

DAVID M. ALMEIDA *University of Arizona*

ELAINE WETHINGTON *Cornell University*

DANIEL A. McDONALD *University of Arizona*

Daily Variation in Paternal Engagement and Negative Mood: Implications for Emotionally Supportive and Conflictual Interactions

This study used an ecological perspective to examine how daily variation in the time fathers spend in child-care activities was related to emotionally supportive or conflictual father-child interactions and whether fathers' negative mood moderated these associations. Data for the present analyses were from 2 daily diary studies. Both studies asked fathers to report about their daily experiences with their children, including how much time they spent with them and whether or not they had any supportive interactions or conflictual interactions. The first study used daily self-report questionnaires from a sample of fathers in rural upstate New York, and the second study used daily telephone interviews from a national sample of fathers. Results from a series of hierarchical linear models showed that fathers were more likely to have supportive and conflictual interactions on days when they spent more time engaged in child-care activities. The association between time with children and conflictual interactions was greater on days when fathers were in a negative mood. Negative mood did not moderate the association between time with children and emotionally supportive interactions. The

findings from this study suggest that when fathers spend more time with their children they are more likely to engage in supportive interactions, regardless of negative mood.

Public conceptions of the role of fathers in the family have shifted from viewing fathers primarily as breadwinners and disciplinarians to recognizing fathers as active and nurturing participants in all aspects of childrearing (Lamb, 1997). This public emergence of the "new fatherhood" has prompted researchers to examine how fathers' involvement in the day-to-day care of their children affects the quality of father-child relations. Indeed, several researchers have proposed that spending time taking care of children provides fathers with opportunities to display affection and to nurture their children (Almeida & Galambos, 1991; Coltrane, 1996; Ishii-Kuntz, 1994; Lamb, 1997). Increased contact may also open the door to more father-child conflicts (Almeida & Galambos, 1991). In this article we apply an ecological perspective on parenting and examine the relationship between the quantity of time fathers spend engaged in direct father-child activities and the likelihood of their having emotionally supportive or conflictual interactions with their children. We

Division of Family Studies, University of Arizona, P.O. Box 210033, Tucson, AZ 85721-0033.

further investigate the moderating effect of fathers' negative mood on these associations.

Although the new fatherhood has welcomed many highly committed men who have embraced their parenting role, some fathers have retreated from their family obligations, becoming what Gerson (1993) labels "autonomous men." We believe that examining the amount of time fathers spend with their children is critical in understanding the father-child relationship. As Larson and Richards (1994) aptly state, "the minutes and hours of people's everyday lives are the arena in which family warmth is created—or family problems take shape and build steam" (p. 8). Although the quantity of interaction alone does not indicate the quality of the father-child relationship (Lamb, 1997; Marsiglio, 1991; Palkovitz, 1997), research has shown that increased time spent in routine child-care activities is related to fathers' enhanced self-confidence and competence as providers of emotional support to their children (Coltrane, 1996). We argue that researchers must attend to both the duration of father involvement and the context and quality of the activities that occupy fathers' time (Daly & Dienhart, 1998). To that end, the present study extends previous research by examining how daily variation in the time fathers spend in child-care activities is related to the type and form of day-to-day father-child interactions.

QUALITY VERSUS QUANTITY OF INVOLVEMENT

Although some researchers find no relationship between the quality and quantity of father-child interactions (Grossman, Pollack, & Golding, 1988; Lamb, 1997), Aldous, Mulligan, and Bjaranson (1998) contend that both the frequency and form of father-child interactions play an important role in the social, emotional, and cognitive development of children. According to Parke (1996), what fathers do and how they do it, or more specifically, the quality of fathers' interactions with their children, is a vital component of paternal involvement that promotes children's healthy development. Children who experience nurturing, warm, and supportive relationships with their fathers score higher on measures of psychological and social competence compared to those who do not experience such close relationships (Lamb, 1997; Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Furthermore, the types of activities in which fathers and children engage are likely to facilitate positive development. For instance, most of the time that fathers spend with their children

involves leisure or recreational activities (Lamb, 1997; Marsiglio, 1991; Robinson & Godbey, 1997), which allow fathers to display and manage their own emotions as well as react to their children's display of emotions. In this way, the fathers' emotional regulation is likely to influence the socioemotional development of the children (Parke, 1996).

The amount of father involvement may also be an important predictor of child well-being. For the purpose of this study, we examine one aspect of involvement, paternal engagement, that is, the "direct interaction with the child, in the form of caretaking, or play or leisure" (Pleck & Stueve, 1997, p. 3). For fathers of young children (ages 3–5 years), estimates of paternal engagement range from about 2 hours on weekdays to about 6.5 hours on Sundays (Pleck, 1997). Paternal engagement is negatively related to the child's age (Aldous et al., 1998; Barnett & Baruch, 1987; Gjerde, 1986) such that by the time they reach adolescence, children in two-parent families spend an average of 1.25 hours each day in the company of their fathers (Larson, 1998). The figures just presented, although still low in comparison to the time mothers spend with their children, reflect an increase over the past several decades in the amount of time fathers devote to their children (Parke, 1996; Pleck, 1997).

Our position is that paternal engagement plays a vital role in father-child relations and that gaining competence in parenting skills is the result of repeated practice and experiences rather than of the innate possession of such a trait (Almeida & Galambos, 1991; Coltrane, 1996). Classic formulations of the ecological perspective (e.g., Bronfenbrenner, 1979) postulate that time spent in interaction with children leads to joint activities, which in turn fosters the development of the child's and the parent's competence and of the relationship itself. Lamb (1997) argues that development of close father-child relationships is the result of ample interactions that enhance fathers' sensitivity, itself a skill, and their self-confidence. Thus, spending time engaged in direct interaction with their children allows fathers to learn about and become more sensitive to the needs of their children, to grow in competence and self-confidence in their paternal role, and to develop the necessary skills to fulfill that role. In this way, we argue, quantity of involvement (i.e., paternal engagement) may presage quality of involvement.

In a study of fathers and their adolescent children, Almeida and Galambos (1991) showed that

time taking care of or doing things with children predicts increases in parental warmth over a 6-month period. As fathers participate more in the day-to-day activities of their children's lives, they develop closer relationships with their children, and children become more likely to seek out their fathers for emotional support (Coltrane, 1996). At the same time, there is greater opportunity for more frequent conflictual interactions (Almeida & Galambos, 1991). For instance, children of more highly participant fathers perceived them as more punitive than the children of those fathers who participated to a lesser degree (Coltrane, 1996). This finding may reflect the more routine, day-to-day responsibilities incumbent upon the role of parent, such as providing appropriate discipline and behavioral regulation for children. We hypothesize that fathers' engagement with their children will be positively associated with both emotionally supportive interactions and conflictual interactions.

NEGATIVE MOOD AND FATHER ENGAGEMENT

Although engagement in activities with their children, such as caretaking or play, may provide fathers with opportunities for nurturing as well as conflictual interactions, we propose that fathers' emotional state is likely to play a role in determining the quality and quantity of father-child interactions. Several studies suggest that when fathers are experiencing psychological distress, they are more likely to be unresponsive, inattentive, and even hostile toward their children (Conger et al., 1993; DeLuccie & Davis, 1991; McBride, 1989). Further evidence of the impact of fathers' psychological distress on father-child relations comes from research on emotional transmission in families (Larson & Almeida, 1999). The emotional state of fathers upon arriving home from work has been shown to be associated with father-child interactions (Repetti, 1989). Negative emotional arousal may manifest itself through more conflictual interactions between father and child (Larson & Pleck, 1997). According to the ecological perspective, such situations may be caused by a pile-up of both work and home stress, thus leading to a greater likelihood of father-child tensions (Almeida & McDonald, 1998). In a different study of daily stressors, fathers were more than twice as likely to report conflicts with their children on days they experienced stressors due to work overload or home demands compared to days they did not experience such stressors (Almeida, Wething-

ton, & Chandler, 1999). In this study we explore the extent to which a father's negative mood moderates the associations of paternal engagement with emotionally supportive and conflictual interactions. We hypothesize that on days when fathers are in a bad mood, engagement with children will decrease the likelihood of emotionally supportive interactions and increase the likelihood of conflictual interactions.

DAILY DIARY APPROACH

Much of the empirical support for the link between paternal engagement and father-child relations has relied on cross-sectional studies (Baruch & Barnett, 1986; Ishii-Kuntz, 1994; Marsiglio, 1993). The present study extends this analysis by examining father-child engagement, emotionally supportive interactions, and conflictual interactions on a *daily*, short-term longitudinal basis. Whereas most other studies have only considered between-father differences in the level of engagement and relations with children, we examine how daily variation in engagement *within* fathers is associated with their daily interactions with their children. This daily approach to examining father involvement affords the researcher several benefits that cannot be easily achieved through the use of standard designs. First, daily measurement helps resolve the retrospective recall problem by allowing fathers to report about involvement and interactions with their children much closer to the time that they occur. Second, the daily design is especially useful in capturing information about the dynamics of involvement that appear static in traditional cross-sectional designs. By establishing within-person covariation between involvement and father-child interactions over time, this intra-individual approach allows the researcher to rule out temporally stable personality and environmental variables as third-variable explanations for the relationship between duration of engagement and quality of father-child interactions. Third, the intensive longitudinal aspect of this design permits an examination of how engagement is associated with changes in father-child interactions from one day to the next.

Through the use of daily questionnaires and interviews, we examined the co-occurring fluctuations of paternal engagement and negative mood on the one hand with emotionally supportive and conflictual interactions on the other hand. Specifically, we addressed the following research questions: (a) Are fathers more likely to have both

emotionally supportive and conflictual interactions with their children on days when they spend more time directly engaged with each other? (b) Does negative mood moderate the associations of engagement with emotionally supportive and conflictual interactions? and (c) To what extent are paternal engagement and the moderating effect of mood predictive of *changes* in emotionally supportive and conflictual interactions?

METHOD

Data for the present analyses came from two daily diary studies. Both studies asked fathers to report their daily experiences with their children, including how much time they spent with them and whether or not they had any supportive interactions or tense interactions. The first study used daily self-report questionnaires from a sample of fathers in rural upstate New York, and the second study used daily telephone interviews from a national sample of fathers.

Study 1: Design and Sample

Data from the first study were obtained from a short-term longitudinal survey administered in the summer of 1990. The sample was a random selection of household telephones in a rural county in upstate New York. The respondents selected for inclusion were married or cohabiting couples and single parents residing in noninstitutionalized housing. In households containing couples, both members were asked to participate. Of the eligible respondents contacted by phone, 85% (160) elected to take part in the study. If couples were recruited, the interviewer also spoke to the second partner. Members of couples were instructed at recruitment to "record only their own opinions" and keep their reports confidential from each other. A few days after recruitment, staff sent an initial questionnaire (the "baseline") to each respondent; the baseline assessed demographic characteristics, household structure, quality of family and friend relationships, other social support, well-being, symptoms of depression and anxiety, attitudes toward the roles of men and women at work and home, and recent stressors. After the respondents returned the baseline questionnaire, a second questionnaire—a 7-day daily diary—was mailed to them. The diary instructed respondents to begin on the next Sunday. The diaries were timed to arrive on Friday or Saturday. Once again, the instructions repeated the pledge

of confidentiality and requested that couples keep their diaries separate from one another and not discuss their reports. Of the 160 baseline respondents, 98 (61%) returned the completed diary.

The participants for the present analyses were the 30 fathers of children under the age of 18 who completed the diary portion of the study. Fathers were on average 35 years old, with children of an average age of 12 years. The children in 12 of the households included in the study consisted entirely of children under age 16, and 3 of those were preschool children only. All of the fathers were married, and 90% were employed at the time of the study, working on average 48.85 hours per week. Of those employed, 38.2% held professional or managerial jobs. The average household income was \$40,118. The average individual earnings for this sample of fathers was \$30,500, and the average level of education attained was 13.5 years ($SD = 2.3$ years). The fathers all completed the diary questionnaire on each of 7 days, permitting the analysis of data from 210 father-days.

Study 1: Measures

The diary packet included seven identical daily questionnaires, one for each day of the week. Fathers answered questions about daily experiences in the previous 24 hours concerning their mood, physical symptoms, daily stressors, appraisal, social support, coping, and interactions with children, as well as hours spent on housework, employment, child care, social activities, and leisure.

Paternal engagement in child care was measured by asking fathers how much time in hours and minutes they spent each day "taking care of children, including helping with homework, playing with them, or driving them around." This item was adapted from the Quality of Employment Survey (Quinn & Staines, 1979). The occurrence of daily *emotional support* was assessed by asking fathers whether or not their child or children had talked to them about a problem or worry. Fathers were given a score of 1 if they reported supportive interactions on that day and a score of 0 if they did not. Similarly, the occurrence of *conflictual interactions* was assessed by asking fathers whether or not they had had an argument or had been upset with their child or children in the previous 24 hours. Again, fathers were given a score of 1 if they reported conflict on that day and a 0 if there was no reported conflict.

Negative mood was measured by the Affects Balance Scale (Derogatis, 1975), an inventory of

18 emotions designed to measure daily level of anxiety (e.g., nervous, tense, afraid), hostility (e.g., irritable, angry, resentful), and depression (e.g., helpless, worthless, depressed). Each day the fathers indicated how strongly they felt about each emotion over the past 24 hours on a 4-point scale from *not at all* to *a lot*. Mean scores were calculated across the 18 emotions on each of the diary days. Cronbach's alpha for the scale was .92.

Study 2: Design and Sample

Respondents from the second study were from the National Study of Daily Experiences (NSDE), one of the in-depth studies that was part of the National Survey of Midlife in the United States Survey (MIDUS) carried out under the auspices of the John D. and Catherine T. MacArthur Foundation Research Network on Successful Midlife (for a description of the MIDUS project, see Mroczek & Kolarz, 1998). Respondents in the NSDE were randomly selected from the MIDUS sample and received \$20 for their participation in the project. Over the course of eight consecutive evenings, respondents completed short telephone interviews about their daily experiences. Data collection spanned an entire year (March 1996 to March 1997) and consisted of 40 separate "flights" of interviews, with each flight representing the 8-day sequence of interviews from approximately 38 respondents. The initiation of interview flights was staggered across the days of the week to control for the possible confounding between day of study and day of the week. Of the 1,242 MIDUS respondents whom we attempted to contact, 1,031 agreed to participate, yielding a response rate of 83%. Respondents completed an average of 7 of the 8 interviews, resulting in a total of 7,221 daily interviews.

The present analysis used the 210 fathers who reported having at least one child aged 18 years or younger in the household. Respondents were on average 38 years old and had 2.4 children with an average age of 11 years. Forty-seven percent of the households reported having at least one adolescent (age 11 years or older) in the household. Eighty-five percent of the fathers were married at the time of the study. The average family income was \$55,000, and the average level of education attained was 14.5 years ($SD = 3.4$ years). This subsample of fathers completed an average of 6.5 interviews, permitting the analysis of data from 1,220 daily interviews.

Study 2: Measures

The second study used daily telephone reports of fathers' daily experiences rather than relying on questionnaires. Telephone interviews permitted more control over the quality of the data collection (e.g., whether the respondent was paying full attention to the diary completion task, whether diaries were completed every day). Data were recorded more completely in phone interviews than self-administered diaries, because the interviewer could ensure that no questions were skipped. Telephone interviewers could also enhance the quality of data by probing incomplete or unclear responses. Finally, administering the survey over the phone permitted rapid feedback about nonresponses such as missed phone appointments, making it possible to implement special efforts to complete the interview. For example, interviewers made extra callbacks to contact a participant who missed an appointment or to implement special refusal conversion procedures.

The daily telephone interview included questions about experiences in the previous 24 hours concerning time use, mood, physical symptoms, productivity and cutbacks, and daily stressors. *Paternal engagement* was measured by asking respondents how much time in hours and minutes they spent each day "taking care of or doing things with your children—such as playing with them, helping them with homework, driving them around, or doing something else with them." This item encompasses a broader definition than the paternal engagement measure from Study 1, incorporating doing things with children as well as taking care of them. The occurrence of daily *emotional support* was assessed by asking respondents whether or not they spent "any time giving emotional support to your children like listening to their problems, giving advice, or comforting them." Respondents were given a score of 1 if they reported such interactions on that day and a 0 if they did not.

Conflictual interactions were assessed through a semistructured Daily Inventory of Stressful Experiences (Almeida, 1998). The inventory consisted of a series of stem questions asking whether certain types of events had occurred in the previous 24 hours along with a set of guidelines for probing affirmative responses. The aim of this interviewing technique was to acquire a short narrative of each stressor that included descriptive information (e.g., topic or content of the stressor, who was involved, how long the stressor lasted)

as well as what was at stake for the respondent. Open-ended information for each reported stressor was tape recorded and then transcribed and coded for several characteristics. In the present article, we analyzed only those events that involved tensions or disagreements with one's children. Respondents were given a score of 1 if they reported child tension on that day and a 0 if there was no reported tension. Two coders rated approximately 20% of the stressors. The interrater reliability for interpersonal tensions was .90.

Negative mood was assessed through an inventory of 10 emotions from the Negative Affect scale designed specifically for the MIDUS survey (Mroczek & Kolarz, 1998). This scale was developed from the following well-known and valid instruments: the Affect Balance Scale (Bradburn, 1969), the University of Michigan's Composite International Diagnostic Interview (Kessler et al., 1994), the Manifest Anxiety Scale (Taylor, 1953), and the Center for Epidemiological Studies Depression Scale (Radloff, 1977). Examples of items include sad, hopeless, anxious, and restless. Each day the respondents indicated how much of the time they had experienced each emotion over the previous 24 hours on a 5-point scale from *none of the time* to *all of the time*. Cronbach's alpha for the scale was .89. Mean scores across the 10 items were computed.

Statistical Model

Hierarchical linear modeling (Bryk & Raudenbush, 1992) was used to examine whether daily engagement in child care and negative mood were associated with daily father-child emotionally supportive and conflictual interactions. These analyses were based on the following model:

$$\begin{aligned} \text{F-C Interaction}_{it} &= b_0 + b_1 \text{Paternal Engagement Hours}_{it} \\ &+ b_2 \text{Negative Mood}_{it} \\ &+ b_3 (\text{Paternal Engagement Hours}_{it} \\ &\quad \times \text{Negative Mood}_{it}) + c_i + d_{it} \end{aligned}$$

where F-C Interaction_{it} represents whether respondent *i* had an emotionally supportive or conflictual interaction on day *t*, Paternal Engagement Hours_{it} is the number of hours respondent *i* spent involved in child care on day *t*, Negative Mood_{it} is the level of negative mood respondent *i* reported on day *t*,

Paternal Engagement Hours_{it} × Negative Mood_{it} is respondent *i*'s score for the interaction effect of Paternal Engagement Hours and Negative Mood on day *t*, *b*₀ is the intercept, *b*₁ through *b*₃ are coefficients defining the effects of Paternal Engagement Hours, Negative Mood, and their interaction on daily Father-Child Interaction, *c*_{*i*} is random variation in the individuals, and *d*_{*it*} is the random variation in the diary days.

Control variables were included in the model to adjust for time-varying correlates of father-child interaction and paternal engagement hours. These included day of the week (six dummy variables) and the linear and quadratic forms of a variable defining the number of days that had elapsed since the respondent first began filling out the diary. We controlled for length of time in the study in order to capture any tendency of respondents to change how they completed the diaries in response to boredom, novelty, or fatigue. Previous research has shown that the number of daily experiences reported by diary respondents declines over time (DeLongis, Folkman, & Lazarus, 1988). Analyses of Study 2 included an additional stable control variable that controlled for whether adolescents were in the household. Age of child has been shown to be an important prediction of father-child interactions including engagement and father-child conflict (Aldous et al., 1998; Almeida & Galambos, 1994). The goals of these analyses were (a) to ascertain whether daily variations in paternal engagement predicted daily variations in nurturing and conflictual interaction, and (b) to investigate whether daily variations in negative mood moderated these associations.

RESULTS

Table 1 presents the description of the variables for weekdays, weekend days, and all of the days for both of the studies. The means for the first two variables represent the percentage of days that fathers reported having emotionally supportive interactions and conflictual interactions. Fathers in the New York sample were more likely to have an emotionally supportive interaction on weekend days than on weekdays ($t(30) = 2.03, p < .05$). The percentage of conflict days, however, did not significantly differ by day of the week in either sample. Across the week, the average father in the New York sample reported between 1 and 2 days in which he had a supportive interaction, whereas the average father from the national sample had a supportive interaction on less than 1 day per week.

TABLE 1. DESCRIPTION OF STUDY VARIABLES

Variable	New York Sample (<i>n</i> = 210 Days)		National Sample (<i>n</i> = 1,220 Days)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Days of emotional support				
Total	0.20	0.24	0.09	0.19
Weekday	0.16	0.35	0.09	0.19
Weekend	0.29	0.46	0.08	0.24
Days of conflictual interactions				
Total	0.14	0.18	0.04	0.09
Weekday	0.15	0.36	0.04	0.11
Weekend	0.13	0.34	0.04	0.16
Hours of paternal engagement				
Total	0.98	0.75	2.60	2.00
Weekday	0.91	1.29	2.13	1.79
Weekend	1.14	1.31	3.94	3.71
Level of negative mood ^a				
Total	1.60	0.38	1.21	0.33
Weekday	1.60	0.35	1.23	0.35
Weekend	1.62	0.42	1.11	0.23

^aRange: 1 (*none of the time*) to 4 (*all of the time*) in the New York sample and 1 (*none of the time*) to 5 (*all of the time*) in the national sample.

The number of conflict days were somewhat less, with just 1 day per week on average in the New York sample and what would translate to approximately 1 conflict day per month in the national sample. The lower incidence of conflict and emotional support in the national sample is most likely due to the more narrow scope of measurement. Fathers in the New York sample reported whether children *sought support*, whereas the fathers in the national sample reported whether they *provided support* to their children. For the conflict measures, the New York study relied solely on fathers' reports of conflict. Such reports could include affective feeling states (i.e., being upset) as well as actual interactions (arguments). The national study used objectively rated criteria for what constituted a conflictual interaction. For example, being upset or angry with a child would not meet the threshold of a conflictual interaction in the national study.

The table also shows that fathers spent between 1 and 2 hours on weekdays and 1 and 4 hours on weekend days in direct involvement taking care of, playing with, or doing things with their children. Fathers in the national sample were more likely to be engaged with their children on weekend days as opposed to weekdays ($t(210) = -5.97, p < .01$). Although not shown in the table, fathers in the national sample who had adolescent children (age 12–18 years) in the household spent less time with their adolescent children than did fathers with only younger children in the house-

hold ($t(210) = 2.53, p < .01$). Finally, fathers' level of negative mood was relatively low in both samples. However, fathers in the national sample were more likely to be in a bad mood on weekdays versus weekend days ($t(210) = 4.01, p < .01$).

Daily Covariation of Paternal Engagement, Negative Mood, and Father-Child Interactions

Two sets of hierarchical linear models assessed whether the daily variation in paternal engagement in child care predicted daily variations in emotionally supportive and conflictual father-child interactions. These models also tested whether fathers' negative moods moderated this relationship. In the first step of each model, paternal engagement hours and negative mood were entered. In the second step, the interaction effect of Paternal Engagement \times Negative Mood was added. Table 2 presents the results for emotionally supportive interactions from both studies. The results for both of the studies show a significant positive effect for paternal engagement hours. On days that fathers spent more time engaged with their children, they were more likely to have emotionally supportive interactions compared to days in which they spent less time with their children. Fathers in the national sample reported higher levels of negative mood on days that they provided emotional support to their children. This was not the case for fathers in the New York sample. In both studies,

TABLE 2. DAILY COVARIATION OF EMOTIONALLY SUPPORTIVE INTERACTIONS WITH PATERNAL ENGAGEMENT HOURS AND FATHER'S NEGATIVE MOOD

	New York Sample (n = 210 Days)				National Sample (n = 1,280 Days)			
	β	SE	R ²	R ² Change	β	SE	R ²	R ² Change
Step 1								
Paternal engagement hours	.18*	.09			.17*	.05		
Negative mood	.12	.08	.10**		.25**	.07		
Adolescent in household	— ^a				-.02	.07	.12**	
Step 2								
Paternal engagement hours \times negative mood	.04	.05	.11**	.01	-.03	.06	.12**	.00

Note: β = Standardized regression coefficient.

^aEffects of adolescent in household were not tested in the New York study because of the small sample size.

* $p < .05$. ** $p < .01$.

the interaction of negative affect and father-child engagement was not significant. This finding suggests that emotionally supportive effects of father engagement are not dependent upon fathers' negative moods.

Table 3 presents the results for conflictual interaction days. Fathers in the national study were more likely to report conflictual interactions with children when an adolescent was in the household. Although not shown in the table, interactions between Adolescent in the Household and the other predictor variables were tested, but none was significant. The small number of households in the New York sample did not permit this analysis. In both samples, paternal engagement hours, negative mood, and their interaction were all significant predictors of conflictual interactions. Although spending more time with children increased the likelihood of having a conflict, this association was moderated by fathers' moods. The nature of this interaction was probed by conducting a median split on the Negative Mood scale and calculating separate models for fathers with

high negative mood (i.e., above the median) and fathers with low negative mood (i.e., below the median). These analyses were conducted on both samples and revealed similar patterns. Figure 1 depicts this moderating effect of mood on the relationship between paternal engagement hours and conflict for fathers in the New York sample. Spending time in direct interaction increased the likelihood of conflict only on days when fathers were in a bad mood. There was little effect of hours of paternal engagement on conflictual interactions on days that fathers were not in bad moods.

Of course, a question can be raised about the temporal ordering of these relationships. It could very well be that having emotionally supportive interactions leads fathers to become involved with their children. Likewise, the previously reported moderating effect of negative mood on the relationship between involvement and conflict could happen because having a conflict is likely to put fathers in a negative mood. One way to assess this issue is to examine whether child-care hours and

TABLE 3. DAILY COVARIATION OF CONFLICTUAL INTERACTIONS WITH PATERNAL ENGAGEMENT HOURS AND FATHER'S NEGATIVE MOOD

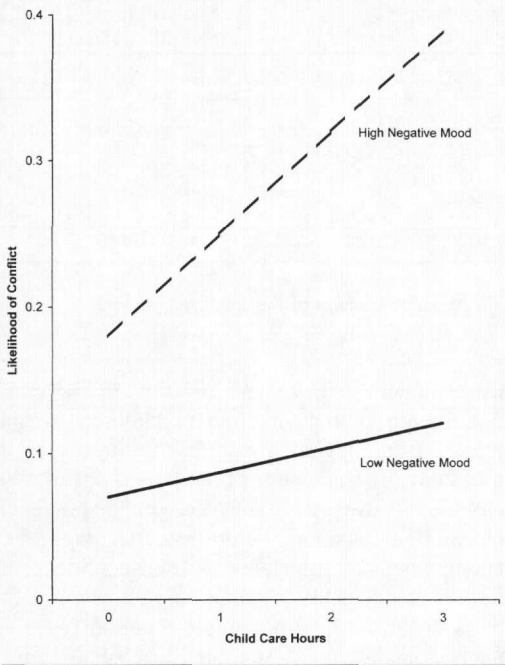
	New York Sample (n = 210 Days)				National Sample (n = 1,280 Days)			
	β	SE	R ²	R ² Change	β	SE	R ²	R ² Change
Step 1								
Paternal engagement hours	.16*	.07			.13*	.05		
Negative mood	.28**	.08	.24**		.17**	.05		
Adolescent in household	— ^a				.17**	.06	.18**	
Step 2								
Paternal engagement hours \times negative mood	.17*	.08	.28**	.04*	.12*	.05	.21**	.03*

Note: β = Standardized regression coefficient.

^aEffects of adolescent in household were not tested in the New York study because of the small sample size.

* $p < .05$. ** $p < .01$.

FIGURE 1. CONFLICTUAL INTERACTIONS BY CHILD-CARE HOURS AND NEGATIVE MOOD



the moderating effects of negative mood are associated with starting a new supportive interaction day or a new conflictual interaction day. Here we define *starting a supportive day or a conflict day* as days when fathers reported one of these interactions on a given day and not on the previous day (e.g., no conflict yesterday and conflict today). Thus, for each type of interaction, we eliminated days if fathers had reported having that type of interaction on the previous day. In effect, this permitted us to examine the likelihood of experiencing a type of interaction given that the same type

of interaction did not occur on the previous day. These models allowed us to rule out the alternative hypotheses that the links between paternal engagement in child care and father-child interactions were due to previous-day nurturing or conflictual interactions affecting subsequent engagement hours or negative mood. Tables 4 and 5 show the results of the analysis for this subset of days. One difference from the previous analyses is that the association between adolescents in the household and conflict in the national sample is no longer significant. The pattern of results for paternal engagement hours and negative mood, however, is nearly identical to the initial analyses. On days that fathers spent more time with their children, they were also more likely to initiate emotionally supportive interactions and conflictual interactions. Again, negative mood appears to moderate the relationship between engagement hours and initiating conflict.

DISCUSSION

Consistent with other studies (Coltrane, 1996; Ishii-Kuntz, 1994; Marsiglio, 1993), the findings reported here suggest that a father's involvement in the day-to-day care of his children may play an important role in determining the quality of interactions that he has with them. However, because previous studies typically examined between-father differences in involvement and nurturing, it was difficult to know whether the association between involvement and nurturing interactions was due to some third variable, such as commitment to parenting, sex-role attitudes, or mothers' availability for child care. It could very well be that committed or nontraditional fathers are both more involved and more nurturing at the same time.

TABLE 4. DAILY COVARIATION OF CHANGE IN EMOTIONAL SUPPORT WITH PATERNAL ENGAGEMENT HOURS AND FATHER'S NEGATIVE MOOD

	New York Sample (n = 126 Days)				National Sample (n = 973 Days)			
	β	SE	R ²	R ² Change	β	SE	R ²	R ² Change
Step 1								
Paternal engagement hours	.15*	.07			.13*	.05		
Negative mood	.10	.08	.09*		.17*	.07		
Adolescent in household	— ^a				-.08	.07	.07*	
Step 2								
Paternal engagement hours × negative mood	-.07	.05	.10*	.01	.01	.06	.07*	.00

Note: β = Standardized regression coefficient.

^aEffects of adolescent in household were not tested in the New York study because of the small sample size.

* $p < .05$.

TABLE 5. DAILY COVARIATION OF CHANGE IN CONFLICTUAL INTERACTIONS WITH PATERNAL ENGAGEMENT HOURS AND FATHER'S NEGATIVE MOOD

	New York Sample (<i>n</i> = 131 Days)				National Sample (<i>n</i> = 1,025 Days)			
	β	<i>SE</i>	<i>R</i> ²	<i>R</i> ² Change	β	<i>SE</i>	<i>R</i> ²	<i>R</i> ² Change
Step 1								
Paternal engagement hours	.16*	.07			.14*	.06		
Negative mood	.35**	.08	.26**		.24**	.05		
Adolescent in household	— ^a				.09	.06	.14**	
Step 2								
Paternal engagement hours \times negative mood	.15*	.07	.29**	.03*	.13*	.06	.16**	.02*

Note: β = Standardized regression coefficient.

^aEffects of adolescent in household were not tested in the New York study because of the small sample size.

p* < .05. *p* < .01.

The present study makes it possible to take the first step toward eliminating these third variables. The major innovation of the present study was to address these third-variable issues by looking at the covariation in paternal engagement and supportive interactions within fathers over time. By recording the details of father-child interactions and mood, we have resolving power that cannot be achieved easily through the use of standard interviews or questionnaires. This is especially useful in establishing within-person covariation over time. By following individuals intensively over a number of days, we were able to examine the extent to which supportive or conflictual interaction with children, as well as negative mood, co-occur within the same individual. Therefore, instead of asking whether involved fathers are more nurturing than noninvolved fathers, we asked: Is a father more likely to have emotionally supportive interactions with his children on days he spends more time with them than on days he spends less time with them? The findings from this article suggest that it is indeed the case that when fathers spend more time with their children, they are more likely to engage in supportive interactions, regardless of negative mood. In fact, results from the change-over-time analysis show that involvement may initiate a new day of supportive interactions even if supportive interactions did not take place on the previous study day.

Supportive interactions were investigated from two different perspectives: support sought by the child and support provided by the father. The New York study asked the respondent whether or not his child or children talked to him about a problem or worry. The results of this study support Coltrane's (1996) findings that children are more likely to seek out emotional support from fathers who participate more in their lives. The national study

asked fathers if they spent any time giving emotional support to their child or children. Again, previous findings are supported by the results of this study. The amount of time fathers spend with children is positively associated with the provision of emotional support. Future research should examine whether competence and self-confidence of fathers mediates this association. Interestingly, fathers in the New York sample reported twice as many solicitations of support (20% of the days) as reports of provision of emotional support reported by fathers in the national sample (9% of days). One plausible explanation for this discrepancy is that fathers may not be providing emotional support as often as they are requested to do so.

Although father involvement in child care may cultivate supportive interactions, previous studies imply that it may also open the door for more conflict (Almeida & Galambos, 1994). On days when fathers spent more time engaged with their children, they were also more likely to experience conflict with their children. It is important to point out that this relationship was moderated by fathers' negative moods. Prior research has shown that when parents are psychologically distressed, they are likely to be unresponsive and even hostile toward their children (Forehand, McCombs, & Brody, 1987). It appears that direct involvement may increase the likelihood of conflictual interactions with children when fathers are in a bad mood.

The findings for conflictual interactions raise two important points. First, as Marsiglio (1991) has pointed out, quantity of involvement does not in and of itself tell the whole story. Examining the complex interweaving of quality and quantity of involvement helps us to better understand the impact level that engagement behaviors may have on

the various aspects of the father-child relationship in the short term. Second, fluctuating characteristics of the father, such as mood, are likely to affect the tenor of father-child interactions. Simply put, involvement creates opportunities for fathers and children to interact. Yet if the father is in a bad mood, this increased opportunity for interaction may result in conflict. When a father is having a bad day, the bad day is likely to transfer over into his relations with his children. As researchers, we should take this into account in determining both of the varied consequences of increased father involvement. In addition, we should examine the conditions in men's lives—such as longer work hours, greater financial responsibility, and conflictual interaction with work peers—all of which may affect fathers' moods. Recent research on emotional transmission in the family may help shed light on these issues by drawing attention to and providing models for how and under which conditions emotions are passed from one family member to another (Larson & Almeida, 1999; Margolin, Christensen, & John, 1996).

It is important to note that these data come from fathers' reports of interaction with all of their children. Our design restricted any analyses of how characteristics of a particular child influence father-child interactions. Future studies would benefit from using a father-target child design that permits gathering information on children's moods as well as fathers' moods. We attempted to simulate this more advanced design by comparing the 71 fathers in the national sample who had only one child in the household with the fathers with two or more children in the household. (There were not enough fathers in the New York study to do similar analyses.) These single-child fathers did spend less time with children and had fewer tensions than multichild fathers, presumably because of less opportunity. However, results from a series of hierarchical linear models analyses on these single-child fathers linking father-child interactions with time and mood did not change. Although these supplemental analyses do not address the contribution of a child's mood and temperament, they do suggest that fathers' affective states are associated with the interactions that they have with their children.

Generalizations of the findings in this study should be considered in light of the limitations of these data. First, we operationalized paternal engagement as the quantity of time that fathers spent taking care of or doing things with their children. Lamb (1997) proposes a broader view of father

involvement incorporating availability and responsibility for child-care needs. Second, our measures of father-child interactions, although more precise than in many other investigations, are admittedly crude. Although we were able to assess the daily occurrence of supportive and conflictual interactions, we were not able to examine the duration or content of these interactions. Third, because our data are taken from daily reports, we cannot extrapolate from those reports the sequence of events within each day. Use of an experience sampling method (Larson & Richards, 1994) would have made it more likely for us to determine whether or not the father's bad mood preceded or followed the conflict with his child. Finally, it should be noted that the New York data were drawn from a relatively small sample of fathers. Future research would benefit from incorporating within-father approaches with more detailed measurement of involvement to include availability, responsibility for children, and quality and sequences of father-child interactions collected from larger and more diverse populations.

In summary, the findings reported here help to establish the links between duration of paternal engagement with children and the quality of father-child relations. However, it remains to be seen what impact involvement has for child development. Other research has pointed to the importance of fathers for children's sex-role development, cognitive development, and social skills (Crouter, Perry-Jenkins, Houston, & McHale, 1987; Parke, 1996; Wenk, Hardesty, Morgan, & Blair, 1994). One logical direction for future research would be to investigate how involvement influences these aspects of child development and how qualitative aspects of father-child relations mediate such links.

Fathers' involvement in the care of their children may also have implications for adult development. Bronfenbrenner (1991) suggests that there is an informal and unconscious mutual education that takes place between parent and child. Erikson (1963) argued:

The fashionable insistence on dramatizing the dependence of children on adults often blinds us to the dependence of the older generation on the younger one. A mature adult needs to be needed, and maturity needs guidance as well as encouragement from what has been produced and must be taken care of. (pp. 266–267)

Thus, father involvement may be a vehicle for stimulating a father's emotional growth and en-

hancing feelings of value and well-being through the significant role that the father plays in the child's life (Ryff & Seltzer, 1996). As we continue to study the role of the father in child development, we should not lose focus of the vital role children play in the lives of their fathers.

NOTE

The research reported in this article was supported by grants from the Alfred P. Sloan Foundation, the MacArthur Foundation Research Network on Successful Midlife Development, the National Institute for Mental Health (MH19734) and the National Institute on Aging (AG16731). The authors wish to thank Amy Chandler and Allison Kavey for their research assistance.

REFERENCES

- Aldous, J., Mulligan, G. M., & Bjarnason, T. (1998). Fathering over time: What makes the difference. *Journal of Marriage and the Family*, *60*, 809–820.
- Almeida, D. M. (1998). *Daily Inventory of Stressful Events (DISE): Interview and coding manual*. Unpublished manuscript, The University of Arizona.
- Almeida, D. M., & Galambos, N. L. (1991). Examining father involvement and father-adolescent relations. *Journal of Research on Adolescence*, *1*, 155–172.
- Almeida, D. M., & Galambos, N. L. (1994). Continuity and change in father-adolescent relations. In S. Shulman & W. A. Collins (Eds.), *Fathers-adolescent relationships: Development and context. New directions in child development* (pp. 27–40). San Francisco: Jossey-Bass.
- Almeida, D. M., & McDonald, D. A. (1998). Weekly rhythms of parent's work stress, home stress, and parent adolescent tension. In A. C. Crouter & R. Larson (Eds.), *Temporal rhythms in adolescence: Clocks, calendars, and the coordination of daily life* (pp. 53–67).
- Almeida, D. M., Wethington, E., & Chandler, A. (1999). Daily spillover between marital and parent child conflict. *Journal of Marriage and the Family*, *61*, 49–61.
- Barnett, R. L., & Baruch, G. K. (1987). Determinants in father's participation in family work. *Journal of Marriage and the Family*, *49*, 29–40.
- Baruch, G. K., & Barnett, R. C. (1986). Consequences of fathers' participation in family work: Parents role strain and well-being. *Journal of Personality and Social Psychology*, *51*, 983–992.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1991). What do families do? *Family Affairs*, *4*, 1–2.
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis*. Newbury Park, CA: Sage.
- Coltrane, S. (1996). *Family man: Fatherhood, housework, and gender equity*. Oxford, U.K.: Oxford University Press.
- Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1993). Family economic stress and adjustment in early adolescent girls. *Developmental Psychology*, *29*, 206–219.
- Crouter, A. C., Perry-Jenkins, M., Houston, T. L., & McHale, S. M. (1987). Processes underlying father involvement in dual- and single-earner families. *Developmental Psychology*, *23*, 431–440.
- Daly, K. J., & Dienhart, A. (1998). Negotiating parental involvement: Finding time for children. In D. Vannoy & P. J. Dubeck (Eds.), *Challenges for work and family in the twenty-first century* (pp. 111–121). New York: Aldine de Gruyter.
- DeLongis, A., Folkman, S., & Lazarus, R. S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology*, *54*, 486–496.
- DeLuccie, M. F., & Davis, A. J. (1991). Do men's adult life concerns affect their fathering orientations? *Journal of Psychology*, *125*, 175–188.
- Derogatis, L. R. (1975). *Affects Balance Scale*. Baltimore: Clinical Psychometrics Research Unit.
- Erikson, E. H. (1963). *Childhood and society* (2nd ed.). New York: Norton.
- Forehand, R., McCombs, A., & Brody, G. H. (1987). The relationship between parental depressive mood states and child functioning. *Advances in Behavior Research and Therapy*, *9*, 1–20.
- Gerson, K. (1993). *No man's land: Men's changing commitments to family and work*. New York: Basic Books.
- Gjerde, P. F. (1986). The interpersonal structure of family settings: Parent-adolescent relations in dyads and triads. *Developmental Psychology*, *22*, 297–304.
- Grossman, F. K., Pollack, W. S., & Golding, E. (1988). Fathers and children: Predicting the quality and quantity of fathering. *Developmental Psychology*, *24*, 82–91.
- Ishii-Kuntz, M. (1994). Paternal involvement and perception towards fathers' roles: A comparison between Japan and the United States. *Journal of Family Issues*, *15*, 30–48.
- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H.-U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-II-R psychiatric disorders in the United States. *Archives of General Psychiatry*, *51*, 8–19.
- Lamb, M. E. (Ed.). (1997). *The role of the father in child development* (3rd ed.). New York: Wiley.
- Lamborn, S. D., Mounts, N. S., Steinberg, L., & Dornbusch, S. M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, *62*, 1049–1065.
- Larson, R. (1998, July). *The ecology of adolescents' experience in U.S. one-parent families*. Paper presented at the Meetings of the International Society for the Study of Behavioral Development, Berne, Switzerland.
- Larson, R. W., & Almeida, D. M. (1999). Emotional transmission in the daily lives of families: A new paradigm for studying family process. *Journal of Marriage and the Family*, *61*, 5–20.
- Larson, R., & Pleck, J. (1997). Hidden feelings: Emotionality in boys and men. In D. Bernstein (Ed.), *The*

- Nebraska Symposium on Motivation, 1997* (pp. 25–74). Lincoln, NE: University of Nebraska Press.
- Larson, R., & Richards, M. H. (1994). *Divergent realities*. New York: Basic Books.
- Margolin, G., Christensen, A., & John, R. S. (1996). The continuance and spillover of everyday tensions in distressed and nondistressed families. *Journal of Family Psychology, 10*, 304–321.
- Marsiglio, W. (1991). Paternal engagement activities with minor children. *Journal of Marriage and the Family, 53*, 973–986.
- Marsiglio, W. (1993). Contemporary scholarship on fatherhood: Culture, identity, and conduct. *Journal of Family Issues, 14*, 484–509.
- McBride, B. A. (1989). Stress and father's parental competence: Implications for family life and parent educators. *Family Relations, 38*, 385–389.
- Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on happiness: A descriptive interpretation employing positive and negative affect. *Journal of Personality and Social Psychology, 75*, 1333–1349.
- Palkovitz, R. (1997). Reconstructing "involvement": Expanding conceptions of men's caring in contemporary families. In A. J. Hawkins & D. C. Dollahite (Eds.), *Generative fathering: Beyond deficit perspectives* (pp. 200–216). Thousand Oaks, CA: Sage.
- Parke, R. D. (1996). *Fatherhood*. Cambridge, MA: Harvard University Press.
- Pleck, J. H. (1997). Paternal involvement: Levels, sources, and consequences. In M. E. Lamb (Ed.), *The role of the father in child development* (pp. 66–103). New York: Wiley.
- Pleck, J. H., & Stueve, J. L. (1997, November). *Paternal engagement: Its caretaking and developmental components in a diverse national sample of young adult residential fathers*. Paper presented at the meeting of the National Council on Family Relations, Washington, DC.
- Quinn, R. P., & Staines, G. L. (1979). *The 1977 quality of employment survey*. Ann Arbor, MI: Survey Research Center.
- Radloff, L. S. (1977). The CES-D Scales: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–405.
- Repetti, R. L. (1989). Effects of daily workload on subsequent behavior during marital interaction: The roles of social withdrawal and spouse support. *Journal of Personality and Social Psychology, 57*, 651–659.
- Robinson, J. P., & Godbey, G. (1997). *Time for life: The surprising ways Americans use their time*. University Park: The Pennsylvania State University Press.
- Ryff, C. D., & Seltzer, M. M. (1996). *The parental experience in midlife*. Chicago: University of Chicago Press.
- Taylor, J. A. (1953). A personality scale of manifest anxiety. *Journal of Abnormal and Social Psychology, 48*, 285–290.
- Wenk, D., Hardesty, C. L., Morgan, C. S., & Blair, S. L. (1994). The influence of parental involvement on the well-being of sons and daughters. *Journal of Marriage and the Family, 56*, 229–234.