# FATHER-CHILD AND MOTHER-CHILD INTERACTION IN FAMILIES WITH A CHILD FEEDING DISORDER: THE ROLE

# OF PATERNAL INVOLVEMENT

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ABSTRACT: To date, research about feeding disorder (FD) has focused almost exclusively on the mother-child dyad, ignoring fathers' roles. The current study investigated father-child interactions with children having FD. The sample consisted of 67 children (1–3 years old) and their mothers and fathers. Thirty-four children, diagnosed with a nonorganic-based FD (FD group) and 33 children without an FD (control group) were matched for age, gender, birth order, and maternal education. Data were collected during home visits. Mothers were interviewed about their and the father's involvement in childcare. In addition, mother-child and father-child interactions were videotaped during play and feeding. Both mothers and fathers from the FD group experienced less positive parent-child interactions than did parents in the control group. Furthermore, mothers in the FD group reported greater maternal versus paternal childcare involvement than did control group mothers. Finally, FD group mothers exhibited more parental sensitivity than did fathers during feeing interactions; however, this difference was observed only when coupled with low paternal involvement. In families where fathers were highly involved, no difference was evident in paternal and maternal sensitivity. These findings highlight the importance of fathers' involvement, especially in families with children exhibiting an FD.

RESUMEN: Hasta la fecha, la investigación acerca de los trastornos en la alimentación se ha enfocado casi exclusivamente en la díada madre-infante, ignorando el papel de los papás. El presente estudio investigó las interacciones entre papá e infante con niños que presentaban trastornos de alimentación (FD). El grupo muestra consistió en 67 niños (de 1 a 3 años de edad), sus mamás y sus papás. Treinta y cuatro niños, a quienes se les había diagnosticado con trastornos de alimentación con base no orgánica (grupo FD) y treinta y tres niños sin trastornos de alimentación (grupo de control) fueron aparejados según la edad, el sexo, el orden de nacimiento y la educación de la madre. La información fue recogida durante visitas a casa. Las madres fueron entrevistadas acerca de su participación y la de los papás en el cuidado del niño. Adicionalmente, se grabaron en vídeo las interacciones mamá-infante y papá-infante durante el juego y la alimentación. Tanto las mamás como los papás del grupo FD experimentaron menos positivas

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interacciones con sus niños que los padres en el grupo de control. Es más, las madres en el grupo FD reportaron mayor participación de ellas (versus los papás) en el cuidado del niño, que las madres en el grupo de control. Finalmente las madres del grupo FD mostraron una mayor sensibilidad en la crianza que los padres durante las interacciones de alimentación. Sin embargo, esta diferencia se observó *solamente* cuando venía acompañada de una baja participación del padre. En las familias donde el padre participaba altamente, no se dio ninguna diferencia evidente en cuanto a la sensibilidad materna y paterna. Estos resultados subrayan la importancia de la participación de los papás, especialmente en familias con niños que presentan trastornos de alimentación.

RÉSUMÉ: A ce jour, les recherches sur les troubles de l'alimentation se sont presque exclusivement portées sur la dyade mère-enfant, tout en ignorant le rôle des pères. Cette présente étude s'est penchée sur les interactions père-enfant avec les enfants atteints de troubles de l'alimentation (TA). L'échantillon a consisté en 67 enfants (de 1 à 3 ans), leurs mères et mères. Trente quatre enfants, diagnostiqués avec un TA non-organique (groupe TA) et trente trois enfants sans TA (groupe de contrôle) ont été assortis par âge, sexe, ordre de naissance et éducation maternelle. Les données ont été rassemblées lors de visites à domicile. Les mères ont subi un entretien sur leur implication, ainsi que celle du père, dans les soins à l'enfant. De plus, les interactions mère-enfant et père-enfant ont été filmées à la vidéo lors d'une séance de jeu et une prise de nourriture. A la fois les mères et les pères du groupe TA ont fait l'expérience d'interactions parent-enfant moins positives que les parents du groupe de contrôle. De plus, les mères du groupe TA ont fait état de bien plus d'implication maternelle que l'implication paternelle que les mères du groupe de contrôle. Enfin, les mères du groupe TA ont fait preuve de plus de sensibilité parentale que les pères durant les interactions pendant la prise de nourriture. Dans les familles où les pères étaient très impliqués, aucune différence n'était évidente dans la sensibilité paternelle ou maternelle. Ces résultats mettent en évidence l'important de l'implication des pères, surtout dans les familles avec des enfants faisant preuve d'un TA.

ZUSAMMENFASSUNG: Die aktuelle Forschung über Fütterstörungen konzentrierte sich fast ausschließlich auf die Mutter-Kind Dyade und ignoriert die Rolle der Väter. Die aktuelle Studie untersuchte Vater-Kind-Interaktionen bei Kindern mit FD. Die Stichprobe bestand aus 67 Kindern (1-3 Jahre alt) sowie ihren Müttern und Vätern. Vierunddreißig Kinder mit FD ohne organische Grundlage (FD-Gruppe) und dreiunddreißig Kinder ohne FD (Kontrollgruppe) wurden auf Alter, Geschlecht, Geburtsreihenfolge und Bildungstand der Mutter abgestimmt. Die Daten wurden während Hausbesuchen gesammelt. Die Mütter wurden über ihr und des Vaters Engagement in der Kinderbetreuung befragt. Darüber hinaus wurden Mutter-Kind und Vater-Kind Interaktionen während des Spiels und bei der Fütterung auf Video aufgezeichnet. Sowohl Mütter als auch Väter der FD-Gruppe erfuhren weniger positive Eltern-Kind-Interaktionen als die Eltern in der Kontrollgruppe. Des Weiteren berichtete Mütter in der FD-Gruppe, dass mehr Mütter mehr Zeit als Väter mit der Betreuung der Kinder verbrachten als die Mütter der Kontrollgruppe. Darüber hinaus zeigten die Mütter der FD-Gruppe mehr elterliche Feinfühligkeit als die Väter in Fütterungssituationen. Allerdings war dieser Unterschied an niedriges väterliches Engagement gekoppelt. In Familien, in denen Väter stark beteiligt waren, war kein Unterschied in der väterlichen und mütterlichen Sensitivität zu finden. Diese Ergebnisse unterstreichen die Bedeutung der Beteiligung der Väter, vor allem in Familien bei Kindern mit FD.

抄録: はじめに。今日まで摂食障害feeding disorder FDはほとんどすべて母親と子どもの二人組に焦点を当てられており、父親の役割は無視されてきた。この研究では、FDを持つ子どもについて、父親と子どもの相互交流を調査した。5法。対象は67人の子ども(1-3歳)、母親そして父親から構成された。34人の子どもは非器質的 FDと診断され(FD群)、FDのない33人(対照群)は年齢、性別、出生順位、および母親の教育についてマッチさせた。データは家庭訪問の際に収集された。母親は、自分の、そして父親の育児への参加についてインタビューされた。それに加えて、母親と子ども、父親と子どもの相互交流が、プレイと食事の間にビデオ撮影された。 <u>結果</u>。FD群の母親と父親は両者とも対照群の両親よりも肯定的な親と子の相互交流を体験することが少なかった。さらに、FD群の母親は、対照群の母親よりも、父親の育児参加に対してより大きな母親の育児参加を報告した。最後にFD群の母親は、父親よりも、食事の相互交流でより多くの親の感受性を見せた。しかしこの差は、低い父親の育児参加と組み合わせたときに<u>だけ</u>観察された。父親が大いに育児に参加している家庭では、父親と母親の感受性に違いは明らかではなかった。 <u>考察</u>。これらの所見から、父親の育児参加の重要性が、とくにFDを表す子どもがいる家庭において、強調される。

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Feeding disorder (FD) is a general term applied to children under the age of 6 years who experience feeding and growth problems that cannot be explained by organic factors, lack of food, or any mental disorder (Chatoor, 2002). FD is considered a physiological expression of an infant's emotional distress (Drotar & Strum, 1988). The pediatric literature refers to FD as nonorganic failure to thrive (NOFTT). NOFTT is defined when children's growth is below the 5th percentile for their age or when their growth has fallen off precipitously and has decreased by two major growth percentiles (e.g., Benoit & Coolbear, 2004; Drotar, 1991; Olsen et al., 2007). In contrast to pediatric studies which have focused primarily on NOFTT as a diagnostic label for FD, the psychiatric literature has labeled FD as "feeding behavior disorder" (DC:0–3R; ZERO TO THREE, 2005). According to the *Diagnostic Classification 0–3: Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, revised* (DC:0–3R; ZERO TO THREE, 2005):

the diagnosis of Feeding Behavior Disorder . . . should be considered when an infant or young child has difficulty establishing regular feeding patterns—that is, when the child does not regulate his feeding in accordance with physiological feelings of hunger or fullness . . . ." (p. 35)

NOFTT and *feeding behavior disorder* have been used as synonyms, although not all infants with feeding difficulties are failing to thrive and not all infant who do not thrive have feeding problems (Chatoor et al., 1997). In the current study, we employ the more general term *feeding disorder* (FD).

Satter (1986) proposed the term *feeding relationship* to describe "the complex of interactions that transpire between parent (or primary caregiver) and child as they engage in food selection, ingestion, and regulation" (p. 353). Today, FD is perceived as a transactional or relationship disorder (Chatoor, Ganiban, Colin, Plummer, & Harmon, 1998; Goodlin-Jones & Andes, 2001). Disruptions in the feeding relationship may occur for diverse reasons, such as a lack of goodness-of-fit of the parent to the child, parental difficulties in supporting the child's bids for autonomy expressed through regulation of food intake, excessive parental control, or knowledge deficiency about food dynamics. The child may be temperamentally challenging and may resist eating the amount of food expected by parents (Davis, Levitan, Smith, Tweed, & Curtis, 2006).

There is substantial evidence to support the association between FD in infancy and mother infant relationships (e.g., Skuse, Gill, Reilly, Wolke, & Lynch, 1995). Most studies involved children having NOFTT. For example, mothers of children with NOFTT exhibited greater negative affect, intrusiveness (Stein, Wooley, Cooper, & Fairburn, 1994), and struggle for control (Sanders, Patel, LeGrice, & Shephard, 1993) in comparison to mothers of healthy children. Furthermore, they were less inclined to physical touch, were less receptive to the child's touch, and often remained outside of the child's physical reach when compared to mothers in a control group (Feldman, Keren, Groos-Rozval, & Tyano, 2004). In addition, children with FD expressed more negativity and withdrawal (Polan, Leon, Kessler, Stern, & Ward, 1991), and were more often described as apathetic and difficult than were healthy children (Chatoor, Ganiban, Hirsch, Borman-Spurrell, & Mrazek, 2000). A main limitation to these studies is their exclusive focus on the mother-child dyad, ignoring the father and his role. Such narrow examination is surprising, especially because during the last three decades, researchers have increasingly focused on the role of fathers of normally developing children (Lamb, 2004). Nonetheless, a dearth of studies remains regarding the role of fathers in the study of FD in childhood (cf. Drotar & Strum, 1987). Furthermore, the emerging scientific consensus is that FD is a transactional disorder (Chatoor et al., 1998; Feldman, Keren, Gross-Rozval, & Tyano, 2004; Goodlin-Jones & Anders, 2001), thus requiring a comprehensive assessment of the child and all his/her carers (Minuchin, 2002). The current research applied a holistic approach to family functioning, focusing on both the mother-child and father-child dyads.

#### THE ROLE OF FATHERS

A little more than a half-century ago, Bowlby (1953) relegated the role of the father to the economic and social support of the mother (p. 13). Accumulating evidence has indicated that the father's support does impact mothering (Easterbrooks & Emde, 1988). However, the father's role also has expanded, with fathers taking increasingly active roles in their children's socialization (Lamb, 2004). Indeed, the quantity and quality of fathers' involvement does affect children's developmental outcomes above and beyond mothering (Parke & Buriel, 1998). Nonetheless, whereas research has demonstrated that paternal involvement with their children has increased in recent decades, maternal involvement remains higher, irrespective of whether the mother is employed outside the home (Bader & Phillips, 1999; Burghes, Clarke, & Cronin, 1997; Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000; Lamb & Tamis-LaMonda, 2004; Pleck, 1997). Research investigating father-child interactions also has revealed that fathers remain less emotionally available to their infants than are mothers (Lovas, 2005; Volling, McElwain, Notaro, & Herrera, 2002); however, these differences may be explained by lower paternal involvement and practice rather than by paternal incapability (Lamb, 2004). In addition, many fathers continue to assume minimal responsibility for their children's care or rearing, as defined by participation in key decisions, availability at short notice, involvement in the care of sick children, and selection of alternative childcare (Pleck & Masciadrelli, 2004).

In addition to research on paternal involvement focusing on families having healthy children, there is some evidence indicating that in families with chronically ill children, mothers are more involved than are fathers in comparison to parents with healthy children (Kazak, 1986). In such cases, mothers tend to assume responsibility for childcare, thus becoming "experts" in the child's illness or disability (Turner-Henson, Holaday, & Swan, 1992). In fact, previous research

has suggested that father involvement with disabled children tends to be lower than father involvement with matched healthy children (Bristol, Gallagher, & Schopler, 1988). Furthermore, Hadadian and Merbler (1995) found that while in practice fathers spent little time with their disabled children, they expressed interest in spending more time with the children and being more involved in their emotional and physical care. FD, although not classified as a disability or illness, is considered as a mental disorder. To date, to the best of our knowledge, no research has examined paternal involvement with children having FD.

Certain studies have suggested that involved parents are exposed to diverse circumstances that facilitate the acquisition of parenting skills (Jarvis, 1992). Supporting this claim, low paternal involvement has been linked to poor father–child interaction (Spelke, Zelazo, Kagen, & Kotelchuck, 1973), while high levels of involvement were related to elevated levels of fathers' responsiveness and emotional availability (Donate-Bartfield & Passman, 1985; Lovas, 2005; Volling et al., 2002). One of the few studies that has examined paternal behavior with ill children revealed that fathers of children with cystic fibrosis who were highly involved in childcare demonstrated more positive interactions with their children than did less involved fathers (Darke & Goldberg, 1994). Research investigating paternal involvement with children with developmental problems is scarce (e.g., Navalkar, 2004), and to date, the paternal role in families with children diagnosed with FD remains uninvestigated.

#### **CURRENT STUDY**

The current study was the first to investigate the role of fathers in families having children with FD. The study expands existing knowledge in several ways. First, we focused not only on mothers but also on fathers, thus examining whether a spillover effect exists from the mother–child feeding relationship to the father–child feeding relationship, or alternatively, that FD is relationship-specific. Second, we examined father–child and mother–child interactions in households with both high- and low-involved paternal childcare involvement. Specifically, we hypothesized that: (a) Mother–child interactions would be less positive in families having children with FD compared to those of mother–child dyads in the comparison group. Group differences between father–child interaction were examined in an exploratory manner. (b) Within the feeding disorder group, there would be differences between mother–child and father–child interactions. (c) Higher maternal involvement and lower paternal involvement in childcare would be observed for parents in the FD group in comparison to that of control group parents. (d) Within the FD group, parental differences in the dyadic interaction would be moderated by paternal involvement. Specifically, differences in mother–child and father–child interaction would decrease in the context of low paternal involvement.

#### **METHOD**

## Sample

Sixty-seven families participated in the study. Due to technical problems experienced with the videotapes, only data for 56 families were available for coding. Thus, the current sample includes fifty-six 1- to 3-year-old children (66% girls; M = 1.97, SD = .86) and their mothers and fathers. Twenty-eight children (M age = 1.80, SD = .91) diagnosed with NOFTT (FD group) were recruited from the Psychiatric Infant Unit and Pediatric Day Care Unit at the largest medical

center in the area. All children were below the 5th percentile or had dropped two major centile lines on the growth chart. No organic or medical reasons were found for the failure to gain weight. As controls, 28 children (M age = 2.14, SD = .79), with no evidence of FD or other developmental difficulties, were recruited from mainstream daycares and matched to the FD group for age, gender, birth order, and maternal education. Sixty percent of families having children with FD and 65% of families from the control group agreed to participate in the study. The main reasons reported for not participating in the research were time constraints and lack of willingness to expose the family.

Children's gestational age ranged between 37 and 42 weeks (M = 39.20, SD = 1.47), and children's birth weights ranged between 2,150 and 4,150 g (M = 3,057, SD = 499.00). There were no between-group differences in gestational age or in children's birth weight. The vast majority of the mothers (95%) and fathers (93%) were Israeli-born. The mothers ranged from 22 to 42 years of age (M = 31.73, SD = 5.41), and the fathers' age range was 24 to 48 years (M = 34.78, SD = 5.78). All mothers were married to the child's biological father. The number of children in the family ranged between one and five, with the birth order of most participating children being the first (41%) or second child (34%). The sample was diverse in terms of parental years of education, with most mothers in the feeding (61%) and comparison (64%) groups and fathers in the feeding (61%) and comparison (63%) groups possessing a highschool education. In addition, 39% of the mothers and fathers in the FD group and 50% of the mothers and 36% of the fathers in the comparison group had postsecondary school education. No significant differences were found in terms of parental education between the FD group and the control group. Parental occupation was variable for mothers and fathers in the two groups, with mothers employed in mainly managerial and technical (29%), skilled (21%), or partly skilled (24%) occupations. Paternal occupation was characterized primarily by managerial and technical (19%), skilled (31%), and partly skilled occupations (22%) (Israel Central Bureau of Statistics, 1998). There was no group difference in parental occupation.

#### Procedure

Families from the FD group were recruited from the Infant Psychiatric Unit or the Pediatric Day Care Unit at the largest medical center in the area. Families from the comparison group were recruited at mainstream daycare centers. The study received Institutional Review Board approval, and all parents signed informed consent forms. Two researchers visited all recruited families at home, in the afternoon, during mealtime. In other words, feeding interactions were scheduled for times when children would normally eat. The home visits lasted approximately 2 to 3 hr. During the home visit, the researchers interviewed one of the parents. Simultaneously, the other parent participated in two different interactions:

- Parent-child feeding interaction: Parents were asked to engage in one-on-one feeding with the child participating in the study. They were instructed to feed the children food that would represent typical meals for their children. The parent fed the child for the amount of time required. An average feeding interaction lasted 12 min. In 50% of the cases, the fathers were the first to feed the children.
- Parent-child playing interaction: The play session included two different play contexts (structured and unstructured) to obtain a wider range of behaviors. In the structured-play

episode (5 min), parents and children were instructed to build together a train/tower using blocks, to find a hidden duck under cups, and to read a story. In the free- (i.e., unstructured) play episode, parents and children received various toys (dolls, building blocks, cars, books, puzzles, etc.) and were asked to play as they usually do. After 5 min, they had a short clean-up session, in which they were asked to organize the toys together (2 min). The play session lasted approximately 12 min.

Once the initial interactions were completed, parents swapped roles, and the child played with the second parent while the first parent was interviewed. The home visit ended with a dinner in which the second parent fed the child. All play and feeding sessions were videotaped and coded.

#### Measures

Parental involvement. Mothers were interviewed using the Caring and Rearing of Children Scale from the "Who Does What?" Questionnaire (Cowan & Cowan, 1988; Cowan et al., 1985). This measure assesses parental perceptions of their relative responsibility in childcare and childrearing ( $\alpha = .82$ ; e.g., "preparing meals for our child"). The questionnaire is a Likert-type scale. Respondents rated 24 items for "how it is now," with 1 indicating that the mother does it all, 9 indicating that the father does it all, and 5 indicating that the parents share the task about equally.

Parent-child interaction. Father-child and mother-child interactions were coded using the third edition of the Emotional Availability Scales (EAS) developed by Biringen, Robinson, and Emde (1998). The EAS are based on the integration of attachment theory and research (Ainsworth, Blehar, Waters, & Wall, 1978) and emotional availability (Emde & Easterbrooks, 1985; Mahler, Pine, & Bergman, 1975). These scales measure the parent's emotional signaling to the child and vice versa as well as the parent's ability to understand the child's emotional experience (Biringen et al., 2005). Since emotional availability is conceptualized as an interactive construct, the coding system consists of four parental dimension ratings—sensitivity, structuring, nonintrusiveness, and nonhostility-in addition to two child dimensions-responsiveness and involvement of interaction. Each of the variables is coded on a Likert scale. Parental sensitivity (9-point scale) involves an integrated assessment of the parent's affect, accessibility, perceptual clarity, appropriateness of responses and timing, flexibility, variety, and creativity in the interaction, acceptance of the child, amount of interaction, and style of conflict negotiation. Parent structuring (5-point scale) refers to the degree to which the parent appropriately structures the activity and sets limits when necessary. Parent nonintrusiveness (5-point scale) refers to the parent's ability to be available to the child without exercising excess direction, stimulation, or interfering with the child's autonomy. Parent nonhostility (5-point scale) assesses the parent's level of covert or overt hostility. Child responsiveness (7-point scale) reflects the child's eagerness to engage with the parent following a bid for exchange and the child's ability to display pleasure during the interaction. Child involvement (7-point scale) reflects the child's ability and interest in inviting the parent into the activity as well as the extent to which the child is able to maintain an optimal balance between drawing the parent into play and age-appropriate autonomy. Each individual scale focuses on the behavior of one partner; however, all dimensions of the EAS are viewed as "relationship variables" because each takes the other partner's behavior

into account. Thus, the EAS assess specific behaviors of individuals, but also constitutes global ratings of dyads and emphasizes joint interactional styles (Biringen, 2000).

Three trained research assistants who did not participate in the data collection and were blind regarding any information about the families coded in the videotapes. For coding purposes, 20% of the videotapes were randomly selected and rated by three trained coders. Interclass coefficients were calculated for each of the EA dimensions, and all scales showed excellent interrater reliability (range = 0.91-0.99).

#### **RESULTS**

#### **Preliminary Analyses**

Pearson correlations between mother–child and father–child interaction variables were calculated first. Table 1 demonstrates that all variables were moderately to substantially correlated during play (r = .23–.66). Similarly, during feeding, moderate to substantial correlations were seen for all variables, except maternal nonhostility (r = .41–.61). Maternal nonhostility significantly correlated with paternal nonhostility, but had low associations with all other variables (see Table 2).

Mother–child and father–child differences between groups. Parent–child interactions were found to be less positive for both mothers and fathers from the FD group in comparison to those of the control group. Specifically, as delineated in Tables 3 and 4, mothers from the FD group exhibited significantly less sensitivity, t(58) = 1.97, p < .05, during play and feeding as well as lower levels of structuring, t(57) = 2.27, p < .05, and nonintrusiveness, t(57) = 2.82, p < .01, during feeding than did mothers in the comparison group. Similarly, during feeding, fathers from the FD group showed lower levels of sensitivity, t(51) = 2.61, p < .05, and nonintrusiveness, t(51) = 2.54, p < .05, than did fathers in the control group. Furthermore, they demonstrated lower levels of structuring than control fathers, but this difference only approached significance, t(51) = 1.88, p = .07. In addition, during play, fathers from the FD group showed lower levels of structuring, t(55) = 2.00, p < .05, and nonintrusiveness, t(55) = 2.69, p < .01, in comparison

TABLE 1. Correlations Between Mother-Child and Father-Child (ns = 56) Interaction Variables During
Play

	Paternal Sensitivity	Paternal Structuring	Paternal Nonintrusiveness	Paternal Nonhostility	Child's Responsiveness to Father	Child's Involvement to Father
Maternal sensitivity	.52***	.65***	.53***	.42**	.50***	.40**
Maternal structuring	.47***	.60***	.50***	.30*	.46***	.34*
Maternal nonintrusiveness	.46***	.59***	.50***	.39**	.38**	.28*
Maternal nonhostility	.30*	.49***	.37**	.30*	.31*	$.23^{t}$
Child's responsiveness to mother	.51***	.66***	.52***	.38**	.57***	.44**
Child's involvement to mother	.52***	.64***	.49***	.37**	.56***	.45**

 $<sup>^{</sup>t}p < .10. *p < .05. **p < .01. ***p < .001.$ 

**TABLE 2.** Correlations Between Mother–Child and Father–Child (ns = 56) Interaction Variables During Feeding

	Paternal Sensitivity	Paternal Structuring	Paternal Nonintrusiveness	Paternal Nonhostility	Child's Responsiveness to Father	Child's Involvement to Father
Maternal sensitivity	.49***	.41**	.41**	.48***	.53***	.48***
Maternal structuring	.46**	.43**	.44**	.48***	.52***	.46**
Maternal nonintrusiveness	.46**	.44**	.45**	.48***	.55***	.48***
Maternal nonhostility	$.25^{t}$	.11	.21	.44**	$.26^{t}$	.18
Child's responsiveness to mother	.54***	.49***	.52***	.53***	.59***	.55***
Child's involvement to mother	.55***	.55***	.51***	.52***	.61***	.55***

 $<sup>^{</sup>t}p < .10. *p < .05. **p < .01. ***p < .001.$ 

 TABLE 3. Means (SDs) of Mother-Child Interaction by Group and Context of Interaction

Emotion Availability Scales	Play Se	ssion	Feeding Session		
	Feeding Disorder Group	Control Group	Feeding Disorder Group	Control Group	
Parental sensitivity	5.17* (1.59)	5.88* (1.35)	5.15* (1.74)	5.89* (1.29)	
Parental structuring	3.50 (.84)	3.72 (.54)	3.33* (.82)	3.85* (.72)	
Parental nonintrusiveness	3.37 (.96)	3.60 (.75)	3.36** (.95)	3.88** (.72)	
Parental nonhostility	4.20 (.82)	4.48 (.66)	3.98 (.96)	4.28 (.67)	
Child's responsiveness	4.55* (1.27)	5.27* (.86)	4.34*** (1.36)	5.34*** (.87)	
Child's involvement	4.23* (1.44)	5.02* (1.05)	4.22*** (1.42)	5.27*** (1.05)	

*Note.* Group differences are significant at \*p < .05. \*\*p < .01. \*\*\*p < .001.

 TABLE 4. Means (SDs) of Father-Child Interaction by Group and Context of Interaction

Emotion Availability Scales	Play Se	ssion	Feeding Session		
	Feeding Disorder Group	Control Group	Feeding Disorder Group	Control Group	
Parental sensitivity	$4.97^{t}$ (1.20)	5.55 <sup>t</sup> (1.11)	4.82* (1.63)	5.79* (1.01)	
Parental structuring	3.29* (.73)	3.65* (.58)	$3.27^t$ (.88)	$3.65^t$ (.58)	
Parental nonintrusiveness	3.09** (.79)	3.59** (.69)	3.46* (.95)	4.01* (.61)	
Parental nonhostility	4.32 (.58)	4.33 (.55)	3.95 (.97)	4.47 (.48)	
Child's responsiveness	4.28*** (.95)	5.09*** (.81)	4.26** (1.25)	5.13** (.90)	
Child's involvement	4.00** (1.06)	4.83** (.92)	4.02** (1.38)	5.07** (.97)	

*Note.* Group differences are significant at  $^tp < .10. *p < .05. **p < .01. ***p < .001.$ 

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to that of fathers from the control group. Group differences also were nearing significance for sensitivity, with fathers at the FD group showing lower levels of sensitivity than did control fathers, t(55) = 1.94, p = .06. Note that as the group analyses conducted for fathers were examined in an exploratory manner, it is possible to have inflated Type I error rates. Therefore, Bonferroni correction was used to correct for the number of comparisons. Accordingly, group differences seen for fathers that were significant at p < .01 remained significant after Bonferroni correction; however, group differences that were significant at p < .05, but p > .01, should be interpreted with caution.

In addition, children, in the FD group were less responsive to their mothers during play, t(58) = 2.61, p < .05, and feeding, t(57) = 3.66, p < .001, and involved them less in their play, t(58) = 2.43, p < .05, and feeding, t(57) = 3.62, p < .001, interactions, as compared to that of children in the comparison group. Similarly, children having feeding difficulties were less responsive to their fathers during play, t(55) = 3.37, p < .001, and feeding, t(55) = 2.71, p < .01, interactions and involved their fathers less in their play, t(55) = 3.17, p < .01, and feeding, t(51) = 3.24, p < .01, interactions as compared to those of the control group (see Tables 3 and 4).

Mother–child and father–child interaction within the feeding disorder group. To examine the second hypothesis proposing differences between mother–child and father–child interactions within the FD group, t-test analyses were conducted. These analyses revealed one significant difference, t(23) = 2.12, p < .05. Within the FD group, mothers were more sensitive (M = 5.35, SD = 1.57) than were fathers (M = 4.66, SD = 1.55). No significant difference was seen within the control group. Furthermore, no other significant difference was seen in both groups for the other parent–child interaction variables.

Moderation by paternal involvement. To examine the third hypothesis proposing more traditional parental-role division in the FD group than in the comparison group, t-test analysis was conducted. This analysis revealed significant group differences, t(54) = -2.19, p < .05. Although mothers in both groups reported being more involved than did fathers in childcare (i.e., scores were <5.00, representing higher maternal involvement), less paternal involvement (compared to maternal involvement) (M = 3.37, SD = .73) was found in the FD group than in the control group (M = 3.86, SD = .94).

Similarly to the second hypothesis' findings, only one dimension (paternal sensitivity) of parent–child interaction differed between mother–child and father–child interactions among the FD group; thus, the last hypothesis was tested only for this dimension. Therefore, the sample was initially divided into "low paternal involvement" and "high paternal involvement" groups using a median split. Subsequently, the mean paternal-sensitivity scores for mothers and fathers were examined within each group. The pattern was clear: Mothers were found to be more sensitive, t(11) = 2.27, p < .05, in their parenting interactions than were fathers *only* when coupled with low paternal involvement (in reference to maternal involvement). In families where fathers were more involved (less traditional role division), no difference, t(11) = 0.68, n.s., was evident in paternal and maternal sensitivity (see Figure 1). No moderation effect was seen within the comparison group.

#### **DISCUSSION**

This study's main goal was to transcend the mother-child interaction with respect to families with children having FD and to examine the father-child interaction as well as to understand

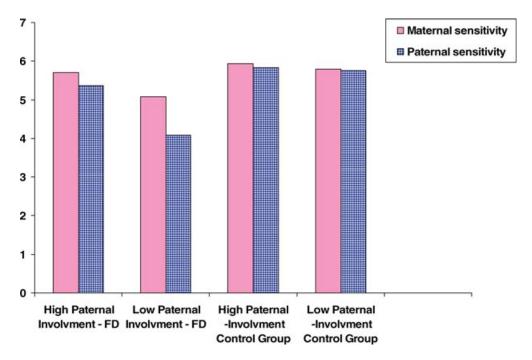


FIGURE 1. Mean levels of mothers' and fathers' sensitivity for low and high paternal involvement in the feeding disorder (FD) and control groups.

the role fathers assume in such families. The findings revealed that similar to mother—child interactions, father—child interactions are less positive in the FD families than are those in the comparison group. Furthermore, within the FD group, mothers exhibited greater sensitivity than did fathers; however, this difference is moderated by paternal involvement.

#### Mother-Child and Father-Child Relationships in Families with Children Having FD

Historically, both theory (e.g., Freud, 1978; Winnicot, 1957) and research (Chatoor, 1997) have contended that mothers play a central role in the development of FD. For example, Winnicot (1957) proposed that feeding is an integral part of the mother–child relationship and an actual fulfillment of the love relationship between two human beings. Anna Freud (1978) postulated that in infancy and early childhood, mother and food are invariably intertwined, or in other words, *mother* = *food*. This equation is further supported by the striking similarity in many languages between the childish word for mother (e.g., "mummy") and the babyish word for food or eating (e.g., "Yummy"). Feeding a child is a major way by which mothers show their love. Therefore, children's food refusal and the rejection of all maternal efforts to feed may be perceived by mothers as a sign of rejection (Drotar, 1991).

Supporting previous findings (e.g., Skuse et al., 1995), we found that mothers of children with FD were less sensitive, less structuring, and more intrusive when interacting with their children than were mothers of healthy children. In addition, children in the FD group were less responsive and involved than were children in the control group.

Furthermore, the study's results indicate that in the FD group, both mother–child interactions and father–child interactions were less positive than the equivalent control group interactions. Fathers from the FD group showed lower levels of sensitivity, structuring, and nonintrusiveness during both play and feeding than did their comparison-group counterparts. In addition, children were less responsive and showed less involvement to both mothers and fathers than did the comparison group. One possible explanation why fathers in the FD group were less sensitive to their children than were control group fathers involves a spillover effect. According to family (Minuchin, 1974) as well as ecological theories (Bronfenbrenner, 1979), mother–child and father–child dyads are interconnected, resulting in spillover from one setting to another. It may be that the negative coercive cycles involving food commence with the mother–child dyad, but as a result of shared family life, spillover to the father–child relationship occurs, engendering negative consequences for both mother–child and father–child interactions. Another possible explanation is that women who are less sensitive toward their children simply tend to marry men who also are likely to become less sensitive fathers. Thus, there is more prevalence of two parents who are low in sensitivity in the same family.

Furthermore, less positive parent–child interactions were not limited to the feeding arena. Mother–child and father–child interactions involving play also were less positive in the FD group than were those in the comparison group. This finding is an indication of the severity of the damaged relationships. The difficult interactions around feeding seem to be expanded to other situations, thereby reflecting the theory that FD is in fact a feeding relationship disorder. Accordingly, the focus of understanding feeding difficulties should center on the damaged relationship which may have initiated around feeding, but may well spill over to other situations. Note that although direction of effects is being proposed, as the data are cross-sectional in nature, this direction of influence is only suggestive. Alternate directions of influence are probable. Overall, it seems that these families are caught in destructive cycles of interaction (Patterson, Reid, & Dishion, 1992).

### Mother-Child Versus Father-Child Relationship in Families with Children Having FD

Our analyses confirm previous research findings that have shown that mothers are, overall, more involved than are fathers in childrearing (Pleck & Masciadrelli, 2004). Furthermore, more traditional parental-role division was reported in the FD group in comparison to that of the control group. FD mothers reported higher levels of involvement in childcare relative to their husbands in comparison to control group mothers. This result replicates findings from others studies, conducted with chronically ill children, showing that mothers are more engaged in their children's care than are fathers (Kazak, 1986), and tend to assume the brunt of the burden (Turner-Henson et al., 1992). Thus, this current study expands such findings to cases of children who are medically healthy, but fail to thrive. Diverse possible explanations may explain this finding. First, it is possible that more dichotomous perceptions of parental-role division are assumed by parents experiencing stressful conditions such as raising children with diverse challenges (Pelchat, Lefebvre, & Perreault, 2003). An alternative explanation is based on the concept that mothers tend to isolate fathers from childcare activities when faced with ill, disabled, or otherwise challenged children (Lillie, 1993; Pelchat et al., 2003). Such behavior may be a result of commonly held beliefs that fathers are not as capable as are mothers in the childcare arena, and therefore will be less adequate in their caring activities (Pelchat, Bisson, Ricard, Perreault, & Bouchard, 1999). Finally, as paternal success in childcare and particularly in feeding may

sharpen maternal feelings of incompetence, mothers may act as gatekeepers, keeping fathers away, thereby mitigating additional feelings of failure.

Our investigation of similarities and differences between mother-child and father-child interactions, within the FD group, revealed that during play, father-child and mother-child interaction did not differ significantly. The only significant difference found involved motherchild and father-child sensitivity. Parental sensitivity is broadly defined as the parent's ability to perceive, to interpret accurately, and to respond promptly and appropriately to his or her child's signals (Nicholls & Kirkland, 1996). Parental sensitivity develops over the years, confirming the idea that experience and interaction exchanges spur more sensitive parenting. Within the FD group, fathers were less sensitive than were mothers during feeding. No difference was seen within the comparison group. The concept that parental sensitivity progressively develops over time was further supported by the moderation finding: Fathers were less sensitive than were mothers only when coupled with low paternal involvement. In families where fathers were more involved, no difference in parental sensitivity was evident. Davis et al. (2006) suggested that "Both child and parent come to the feeding environment with predispositions and abilities that are further shaped over time as the history of interactions builds" (p. 431). That is, parental sensitivity is a construct that develops through repetitive transactions between a parent and a child. Sensitivity demands that a parent identify with the child's needs and behave in an appropriate manner. Experience provides parents the sole opportunity to learn about their children and attune their behavior in a manner sensitive to their children's signals (Biringen, 2005). The low sensitivity levels exhibited by low-involved fathers in the FD group highlight the need for consistently and repeatedly practicing feeding interactions. With respect to the FD group, our finding that increased paternal involvement was linked to raised maternal and paternal sensitivity supported previous findings that have demonstrated the overall familial benefits of increased father involvement (Hawkins & Belsky, 1990). It may be that in the presence of high paternal involvement, mothers' feelings of domestic burden are reduced (Hawkins & Belsky, 1990), resulting in less stress and, consequently, increased sensitivity (Peggy, 1999). Furthermore, it seems that fathers' greater involvement was related to increased availability to the children's needs, as reflected in the higher paternal sensitivity seen in the father-child feeding interactions (Coltrane, 1996).

#### Limitations and Future Directions

Several limitations should be noted. First, the current study examined one specific situation: children with FD. Although FD is unique and may have medical and social implications (e.g., weight loss, malnutrition, and maternal guilt) that other challenges of childhood may not have, it would be worthwhile to replicate this study with diverse childhood difficulties (e.g., sleep problems, behavioral problems). Such replication may indicate whether the results presented here are unique to families of children with FD or whether they may be generalized to other childhood difficulties. Furthermore, although various and important group differences were found, replicating this study with a larger sample size would strengthen the results and may reveal smaller (though systematic) effects. Furthermore, the inclusion of paternal reports of their own involvement in childcare could be an important step toward understanding paternal experience in families having children who fail to thrive. Paternal reports may complete the picture on parents' role division and enable the examination of this topic when having multiple reporters.

Finally, future research exploring mediating processes (e.g., marital quality) would enable the understanding of the mechanisms by which mother-child and father-child relationships differ between families with children having FD and healthy children.

#### Clinical Implications

As the first study focusing on the role of fathers when having children with FD, the current research revealed important findings leading to several clinical implications. First, although the maternal role in FD has been theoretically and empirically evident, this study suggests that fathers also are significant actors in the dynamics of their children's FD. Our findings demonstrate that it is not only the mother-child but also the father-child interactions that were at risk in families with children having FD. Therefore, although fathers do not usually bear the primary feeding responsibility and often do not participate in the feeding process, they should be given more consideration in the intervention process, including observation of the father-child interaction during play and feeding. Second, intervention should focus on ways to increase paternal involvement in childcare, and in understanding possible maternal reservations about paternal participation in childcare. High paternal involvement with children having FD may serve as a catalyst for the development of fathers' sensitivity to their children as well as reduce maternal burden. Finally, raising professional awareness to the importance of the role of fathers as well as to the understanding that through their FD children reflect their relationship difficulties with both parents may lead to the construction of specific interventions that focus not only on the mother-child relationship but also on the father-child relationship.

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