ORIGINAL ARTICLE

Young, Disadvantaged Fathers' Involvement With Their Infants: An Ecological Perspective

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Purpose: To investigate fathers' involvement with their children using an ecological model, multiple respondents, and a comprehensive definition of fathers' involvement. The study's primary objectives were: (a) to describe the characteristics of fathers whose infants are born to low-income, urban, African-American adolescent mothers; (b) to describe the ways in which fathers are involved with their children; and (c) to identify factors associated with fathers' involvement.

Methods: A total of 181 first-time mothers (aged <18 years) living in three-generation households (infant, mother, and grandmother) were recruited from three urban hospitals shortly after delivery and invited to participate in a longitudinal study of parenting. Mothers provided the name of their infant's father; 109 (60%) of the fathers also agreed to participate. Baseline interviews of mothers, fathers, and grandmothers addressed demographic characteristics, relationships, and the father's involvement with his child.

Results: Three multivariate regression models were used to identify factors associated with paternal involvement, explaining 35% to 51% of the variability in father involvement. Regardless of the respondent (mother, father, or grandmother), paternal involvement was predicted most strongly by the quality of the parents' romantic relationship. The father's employment status, the maternal grandmother's education, and the father's

relationship with the baby's maternal grandmother were also associated with paternal involvement.

Conclusions: The study confirmed the value of an ecological perspective that uses multiple informants and a comprehensive definition of father involvement that includes multiple role functions. Efforts to increase paternal involvement should help young parents separate the father's relationship with their child from the romantic relationship between the mother and father, address the roles played by maternal grandmothers, and assist fathers to complete their education, and obtain and keep jobs. © Society for Adolescent Medicine, 2002

KEY WORDS: Adolescents Young fathers Teen mothers Grandmothers Parenting

Despite recent declines in teen pregnancy rates [1], the negative effects of adolescent pregnancy on the 500,000 children who are born each year to teen mothers in the United States remain an important public health concern. Children born to adolescent mothers suffer from more health problems, such as low birth weight, lower cognitive development and academic achievement, higher rates of behavioral problems, a greater probability of living in poverty, and an increased risk of becoming an adolescent parent themselves [2–4].

However, preliminary research has shown that paternal involvement can improve many of these outcomes. Studies among low-income, urban, African-American families illustrate links between fa-

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Manuscript accepted January 23, 2002.

thers' roles and their children's behavior and development. When fathers are satisfied with parenting, contribute financially to the family, and are nurturant during play, their 3-year-old children have better cognitive and language competence and fewer behavior problems [5]. In one of the few longitudinal studies that followed the children of adolescent mothers into their own adolescence, youth who had a close relationship with their father were more likely to enter college or find stable employment after graduating from high school, less likely to have a child before age 19 years, and less likely to experience depressive symptoms [6]. These findings support a growing recognition of the need to better understand the role played by the fathers of babies born to adolescent mothers, and to identify ways to support fathers' sustained involvement with their children [7,8].

An improved understanding of father involvement may be especially important among African-American adolescents. Despite recent declines, African-American adolescents are 2.5 times more likely to give birth than non-Hispanic white adolescents [1] and are far more likely to be unwed at the time of birth [9]. The frequency with which young, unwed fathers see their children and provide financial support declines rapidly over the early years of a child's life [6,10,11].

Existing research has several methodologic limitations. The definition of "involvement" often focuses on financial contributions, with limited attention to other dimensions of a father's involvement [12]. Many studies rely exclusively on the mother's report of the father's behavior, without validation by the father's [12]. Finally, most research uses measures that were developed for studying residential, married fathers, and which do not reflect the unique circumstances of nonresidential, unwed fathers of babies born to low-income, urban, African-American adolescent females.

Conceptual Framework

The conceptual framework of this study consists of an ecological approach, which recognizes the importance of cultural, environmental, and social systems on human behavior [13]. Within the ecological model, Harkness and Super [14] have introduced the concept of a "developmental niche" within which children grow and develop. The niche is comprised of three components: ethnotheories of parenting, physical and social setting; and psychology of the

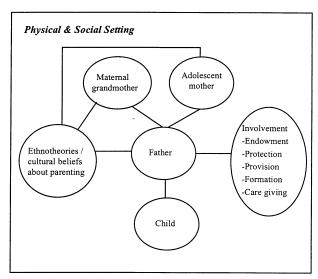


Figure 1. Conceptual framework: The paternal niche. Adapted from Harkness and Super [14] and Belsky [15].

child's caregivers. We extended this framework to the conceptualization of a "paternal niche" within which young men develop into fathers; and we added the contribution that the child makes on the process [15] (Figure 1).

Ethnotheories of Fatherhood

Ethnotheories, or cultural beliefs, are parents' understandings about the nature of fatherhood, the structure of fathers' responsibilities, and the meaning of fathers' behavior [16]. Ethnotheories relate to parental behavior (e.g., in the ways parents talk to and discipline children) because they embody beliefs about what parents "should" do in a given culture and therefore inform parents about what is expected [16].

Physical and Social Setting

Characteristics of the physical and social setting include a consideration of who spends time with, and cares for, the child, the father's non-child-related activities, and where and under what circumstances the father and child spend time together. It also includes structural characteristics such as access to education and jobs, or the presence of persistent poverty, racism, and discrimination. Income and/or employment status are central constructs because, as Wilson [17] maintains, joblessness in the inner city results in low incomes for black men, men with low incomes are less likely to get married, and low rates

of marriage contribute to the disengagement of black men from family life. As economic stability increases, fathers are more likely to be employed and involved [18–20].

The Psychology of the Child's Caregivers

Psychological characteristics of the child's caregivers and the nature of their relationships may influence a father's involvement with his child. For example, mothers sometimes play a gatekeeping role, either supporting or inhibiting a father's involvement with his child [20–23]. One of the few studies that looked at adolescent parents (albeit Caucasian) reported that fathers interact more positively with their infants when there is a high level of mother–father engagement [24].

Maternal grandmothers may also play a gatekeeping role owing to their central position in the lives of adolescent mothers and their children. The majority of African-American adolescent mothers continue to reside with the baby in the home of the maternal grandmother [9,25], who often assumes traditionally parental roles such as financial provision and assistance with caregiving [26-29]. Fathers reside elsewhere, often with their own family of origin [11], and as a result, often end up being relatively powerless in determining their "rights" to their child [30,31]. Welfare reform adopted in the late 1990s is likely to increase this trend, given the requirement that adolescent mothers live with a parent, legal guardian, or other adult relative if they wish to receive financial benefits [32].

Child's Contribution

Characteristics of the child are the physical and behavioral traits that the child displays and that elicit parental reactions. For example, many fathers are more involved with sons than with daughters [33,34].

Definition of Involvement

The roles played by fathers, like other social roles, vary from culture to culture and among subcultures [22,35]. The definition of involvement in this study incorporated five paternal functions that are common in many cultures, although the relative importance of each varies by culture: *endowment*, acknowledging the child as one's own; *protection*, protecting the child from sources of potential danger and con-

tributing to decisions that affect the child's welfare; *provision*, ensuring that the child's material needs are met; *formation*, socialization activities, such as discipline and teaching; and *caregiving*, meeting the physical needs of the baby by feeding, diapering, bathing, and so on [36,37].

The study's primary objectives were to describe the characteristics of fathers whose infants are born to low-income, urban, African-American adolescent mothers; to describe the ways in which fathers are involved with their children; and to identify ecological factors from the "paternal niche" that are associated with paternal involvement. The theoretical framework provides the basis to test four hypotheses: (a) paternal involvement will be positively associated with the father's income; (b) fathers who are romantically involved with the baby's mother will be more involved with the child; (c) fathers who have a positive relationship with the baby's maternal grandmother will be more be involved with the child; and (d) fathers of male children will be more involved than fathers of female children.

Methods

Sample

Adolescent first-time mothers of 181 infants were recruited following delivery from three urban hospitals in Baltimore, Maryland. Eligibility requirements included that the mother be aged <18 years, coreside with her own mother (the baby's maternal grandmother), be low-income (eligible for the Special Supplemental Nutrition Program for Women, Infants, and Children [WIC]), be African-American, and that the child be healthy and delivered after a full-term pregnancy with birth weight appropriate for gestational age and no chronic illnesses or disabilities.

Procedures

At recruitment, mothers were asked for contact information regarding her mother and the baby's father. Interviews with the mother and maternal grandmother were conducted in the mother's home 2–4 weeks postpartum and interviews with the father were conducted in the father's home. Adolescent mothers completed the questionnaires on a laptop computer in which questions were presented aurally through headphones and visually on the screen, and responses were recorded with a mouse [38]. Grandmothers and fathers completed struc-

tured questionnaires in a face-to-face interview with a research assistant. All research assistants were African-American and were trained to ensure consistency in presentation of the questions and recording of the responses. A time interval of 4.4 weeks (standard deviation [SD] = 5.6) separated the mother's and father's interviews, and the mean age of the infants at the time of the father's interview was 6.8 weeks (SD = 5.8).

Measures of paternal involvement, paternal demographics, and the romantic relationship between the mother and father were administered to mothers and fathers. Measures of the relationship between the father and maternal grandmother were administered to both the father and grandmother. All subjects provided written consent, following procedures approved by the Institutional Review Boards at the Johns Hopkins University, Bloomberg School of Public Health, and the University of Maryland at Baltimore. Approximately 60% of the fathers (n = 109) were interviewed. The remaining 72 fathers were not interviewed either because the mother refused permission to contact him (10), the father refused to participate (11), the father could not be located (27), the father was in jail or prison (12), the father lived out of state (7), the mother was raped (2), or other reasons (4).

Measures

Paternal involvement. The outcome variable, paternal involvement, was adapted from a measure by Radin [36]. Modifications to the original instrument were based on the conceptual framework and findings from extensive ethnographic research among 19 families that was conducted prior to the study. For example, the original instrument had only three of the five paternal functions from our conceptual model, and it assumed the parents cohabited. We therefore modified the instrument to add items measuring the missing functions (endowment and provision), and asked how often the father sees the baby rather than how often the spouse is away from home on weekends. We also added items that better describe the ways in which young, unwed fathers provide financial support to the baby (e.g., child support, provide diapers, baby equipment or clothing, etc.).

The final measure was comprised of 16 questions representing six components: endowment, protection, caregiving, provision, formation, and general involvement. Fourteen items had dichotomous responses (0–1) and each of the two general involve-

ment questions had Likert-scale responses (0–3). Involvement scores were formed by summing responses, such that the highest degree of involvement had the highest score, with a range of 0–20. A composite involvement score was formed by summing the mother and father scores (range 0–40). Reliability analysis yielded Cronbach alphas of .73 for the fathers' responses, .78 for the mothers' responses, and .81 for the combined responses.

Father's income. Income and employment were used as indicators of the physical and social setting within which fathers lived. Fathers were asked whether they had received money from any of the following sources in the previous month: family, job, selling/delivering drugs, social services/welfare, other. Fathers were also asked whether they were currently employed, and whether they had been employed in the past 12 months. Mothers were asked the same questions in reference to the father.

Romantic relationship between adolescent mother and baby's father. The quality of the mother and father's romantic relationship was selected as one aspect of the paternal niche, the psychology of caregivers. The Dyadic Adjustment Scale (DAS) assessed the quality of the mother's and father's romantic relationship [39]. Two subscales were used (Dyadic Satisfaction and Dyadic Cohesion) because they were most relevant to noncohabiting couples. Questions addressed the respondents' relationship (e.g., how often they consider breaking up, confide in each other, quarrel, kiss, do things together, etc.). The 15 questions had Likert scale responses (0-5), which were summed so that the highest score indicated the greatest degree of satisfaction and cohesion, with a range of 0-74. The internal consistency was high, with Cronbach alphas of .89 and .91 for the father's and mother's report, respectively.

Maternal grandmother and father's relationship. A second aspect of the paternal niche's psychology of the caregivers was the quality of the father's relationship with his baby's maternal grandmother. Their relationship was assessed by three subscales from the Network of Relationships Inventories (NRI): Enhancement of Worth, Conflict, and Annoyance [40]. Nine questions were asked about their relationship (e.g., "How much does the maternal grandmother like or approve of the things you do?" "How much do you get on each other's nerves?") with answers ranging from "not often/never" ("0") to "always" ("4"). Scores were summed, reverse coding when

necessary, with high scores representing more positive relationships. Internal consistency was high, with Cronbach alphas of .81 for the maternal grandmothers' report and .89 for the fathers' report.

Child's contribution. The child's gender was examined as one aspect of the child's contribution towards paternal involvement. Information about the child's gender was obtained from hospital records.

Demographics. All respondents were asked their date of birth, the highest grade of school they had completed, and whether they were currently enrolled in school. Information about the baby's date of birth was obtained from hospital records.

Data Analysis

Initial sample size calculations, based on Danziger and Radin's [18] study of young unwed fathers, indicated that a sample size of 112 households would detect a difference of 5 points on a 20-point scale of father involvement, with a 95% confidence level.

Standard univariate, bivariate, and multivariate analytic procedures were used to examine patterns of involvement. Univariate analyses included the use of frequencies, histograms, and summary statistics to assess measures of central tendency and variability. When more than one item was used to define a variable, each item was summarized separately before the indices were compiled and summarized. Reliability coefficients, using Cronbach alphas, were generated for all indices. Standard bivariate analyses were conducted to identify factors associated with paternal involvement. A Pearson product moment correlation (r) was calculated for continuous variables. The Student's *t*-test for independent samples was used to detect significant differences between independent means, the paired Student's t-test was used to test for significant differences between pairs, and the Chi-square test was used to test for differences between proportions. A p value < .05 was used to indicate a statistically significant association between two variables. The multivariate technique of sequential linear regression was used because the dependent variable of paternal involvement was continuous and normally distributed. The covariates were infant age, parental ages, and the education levels of the father, mother, and grandmother. They were chosen because they have been associated with paternal involvement in previous investigations [6,11,18].

Since we obtained information from both fathers

and mothers, we compared their reports on similar measures using paired Student's *t*-tests. A unique aspect of this study is that we were able to obtain data from the mothers about the 72 fathers who did not participate in the father interview, thereby allowing a comparison of fathers who were and were not interviewed.

Results

Characteristics of Fathers

Table 1 summarizes characteristics of the study population. The mothers' and fathers' reports were not significantly different with regard to several father characteristics (i.e., father's age; education; whether married to the baby's mother; and history of being in jail, prison, or reform school), nor with the scores on the NRI, the DAS, and paternal involvement. There were small, but significant, reporting differences with regard to whether the father lived with the mother (11.3% vs. 6.6%), whether the father was currently enrolled in school (60.4% vs. 49.1%), whether this was the father's first child (88.6% vs. 78.6%), and whether the father had held a job in the past 12 months (62.4% vs. 48.6%).

There was no significant difference in the educational and employment history of fathers who were and were not interviewed (Table 1). However, fathers who were not interviewed were older; less likely to be enrolled in school; more likely to have sold/delivered drugs; and more likely to have been in jail, prison, or reform school (i.e., were higher risk). Maternal grandmothers reported a less supportive relationship with the fathers who were not interviewed as noted by a lower score on the NRI. Adolescent mothers reported having a less satisfying romantic relationship with the fathers who were not interviewed and reported that these fathers were less involved with their children.

Father Involvement

Table 2 summarizes the ways in which the fathers were involved with their children. It presents the proportion of all fathers who performed each of the 16 paternal behaviors, as reported by the father and by the mother. Mothers and fathers tended to agree on the father's frequency of visitation, endowment, protection, caregiving, and formation functions. The correlation between mothers' and fathers' reports was .331 (p < .01) and a paired Student's t-test indicated no significant difference between them.

Table 1. Characteristics of Study Participants

	Fathers Who Were I	Fathers Who Were Not Interviewed (n = 72)	
Characteristics	I Father report ^a M (SD) or n (%)	II Mother/Grand- mother Report M (SD) or n (%)	III Mother/Grandmother Reportb M (SD) or n (%)
Age at baseline (years)			
Father	18.6 (2.4)	18.2 (2.4)	19.7 (2.6)***
Adolescent mother	n.a.	16.3 (0.9)	16.4 (0.9)
Maternal grandmother	n.a.	39.0 (5.2)	38.4 (4.2)
Education (years completed)		0 × 10 (0 1 <u>—</u>)	()
Father	10.5 (1.3)	10.5 (1.6)	10.9 (1.3)
Adolescent mother	n.a.	10.1 (1.4)	10.2 (1.1)
Maternal grandmother	n.a.	12.0 (1.9)	11.9 (1.8)
Married to baby's mother	1 (1.2)	1 (1.2)	2 (2.1)
Father lives in same home with baby's mother	12 (11.3)***	7 (6.6)	3 (4.3)
Father currently enrolled in school	66 (60.4)*	54 (49.1)	14 (19.7)***
Father has only one child	97 (88.6)***	86 (78.6)	51 (70.7)
Father sold/delivered drugs in past 12 months	_	8 (7.3)	14 (19.7)***
Father ever sold/delivered drugs ^c	39 (35.8)		_
Father held a job in past 12 months	68 (62.4)***	53 (48.6)	32 (44.8)
Father ever in jail, prison, or reform school	48 (43.8)	38 (35.2)	39 (54.5)**
Network of Relationships Inventory score (scale = $0-4$)	3.0 (0.8)	3.2 (0.6)	3.0 (0.6)*
Dyadic Adjustment Scale Score (scale = 0-74)	47.6 (14.2)	49.4 (15.9)	37.5 (19.8)**
Paternal involvement score (scale = 0-20)	15.1 (3.5)	14.8 (4.1)	8.6 (6.5)***

^{*} p < .05; ** p < .01; *** p < .001.

A comparison of fathers who were interviewed to those who were not interviewed indicated significant differences for all paternal behaviors except for payment of court-ordered child support, with noninterviewed fathers less involved in all five paternal functions as well as the general statement of involvement.

Factors Associated With Involvement

We first examined demographic variables to determine their relationship with paternal involvement. There were three significant correlations: between infant age and two measures of paternal involvement (i.e., the mother's report of involvement and the composite involvement score), and between maternal grandmother's education and father's report of his involvement. All three associations were weakly correlated, with no correlation greater than .300.

We next examined relationships among indepen-

dent variables, and found relatively low, but significant correlations among several independent variables. The mothers' DAS score was related to the fathers' DAS score ($r=.240,\ p<.05$) and the mothers' report of the fathers' sources of income ($r=.269,\ p<.01$). The fathers' DAS score was related to their relationship with the maternal grandmother ($r=.250,\ p<.01$). The grandmother's report on the NRI was inversely related to the father's sources of income ($r=-.251,\ p<.05$). Similarly, the correlations between the independent variables and the covariates (i.e., DAS with caregivers' ages and education) were relatively low, with no correlation greater than -.377 (p<.01).

Examination of the independent and dependent variables showed significant correlations between the dependent variable and the DAS (from .417, p < .01, for father-reported data, and .677, p < .01, for mother-reported data) as well as the father's report on the NRI (.259, p < .05). Fathers who were employed or had been employed in the past 12 months

^a Significance level indicates comparison between paternal and maternal report among the 109 mother-father pairs.

^b Significance level indicates comparison between the maternal report when father was interviewed (n = 109) and the maternal report when the father was not interviewed (n = 72).

^c The question about drug selling/delivery was worded slightly differently in the mother and father questionnaires; thus, the responses are not directly comparable.

Table 2. How Fathers Were Involved With Their Children

	Fathers Who W (n = N	Fathers Who Were Not Interviewed $(n = 72)^{a}$ N (%)		
Paternal Behaviors	Father's Report ^b	Mother's Report	Mother's Report ^c	
General statement/frequency of contact				
How involved father is with baby				
Very uninvolved	13 (11.9) ^d	26 (24.8)	25 (36.8) ^e **	
Uninvolved	3 (2.8)	7 (6.4)	9 (13.2)	
Involved	20 (18.3)	11 (11.0)	13 (19.1)	
Very involved	71 (65.1)	63 (57.8)	21 (30.9)	
How often father has seen baby in past 2 weeks	, ,	, ,	, ,	
0–2 times per week	24 (22.0) ^e ***	24 (21.9)	44 (64.7) ^e ***	
3–4 times per week	33 (30.3)	16 (14.7)	14 (20.6)	
5–7 times per week	52 (47.7)	69 (63.3)	10 (14.7)	
Endowment	, ,	, ,	, ,	
Father's name listed on baby's birth certificate	97 (88.9) ^f	105 (96.3)	46 (69.7) ^e ***	
Father involved in selecting child's name	84 (77.1) ^f	89 (81.7)	33 (48.5) ^e	
Baby was given father's last name	96 (88.1) ^f	94 (86.2)	47 (68.1) ^e	
Protection	, ,	, ,	, ,	
Father involved in decision whether to keep the child	74 (67.9) ^e	92 (84.4)	41 (56.5) ^e	
Father attended at least one prenatal visit, childbirth class, or attend, labor/delivery	83 (76.1) ^f	93 (85.3)	27 (37.7) ^e ***	
Father involved in decision of whether to breast- or bottle- feed baby	55 (50.0) ^e	49 (45.4)	17 (25.0) ^e **	
Provision				
Father is paying court-ordered child support	12 (11.0) ^f	13 (11.9)	7 (10.4) ^e	
Father and/or his family have provided: diapers/pampers, equipment (stroller, high chair, crib) or clothes/shoes	104 (95.4) ^f	95 (87.2)	27 (39.1) ^e ***	
Father and/or his family has given the mother money for the baby (not through formal child support)	85 (78.0) ^d	63 (57.8)	24 (35.3)e**	
Formation	00 (00 0) f	05 (05 0)	24 (40 2) 0444	
Father has comforted the baby when baby was upset	99 (90.8) ^f	95 (87.2)	34 (49.3) ^e ***	
Father has played with baby (e.g., jiggled or talked playfully)	106 (97.2) ^f	98 (89.9)	40 (58.8) ^e	
Caregiving				
Father has fed the baby in the past 2 weeks	95 (87.2) ^f	93 (85.3)	29 (42.6) ^e ***	
Father has changed the baby's diaper Father has held child in the past 2 weeks	81 (74.3) ^{e***} 101 (92.7) ^f	77 (70.6) 102 (93.6)	23 (33.8) ^e 40 (58.0) ^e	

^a Number varies from 68 to 72 depending upon the mother's knowledge of the father's involvement.

^b Significance level indicates comparison between paternal and maternal report among the 109 mother–father pairs.

were more involved than those who were not employed (p < .01 and p < .05, respectively). There was no significant difference in mean scores of father involvement when the child's gender was compared.

Sequential regression was used to determine if the addition of the hypothesized independent variables improved prediction of father involvement over and above that afforded by the covariates of age and education. It was assumed that there may be differences between mothers' and fathers' reports of paternal behavior, and that an understanding of these differences may lead to a better interpretation of studies using a single source of data (i.e., only the mother or only the father). For this reason, three regression models were tested using the 109 cases in which father, mother, and maternal grandmother reports were available. The first model used only those dependent and independent variables that were reported by the father. In the second model, the dependent variable was the father involvement score

c Significance level indicates comparison between the maternal report when father was interviewed (n = 109) and the maternal report when the father was not interviewed (n = 72).

^d A χ^2 test indicated no difference by respondent.

^e A χ^2 test indicated difference by respondent: * p < .05; ** p < .01; *** p < .001.

^f A χ^2 could not be calculated because at least one cell had an expected count <5.

Table 3. A Comparison of	Output From Three Regres	sion Models: Father Report	, Mother/Grandmother Report,
Composite ($n = 109$)		-	-

Variable	Model One: Father		Model Two: Mother/Grandmother		Model Three: Composite	
	В	β	В	β	В	β
DAS (F)	1.79***	.500			1.49**	.230
DAS (M)			2.61***	.684	3.60***	.626
NRI (F)					1.17*	.149
Father is employed (yes/no)	1.26*	.177				
Grandmother's education	.371*	.204				
Intercept	4.60*		6.20***		9.54***	
R^2	.366		.468		.519	
Adjusted R ²	.346		.463		.505	

^{*} p < .05; ** p < .01; *** p < .001.

as reported by the mother, and *only* those independent variables that were reported by the mother or maternal grandmother were included. In the third model a composite father involvement score (i.e., the sum of the mother's and father's report) was used as the dependent variable, while the independent variables were those reported by mother, father, and maternal grandmother.

Separate Models

The Model One column of Table 3 summarizes the results of the regression analysis for the model in which only father-reported variables were used. Altogether, 35% (adjusted) of the variability in father involvement was predicted by the father's score on the DAS (i.e., the quality of his romantic relationship with the baby's mother), whether he was currently employed, and the maternal grandmother's education. Maternal grandmother's education. Maternal grandmother's education was included in the model because it was significant, but other covariates (age of mother, father, maternal grandmother, baby; education of mother, father) were not included owing to lack of significance.

The Model Two column of Table 3 summarizes the results of the regression analysis for the model in which only mother- and grandmother-reported variables were used. Altogether, 46% (adjusted) of the variability in father involvement was predicted by the mother's score on the DAS (i.e., the quality of her romantic relationship with the baby's father). The covariates described above were not included in the model because they were not significant. This analysis was also conducted for the 72 cases in which the father was not interviewed. The results were very similar, with the mother's report of the DAS explaining 53% of the variability (adjusted R²).

Composite Model

The Model Three of Table 3 summarizes the results of the regression analyses for the composite model. With all independent variables in the equation, 51% (adjusted) of the variability in father involvement was predicted by the two variables measuring the parents' romantic relationship and the variable measuring father's relationship with his child's maternal grandmother. Owing to lack of significance, none of the covariates was included.

Discussion

This study provides support for broadening the definition of paternal involvement beyond financial provision and the use of an ecological perspective for the investigation of human behavior [13], and illustrates the strengths of using multiple informants. When the definition of paternal involvement is broadened to include functions other than financial provision, we see that many young, disadvantaged fathers are involved in the early care of their children. Many study fathers acknowledged the child as their own and were involved in endowment functions such as selecting the child's name. They were involved in decisions affecting the child's welfare and participated in child care tasks such as diapering, feeding, and holding their child. Most provided some form of financial support even if they were not making payments to the state-run child support enforcement program, and they contributed by comforting and playing with their baby.

The study results also provide support for the notion of a paternal niche [14]. First, the quality of the father's relationship with his child's mother was a significant determinant of paternal involvement. It

F = father reported; M = mother reported; G = grandmother reported; DAS = Dyadic Adjustment Scale (parents' romantic relationship); NRI = Network of Relationships Inventory (father–grandmother relationship).

is not surprising that a breakdown in the romantic relationship between parents can pose a barrier to a father's involvement with his child. Our findings confirm previous qualitative research regarding the central role that romantic relationships play in paternal involvement [23,26,29].

Second, the findings also provide support for the gatekeeping role that has been described among maternal grandmothers [26–29]. Fathers were more involved in households in which maternal grandmothers had higher levels of education and reported a positive relationship with the baby's father. Bettereducated grandmothers may have a broader vision of children's needs and more readily see the advantage of having fathers involved. In turn, fathers who feel welcomed by the child's maternal grandmother may be more involved in their child's care, thereby internalizing the expectations that define a paternal role.

Third, the physical and social setting, as measured by the father's employment status, contributed to paternal involvement. Previous research that showed father's employment status is associated with father involvement is confirmed [17,18]. There are strong cultural expectations that a father, regardless of his age, will provide financial support; something that is clearly easier to do when there is a source of income [41]. This study was conducted very shortly after the child's birth, during the period when the excitement and novelty of having a new child are at their peak. It is likely that the influence of the father's employment will become even stronger after this period has ended and the additional burdens caused by a new child are more keenly felt (e.g., as the costs of day care are incurred).

The fourth component of the paternal niche, the child's gender, was not associated with paternal involvement. This finding appears to contradict other findings [33,34], which indicated that fathers were differentially involved with sons over daughters. However, this study was conducted when the children were still infants (the mean age of the infants was 6.8 weeks), and the fulfillment of this aspect of the paternal role may not become significant until the children are older and gender roles are more apparent.

The study provides important information about the use of multiple informants in research on father involvement. We expected that including fathers' report on their involvement would provide a perspective that would differ from maternal report. However, in this investigation, there was little difference between paternal and maternal reports. This lack of difference may reflect a consensus between the respondents and be specific to paternal involvement immediately after birth. As others have suggested [12], the paternal perspective is often missing in research on fathers. Additional research in other contexts is needed to assess the adequacy of maternal reports on father involvement when fathers are not available.

All three regression models identified the DAS as the most important factor associated with paternal involvement, but distinctive patterns appeared in each model. For example, the model using father-reported data showed that grandmaternal education and father's employment were also associated with involvement. The composite model showed that the quality of the relationship between the father and the maternal grandmother influenced involvement. Given that each model represents a different perspective of "reality," it is likely that all these findings are relevant to an understanding of father involvement.

This study also provides useful information about how to interpret other studies of fathers. The comparison of fathers who were interviewed to those who were not suggests that fathers who are *not* interviewed differ in important ways from those who are interviewed. They are older, less likely to be enrolled in school, more likely to be engaged in high-risk behaviors, and to be less involved with their baby and their baby's mother. Thus, the generalizability of results from such studies is restricted to those who agreed to be interviewed, while other efforts will be needed to understand fathers who are more difficult to reach.

The study design had several strengths as well as several limitations. Identifying the sample at the time of a child's birth makes the study results more generalizable than studies that identify a sample on the basis of some father characteristic (e.g., participation in a service program, or on the basis of high-risk behavior). The use of multiple informants was a major strength because it validated reports from a single source and provided additional insights. However, the fathers were interviewed an average of 4.4 weeks after the mothers. This interval may have highlighted the discordance between the mother and father reports since circumstances may have changed for the parents during the several weeks between their interviews (i.e., there may have been a change in job status or in their romantic relationship). The study was cross-sectional and as such cannot identify direction of causality; for example, it is possible that lower levels of paternal involvement caused a deterioration of the romantic relationship rather than the reverse situation. Further, earlier studies have shown that young, unwed fathers' involvement decreases with the child's age [6,11]. Longitudinal studies are needed to confirm the direction of effects and to identify factors that explain declines in paternal involvement over time.

The study also suggests future areas of research. Future research should continue to use multiple respondents in longitudinal study designs. The regression model using father-reported data explained the smallest amount of variance, which suggests the need to investigate other factors that influence involvement from the father's perspective. For example, Rhein et al. [41] found that the individual-level factor of paternal "disinterest" was the strongest predictor of paternal involvement. Future research may need to investigate other aspects of the paternal niche, such as the father's psychology (e.g., father's knowledge of child care and development, selfesteem, depression, and parenting self-efficacy) and other aspects of the physical and social setting (e.g., social support, peer influence, and risk behavior).

In summary, this study confirms the value of ecologically based research using multiple informants and a comprehensive definition of involvement. Young fathers face many barriers to their involvement with their child, but by bolstering components of the paternal niche, service providers can help fathers achieve and maintain high levels of involvement.

This research could not have been completed without the contribution of many people, most importantly the fathers, mothers, and maternal grandmothers who generously agreed to answer many, many questions about their personal lives. We also are deeply indebted to our very gifted interviewers, Adele and Jennifer Israel.

Support for this research was provided by The Gerber Company Foundation, grant APR PA000974 from the Office of Population Affairs, and grant MCJ-240301 from the Maternal and Child Health Program (Title V, Social Security Act), Health Resources and Services Administration, U.S. Department of Health and Human Services.

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