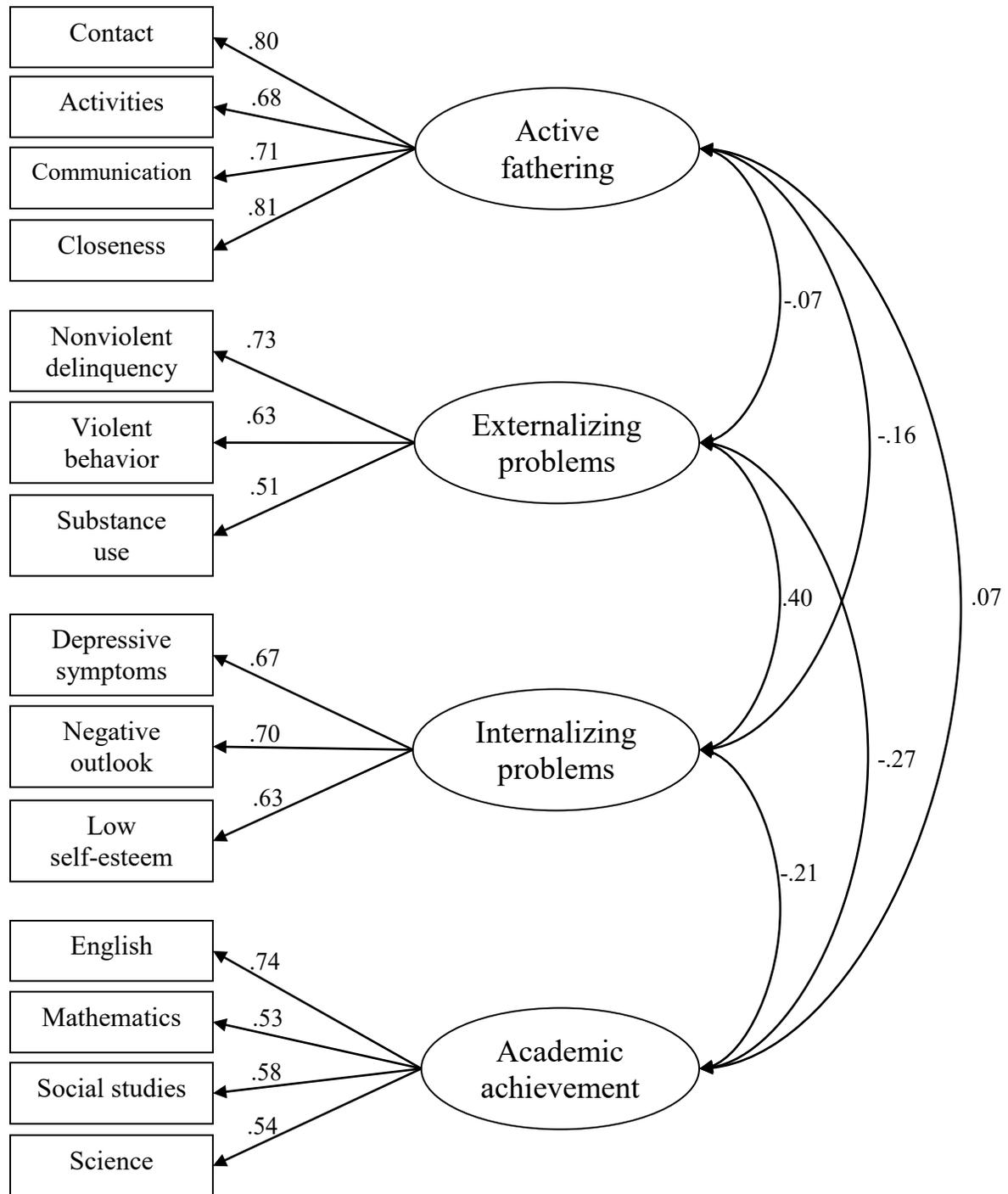


Figure 2. Measurement Model for Latent Constructs Used in the Analyses of Nonresident Biological Fathers in Wave 1



Notes:  $N = 3,394$ ;  $\chi^2 = 309.19$  ( $df = 71$ );  $CFI = .96$ ;  $RMSEA = .03$ .

All coefficients are significant ( $p < .05$ ; two-tailed)

## Appendix A. Survey Items for Central Independent and Dependent Variables

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### Active fathering

#### *Contact* ( $\alpha = .70$ )

In the last 12 months, about how often have you stayed overnight with your biological father?

In the last 12 months, about how often have talked to him in person or on the telephone, or received a letter from him?

(0 = *not at all*; 1 = *once or twice*; 2 = *several times*; 3 = *about once a month*; 4 = *about once a week*; 5 = *more than once a week*)

#### *Activities* ( $\alpha = .71$ )

Which of the following things have you done with your biological father in the past four weeks? (0 = *no*; 1 = *yes*)

Have you gone shopping?

Have you played a sport?

Have you gone to a religious or church-related event?

Have you gone to a movie, play, museum, or sports event?

Have you worked on a project for school?

#### *Communication* ( $\alpha = .77$ )

Which of the following things have you done with your biological father in the past four weeks? (0 = *no*; 1 = *yes*)

Have you talked about someone you're dating, or a party you went to?

Have you talked about your school work or grades?

Have you talked about other things you're doing in school?

#### *Closeness*

How close do you feel to your biological father?

(1 = *not close at all*; 2 = *not very close*; 3 = *somewhat close*; 4 = *quite close*; 5 = *extremely close*)

### Externalizing problems

#### *Nonviolent delinquency* ( $\alpha = .78$ )

In the past 12 months, how often did you...

(0 = *never*; 1 = *1 or 2 times*; 2 = *3 or more times*)

...paint graffiti or signs on someone else's property or in a public place?

...deliberately damage property that didn't belong to you?

...lie to your parents or guardians about where you had been or whom you were with?

...take something from a store without paying for it?

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- ...drive a car without its owner's permission?
  - ...steal something worth more than \$50?
  - ...go into a house or building to steal something?
  - ...sell marijuana or other drugs?
  - ...steal something worth less than \$50?
  - ...act loud, rowdy, or unruly in a public place?

*Violent behavior* ( $\alpha = .81$ )

In the past 12 months, how often did you...

(0 = never; 1 = 1 or 2 times; 2 = 3 or more times)

- ...get into a serious fight?
- ...hurt someone badly enough to need bandages or care from a doctor or nurse?
- ...use or threaten to use a weapon to get something from someone?
- ...take part in a fight where a group of your friends was against another group?
- ...have a knife or gun pulled on you?
- ...get into a physical fight?
- ...get jumped?
- ...pull a knife or gun on someone?

*Substance use* ( $\alpha = .84$ )

During the past 30 days, on how many days did you smoke cigarettes?

(0 = 0 to 4 days; 1 = 5 or more days)

During the past 30 days, on the days you smoked, how many cigarettes did you smoke each day? (0 = 0 or 1 cigarettes; 1 = 2 or more cigarettes)

During the past 12 months, on how many days did you drink alcohol?

(0 = never to 2 days; 1 = 3 or more days)

Over the past 12 months, on how many days did you drink five or more drinks in a row?

(0 = never to 2 days; 1 = 3 or more days)

Over the past 12 months, how many days have you gotten drunk or "very high" on alcohol? (0 = never to 2 days; 1 = 3 or more days)

During the past 30 days, how many times did you use marijuana?

(0 = none; 1 = once or more)

Internalizing problems

*Depressive symptoms* ( $\alpha = .84$ )

How often was each of these things true during the past week?

(0 = never or rarely; 1 = sometimes; 2 = a lot of the time, most of the time, or all of the time)

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You were bothered by things that usually don't bother you.  
You felt that you could not shake off the blues, even with help from your family and friends.  
You felt depressed.  
You thought your life had been a failure.  
You felt lonely.  
You felt sad.  
You felt life was not worth living.

*Negative outlook* ( $\alpha = .70$ )

How often was each of these things true during the past week?  
(0 = a lot of the time, most of the time, or all of the time; 1 = sometimes; 2 = never or rarely)

You felt that you were just as good as other people.  
You felt hopeful about the future.  
You were happy.  
You enjoyed life.

*Low self-esteem* ( $\alpha = .82$ )

Please tell me whether you agree or disagree with the following statements.  
(1 = strongly agree; 2 = agree; 3 = neither agree nor disagree; 4 = disagree)

You have a lot of good qualities.  
You have a lot to be proud of.  
You like yourself the way you are.  
You feel like you are doing just about everything right.  
You feel socially accepted.  
You feel loved and wanted.

Academic achievement

What was your grade in...  
(1 = D or lower; 2 = C; 3 = B; 4 = A)  
...English or language arts?  
...mathematics?  
...history or social studies?  
...science?

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